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**ΘΕΜΑ: “TESTING THE RANDOM WALK HYPOTHESIS:  
EVIDENCE FROM EMERGING MARKETS”**

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## ABSTRACT

Using five classical unit root tests, the Augmented Dickey Fuller test, the Phillips Perron test, the Dickey-Fuller test with GLS Detrending (DFGLS), the NG and Perron (NP) test and the Kwiatkowski, Phillips, Schmidt, and Shin (KPSS) test, this paper investigates the return predictability of twenty two emerging markets. These markets are China, India, Indonesia, Korea, Malaysia, Philippines, Russia, Thailand, Taiwan, Czech, Hungary, Poland, Portugal, Slovenia, Turkey, Africa, Egypt, Israel, Argentina, Brazil, Chile and Greece. The data are daily, weekly, monthly and both criteria of the tests (Schwartz and Akaike) are used. Our findings show that the prices of some of the above emerging markets are characterised by random walk. Hence, these markets are weak form efficient since it is useless to predict future returns based on historical ones.

Keywords: stock prices, random walk, unit root tests, market efficiency

## 1. MARKET EFFICIENCY

The concept of efficiency is central to finance. Basically, the term efficiency is used to describe a market in which relevant information is impounded into the price of financial assets. If capital markets are sufficiently competitive, then simple microeconomics indicates that investors cannot expect superior profits from their investment strategies. Although, this appears self-evident today, it was far from obvious for the majority of the century.

The whole idea of market efficiency had been originated at the beginning of the century in the dissertation by Bachelier (1900) to the Sorbonne for his PhD in mathematics. Bachelier believed that “past, present and even discounted future events are reflected in market price, but often show no apparent relation to price changes”. This gave rise to a brilliant analysis in the “informational efficiency of the market”.

When the term “efficient market” was introduced into the economics literature thirty years ago, it was defined as a market which “adjusts rapidly to new information”. (Fama “Efficient Capital Markets A Review of Theory and Empirical Work”, *Journal of Finance*, 1969). The most modern definition is that asset prices in an efficient market “fully reflect all available information” (Fama 1991). What is implied is that the market processes information rationally, in the sense that relevant information is not ignored, and systematic errors are not made.

Beechy, Gruen and Vickery believe that this is a strong version of the hypothesis that could only be literally true if ‘all available information’ was costless to obtain. If information was instead costly, there must be a financial motive to obtain it. Although, there would not be a financial motive if the information was already ‘fully reflected’ in asset prices.

An economically more realistic, version of the hypothesis was presented by Jensen in 1978 who indicated that “prices reflect information up to the point where the marginal benefits of acting on the information (the expected profits to be made) do not exceed the marginal costs of collecting it”.

### **1.1 WHY DOES EFFICIENCY MATTER?**

Jones S. and Netter J. wonder how important is informational efficiency in markets. Nowadays, the capital markets channel funds from savers to firms, which use the funds to finance projects. Informational efficiency is necessary if funds are to flow to the highest-valued projects. Shareholders want managers to maximize stock prices and they will attempt to ensure that their managements undertake only projects (decisions) that increase the value of their stock. However, maximization of stock prices can result in the capital market directing funds to the most valuable projects only if stocks are efficiently priced, in the sense of accurately reflecting the fundamental value of all future cash flows. Thus, for example, if capital markets are efficient, there is no reason to expect managers to emphasize the short run at the expense of long-term projects. In addition, efficient capital markets make it easier for firms to increase capital because the markets determine the prices at which existing and potential security holders are willing to exchange claims on a firm's future cash flows.

An important reason for caring about efficiency is that investors who do not have the time or the resources to do a thorough analysis will be more willing to “invest their money” in the market if they know that the securities they trade are accurately priced. This, in turn, helps the capital market to perform its function of translating savings into

productive projects. Finally, there are policy implications on market efficiency. If capital markets are efficient, then the government's role in capital markets should be very limited.

Jones S. and Netter J. recognise that a large amount of empirical research has been done in order to answer whether capital markets are efficient. Most research has used stock price data, for two main reasons. First, stock prices are easily available. Second, the stock market is likely to be less efficient than other securities markets (such as the bond market) because cash flows paid to stockholders are relatively uncertain, and there is no terminal payoff as in a bond. Therefore, stocks are relatively difficult to value, and evidence of stock market efficiency would be an evidence of efficiency in securities markets in general.

An important amount of empirical evidence shows that stock prices react quickly, in the expected direction, to the release of information. For example, stock prices react within ten minutes to an earnings announcement. However, such evidence does not show that the amount of price reaction accurately reflects fundamentals or that security prices accurately reflect the fundamental value of the securities. Other evidence shows that profits trading have been earned by corporate insiders based on inside information. Nowadays, the empirical debate on market efficiency centers on whether future returns are predictable or not.

The empirical tests of capital market efficiency began even before Eugene Fama of the University of Chicago made his theory in 1970. The early tests hypothesized that if prices fully reflected available information, if information arrives randomly, and if expected returns are constant, then stock returns from one period to the next should be statistically independent. The stock returns follow what has loosely been referred to as a "random walk". This implies that historical returns are

useless for predicting future returns, which is consistent with weak form of efficiency.

## **1.2 FORMS OF EFFICIENCY**

The study of capital market efficiency examines how much, how fast, and how accurately available information is incorporated into security prices. Financial economists often classify efficiency into three categories based on what is meant as "available information". The three forms are the weak, the semistrong, and the strong based on information.

Williams L. indicates that the weak form of the efficient market hypothesis holds that current security prices fully and instantaneously reflect all weak form information, and similarly for the semi-strong and strong forms of the hypothesis.

Specifically, weak form information is information contained in the set of historical prices. A market is weakly efficient (with respect to information) if this is fully and instantaneously incorporated in present prices. Present prices reflect all available information in patterns of historical prices, and so future price movements cannot be derived from an examination of past prices.

If capital markets are weak-form efficient, then investors cannot earn excess profits from trading based on past prices or returns. That means that stock returns are not predictable, and so-called technical analysis (analyzing patterns in past price movements) is useless. A less strict form of weak efficiency holds that no information can be gathered from such price data which would allow one to make abnormal returns, except by chance.

Semi-strong information contains everything is referred to all public information. A market is semi-strong efficient if this is fully and instantaneously incorporated into present prices. In such a market, present prices reflect all available public information, and so future price movements reflect future revaluations of publicly available information.

Strong information is that contained in the set of all information, including that of privately and monopolistically held. A market is strongly efficient if all information is fully and instantaneously incorporated into present prices. In such a market, present prices reflect all information and so future price movements reflect future revaluations of information.

## **2. MARKET EFFICIENCY AND RETURN PREDICTABILITY**

Many years before, the efficient market hypothesis was widely accepted by academic financial economists. It was generally believed that securities markets were extremely efficient in reflecting information about individual stocks and the market as a whole. The accepted view was that when information arises, the news spreads very quickly and is incorporated into the prices of securities without delay. For that reason, neither technical analysis, which is the study of past stock prices in an attempt to predict future prices, nor even fundamental analysis, which is the analysis of financial information such as company earnings, asset values to help investors select “undervalued” stocks, would enable an investor to achieve returns greater than those that could be obtained by holding a randomly selected portfolio of individual stocks with comparable risk.



Poshakwale believes that the efficient market hypothesis does not deny that a positive information about a given security should increase its market price. It only states that this information cannot yield in excess return. The thing that it matters is the speed which information is impounded into security prices. If a positive announcement is made, the price will gradually increase in response to the announcement for example in a week. Investors who examine the price sequence would observe that the price is moving away from the level that it was traded, and they will purchase the securities. Tests of return predictability are in part tests of whether this type of trading behaviour can lead to excess profits. If returns are not predictable from past returns, then new information is incorporated in the security price sufficiently fast that, by the time an investor could realise from the price movements that there had been a fundamental change in company prospects, the fundamental change is already fully reflected in price.

### **3. MARKET EFFICIENCY AND THE RANDOM WALK THEORY**

The idea that security prices follow random walk was introduced by Bachelier in 1900. He used this term to refer to successive price changes which are independent of each other. In other words, tomorrow's price changes (and therefore tomorrow's price) cannot be predicted by looking at today's price change,  $P_{t+1} - P_t$  is independent of  $p_t - p_{t-1}$ .

More recently, the first serious application of the Random Walk Hypothesis to financial markets can be traced back to Paul Samuelson (1965), whose contribution is summarised by the title of his article: "Proof that Properly Anticipated Prices Fluctuate Randomly". Samuelson indicates that in informationally efficient market prices changes must be

unforecastable if they fully incorporate the expectations and information of all market participants.

Malkiel B. also indicates that the efficient market hypothesis is associated with the idea of “random walk”. The random walk idea is that if the flow of information is immediately reflected in stock prices, then tomorrow’s price change will reflect only tomorrow’s news and will be independent of the price changes today. On the other hand, news is by definition unpredictable and, thus, price changes must be unpredictable and random. This leads to the fact that prices fully reflect all known information, and even uninformed investors buying a diversified portfolio will gain a rate of return as generous as that the experts will achieve. For Malkiel, efficiency means that investors are not allowed to earn above-average risk-adjusted returns.

Poshakwale S., among other analysts, also, recognizes that the efficient market hypothesis is inextricably related to the random walk theory. As with all tests of theories involving future expected prices or returns, past actual prices or returns are used for the tests. As far as the random walk theory concerns, sets of share price changes are tested for serial independence. Random walk theory for share prices reflects a securities market where new information is rapidly incorporated into prices and where “excess” returns cannot be made from spotting trends or from trading new information.

That share prices which appear to follow a random walk is an interesting result and either proving it or disproving it, occupied many analysts in the 1970s. What remained to be shown was why share prices followed a random walk. There was plenty of evidence, but a formal theory was missing. What was needed was a model of share price behaviour to explain the random walk. The gap was filled by more

general model based on the concept of the efficiency- the efficient market hypothesis (EMH).

According to Andor G. and Ormos M. the random walk model assumes that successive returns are independent and that the returns are identically distributed over time. The random walk model is a restricted version of the efficient market theory. The efficient market hypothesis does not require identical return distribution in the various periods, furthermore it does not imply the returns independent through time. So the random walk is a sufficient but not necessary condition to fulfil the weak form of efficient market.

The connection between the weak form of efficiency and the random walk hypothesis is the main topic in the research of the analysts Ko and Lee in 1991. They present that if the random walk hypothesis holds, the weak form of efficient must hold, but not vice versa. The evidence that supports random walk model also supports market efficiency. Although, when the random walk model is violated and the prices in the market are predictable, it is not evidence of market inefficiency in the weak form.

Le Roy (1973) and Lucas (1978) have shown in many ways that the Random Walk Hypothesis is neither a necessary nor a sufficient condition for rationally determined security prices. In other words, unforecastable prices need not imply a well functioning financial market with rational investors, and forecastable prices need not imply the opposite.

Grossman (1976) and Grossman and Stiglitz (1980) go further. They strongly believe that perfectly informational markets are impossible to exist. If markets are perfectly efficient, the possibility of gathering information would be zero and the markets would eventually collapse. On the other hand, the inefficiency of the markets gives the investors the

motive to expand to gather information and find profit opportunities in order to eliminate their costs of trading and information-gathering.

#### **4. EMERGING MARKETS**

The term emerging markets is by its nature general and applies to a very diverse cast of countries. Basically the term refers to the stock markets of these countries that are developing from an incipient stage toward a more modern and a more mature stage. However, many researchers believe that the term is not necessarily tied to stock markets. It is simply a “reflection” of the economic development. The emergence of new more rapidly growing economies is an inevitable process as the industrialised countries, with aging populations, slows down.

In the 1950s these industrial economies grew only at 6% annually, due to post-war reconstruction, which changed to 5% annually into the 1960s. By the 1970s the oil crisis, which was the result of inflation in the wake of the Vietnam war slowed industrial countries' growth to barely 3% annually and in the 1980s they had the slowest growth since the Depression, about 2,5% annually. The 1990s do not look much better, although individual living standards continue to rise rapidly-especially in Europe, where several major countries have declining populations, and also in Japan.

In the meantime, so-called developing countries has been expanding more steadily at 6% annual rate in the almost 50 years since the Second World War. Specifically, in the 1950s, 1960s and 1970 Latin

America expanded at 6% annually while Asian Countries were catching up until the 1960s. In the 1980s, had a small growth of 2% per year while the East Asians were surging along at 8% annually and India and China, together having the half of the population of the developing world, really took off from the middle of the decade. The four East Asian countries plus China have accounted for 18%, almost one-fifth of the growth of world exports in the last 10 years. Africa and the Middle East have stagnated, at very different levels of income.

Emerging stock markets showed their first positive collective return since the boom of 1993, as measured by the IFC Global (IFCG) and Investable (IFCI) Composite indexes. The IFCG Composite Index rose about 5.8% during 1996. It is the broadest indicator of emerging stock market performance available, covering 1,779 stocks in 27 markets during 1996. The IFCI Composite Index, with 1,224 stocks in 26 markets, is the broadest index available, designed to measure returns on emerging market stocks that are legally and practically open to foreign portfolio investment, and is a widely-used benchmark for international portfolio management purposes. The IFCI Composite gained 6.7% in 1996.

While share price performance in most emerging markets was positive, individual performance among the emerging markets in 1996 was as diverse as the features of the markets themselves. As in many years passed, emerging markets could be found both at the top and bottom of a list of the world's best performing stock markets.

For instance, emerging markets swept the top 15 spots for annual performance measured in dollar terms, from a list of 76 world stock markets. Only Spain and Sweden from the developed markets made the top 20 on this list, which included 54 markets from developing countries and 22 from developed countries. The top five performers for 1996 were Bangladesh (up to 196%), Russia (156%), Hungary (95%), and China

(89%). It is noteworthy that the largest gains tended to come from some of the smaller, less-known emerging markets not contained in any index producer's composite index, though the relatively large Taiwanese market made 18th on the list with a 36% increase.

The worst performing markets were also concentrated in emerging markets. Twenty-one world equity markets dropped in price in 1996, of which 19 were emerging markets. Large emerging markets like Korea, Thailand, and South Africa also suffered heavy losses, with their IFCI indexes falling 39%, 38%, and 19% for the year in reaction to domestic economic problems.

International portfolio flows to emerging markets and emerging market stocks picked up in 1996, according to many sources. The World Bank's Global Development Finance (formerly, World Debt Tables), provides preliminary estimates of approximately \$45.7 billion of new foreign money for emerging stock markets. This represents the first increase in annual flows since 1993. In addition, 1996's estimated flow set a new record in this regard, easing past 1993's \$45 billion. While other sources differ as to the amounts of the flows, they agree that 1996 saw a major increase after two years of no growth in net new cash flows.

Looking at allocations on a regional basis, Latin America received the most (\$16.5 billion), followed by East Asia and the Pacific (\$12.9 billion), Europe and Central Asia (\$6.7 billion), South Asia (\$5.4 billion), Sub-Saharan Africa (\$3.6 billion), and Middle East and North Africa (\$0.7 billion).

The World Bank estimates that almost \$177 billion of foreign portfolio capital has moved into emerging markets' stocks over the course of the 1990s. The total amount of foreign portfolio investment in emerging stock markets (directly and indirectly through depositary receipts and other vehicles) at the end of 1996 is estimated by IFC at

around \$230 billion, with dedicated emerging market funds accounting for about two-thirds of the total. The balance comes from global/international equity funds, hedge funds, and institutions and retail investors via direct purchases.

Nowadays, China climbed up a record trade surplus of \$ 18.8 billion in August of 2006 and its industrial production was 15,7% greater than in the same month one year before. Russia's GDP grew by 7,4% in the year to the second quarter of 2006 faster than 5,5% it managed in the year to the first. India's industrial production expanded by 12,4% in this year, its quickest pace in a decade.

Private capital flows to emerging markets remained strong in the first half of 2006, despite market turbulence in the second quarter. Gross issuance of bonds, loans and equities was \$196.5 billion in the first half of 2006, up 6.5% over the same period a year earlier, but down 13.3% from the record high seen in the second half of 2005. Compared with the year before, new issuance of equities in the first half of 2006 grew the most in relative terms (82.3%), starting from a lower base and reflecting foreign investor's rising comfort with this asset class. At the same time, gross loan issuance climbed 25.9 percent in the first half of 2006, reflecting increased activity by commercial banks in Emerging Markets in search of higher returns amid strong competition in mature markets. On a regional basis, Latin America had fully completed its issuance needs while emerging Asia had met 62% of its 2006 financing needs, and emerging Europe about 56%. Turkey posted the largest external financing need, estimated at about \$2.4 billion.

The motivations behind these financing flows can be summarized as:

- Interest in emerging markets as relatively high-growth economies.
- Interest in emerging markets as a means of diversifying opportunities at relatively attractive valuations.

- Greater access to emerging market stocks
- Growth of domestic capital accumulation

The emerging market phenomenon has to do with economic growth and trade much more than with stock markets and financial markets. The latter are a key instrument to mobilize capital, but the pre-conditions for growth are the essential ingredient. The main and the most important question is what their prospects are for sustained economic growth over a long period.

## **5. MARKET EFFICIENCY AND THE EMERGING MARKETS**

A few studies were conducted on the test of efficient market hypothesis (EMH) in emerging markets and compared to the volume of studies published on the developed market. It is generally assumed that the emerging markets are less efficient than the developed markets. The definition of emerging market highlighted on the growth potentiality as well as rapid growth of size of the market. However, it is not unlikely that the market participants are not well informed and have irrational behaviour compared to well organize markets. The causes of lack of financial development specially in capital markets are due to certain market imperfection such as transaction costs, lack of timely information, cost of acquiring new information, and possibly greater uncertainty about the future (Taylor, 1956, Goldsmith, 1971).

Mobarek A. and Keasy K. strongly believe that in the emerging markets, speculations are common and large investors can easily speculate the market. In a less organized market without market makers and timely available information, there is always remain a possibility to make profit by large investors and insiders. They also



agree with other analysts to the idea that the lower the market efficiency is, the greater the predictability of stock price changes.

Harvey, also, states in 1993 that stock returns of emerging countries are highly predictable and have low correlation with stock returns of developed countries. He concludes that emerging markets are less efficient than developed markets and that higher return and low risk can be obtained by incorporating emerging market stocks in investors' portfolios.

As mentioned before, the Weak Form Efficient Market Hypothesis tests measures whether past series of share prices or returns can be used to successfully predict future share prices or returns. The empirical investigation of the above tests measures the statistical dependence between price changes. If no dependence is found (price changes are random), then this provides evidence in support of the WFEMH, which implies that no profitable investment trading strategy can be derived based on past prices. On the other hand, if dependence is found, for example, price increases generally followed by price increases in the next period and vice versa, it clearly indicates that this can be the basis of profitable investment rule. That leads to the violation of the assumption of the WFEMH. However, the profitability of any trading rule depends largely on the operating cost (such as brokerage cost, interest cost, trading settlement procedure) and on whether transactions can be made at the exact prices quoted in the market.

Mobarek A. and Keasy K. indicate that results of previous research evidence which are referred to the market of developed economies are generally weak form efficient. That means that successive returns are independent and follow random walk (Fama, 1965). On the other hand, the research findings on the market of developing and less developed countries are controversial. Some of the researchers find evidence of

weak form efficiency and can not reject the random-walk hypothesis in emerging markets (Branes, 1986, Dickinson and Muragu, 1994, Urrutia, 1995, Ojah and Karemera, 1999). Whereas the others find the evidence of non-randomness stock price behavior and reject the weak-form efficiency in the developing and emerging markets (Roux and Gilberson, 1978, Harvey, 1994, Claessens, Dasgupta and Glen, 1995, Poshakwale, 1996 and Nourredine Khaba, 1998). Many analysts assume that this market inefficiency (not weak form efficient) might be due to delay in operations and high transaction cost, thinness of trading and illiquidity in the market.

## **6. THE RANDOM WALK MODEL**

We could re-introduce the concept of the autoregressive process (e.g., an AR(1)), and define

$$y_t = \rho y_{t-1} + e_t$$

In this case,  $e_t$  is assumed to have a mean of zero, a constant variance and zero auto-covariances, and is said to be 'white noise'.

The likeliest range of values for  $\rho$  in conventional economic time series is  $0 < \rho \leq 1$ . Negative values for  $\rho$  led to frequent oscillations in sign, which are not common in economic variables and values greater than unity imply that the process is explosive and that  $y_t$  will tend to grow without limit. If  $\rho=0$ , then  $y_t$  and  $e_t$  exhibit the same stochastic properties.

Thus,  $y_t$  is said to be 'white noise' possessing all the statistical properties of  $e_t$ . A pure random walk is the case where  $\rho = 1$ . If the pure random walk is started, it could be expressed as:

$$y_t = y_{t-1} + e_t$$

This process implies that the best guess regarding the outcome in time  $t$  is the outcome in time  $t-1$  and a random shock. However, if the first difference of  $y_t$ , is taken then:

$$y_t - y_{t-1} = e_t$$

which could be re-written as:

$$\Delta_1 y_t = e_t$$

Thus, taking the first difference of a pure random walk results in a process that is characterised by 'white noise'.

## 7. UNIT ROOT TESTS

How is defined the presence of a unit root? If the equation for a random walk above is returned, then:

$$y_t = \mu + \rho y_{t-1} + e_t$$

If  $y_{t-1}$  is subtracted from both sides of the above equation, an other equation is obtained:

$$y_t - y_{t-1} = \mu + \rho y_{t-1} - y_{t-1} + e_t$$

which can be re-written as:

$$\Delta_1 y_t = \mu + (\rho - 1)y_{t-1} + e_t$$

This equation can be re-expressed as:

$$\Delta_1 y_t = \mu + \gamma y_{t-1} + e_t \quad \text{where} \quad \gamma = \rho - 1$$

If  $\rho=1$ , then  $y_t = \mu + \rho y_{t-1} + e_t$

and it could be re-written as:  $y_t = \mu + y_{t-1} + e_t$

With further re-arrangement the above equation can be written as:

$$y_t - y_{t-1} = \mu + e_t$$

and thus:  $\Delta_1 y_t = \mu + e_t$

If  $\rho=1$  then the series is said to have a unit root. And if  $\rho=1$  this implies that  $\gamma=0$ . Under such circumstances the series is said to be I(1) and requires differencing once to achieve stationarity.

Dickey-Fuller tests use two hypothesis (null and alternative) to evaluate the stationarity of series.

As far the null hypothesis is concerned there are two versions of the same equation:  $y_t = \mu + \rho y_{t-1} + e_t$

and  $\Delta_1 y_t = \mu + \gamma y_{t-1} + e_t$  where  $\gamma = \rho - 1$

The formulation of the null hypothesis is relatively straightforward. This can be expressed as:

$$H_0: \gamma = 0$$

This null implies that there is a unit root present in the data. What about the alternative hypothesis? If a two-tailed test is used (i.e.,  $H_a: \gamma \neq$

0) which allows either  $\gamma > 0$  or  $\gamma < 0$ , then there are some problems. In particular, if  $\gamma > 0$  this implies  $\rho > 1$ . If this is the case, the process generating  $y_t$  is explosive. For this reason, the alternative is expressed only in terms of  $\gamma < 0$  (or  $\rho < 1$ ). This implies that any departures from the null are in the direction of a stationary (or  $I(0)$ ) process that is convergent and not explosive, which is a reasonably plausible assumption in economics. Thus, the alternative is always expressed as:

$$H_a: \gamma < 0$$

This also implies that the test is a one-sided (or left-sided) test and the relevant critical values are all negative. A value for the sample test-statistic less negative than the critical value leads to the non-rejection of the null hypothesis. In other words, the null of a unit root being present in the series cannot be rejected.

## **7.1 THE AUGMENTED DICKEY FULLER TEST**

The simple unit root test described above is valid only if the series is an AR (1) process. If the series is correlated at higher order lags, the assumption of white noise disturbances is violated. The ADF tests use different methods for high – order serial correlation in the series. The ADF tests makes a parametric correction for higher – order correlation by assuming that the  $y$  series follows an  $AR(\rho)$  process and adjusting the test methodology.

The ADF approach controls for higher order correlation by adding lagged difference terms on the dependent variable  $y$  to the right hand side of the regression:

$$\Delta y_t = \mu + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \delta_2 \Delta y_{t-2} + \dots + \delta_p \Delta y_{t-p} + \varepsilon_t$$

This augmented specification is then used to test

$H_0 : \gamma = 0$  (null hypothesis)

$H_1 : \gamma < 0$  (alternative hypothesis)

in this regression. Except from determining the number of different lagged difference terms what must also be decided is whether to include a constant, a constant and a linear trend or neither in the test regression. One approach would be to run the test with both a constant and a linear trend since the other two cases are just special cases of this more general specification. However, including irrelevant regressors in the regression reduces the power of the test, possibly concluding that there is a unit root when in fact there is none. The general principle is to choose a specification that is a plausible description of the data under both the null and alternative hypothesis. If the series seems to contain a trend, both a constant and trend should be included in the test regression. If the series does not exhibit any trend, a constant should be included in the regression, while if the series seems to be fluctuating around a zero mean, neither a constant nor a trend in the test regression should be included.

## **7.2 THE PHILLIPS-PERRON TEST**

Phillips and Perron (1988) propose an alternative (nonparametric) method of controlling for serial correlation when testing for a unit root. The PP method estimates the non-augmented DF test equation, and

modifies the t-ratio of the  $\alpha$  coefficient so that serial correlation does not affect the asymptotic distribution of the test statistic. The PP test is based on the statistic:

$$\tilde{t}_a = t_a(\gamma_0 / f_0)^{1/2} - \frac{T(f_0 - \gamma_0)(se(\tilde{\alpha}))}{2f_0^{1/2}s}$$

Where  $\tilde{\alpha}$  is the estimate, and  $t_a$  the t-ratio of  $\alpha$ ,  $se(\tilde{\alpha})$  is coefficient standard error, and  $s$  is the standard error of the test regression. The remaining term,  $f_0$ , is an estimator of the residual spectrum at frequency zero. There are two choices we make when performing the PP test. First, we must choose whether to include a constant, a constant and a linear time trend, or neither, in the test regression. Second, we have to choose a method for estimating  $f_0$ . E-views programme supports estimators for  $f_0$ .

### **7.3 THE DICKEY-FULLER TEST WITH GLS DETRENDING (DFGLS)**

We may elect to include a constant, or a constant and a linear time trend, in our ADF test regression. For these two cases, ERS (1996) propose a simple modification of the ADF tests in which the data are detrended so that explanatory variables are “taken out” of the data prior to running the test regression.

ERS define a quasi-difference of  $y_t$  that depends on the value  $a$  representing the specific point alternative against which we wish to test the null:

$$d(y_t|a) = \begin{cases} y_t & \text{if } t=1 \\ y_t - ay_{t-1} & \text{if } t > 1 \end{cases}$$

Next, we consider an OLS regression of the quasi-differenced data  $d(y_t|a)$  on the quasi-differenced  $d(x_t|a)$ :

$$d(y_t|a) = d(x_t|a)' \delta(\alpha) + n_t$$

where  $x_t$  contains either a constant, or a constant and trend, and let  $\delta(\alpha)$  be the OLS estimates from this regression.

All that we need now is a value for  $\alpha$ . ERS recommend the use of  $\alpha = \bar{\alpha}$ , where

$$\bar{\alpha} = \begin{cases} 1 - 7/T \\ 1 - 13.5/T \end{cases} \text{ if } x_t = \{1\} \text{ and if } x_t = \{1, t\}$$

We now define the GLS detrended data,  $y_t^d$  using the estimates associated with the  $\bar{\alpha}$ :  $y_t^d \equiv y_t - x_t' \delta(\bar{\alpha})$

Then the DFGLS test involves estimating the standard ADF test equation, after substituting the GLS detrended  $y_t^d$  for the original  $y_t$ :

$$\Delta y_t^d = \alpha y_{t-1}^d + \beta_1 \Delta y_{t-1}^d + \dots + \beta_p y_{t-p}^d + u_t$$

Since the  $y_t^d$  are detrended, we do not include the  $x_t$  in the DFGLS test equation. As with the ADF test, we consider the t-ratio for  $\alpha$  from this test equation.

While the DFGLS t-ratio follows a Dickey-Fuller (no constant) distribution in the constant only case, the asymptotic distribution differs when we include both a constant and a trend.

ERS simulate the critical values of the test statistic in this latter setting for  $T = \{50, 100, 200, \dots\}$ . Thus, the EViews lower tail critical values use the MacKinnon simulations for the constant only case, but are interpolated from the ERS simulated values for the constant and trend case. The null hypothesis is rejected for values that fall below these critical values.



## 7.4 THE NG AND PERRON (NP) TESTS

Ng and Perron (2001) construct four test statistics that are based upon the GLS detrended data  $y_t^d$ . These test statistics are modified forms of Phillips and Perron  $Z_a$  and  $Z_t$  statistics, the Bhargava (1986)  $R_1$  statistic, and the ERS Point Optimal statistic. First, there is the definition of the term:

$$\kappa = \sum_{t=2}^T (y_t^d - 1)^2 / T^2$$

The GLS-detrended modified statistics may then be written as

$$MZ_a^d = (T^{-1}(y_T^d)^2 - f_0)/(2k)$$

$$MZ_t^d = MZ_a^d \times MSB$$

$$MSB^d = (k / f_0)^{1/2}$$

$$MP_T^d = \begin{cases} (\bar{c}^2 k - \bar{c} T^{-1} (y_T^d)^2) / f_0, \\ (\bar{c}^2 k + (1 - \bar{c}) T^{-1} (y_T^d)^2) / f_0 \end{cases} \quad \text{if } x_t = \{1\} \text{ and if } x_t = \{1, t\}$$

$$\text{Where } \bar{c} = \begin{cases} -7 \\ -13.5 \end{cases} \quad \text{if } x_t = \{1\} \text{ and if } x_t = \{1, t\}$$

The NP tests require a specification for  $x_t$  and a choice of method for estimating  $f_0$ .

## **7.5 THE KWIATKOWSKI, PHILLIPS, SCHMIDT, AND SHIN (KPSS) TEST**

The KPSS (1992) test differs from the other unit root tests described in this study. The difference is that the series  $y_t$  is assumed to be (trend) stationary under the null. The KPSS statistic is based on the residuals from the OLS regression of  $y_t$  on the exogenous variables  $x_t$  :

$$y_t = x_t' \delta + u_t$$

The LM statistic is defined as:

$LM = \sum_T S(t)^2 / (T^2 f_0)$  where  $f_0$ , is an estimator of the residual spectrum at frequency zero and where  $S(t)$  is a cumulative residual function:

$S(t) = \sum_{r=1}^t u_r$  based on the residuals  $u_t = y_t - x_t' \delta(0)$ . It is pointed out that the

estimator of  $\delta$  used in this calculation differs from the estimator for  $\delta$  used by GLS detrending since it is based on a regression involving the original data, and not on the quasi-differenced data. To specify the KPSS test, it must be specified the set of exogenous regressors and a method for estimating  $f_0$ .

## **8. UNIT ROOTS BY CAMPBELL, LO AND MACKINLAY**

MacKinlay, Lo and Campbell in their book “The Econometrics of Financial Markets” are referred to the unit root tests as a more recent and more specialised class of tests that are often confused with tests of the random walk hypothesis. They refer to the two hypotheses, the null and the alternative which are

$X_t = \mu + X_{t-1} + \varepsilon_t$  (the null hypothesis) and

$X_t - \mu_t = \phi(X_{t-1} - \mu_{(t-1)}) + \varepsilon_t$  (the alternative hypothesis),  $\phi \in (-1,1)$

where  $\varepsilon_t$  is any zero-mean stationary process.

The unit root is designed to reveal whether  $X_t$  is difference-stationary (the null hypothesis) or trend-stationary (the alternative hypothesis). This distinction rests on whether  $\phi$  is unity, hence the term unit root hypothesis. Under the null hypothesis, any shock to  $X_t$  is said to be permanent since  $E[X_{t+k} | X_t] = \mu k + X_t$  for all  $k > 0$ , and a shock to  $X_t$  will appear in the conditional expectation of all future  $X_{t+k}$ . In contrast, under the alternative hypothesis a shock to  $X_t$  is said to be temporary, since  $E[X_{t+k} | X_t] = \mu(t+k) + \phi^k (X_t - \mu t)$ , and the influence of  $X_t$  on the conditional expectation of future  $X_{t+k}$  diminishes as  $k$  increases.

Because the  $\varepsilon_t$ 's are allowed to be an arbitrary zero-mean stationary process under both the unit root null and alternative hypothesis the focus of the unit root test is not on the predictability of  $X_t$ , as it is under the random walk hypothesis. Even under the null hypothesis the increments of  $X_t$  may be predictable. Despite the fact that the random walk hypothesis is contained in the unit root null hypothesis, it is the permanent/temporary nature of shocks to  $X_t$  that concerns such tests. Finally, what the analysts add is that since there are also nonrandom walk alternatives in the unit root null hypothesis, tests of unit roots are clearly not designed to detect predictability, but are in fact insensitive to it by construction.

## 9. REVIEW OF THE BIBLIOGRAPHY

Chaudhuri k. and Wu Y. (2004) use data from International Finance Corporation's Emerging Market Database (IFC-EMDB). The sample is monthly data from January 1985 to April 2002 with 208 observations and contains U.S. dollar denominated stock-price indexes for the following seventeen countries: Argentina, Brazil, Chile, Colombia, Greece, India, Jordan, Korea, Malaysia, Mexico, Nigeria, Pakistan, Philippines, Taiwan, Thailand, Venezuela, and Zimbabwe. Their primary interest is to test whether stock prices in emerging markets follow random walk or mean reverting process so they first use the Augmented Dickey Fuller and Phillips Perron tests to each country. The model is estimated both with and without a time trend. For the ADF tests, the lag length is optimally chosen using the sequential procedure suggested by Campbell and Perron (1991) with the maximum lag length set to 12, while for the PP tests, the fixed transactional lag is set to 12. They strongly believe that the choice of the lag length can affect the results. Based on the ADF test, the null hypothesis of random walk can be rejected in favor of mean reversion at the 5 percent significance level for only 5 markets out of 17. These markets are Chile, Korea, Philippines, Taiwan and Venezuela. Based on the PP test, the null can be rejected at the 10 percent level for 5 out of 17 markets (Chile, India, Korea, Philippines and Taiwan). Adding the time trend, in both cases, does not seem to improve the power of the test. However, the results suggest that most of the emerging market equity indexes do not have mean reversion. The researchers strongly believe that it is also possible that emerging market equity indexes have slow-speed mean reversion, but the power of the test based on single equation estimation is not sufficient to discriminate it from a random walk process. Based on some other tests

(panel based tests), they document strong evidence of mean reversion which is a different result.

In an other article that they wrote in 2002 (Random walk versus breaking trend in stock prices: Evidence form emerging markets) the two analysts found that, for the same emerging markets, the results of the unit root tests are the following: From the ADF tests without a time trend, the null hypothesis of a random walk can be rejected at the 10% level for Korea, the Philippines and Taiwan. With a time trend, the null can be rejected at the 10% level for Argentina and India and at the 5% for Malaysia. Results from the PP tests provide even weaker evidence against the random walk hypothesis. Overall, their results tend to suggest that there is no significant evidence of mean reversion in emerging-market stock prices. One possible reason for the non-rejection of the random walk hypothesis is the mis-specifications of the deterministic components included as regressors. The analysts assume that the series under investigation is characterised by a fundamental structural change. Failure to account for such a change may have biased the test in favor of the null hypothesis of a random walk.

The primary purpose of the study of Tas O. and Dursunoglu S. (2005) is to test the weak form market efficiency of Istanbul Stock Exchange which is a well known growing emerging market. A random walk is performed for weak form of efficiency. They used data consisting of 30 stocks included in the ISE 30 index covering the period beginning January 1, 1995 through January 1, 2004. The daily returns of these 30 national indexes are examined. They perform the ADF test in order to test the null hypothesis of a unit root and also analyse runs tests. For the ADF tests they use the following regressions :

$$\Delta Y = \beta_1 + \delta Y_{t-i} + a_i \sum_{i=1}^m \Delta Y_{t-i} + \varepsilon_t \text{ and}$$

$$\Delta Y = \beta_1 + r Y_{t-i} + a_i \sum_{i=1}^m \Delta Y_{t-i} + \varepsilon_t$$

Where  $\Delta$  represents first differences and  $Y_i$  is the log of the price index. The length of  $n$  is selected with the Akaike Information Criterion (AIC) and is large enough to achieve a white noise structure in  $\varepsilon_t$ . The null hypothesis is that  $\beta$  equals 0. The null hypothesis is rejected if the pseudo t statistic is larger than the critical value. The results have no drift and no trend model respectively. What they found was that the tests results are not significant for 1%, 5% and 10% parameters. So the  $H_0$  hypothesis is rejected and it shows that stock's regression equations does not consist unit root. Therefore, the hypothesis of randomness of the stock returns is rejected for stock price index changes at all frequencies using both ADF tests. The analysts strongly believe that mean reverting tendency in stock market prices can make the traders who make their living by analysing historical returns of the stocks and using this information to project future returns more "comfortable". This is because they will be able to earn abnormal returns.

Buguk C. and Brorsen W. (2003) tests informational efficiency of the Istanbul Stock Exchange (ISE), an emerging market, by applying more statistical techniques to the composite, financial and industrial indexes for the period of 1992-1999. Among the random walk tests they also use the ADF tests. They take a 396-week time span from 1992 to 1999 using composite, industrial and financial index closing prices from Istanbul Stock Exchange. The weekly prices for all the indexes are taken from the Central Bank of Republic of Turkey data bank. At a 5% significance level, the null hypothesis of a unit root cannot be rejected

except when a linear trend is included in the financial index. Thus, the results indicate nonstationarity, which is necessary condition for a random walk. They also examine the indexes for the presence of a second unit root, applying the ADF tests with the first differences of the series. The results indicate that a second unit root is rejected for all indexes so the first difference of all series under consideration is stationary, which confirms that the series are likely to be  $I(1)$ . Thus the necessary condition for a random walk is met.

The data that Gunduz L. and Omran M. use in their study and presented in International Conference in Economics IV, in Ankara, consist of the weekly stock indexes of Egypt, Israel, Jordan, Morocco and Turkey. The data start from January 1996 until July 2000 (except for Israel because of the availability) and they are obtained from Datastream. They are also expressed in US\$ so to be directly comparable. As far as Israel concerns they include weekly data starting from August 1997 until July 2000. They believe that it was not sensible to exclude it from their analysis as it is one of the most developed emerging market. Gunduz and Omran use the Augmented Dickey Fuller test having the lag lengths determined by Akaike's information criterion. Because of the fact that the ADF tests loses power for sufficiently large values of  $N$  they also use Phillips Perron tests and the modified Dickey Fuller test. ADF and PP results indicate that stock indices from all countries are unable to reject the one unit root hypothesis. Thus, ADF and PP results show that all stock index series are non-stationary in levels. The results of Modified Dickey Fuller test also give similar results. However, they are stationary after the first difference. In other words, they all contain a unit root and indicate that stock prices are unpredictable in the long run.

The data that Cooray A. and Wickremasinghe G. use consist of stock market indices for India, Sri Lanka, Pakistan and Bangladesh. The data are monthly and cover the period from January 1996 to October 2003. All data are obtained from Datastream. Their primary goal is to test weak form efficiency in the above stock markets so they take stock returns. Firstly, they take the log levels of the four stock market indices and they use the four unit root tests Augmented Dickey Fuller, Phillips Perron, Dickey-Fuller Generalised Least Squares and the Elliot, Rothenberg and Stock tests. They found that the stock index of Bangladesh is stationary in levels and at the five per cent level under the DF-GLS and ERS unit root tests. The stock price indices for India and Pakistan show a unit root at the 10% level under the DF-GLS test. For Sri Lanka the series is non-stationary under all four unit root tests providing support for weak-form market efficiency. The previous tests were made including only a constant in the test equation. They also make the tests all over again including a constant and a time trend in the test equation. What they found was that all four stock price indices behave as random walks except that of Bangladesh under the ERS test. Finally, they take the logs of the first differences of the series. The results indicate that all four series are stationary under the ADF, PP and ERS unit root tests. On the other hand, stock returns for India and Pakistan are not stationary under the DF-GLS unit root test.

They conclude that the classical unit root tests support weak form efficiency for all four countries while the DF-GLS and ERS tests do not support weak form efficiency for Bangladesh. Hence, the stock markets of South Asia appear in general to be efficient except in the case of Bangladesh for which the results are mixed.



Worthington A. and Higgs H. (2003) examine the weak form market efficiency of twenty European markets of which sixteen are regarded as developed and the remainder as emerging (Czech, Hungary, Poland and Russia). The data are composed of market value-weighted equity indices for sixteen developed markets and four emerging markets. All data are obtained from Morgan Stanley Capital International (MSCI) and specified in US dollar terms. The end date is 28<sup>th</sup> of May 2003 with AUS, FIN, FRA, GER, GRE, IRE, ITL, NTH, NRW, SPN, SWE and UNK starting on 31<sup>st</sup> December 1987, BEL, DEN and SWI on 31<sup>st</sup> December 1986, POL on 31<sup>st</sup> December 1992, CZH, HGY and RUS on 2<sup>nd</sup> January 1994 and POR on 4<sup>th</sup> of August 1995. Daily data are specified. The researchers use three different unit root tests to test the null hypothesis of a unit root: The Augmented Dickey-Fuller, the Phillips-Perron and the Kwiatkowski, Phillips, Schmidt and Shin test. The ADF and PP t-statistics reject the null hypothesis of a unit root at the .01 level or lower, thereby indicating that all of the return series examined are stationary. As a necessary condition for a random walk, the ADF and PP unit root tests reject the null hypothesis in the case of all twenty emerging and developed markets while the KPSS unit root tests fail to reject the required null with the exception of the Netherlands, Portugal and Poland. Finally, using variance tests they concluded that among the emerging markets, only Hungary satisfies the strictest requirements for a random walk in daily stock returns.

Chang E., Lima E. and Tabak B. take daily closing prices from eleven emerging markets such as Argentina, Brazil, Chile, India, Indonesia, Malaysia, Mexico, the Phillipines, South Korea, Taiwan, Thailand and indices from the United States and Japan, which are included in their study for comparison purposes. Taking data from

January 1992 through December 2002 they use the Augmented Dickey-Fuller tests to find that all return series are stationary. These results are robust to the choice of lags. For most series the first order autocorrelation is significant at 5%. Only for Argentina, Brazil and the US are the first order autocorrelations insignificant.

Most of their methodology is based on variance ratio tests and their remarks are that Asian emerging market indices do not resemble a random walk, while they found the opposite for Latin America with the exception of Chile. For the US and Japan they are not able to reject the Random Walk Hypothesis using the same methodology.

## **10. TESTING EFFICIENCY**

The study seeks evidence of weak form efficient market hypothesis (WFEMH) in less developed emerging markets. Mobarek and Keasy in their research in Dhaka Stock Market in Bangladesh believe that it is very much convenient to test the weak form efficiency of the market rather than semi-strong form and strong-form efficiency. The test of semi strong form and strong form efficiency is very rare in less developed countries because of absence of sufficient data in a convenient form, lack of supervision, structural profile, inadequate regulations and administrative loose in the implication of existing rules. In addition, companies information are released and circulates before the annual report is officially available. Therefore, some reports are mistrusted and is often

result of rumors circulation in the market about the companies. Then the markets moves dramatically for a period of time and becomes a speculation market if not a gamble market. That means that there is a trend of market movement and most of the investors become speculators. Moreover, share price indices data are available and reliable to test the weak form efficiency of the market.

The empirical research on market efficiency can be divided into two analysis: one is technical analysis, which is mainly concerned with testing for availability of exploitable information in past security prices, is widely used in examining the weak form efficient market hypothesis. The other is fundamental analysis, which is based on the assumption that factors other than past security prices are relevant in the determination of the future prices. When testing the WFEMH with technical analysis, one can do two things: determine the existence of predictability using past return series or price information and use technical trading rules to make profits following specific strategies. The aim of the study is to test the former.

## **11. DATA AND METHODOLOGY**

The data we are going to use for our study are stock price indexes from 22 countries which are chosen from the emerging markets organisation. (see [www.emergingmarkets.org](http://www.emergingmarkets.org) and [www.securities.com](http://www.securities.com)). Nowadays, Greece is not included in the list of the emerging markets in contrast to previous publications. We include Greece for comparable purposes and for the obvious reason that it is the country we live in. The indexes are taken from the Bloomberg and their data from Datastream. We chose to take daily, weekly and monthly data from each index. The

main purpose of this study is to see whether the stock prices follow a random walk or not and whether the emerging markets are weak form efficient.

The main reason that these countries have been chosen is that in the last two decades they have shown recent growth and the behaviour of their equity prices has been the focus of much academic research.

## 12. TESTING THE RANDOM WALK HYPOTHESIS

The countries and the stock indexes that are analysed in this study are the following:

<b>COUNTRIES</b>	<b>INDEXES</b>	
<b>CHINA</b>	<b>SHENZHEN SE 100</b>	<b>CHZH100</b>
<b>INDIA</b>	<b>INDIA BSE 30 SENSITIVE</b>	<b>IBOMSEN</b>
<b>INDONESIA</b>	<b>JAKARTA SE COMPOSITE</b>	<b>JAKCOMP</b>
<b>KOREA</b>	<b>KRX100</b>	<b>KRX1001</b>
<b>MALAYSIA</b>	<b>KUALA LUMPUR COMP.DS</b>	<b>KLPCOMZ</b>
<b>PHILIPPINES</b>	<b>PHILIPPINE SE ALL SHARES</b>	<b>PSEALLS</b>
<b>RUSSIA</b>	<b>RUSSIAN RTS INDEX</b>	<b>RSRTSIN</b>
<b>THAILAND</b>	<b>BANGKOK S.E.T.</b>	<b>BNGKSET</b>
<b>TAIWAN</b>	<b>TSEC TAIWAN 50</b>	<b>TAISE50</b>
<b>GREECE</b>	<b>FTASE/ATHEX 20</b>	<b>FTASE20</b>
<b>CZECH</b>	<b>PXGLOBAL INDEX</b>	<b>CZPXGLB</b>
<b>HUNGARY</b>	<b>BUDAPEST(BUX)</b>	<b>BUXINDX</b>

<b>POLAND</b>	<b>WARSAW GENERAL INDEX</b>	<b>POLWIGI</b>
<b>PORTUGAL</b>	<b>PORTUGAL GENERAL PSI</b>	<b>POPSIGN</b>
<b>SLOVENIA</b>	<b>SLOVENIAN EXCH. STOCK (SBI)</b>	<b>SLOESBI</b>
<b>TURKEY</b>	<b>ISE NATIONAL 100</b>	<b>TRKISTB</b>
<b>ARGENTINA</b>	<b>ARGENTINA BOLSA-G</b>	<b>ARGSIBI</b>
<b>BRAZIL</b>	<b>BRAZIL (IBX)</b>	<b>BRIBXIN</b>
<b>CHILE</b>	<b>CHILE GENERAL (IGPA)</b>	<b>IGPAGEN</b>
<b>AFRICA</b>	<b>FTSE/JSE ALL SHARE</b>	<b>JSEOVER</b>
<b>EGYPT</b>	<b>EGYPT HERMES GENERAL</b>	<b>EGHRMGL</b>
<b>ISRAEL</b>	<b>TELAVIV SE GENERAL</b>	<b>ISTGNRL</b>

As mentioned before, the data are daily, weekly and monthly. In the following tables, we show the dates that the data begin to exist for each stock index. As we can see data for most of the indexes begin in the 1980s.

<b>COUNTRIES</b>	<b>DATES</b>		
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>CHINA</b>	<b>2/1/2003- 30/6/2006</b>	<b>3/1/2003- 30/6/2006</b>	<b>1/2/2003- 1/7/2006</b>
<b>INDIA</b>	<b>24/12/1991- 30/6/2006</b>	<b>27/12/1991- 30/6/2006</b>	<b>1/1/1992- 1/7/2006</b>
<b>INDONESIA</b>	<b>4/4/1983- 30/6/2006</b>	<b>8/4/1983- 30/6/2006</b>	<b>1/5/1983- 1/7/2006</b>

<b>KOREA</b>	<b>2/1/2001- 30/6/2006</b>	<b>5/1/2001- 30/6/2006</b>	<b>1/2/2001- 1/7/2006</b>
<b>MALAYSIA</b>	<b>2/1/1986- 30/6/2006</b>	<b>3/1/1986- 30/6/2006</b>	<b>1/2/1986- 1/7/2006</b>
<b>PHILIPPINES</b>	<b>15/11/1996- 30/6/2006</b>	<b>15/11/1996- 30/6/2006</b>	<b>1/12/1996- 1/7/2006</b>
<b>RUSSIA</b>	<b>1/9/1995- 30/6/2006</b>	<b>1/9/1995- 30/6/2006</b>	<b>1/9/1995- 1/7/2006</b>
<b>THAILAND</b>	<b>1/1/1980- 30/6/2006</b>	<b>2/5/1975- 30/6/2006</b>	<b>1/5/1975- 1/7/2006</b>
<b>TAIWAN</b>	<b>15/12/2003- 30/6/2006</b>	<b>19/12/2003- 30/6/2006</b>	<b>1/1/2004- 1/7/2006</b>

<b>COUNTRIES</b>	<b>DATES</b>		
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>GREECE</b>	<b>23/9/1997- 30/6/2006</b>	<b>26/9/1997- 30/6/3006</b>	<b>1/10/1997- 1/7/2006</b>
<b>CZECH</b>	<b>6/4/1995- 30/6/2006</b>	<b>7/4/1995- 30/6/2006</b>	<b>1/5/1995- 1/7/2006</b>
<b>HUNGARY</b>	<b>2/1/1991- 30/6/2006</b>	<b>4/1/1991- 30/6/2006</b>	<b>1/2/1991- 1/7/2006</b>
<b>POLAND</b>	<b>16/4/1991- 30/6/2006</b>	<b>19/4/1991- 30/6/2006</b>	<b>1/5/1991- 1/7/2006</b>
<b>PORTUGAL</b>	<b>5/1/1988- 30/6/2006</b>	<b>8/1/1988- 30/6/2006</b>	<b>1/2/1988- 1/7/2006</b>
<b>SLOVENIA</b>	<b>31/12/1993- 30/6/2006</b>	<b>7/1/1994- 30/6/2006</b>	<b>1/1/1994- 30/6/2006</b>

	<b>30/6/2006</b>	<b>30/6/2006</b>	<b>1/7/2006</b>
<b>TURKEY</b>	<b>4/1/1988- 30/6/2006</b>	<b>8/1/1988- 30/6/2006</b>	<b>1/2/1988- 1/7/2006</b>

<b>COUNTRIES</b>	<b>DATES</b>		
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>AFRICA</b>	<b>30/6/1995- 30/6/2006</b>	<b>30/6/1995- 30/6/2006</b>	<b>1/7/1995- 1/7/2006</b>
<b>EGYPT</b>	<b>3/1/1995- 30/6/2006</b>	<b>6/1/1995- 30/6/2006</b>	<b>1/2/1995- 1/7/2006</b>
<b>ISRAEL</b>	<b>2/1/1984- 30/6/2006</b>	<b>6/1/1984- 30/6/2006</b>	<b>1/1/1984- 1/7/2006</b>

<b>COUNTRIES</b>	<b>DATES</b>		
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>ARGENTINA</b>	<b>30/6/2000- 30/6/2006</b>	<b>30/6/2000- 30/6/2006</b>	<b>1/7/2000- 1/7/2006</b>
<b>BRAZIL</b>	<b>28/12/1995- 30/6/2006</b>	<b>29/12/1995- 30/6/2006</b>	<b>1/1/1996- 1/7/2006</b>
<b>CHILE</b>	<b>2/1/1987- 30/6/2006</b>	<b>2/1/1987- 30/6/2006</b>	<b>1/2/1987- 1/7/2006</b>

We examined the stationarity of the series by using the Augmented Dickey Fuller unit roots test with Schwartz and Akaike criteria and Phillips Perron tests from the E Views program. Specifically, we first created graphs of all the series (see in the Appendix) in order to see whether they seem to contain a trend or not or if they fluctuate around a

zero mean. This has to be done in order to decide whether to include an intercept, a linear trend and an intercept or neither in the test equation. If the series seems to contain a trend, whether it is deterministic or stochastic, we should include both an intercept and a trend in the test equation. If the series does not seem to have any trend but has a non zero mean, we should include an intercept in the equation. Finally, if the series seems to fluctuate around a zero mean, we should include neither an intercept nor a trend in the test equation.

An other approach would be to run all the tests with both an intercept and a linear trend since the other two options are just special cases of this general specification. However, if we include irrelevant regressors we may reduce the power of the test and conclude that there is a unit root when in reality there is none. The basic idea is to choose the best specification so to describe the data under the two hypothesis (null and alternative).

Having the the e-views programme we start to test for unit root. Firstly, we test in level. As anyone can see most of the data give high probabilities at level so in order to achieve stationarity we take the 1<sup>st</sup> differences. In some countries such as Russia, Greece, Czech, Hungary and Argentina we need to take the 2<sup>nd</sup> difference. On the other hand, in Egypt in the monthly data we don't need to take the 1<sup>st</sup> difference but only on the Phillips Perron test.

The results from the testing are the following:



**LEVEL**

<b>CHINA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT</b>	<b>CONSTANT</b>	<b>CONSTANT</b>
		<b>PROBABILITY</b>	
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,2830	0,9397	0,7231
WITH AKAIKE CRITERIA	0,2830	0,5792	0,7231
PHILLIPS PERRON TEST	0,2642	0,9300	0,8002

**1<sup>ST</sup> DIFFERENCE**

<b>CHINA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-33.348	-12.646	-4.857	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0003	
t-statistic	-33.348	-3.777	-4.857	<b>With Akaike criteria</b>
probability	0.0000	0.0038	0.0003	
t-statistic	-33.337	-12.696	-4.857	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0003	

**LEVEL**

<b>INDIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9836	0,9945	0,9888
WITH AKAIKE CRITERIA	0,9799	0,9785	0,9888
PHILLIPS PERRON TEST	0,9884	0,9879	0,9867

**1<sup>ST</sup> DIFFERENCE**

<b>INDIA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-28.333	-25.731	-13.015	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-12.999	-8.336	-8.733	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-56.424	-25.760	-13.014	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>INDONESIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9072	0,9458	0,9126
WITH AKAIKE CRITERIA	0,7682	0,8089	0,9126
PHILLIPS PERRON TEST	0,9276	0,8463	0,8807

**1<sup>ST</sup> DIFFERENCE**

<b>INDONESIA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-64.292	-17.177	-15.449	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-12.476	-13.086	-15.449	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-64.171	-34.760	-15.406	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>KOREA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,5666	0,5324	0,5728
WITH AKAIKE CRITERIA	0,5666	0,6622	0,5728
PHILLIPS PERRON TEST	0,5917	0,5394	0,4612

**1<sup>ST</sup> DIFFERENCE**

<b>KOREA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-37.292	-19.176	-7.687	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-27.645	-19.176	-7.687	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-37.306	-19.052	-7.692	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>MALAYSIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT</b>	<b>CONSTANT</b>	<b>CONSTANT</b>
AUGMENTED Dickey Fuller TEST WITH SCHWARTZ CRITERIA	0,3443	0,3822	0,2224
WITH AKAIKE CRITERIA	0,2742	0,2350	0,1841
PHILLIPS PERRON TEST	0,3525	0,2897	0,2488

**1<sup>ST</sup> DIFFERENCE**

<b>MALAYSIA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-64.357	-30.544	-9.258	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0001	0.0000	0.0000	
t-statistic	-14.109	-8.319	-4.773	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0001	
t-statistic	-64.443	-31.037	-15.409	<b>Phillips Perron tests</b>
probability	0.0001	0.0000	0.0000	

## LEVEL

PHILIPPINES	DAILY	WEEKLY	MONTHLY
INCLUDE IN TEST EQUATION	CONSTANT AND LINEAR TREND	CONSTANT AND LINEAR TREND	CONSTANT AND LINEAR TREND
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,5184	0,5515	0,5880
WITH AKAIKE CRITERIA	0,5456	0,5515	0,3847
PHILLIPS PERRON TEST	0,5322	0,5162	0,5663

## 1<sup>ST</sup> DIFFERENCE

PHILLIPINES				
	DAILY	WEEKLY	MONTHLY	
t-statistic	-42.526	-20.928	-9.114	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-26.551	-20.928	-9.114	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-42.455	-20.928	-9.001	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>RUSSIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9945	0,9979	0,9987
WITH AKAIKE CRITERIA	0,9983	0,9961	0,9329
PHILLIPS PERRON TEST	0,9971	0,9969	0,9990

**1<sup>ST</sup> DIFFERENCE**

<b>RUSSIA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-20.431	-21.241	-12.038	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-10.420	-5.528	-2.497	<b>With Akaike criteria</b>
probability	0.0000	0.0000	<b>0.3287</b>	
t-statistic	-49.273	-21.151	-12.035	<b>Phillips Perron tests</b>
probability	0.0001	0.0000	0.0000	

As we can see, the propability in monthly data is still high so in order to achieve stationarity in this test we take the 2<sup>nd</sup> difference.

### 2<sup>ND</sup> DIFFERENCE

<b>RUSSIA</b>	<b>AUGMENTED DICKEY FULLER WITH AKAIKE CRITERIA</b>	
	t-statistic	probability
monthly	-9.302	0.0000

### LEVEL

<b>THAILAND</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT</b>	<b>CONSTANT</b>	<b>CONSTANT</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,5681	0,5150	0,5074
WITH AKAIKE CRITERIA	0,4302	0,5546	0,3482
PHILLIPS PERRON TEST	0,5480	0,4908	0,4649



1<sup>ST</sup> DIFFERENCE

<b>THAILAND</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-72.436	-25.582	-11.697	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-12.571	-10.319	-4.768	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0001	
t-statistic	-72.780	-39.322	-18.872	<b>Phillips Perron tests</b>
probability	0.0001	0.0000	0.0000	

**LEVEL**

<b>TAIWAN</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,2326	0,2078	0,3757
WITH AKAIKE CRITERIA	0,3580	0,4410	0,3757

PHILLIPS PERRON TEST	0,2370	0,2196	0,3770
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1<sup>ST</sup> DIFFERENCE

TAIWAN				
	DAILY	WEEKLY	MONTHLY	
t-statistic	-25.468	-12.779	-5.854	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-13.857	-8.090	-5.854	
probability	0.0000	0.0000	0.0000	
t-statistic	-25.469	-13.107	-5.884	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

LEVEL

GREECE	DAILY	WEEKLY	MONTHLY
INCLUDE IN TEST EQUATION	CONSTANT	CONSTANT	CONSTANT
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,5063	0,5366	0,5545

WITH AKAIKE CRITERIA	0,6726	0,6233	0,2625
PHILLIPS PERRON TEST	0,5815	0,5617	0,5010

### 1<sup>ST</sup> DIFFERENCE

GREECE				
	DAILY	WEEKLY	MONTHLY	
t-statistic	-41.296	-22.207	-10.420	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-19.875	-16.994	-1.693	<b>With Akaike criteria</b>
probability	0.0000	0.0000	<b>0.4311</b>	
t-statistic	-40.858	-22.245	-10.423	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

As we can see, the propability in monthly data is still high so in order to achieve stationarity in this test we take the 2<sup>nd</sup> difference.

### 2<sup>ND</sup> DIFFERENCE

GREECE	AUGMENTED DICKEY FULLER WITH AKAIKE CRITERIA	
	t-statistic	probability
monthly	-4.129	0.0014

**LEVEL**

<b>CZECH</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9941	0,9952	0,9940
WITH AKAIKE CRITERIA	0,9943	0,9894	0,9092
PHILLIPS PERRON TEST	0,9937	0,9919	0,9915

**1<sup>ST</sup> DIFFERENCE**

<b>CZECH</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-48.111	-13.999	-9.881	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-10.018	-7.944	-2.622	<b>With Akaike criteria</b>
probability	0.0000	0.0000	<b>0.2713</b>	
t-statistic	-48.288	-22.145	-9.803	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

As we can see, the propability in monthly data is still high so in order to achieve stationarity in this test we take the 2<sup>nd</sup> difference.

### 2<sup>ND</sup> DIFFERENCE

<b>CZECH</b>	<b>AUGMENTED DICKEY FULLER WITH AKAIKE CRITERIA</b>	
	t-statistic	probability
monthly	-6.685	0.0000

### LEVEL

<b>HUNGARY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9226	0,9136	0,9100
WITH AKAIKE CRITERIA	0,9442	0,9868	0,2964
PHILLIPS PERRON TEST	0,9090	0,9279	0,9064

## 1<sup>ST</sup> DIFFERENCE

<b>HUNGARY</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-59.628	-26.631	-14.309	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-12.575	-6.912	-3.329	<b>With Akaike criteria</b>
probability	0.0000	0.0000	<b>0.0649</b>	
t-statistic	-59.755	-26.533	-14.316	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

As we can see, the propability in monthly data is still high (greater than 0.05) so in order to achieve stationarity in this test we take the 2<sup>nd</sup> difference.

## 2<sup>ND</sup> DIFFERENCE

<b>HUNGARY</b>	<b>AUGMENTED DICKEY FULLER WITH AKAIKE CRITERIA</b>	
	t-statistic	Probability
monthly	-8.921	0.0000

**LEVEL**

<b>POLAND</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9214	0,9172	0,8693
WITH AKAIKE CRITERIA	0,8455	0,9557	0,8693
PHILLIPS PERRON TEST	0,8756	0,8428	0,8713

**1<sup>ST</sup> DIFFERENCE**

<b>POLAND</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-55.911	-17.093	-13.677	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-40.627	-8.083	-13.677	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-56.290	-27.043	-13.697	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

## LEVEL

<b>PORTUGAL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT</b>	<b>CONSTANT</b>	<b>CONSTANT</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9596	0,9301	0,9250
WITH AKAIKE CRITERIA	0,8619	0,8629	0,8813
PHILLIPS PERRON TEST	0,9229	0,8898	0,8832

## 1<sup>ST</sup> DIFFERENCE

<b>PORTUGAL</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-60.650	-25.208	-12.936	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0001	0.0000	0.0000	
t-statistic	-10.801	-6.855	-7.192	
probability	0.0000	0.0000	0.0000	
t-statistic	-62.684	-26.224	-12.936	<b>Phillips Perron tests</b>
probability	0.0001	0.0000	0.0000	



**LEVEL**

<b>SLOVENIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9035	0,6782	0,8862
WITH AKAIKE CRITERIA	0,8475	0,7465	0,8862
PHILLIPS PERRON TEST	0,8781	0,5943	0,8566

**1<sup>ST</sup> DIFFERENCE**

<b>SLOVENIA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-38.721	-36.101	-11.156	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-16.766	-11.877	-11.156	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-46.965	-36.134	-11.156	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>TURKEY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9538	0,7992	0,9112
WITH AKAIKE CRITERIA	0,8871	0,7131	0,9112
PHILLIPS PERRON TEST	0,9461	0,9190	0,9047

**1<sup>ST</sup> DIFFERENCE**

<b>TURKEY</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-66.564	-8.207	-14.305	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-12.035	-6.425	-8.614	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-66.565	-31.586	-14.333	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>AFRICA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9988	0,9987	0,9985
WITH AKAIKE CRITERIA	0,9987	0,9977	0,9985
PHILLIPS PERRON TEST	0,9985	0,9987	0,9991

**1<sup>ST</sup> DIFFERENCE**

<b>AFRICA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-51.112	-23.109	-11.754	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-11.782	-5.907	-4.411	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0030	

t-statistic	-51.068	-23.099	-11.751	<b>Phillips</b>
probability	0.0000	0.0000	0.0000	<b>Perron tests</b>

### LEVEL

EGUPT	DAILY	WEEKLY	MONTHLY
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT</b>	<b>CONSTANT</b>	<b>CONSTANT</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,5843	0,1266	<b>0,0147</b>
WITH AKAIKE CRITERIA	0,5047	0,1379	<b>0,0147</b>
PHILLIPS PERRON TEST	0,6296	0,5482	0,4103

In Egypt, the propability in ADF in monthly data is low so we don't take the 1st difference. That means that in both criteria we reject the null hypothesis that there is a unit root and the prices are characterised by stationarity.

## 1<sup>ST</sup> DIFFERENCE

<b>EGYPT</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-25.977	-6.371	X	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Propability	0.0000	0.0000	X	
t-statistic	-8.095	-3.428	X	
probability	0.0000	0.010	X	<b>With Akaike criteria</b>
t-statistic	-46.281	-26.079	-7.849	<b>Phillips Perron tests</b>
propability	0.0001	0.0000	0.0000	

## LEVEL

<b>ISRAEL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9125	0,7928	0,8785
WITH AKAIKE CRITERIA	0,7426	0,7269	0,7614
PHILLIPS PERRON TEST	0,9002	0,8475	0,8319

1<sup>ST</sup> DIFFERENCE

<b>ISRAEL</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-71.124	-17.342	-14.887	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-12.837	-14.672	-4.536	
probability	0.0000	0.0000	0.0016	
t-statistic	-71.148	-36.438	-14.832	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>ARGENTINA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,2842	0,3322	0,2313
WITH AKAIKE CRITERIA	0,2183	0,2220	0,2205

PHILLIPS	0,2792	0,3036	0,2553
PERRON TEST			

### 1<sup>ST</sup> DIFFERENCE

<b>ARGENTINA</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-36.696	-15.904	-9.237	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-36.696	-15.904	-2.666	
probability	0.0000	0.0000	<b>0.2540</b>	
t-statistic	-36.847	-15.935	-10.179	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

As we can see, the probability in monthly data is still high so in order to achieve stationarity in this test we take the 2<sup>nd</sup> difference.

### 2<sup>ND</sup> DIFFERENCE

<b>ARGENTINA</b>	<b>AUGMENTED DICKEY FULLER WITH AKAIKE CRITERIA</b>	
	t-statistic	probability
monthly	-6.789	0.0000

## LEVEL

<b>BRAZIL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKEY FULLER TEST WITH SCHWARTZ CRITERIA	0,9916	0,9892	0,9947
WITH AKAIKE CRITERIA	0,9813	0,9741	0,9947
PHILLIPS PERRON TEST	0,9873	0,9876	0,9953

## 1<sup>ST</sup> DIFFERENCE

<b>BRAZIL</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-21.159	-23.931	-11.357	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	
t-statistic	-12.210	-5.450	-11.357	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	



t-statistic	-45.927	-23.941	-11.357	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

**LEVEL**

<b>CHILE</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>INCLUDE IN TEST EQUATION</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>	<b>CONSTANT AND LINEAR TREND</b>
AUGMENTED DICKY FULLER TEST WITH SCHWARTZ CRITERIA	0,9310	0,8866	0,9029
WITH AKAIKE CRITERIA	0,8190	0,8617	0,8200
PHILLIPS PERRON TEST	0,8700	0,8589	0,8587

**1<sup>ST</sup> DIFFERENCE**

<b>CHILE</b>				
	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>	
t-statistic	-54.421	-25.841	-13.092	<b>Augmented Dickey Fuller tests with Schwartz criteria</b>
Probability	0.0000	0.0000	0.0000	

t-statistic	-14.863	-13.526	-13.092	<b>With Akaike criteria</b>
probability	0.0000	0.0000	0.0000	
t-statistic	-56.650	-25.881	-13.015	<b>Phillips Perron tests</b>
probability	0.0000	0.0000	0.0000	

Summarizing the above results:

<b>COUNTRIES</b>	<b>TEST FOR UNIT ROOT</b>		
	<i>LEVEL</i>	<i>1ST DIFFERENCE</i>	<i>2<sup>ND</sup> DIFFERENCE</i>
CHINA	YES	YES	
INDIA	YES	YES	
INDONESIA	YES	YES	
KOREA	YES	YES	
MALAYSIA	YES	YES	
PHILIPPINES	YES	YES	
RUSSIA	YES	YES	YES (ONLY WITH AKAIKE CRITERIA IN MONTHLY DATA)
THAILAND	YES	YES	
TAIWAN	YES	YES	
GREECE	YES	YES	YES (ONLY WITH AKAIKE CRITERIA IN MONTHLY DATA)
CZECH	YES	YES	YES (ONLY WITH AKAIKE CRITERIA IN MONTHLY DATA)
HUNGARY	YES	YES	YES (ONLY WITH AKAIKE CRITERIA IN MONTHLY DATA)
POLAND	YES	YES	
PORTUGAL	YES	YES	
SLOVENIA	YES	YES	

TURKEY	YES	YES	
AFRICA	YES	YES	
EGUPT	YES	YES (ONLY IN PHILLIPS PERRON TEST)	
ISRAEL	YES	YES	
ARGENTINA	YES	YES	YES (ONLY WITH AKAIKE CRITERIA IN MONTHLY DATA)
BRAZIL	YES	YES	
CHILE	YES	YES	

Many analysts such as Chaudhuri, Wu, Buguk, Brorsen, Gunduz, Omran strongly believe that the ADF and the Phillips Perron tests are low power tests and failure to reject the null hypothesis may not be interpreted as decisive evidence against mean reversion. This low power can be seen from the results of this study in the level which the high probabilities show that all countries have unit roots and the prices of all indexes except Egypt follow random walk. That also follows to the conclusion that all emerging markets that we chose to make our analysis are weak form efficient.

In order to see the results more clear and make a thorough analysis, we use some other unit root tests, such as the DF-GLS, the KPPS and the Ng Perron tests, which their utility has been analysed before. We use the DF-GLS test and the Ng Perron tests with both Schwartz and Akaike criteria. Our null hypothesis (Ho) is that there is a unit root so the prices follow a random walk and our alternative hypothesis (H1) is that there is not unit root and the prices are characterised as stationary. Below there are tables of each country with

their data. We write down the t-statistics and also we compare them with the critical values of the significance levels of 1%, 5% and 10%. The stars \*, \*\*, and \*\*\* denote statistical significance at the ten, five, and one percent levels, respectively.

<b>CHINA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-1.4964	0.3076	-1.2499
<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-1.4964	-1.1167	-1.2499
<b>1% level</b>	-2.5669	-2.5777	-2.6240
<b>5% level</b>	-1.9410	-1.9425	-1.9493
<b>10% level</b>	-1.6165	-1.6155	-1.6117

In China, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis that there is a unit root.

<b>INDIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-1.0001	-0.7046	-0.8955
<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-1.0904	-1.2455	-1.3329

<b>1% level</b>	-3.4800	-3.4800	-3.4912
<b>5% level</b>	-2.8900	-2.8900	-2.9560
<b>10% level</b>	-2.5700	-2.5700	-2.6660

As the above table indicates, in India the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>INDONESIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-1.3239	-1.1267	-1.3576
<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-1.7321	-1.6542	-1.5923
<b>1% level</b>	-3.4800	-3.4800	-3.4678
<b>5% level</b>	-2.8900	-2.8900	-2.9144
<b>10% level</b>	-2.5700	-2.5700	-2.6127

As it can be shown from the above table, in Indonesia the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>KOREA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-1.9957	-1.8863	-1.8128

<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-1.9957	-1.6340	-1.8128
<b>1% level</b>	-3.4800	-3.4685	-3.7130
<b>5% level</b>	-2.8900	-2.9130	-3.1420
<b>10% level</b>	-2.5700	-2.6099	-2.8450

As it can be shown from the table, in Korea the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>MALAYSIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-0.0939	-0.0244	-0.4587
<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-0.2029	-0.2944	-0.5603
<b>1% level</b>	-2.5653	-2.5671	-2.5745
<b>5% level</b>	-1.9408	-1.9411	-1.9421
<b>10% level</b>	-1.6166	-1.6165	-1.6158

As it can be shown from the table, in Malaysia the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>PHILIPPINES</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-0.4285	-0.3913	-0.7796
<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-0.4504	-0.4903	-1.1314
<b>1% level</b>	-3.4800	-3.4800	-3.5620
<b>5% level</b>	-2.8900	-2.8900	-3.0150
<b>10% level</b>	-2.5700	-2.5700	-2.7250

As the above table indicates, in Philippines the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>RUSSIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic (based on Schwartz criteria)</b>	-0.3900	-0.1564	-0.1341
<b>DF-GLS t-statistic (based on Akaike criteria)</b>	-0.2005	-0.8054	-1.7368
<b>1% level</b>	-3.4800	-3.4800	-3.5440
<b>5% level</b>	-2.8900	-2.8900	-3.0000
<b>10% level</b>	-2.5700	-2.5700	-2.7100

As the above table shows, in Russia the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>THAILAND</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.6202	-0.7243	-0.8348
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.8772	-0.6399	-1.1038
<b>1% level</b>	-2.5652	-2.5663	-2.5711
<b>5% level</b>	-1.9408	-1.9410	-1.9416
<b>10% level</b>	-1.6166	-1.6165	-1.6161

As the above table indicates, in Thailand the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>TAIWAN</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-2.5486	-2.6385	-2.3825
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-2.3435	-2.3982	-2.3825
<b>1% level</b>	-3.4800	-3.5416	-3.7700
<b>5% level</b>	-2.8900	-2.9980	-3.1900
<b>10% level</b>	-2.5700	-2.7080	-2.8900



As the above table shows, in Taiwan the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>GREECE</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.7064	-0.7524	-0.9699
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.3826	-0.5711	-1.7845*
<b>1% level</b>	-2.5659	-2.5700	-2.5871
<b>5% level</b>	-1.9409	-1.9415	-1.9439
<b>10% level</b>	-1.6166	-1.6162	-1.6147

As the table shows, in Greece the t-statistics of both criteria are greater than the critical values in the 3 levels of significance in daily and weekly data, so we accept the null hypothesis of a unit root. We only reject the null hypothesis of a unit root at the 10% level in monthly data with Akaike criteria.

<b>CZECH</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.0203	-0.2652	-0.1448
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.1006	-0.2652	-1.7565

<b>1% level</b>	-3.4800	-3.4800	-3.5392
<b>5% level</b>	-2.8900	-2.8900	-2.9960
<b>10% level</b>	-2.5700	-2.5700	-2.7060

As the table shows, in Czech the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>HUNGARY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.8198	-0.8910	-0.9961
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.7180	-0.5232	-2.3473
<b>1% level</b>	-3.4800	-3.4800	-3.4780
<b>5% level</b>	-2.8900	-2.8900	-2.9450
<b>10% level</b>	-2.5700	-2.5700	-2.6550

In Hungary, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>POLAND</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-1.4186	-1.4386	-1.6339

<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-1.6979	-1.7747	-1.6339
<b>1% level</b>	-3.4800	-3.4800	-3.4816
<b>5% level</b>	-2.8900	-2.8900	-2.9480
<b>10% level</b>	-2.5700	-2.5700	-2.6580

In Poland, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>PORTUGAL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	0.7952	0.2568	0.2358
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	0.0907	-0.1157	0.0049
<b>1% level</b>	-2.5654	-2.5673	-2.5754
<b>5% level</b>	-1.9408	-1.9411	-1.9422
<b>10% level</b>	-1.6166	-1.6164	-1.6157

In Portugal, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>SLOVENIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.8144	-1.6816	-0.9919
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-1.0102	-1.6274	-0.9919
<b>1% level</b>	-3.4800	-3.4800	-3.5200
<b>5% level</b>	-2.8900	-2.8900	-2.9800
<b>10% level</b>	-2.5700	-2.5700	-2.6900

In Slovenia, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>TURKEY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.5278	-1.2277	-0.9023
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.9137	-1.4345	-1.4309
<b>1% level</b>	-3.4800	-3.4800	-3.4621
<b>5% level</b>	-2.8900	-2.8900	-2.9258
<b>10% level</b>	-2.5700	-2.5700	-2.6326

In Turkey, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>AFRICA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.0587	-0.0931	-0.2495
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.1537	-0.6256	-0.2495
<b>1% level</b>	-3.4800	-3.4800	-3.5416
<b>5% level</b>	-2.8900	-2.8900	-2.9980
<b>10% level</b>	-2.5700	-2.5700	-2.7080

In Africa, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>EGYPT</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.6988	-1.8928*	-3.0477***
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.8890	-1.8304*	-3.0477***
<b>1% level</b>	-2.5657	-2.5689	-2.5825
<b>5% level</b>	-1.9409	-1.9413	-1.9432
<b>10% level</b>	-1.6166	-1.6163	-1.6151

In Egypt, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance in daily data, so we accept the null hypothesis of a unit root. On the other hand, we reject the null hypothesis of a unit root at the 10% level in weekly data. In monthly data, taking this

test we found that the null hypothesis of a unit root is rejected for 1%, 5% and 10% parameters.

<b>ISRAEL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.8121	-1.2131	-1.0651
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-1.3014	-1.3492	-1.5077
<b>1% level</b>	-3.4800	-3.4800	-3.4670
<b>5% level</b>	-2.8900	-2.8900	-2.9160
<b>10% level</b>	-2.5700	-2.5700	-2.6155

In Israel, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>ARGENTINA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-1.0477	-1.1105	-1.7266
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-1.1400	-1.2498	-0.9519
<b>1% level</b>	-3.4800	-3.4713	-3.6864
<b>5% level</b>	-2.8900	-2.9074	-3.1196
<b>10% level</b>	-2.5700	-2.6004	-2.8240

In Argentina, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>BRAZIL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-0.2663	-0.3653	-0.2753
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-0.5653	-1.0224	-0.2753
<b>1% level</b>	-3.4800	-3.4800	-3.5488
<b>5% level</b>	-2.8900	-2.8900	-3.0040
<b>10% level</b>	-2.5700	-2.5700	-2.7140

In Brazil, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

<b>CHILE</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>DF-GLS t-statistic(based on Schwartz criteria)</b>	-1.1690	-1.3816	-1.6053
<b>DF-GLS t-statistic(based on Akaike criteria)</b>	-1.5994	-1.4777	-1.6053
<b>1% level</b>	-3.4800	-3.4800	-3.4632
<b>5% level</b>	-2.8900	-2.8900	-2.9236
<b>10% level</b>	-2.5700	-2.5700	-2.6288

In Chile, the t-statistics of both criteria are greater than the critical values in the 3 levels of significance, so we accept the null hypothesis of a unit root.

Using the the DF-GLS test we realise that the prices in most of the countries follow random walk. For that reason, we can not absolutely trust this test so we continue the testing using the Ng Perron test for all the countries. We make tables for each data and the results are the following:

<b>CHINA DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-7.1649*	-1.4923	0.2082**	4.7117
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-7.1649*	-1.4923	0.2082**	4.7117
<b>1% level</b>	-13.800	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

As the above table indicates, in daily data comparing the modified statistic Mza with the critical values we reject the null hypothesis of a unit root at the 10% level in both criteria. We also reject the null hypothesis at the 5% and at 10% in the modified statistic MSB. In the other cases, we accept the null hypothesis of a unit root.



<b>CHINA WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	0.9379	0.3187	0.3398	14.1273
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-9.9695**	-1.8059*	0.1811***	4.0147*
<b>1% level</b>	-13.800	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In weekly data we reject the null hypothesis at the 5% and 10% level in the modified statistic Mza, at the 10% level in Mzt, at the 5% and 10% level in MSB, and we also reject in 10% level in the parameter Mpt. The rejections of the null hypothesis are only in the Akaike criteria.

<b>CHINA MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-7.2387*	-1.5518	0.2143**	4.5387

<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-7.2387*	-1.5518	0.2143**	4.5387
<b>1% level</b>	-13.800	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In monthly data, we reject the null hypothesis of the unit root at the 10% level in the modified statistic Mza and we also reject it at the 5% and 10% percent in the MSB, in both criteria. In the other cases we accept the null hypothesis.

<b>INDIA DAILY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-3.8026	-1.0378	0.2729	19.8595
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-4.5050	-1.1698	0.2596	17.9782
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>INDIA WEEKLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-2.2667	-0.7040	0.3105	25.7287
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-5.0674	-1.2681	0.2502	16.7033
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>INDIA MONTHLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-3.1277	-0.8896	0.2844	21.8651
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-4.8050	-1.2120	0.2522	17.1978
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>INDONESIA DAILY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-5.4996	-1.3518	0.2458	15.8742
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-8.8544	-1.8358	0.2073	11.2954
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>INDONESIA WEEKLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-4.1988	-1.1251	0.2679	18.8379

<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-8.1243	-1.7409	0.2142	12.0470
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>INDONESIA MONTHLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-5.5545	-1.3445	0.2420	15.7220
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-7.3294	-1.6141	0.2202	13.0152
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>KOREA DAILY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-8.2336	-1.9906	0.2417	11.1955
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-8.2336	-1.9906	0.2417	11.1955
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>KOREA WEEKLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-7.3152	-1.8628	0.2546	12.5590
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-5.5851	-1.6149	0.2891	16.1923

<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>KOREA MONTHLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-6.0165	-1.6897	0.2808	15.1018
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-6.0165	-1.6897	0.2808	15.1018
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>MALAYSIA DAILY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.1319	0.0950	0.7205	31.4809
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.3126	-0.2067	0.6612	26.5078
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>MALAYSIA WEEKLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-0.0310	-0.0236	0.7594	35.0019
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-0.4892	-0.3005	0.6142	22.8993
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500



In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>MALAYSIA MONTHLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic (based on Schwartz criteria)</b>	-0.8316	-0.4517	0.5432	18.0094
<b>Ng-Perron t-statistic (based on Akaike criteria)</b>	-1.2716	-0.6154	0.4840	14.2965
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>PHILIPPINES DAILY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.8666	-0.4506	0.5199	56.9701
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.9299	-0.4754	0.5112	55.0868

<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>PHILIPPINES WEEKLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.7141	-0.3846	0.5385	61.3402
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.9995	-0.4988	0.4988	52.6264
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>PHILIPPINES MONTHLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.6269	-0.6908	0.4246	38.8013

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-3.0085	-1.0436	0.3469	25.8986
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>RUSSIA DAILY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.4872	-0.4844	0.3257	29.2557
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.6878	-0.2458	0.3574	35.2313
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>RUSSIA WEEKLY</b>	<b>Mza</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.4192	-0.1554	0.3707	37.8505
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-2.8647	-0.8212	0.2866	22.6364
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>RUSSIA MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.3253	-0.1191	0.3661	37.5725
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-87.5371***	-6.4908***	0.0741***	1.5405***
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we reject the null hypothesis of a unit root at all levels of significance. This happens only in the Akaike criteria because in the Schwartz criteria we accept the null hypothesis at all levels.

<b>THAILAND DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.1104	-0.6216	0.5598	17.4853
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-1.9477	-0.8830	0.4533	11.4665
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>THAILAND WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.4833	-0.7283	0.4910	13.8071
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-1.2922	-0.6660	0.5153	15.2085

<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>THAILAND MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.8224	-0.8313	0.4561	11.8824
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-3.4044	-1.2059	0.3542	7.1651
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>TAIWAN DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-12.9551	-2.5252	0.1949	7.1495

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-11.2791	-2.3535	0.2086	8.1929
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>TAIWAN WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-12.7228	-2.5139	0.1976	7.2092
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-12.0544	-2.4466	0.2029	7.6063
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>TAIWAN MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-8.1660	-2.0074	0.2458	11.1963
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-8.1660	-2.0074	0.2458	11.1963
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>GREECE DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.5988	-0.7533	0.4711	12.9075
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.9956	-0.5482	0.5506	17.6296
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500



In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>GREECE WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.5718	-0.7500	0.4772	13.1428
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-1.0425	-0.5710	0.5477	17.3172
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>GREECE MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.1973	-0.9425	0.4289	10.3430
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-9.6880**	-2.1441**	0.2213**	2.7532**
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800

<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In monthly data we reject the null hypothesis at the 5% and at 10% in all cases in the Akaike criteria. In Schwartz criteria we accept the null hypothesis.

<b>CZECH DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.0754	-0.0423	0.5611	71.1956
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.5045	-0.2512	0.4979	56.0485
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>CZECH WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.7775	-0.3634	0.4674	49.3736

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.7775	-0.3634	0.4674	49.3736
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>CZECH MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.2221	-0.1224	0.5513	67.8395
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-44.0740***	-4.6203***	0.1048***	2.4530***
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data, we reject the null hypothesis of a unit root at all levels in Akaike criteria. In Schwartz criteria we accept the null hypothesis.

<b>HUNGARY DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.4658	-0.8337	0.3381	27.1585
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-2.2842	-0.7888	0.3453	28.3353
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>HUNGARY WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.7030	-0.8892	0.3290	25.7347
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-1.9250	-0.6945	0.3607	30.9469
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>HUNGARY MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-3.1141	-0.9781	0.3141	23.5407
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-57.573***	-5.2765***	0.0916***	2.0041***
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data, we reject the null hypothesis of a unit root at all levels in Akaike criteria. In Schwartz criteria we accept the null hypothesis.

<b>POLAND DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-5.7382	-1.4299	0.2492	15.4828
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-8.0942	-1.7741	0.2191	11.9778
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300

<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>POLAND WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-5.7529	-1.4342	0.2493	15.4530
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-8.7703	-1.8646	0.2126	11.2377
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>POLAND MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-6.9088	-1.6062	0.2324	13.5012

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-6.9088	-1.6062	0.2324	13.5012
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>PORTUGAL DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	1.1424	0.7931	0.6942	38.3198
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	0.1563	0.0777	0.4970	19.6462
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>PORTUGAL WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	0.4714	0.2549	0.5407	23.2506
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.1427	0.0662	0.4638	17.1057
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>PORTUGAL MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	0.4583	0.2435	0.5312	22.6027
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	0.2147	0.1069	0.4981	19.8700
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500



In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>SLOVENIA DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.8650	-0.8184	0.4388	39.1774
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-2.6642	-1.0223	0.3837	29.9575
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>SLOVENIA WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-5.9500	-1.6787	0.2821	15.2716
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-5.6593	-1.6350	0.2889	16.0125

<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>SLOVENIA MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.4181	-0.9698	0.4010	32.5136
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-2.4181	-0.9698	0.4010	32.5136
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>TURKEY DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.3683	-0.5277	0.3857	35.7072

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-2.9435	-0.9368	0.3182	24.3126
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>TURKEY WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-4.3031	-1.2123	0.2817	19.0565
<b>Ng-Perron t-statistic(based on Schwarz criteria)</b>	-5.7877	-1.4669	0.2534	15.4216
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>TURKEY MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.7110	-0.8883	0.3276	25.6001
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-5.2556	-1.3848	0.2635	16.5540
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>AFRICA DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.1679	-0.0587	0.3498	36.2049
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.7158	-0.2351	0.3285	31.9237
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800

<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700
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In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>AFRICA WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.2668	-0.0920	0.3451	35.2622
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-2.4915	-0.6951	0.2790	23.0478
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>AFRICA MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.7342	-0.2355	0.3207	30.9708

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.7342	-0.2355	0.3207	30.9708
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>EGYPT DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-1.2732	-0.7134	0.5603	16.7876
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-1.8174	-0.8791	0.4837	12.5123
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>EGYPT WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-10.0572**	-2.2098**	0.2197**	2.5674**
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-9.6571**	-2.1641**	0.2241**	2.6706**
<b>1% level</b>	-13.8000	-2.5800	0.1740	1.7800
<b>5% level</b>	-8.1000	-1.9800	0.2330	3.1700
<b>10% level</b>	-5.7000	-1.6200	0.2750	4.4500

In weekly data we reject the null hypothesis of a unit root in all cases at the levels of 5% and 10% in both criteria.

We don't take the Ng Perron test in monthly data because it gives very high numbers which cannot be compared with the critical values. (see Appendix)

<b>ISRAEL DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.4654	-0.8187	0.3321	26.7137
<b>Ng-Perron t-statistic(based on Akaike)</b>	-4.7000	-1.2774	0.2718	17.8936

<b>criteria)</b>				
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>ISRAEL WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-4.2360	-1.1913	0.2812	19.1946
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-4.9258	-1.3154	0.2670	17.3062
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>ISRAEL MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz</b>	-3.6262	-1.0534	0.2904	20.9844



<b>criteria)</b>				
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-10.7435	-2.1035	0.1958	9.5331
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>ARGENTINA DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-2.7986	-1.0510	0.3755	28.7555
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-3.3387	-1.1680	0.3498	24.9533
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>ARGENTINA WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-3.0060	-1.0961	0.3646	27.1322
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-3.7996	-1.2590	0.3313	22.4041
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>ARGENTINA MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-5.3937	-1.5407	0.2856	16.5843
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-10.1678	-2.1775	0.2141	9.3214
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>BRAZIL DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.5566	-0.2368	0.4255	44.5794
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-1.7132	-0.6120	0.3572	31.4171
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>BRAZIL WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.9065	-0.3639	0.4014	39.6138
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-4.1375	-1.1625	0.2809	19.4059
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300

<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>BRAZIL MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-0.6212	-0.2544	0.4095	41.9601
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-0.6212	-0.2544	0.4095	41.9601
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>CHILE DAILY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-3.3180	-1.1763	0.3545	25.3127

<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-6.0472	-1.6511	0.2730	15.0125
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In daily data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>CHILE WEEKLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-4.4986	-1.4019	0.3116	19.5283
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-5.2688	-1.5314	0.2906	16.9867
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In weekly data we accept the null hypothesis of a unit root in all cases in both criteria.

<b>CHILE MONTHLY</b>	<b>MZa</b>	<b>MZt</b>	<b>MSB</b>	<b>MPT</b>
<b>Ng-Perron t-statistic(based on Schwartz criteria)</b>	-5.8350	-1.6159	0.2769	15.4930
<b>Ng-Perron t-statistic(based on Akaike criteria)</b>	-5.8350	-1.6159	0.2769	15.4930
<b>1% level</b>	-23.8000	-3.4200	0.1430	4.0300
<b>5% level</b>	-17.3000	-2.9100	0.1680	5.4800
<b>10% level</b>	-14.2000	-2.6200	0.1850	6.6700

In monthly data we accept the null hypothesis of a unit root in all cases in both criteria.

The KPSS test is an other test where the null hypothesis (Ho) is that there is no unit root and the prices are characterised by stationarity and the alternative hypothesis (H1) is that there is a unit root. If the t-statistic is lower than the critical values then we accept that null hypothesis and we reject it when it is greater. We put the stars \*, \*\*, \*\*\* which denote the significant levels 10%, 5% and 1% when we reject the null hypothesis.

<b>CHINA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski- Phillips-Schmidt- Shin test statistic</b>	0.4476*	0.3154	0.1736
<b>1% level</b>	0.7390	0.7390	0.7390
<b>5% level</b>	0.4630	0.4630	0.4630
<b>10% level</b>	0.3470	0.3470	0.3470

In daily data we reject the null hypothesis of a non-unit root at the 10% level. In weekly and in monthly data we accept the null hypothesis of a non-unit root at all levels.

<b>INDIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.8226***	0.3739***	0.2184***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In India we reject the null hypothesis of a non-unit root in all data because the KPSS t-statistics are greater than the critical values in all cases.

<b>INDONESIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.4731***	0.2240***	0.1184
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Indonesia we reject the null hypothesis of a non-unit root in daily and weekly data because the KPSS t-statistics are greater than the critical values and we accept the null hypothesis in monthly data at all levels.

<b>KOREA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.6058***	0.2817***	0.1744**
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Korea we only accept the null hypothesis of a non-unit root at the level of 1% in monthly data and we reject it in the other cases.

<b>MALAYSIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	4.2902***	1.9472***	1.0165***
<b>1% level</b>	0.7390	0.7390	0.7390
<b>5% level</b>	0.4630	0.4630	0.4630
<b>10% level</b>	0.3470	0.3470	0.3470

In Malaysia we reject the null hypothesis of a non-unit root in all data.

<b>PHILLIPINES</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.9737***	0.4802***	0.2642***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Philippines we reject the null hypothesis of a non-unit root in all data.



<b>RUSSIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	1.0672***	0.5169***	0.2753***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Russia we reject the null hypothesis of a non-unit root in all data.

<b>THAILAND</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	3.0470***	1.9664***	0.9643***
<b>1% level</b>	0.7390	0.7390	0.7390
<b>5% level</b>	0.4630	0.4630	0.4630
<b>10% level</b>	0.3470	0.3470	0.3470

In Thailand we reject the null hypothesis of a non-unit root in all data.

<b>TAIWAN</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.4010***	0.2132**	0.1608**
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Taiwan we accept the null hypothesis at the 1% level in monthly and in weekly data. In the other levels of these data and in all levels of daily data we reject the hypothesis.

<b>GREECE</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.9771***	0.4483*	0.2200
<b>1% level</b>	0.7390	0.7390	0.7390
<b>5% level</b>	0.4630	0.4630	0.4630
<b>10% level</b>	0.3470	0.3470	0.3470

In Greece we reject the null hypothesis of a non-unit root in weekly data at the 10%, we reject it in daily data and we accept it in all levels in monthly data.

<b>CZECH</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	1.3502***	0.6316***	0.3028***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Czech we reject the null hypothesis of a non-unit root in all data.

<b>HUNGARY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.6756***	0.3129***	0.1820**
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Hungary we accept the null hypothesis of a non-unit root at the 1% level in monthly data and we reject it in the other cases.

<b>POLAND</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.5421***	0.2624***	0.1524**
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Poland we accept the null hypothesis of a non-unit root at the 1% level in monthly data and we reject it in the other cases.

<b>PORTUGAL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	6.3960***	2.8849***	1.4552***
<b>1% level</b>	0.7390	0.7390	0.7390
<b>5% level</b>	0.4630	0.4630	0.4630
<b>10% level</b>	0.3470	0.3470	0.3470

In Portugal we reject the null hypothesis of a non-unit root in all data.

<b>SLOVENIA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	1.4532***	0.5871***	0.3125***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Slovenia we reject the null hypothesis of a non-unit root in all data.

<b>TURKEY</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	1.3254***	0.6247***	0.3419***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Turkey we reject the null hypothesis of a non-unit root in all data.

<b>AFRICA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.8027***	0.3957***	0.2150**
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Africa we accept the null hypothesis of a non-unit root only in monthly data at the 1% level. In the other data we reject the null hypothesis.

<b>EGYPT</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	4.2921***	2.0348***	0.9599***
<b>1% level</b>	0.7390	0.7390	0.7390
<b>5% level</b>	0.4630	0.4630	0.4630
<b>10% level</b>	0.3470	0.3470	0.3470

In Egypt we reject the null hypothesis of a non-unit root in all data.

<b>ISRAEL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.9262***	0.4337***	0.2449***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Israel we reject the null hypothesis of a non-unit root in all data.

<b>ARGENTINA</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.8060***	0.3924***	0.2459***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Argentina we reject the null hypothesis of a non-unit root in all data.

<b>BRAZIL</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	1.1374***	0.5335***	0.2726***
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Brazil we reject the null hypothesis of a non-unit root in all data.

<b>CHILE</b>	<b>DAILY</b>	<b>WEEKLY</b>	<b>MONTHLY</b>
<b>Kwiatkowski-Phillips-Schmidt-Shin test statistic</b>	0.7712***	0.3444***	0.1832**
<b>1% level</b>	0.2160	0.2160	0.2160
<b>5% level</b>	0.1460	0.1460	0.1460
<b>10% level</b>	0.1190	0.1190	0.1190

In Chile's monthly data, we accept the null hypothesis of a non-unit root at the 1% level.

### 13. CONCLUSIONS

Using all the unit root tests we conclude to the following:

We use the ADF test and the PP to test in level for daily, weekly and monthly data of China and we also take the 1<sup>st</sup> difference to achieve stationarity. Using the DF-GLS test we accept the null hypothesis of a unit root in both criteria in all data. In the Ng Perron test the null hypothesis of a unit root is rejected at the level of 10% in both criteria in daily data, at the 5% and 10% level in weekly data only in the Akaike criteria and at the 10% level in both criteria in monthly data. As far as the KPSS test concerns the null hypothesis of a non unit root is rejected at the 10% level in daily data and it is accepted in weekly and in monthly data.

**Under the ADF and the PP tests we find that the index prices of China are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow random walk with the exception of daily and monthly data which do not follow random walk at the 10% significance level and for 5% and 10% in weekly data. On the other hand the KPSS test shows that weekly and monthly prices do not follow random walk but the daily prices follow random walk in the significance level of 10%.**

**We can see how these two tests (Ng Perron and the KPSS tests) indicate different results. The last test strongly indicates the non randomness for all levels.**

In the daily data of India, we take the 1<sup>st</sup> difference of both tests (ADF and PP) to achieve stationarity. In the DF-GLS test we accept the null hypothesis of a unit root in both criteria and the same happens with

the Ng Perron test. In the weekly and monthly data we follow the same process for the ADF and PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria. In the KPSS test we reject the null hypothesis of a non unit root at all levels.

**Under the ADF and the PP tests we find that the index prices of India are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of India follow random walk. That exists in all data daily weekly and monthly.**

In the daily data of Indonesia we take the 1<sup>st</sup> difference after the high probabilities that the test in level give in the ADF and in the PP tests. In the DF-GLS test we accept the null hypothesis of a unit root in both criteria and we do the same for the Ng Perron test. As far as the KPSS test concerns we reject the null hypothesis of a non unit root. The exact results we have in the weekly and monthly data with the exception that in monthly data in the KPSS test we accept the null hypothesis of a non unit root at all levels.

**The ADF and PP tests show that the index prices of Indonesia are not-stationary in levels. On the other hand, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow a random walk as far as the daily and weekly data concern. In monthly data despite the fact that all other tests show non stationarity the KPSS test, for all the parameters, shows that the prices do not follow random walk. That means that in monthly prices the KPSS test proves the opposite from the other tests.**



In the daily data of Korea we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS test we accept the null hypothesis of a unit root in both criteria and we do the same thing with the Ng Perron test. In the KPSS test we reject the null hypothesis of a non unit root at all levels. The same results we find in the weekly and monthly data in all tests. The only difference is in monthly data where we accept the null hypothesis of a non unit root at the level of 1%.

**The ADF and PP tests show that the prices of Korea are non-stationary in levels. On the other hand, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow a random walk as far as the daily and weekly data concern. In monthly data despite the fact that all other tests show non stationarity the KPSS test for the significance level 1% shows that the monthly prices do not follow random walk.**

In the daily data of Malaysia we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Using the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Malaysia are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of Malaysia follow random walk. That exists in all data daily weekly and monthly.**

In the daily data of Philippines we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Using the unit root tests in the country's weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Philippines are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Doing the other tests such as the DF-GLS, the KPSS test and the Ng Perron tests which have more predictive power we find that the prices of Philippines follow random walk. That exists in all data daily weekly and monthly.**

In the daily and weekly data of Russia we take the 1<sup>st</sup> difference to achieve stationarity in both criteria. On the other hand in monthly data we have to take the 2<sup>nd</sup> difference in Akaike criteria because the propability still remains in high level. In the DF-GLS test we accept the null hypothesis of a unit root in both criteria in all data and in the Ng Perron test we do the same thing. The only difference is that in monthly data we reject the null hypothesis of a unit root at all levels in the Akaike criteria. As far as the KPSS test concerns we reject the null hypothesis of a non unit root in all data.

**Under the ADF and PP tests the index price of Russia are characterised by non-stationarity. On the other hand if we take the 1<sup>st</sup> difference we find that the prices are stationary. In the monthly data taking the first differences is not enough and to achieve stationarity the second differences are taken. Based on the other tests**

**the prices follow a random walk with the exception of the monthly prices in the Ng Perron test, where at all the significance levels, they do not follow random walk. This happens only if we take the test with the Akaike criteria. The Schwartz criteria in all cases leads us to accept that prices are characterised by random walk.**

In the daily data of Thailand we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Taking the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Thailand are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of Thailand follow random walk. That exists in all data daily weekly and monthly.**

In the daily data of Taiwan we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. The same results we have in weekly and monthly data with the exception of the KPSS test where we accept the null hypothesis of a non unit root at the 1% level.

**The ADF and PP tests show that the index prices of Taiwan are not-stationary in levels. On the other hand, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow a random walk as far as**

**the daily and weekly data concern. In monthly data despite the fact that all other tests show non stationarity the KPSS test for the significance level of 1% shows that the monthly prices do not follow random walk.**

In the data of Greece we take all the tests beginning with the ADF tests and the PP tests. We find high probabilities so we try to take the 1<sup>st</sup> difference to achieve stationarity. In the DF-GLS test in daily and weekly data we accept the null hypothesis of a unit root. We reject it only at the 10% level in monthly data with the Akaike criteria. In the Ng Perron tests in daily and weekly data we accept the null hypothesis and we reject it at the 5% and at 10% in the Akaike criteria in monthly data. On the other hand, in the Schwartz criteria we accept the hypothesis. As far the KPSS test concerns we reject the null hypothesis of a non unit root in daily data, in weekly data at the 10% level and we accept it in all levels in monthly data.

**The ADF and PP tests show that the prices of Greece are not stationary in level. So we have to take the first differences to achieve stationarity. That means that the data contain unit root. Using the other tests we find that monthly prices do not follow random walk at the 10% significance level in the Akaike criteria in the DF-GLS test and at 5% and 10% in the Ng Perron test. The KPSS tests accepts random walk for daily data and for 10% significance level for the weekly data. On the other hand, monthly prices do not follow random walk. The common result of these tests is that the monthly prices do not follow random walk but in different significance levels each time.**

In the daily and weekly data of Czech we take the 1<sup>st</sup> difference to achieve stationarity in both criteria. On the other hand in monthly data we have to take the 2<sup>nd</sup> difference in Akaike criteria because the probability still remains in high level. In the DF-GLS test we accept the null hypothesis of a unit root in both criteria in all data and in the Ng Perron test we only reject the null hypothesis of a unit root in monthly data. This happens only in the Akaike criteria. In Schwartz criteria we accept the hypothesis. In KPSS test we reject the null hypothesis of a non-unit root in all data.

**Under the ADF and PP tests the prices of Czech are characterised by non-stationarity. On the other hand, if we take the 1<sup>st</sup> difference we find that they become stationary. In the monthly data taking the first differences is not enough and to achieve stationarity the second differences are taken. Based on the other tests the prices follow a random walk in the exception of the monthly prices in the Ng Perron test, where at all significance levels, they do not follow random walk. This happens only if we take the test with the Akaike criteria. The Schwartz criteria in all cases leads us to accept that prices are characterised by random walk.**

In the daily and weekly data of Hungary we take the 1<sup>st</sup> difference to achieve stationarity in both criteria. On the other hand in monthly data we have to take the 2<sup>nd</sup> difference in Akaike criteria because the propability still remains in high level. In the DF-GLS test we accept the null hypothesis of a unit root in both criteria. In the Ng Perron test we accept the null hypothesis in both daily and weekly data and we reject it in monthly data in Akaike criteria. The opposite happens to the Schwartz criteria where there is an acceptance of a unit root. In the KPSS test we

reject the null hypothesis in daily and weekly data and we accept it at the 1% level in monthly data.

**Under the ADF and PP tests the prices of Hungary are characterised by non-stationarity. On the other hand if we take the 1<sup>st</sup> difference we find that they are stationary. In the monthly data taking the first differences is not enough and to achieve stationarity the second differences are taken. Based on the other tests the prices follow a random walk with the exception of the monthly prices in the Ng Perron test, where at all significance levels, they do not follow random walk. This happens only if we take the test with the Akaike criteria. The Schwartz criteria in all cases leads us to accept that prices are characterised by random walk. In the KPSS test we accept that the prices do not follow random walk only when we refer to the monthly prices and for 1% significance level. The common evidence from the above is that the Ng Perron and the KPSS tests indicate that the monthly prices do not follow random walk for 1% significance level. The KPSS test indicates and the other levels too.**

In the data of Poland we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria in all data. In the KPSS test we only accept the null hypothesis of a non-unit root at the 1% level in monthly data and we reject it in the other cases.

**The ADF and PP tests show that the prices of Poland are non-stationary in levels. On the other hand, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow a random walk as far as the daily and weekly data concern. In monthly data despite the fact that all other tests show non stationarity the KPSS test for the significance**

**level of 1% shows that the monthly prices do not follow random walk.**

In the daily data of Portugal we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Taking the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Portugal are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS test and the Ng Perron tests which have more predictive power we find that the prices of Portugal follow random walk. That exists in all data daily, weekly and monthly.**

In the daily data of Slovenia we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Taking the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Slovenia are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of Slovenia follow random walk. That exists in all data daily, weekly and monthly.**

In the daily data of Turkey we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Taking the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Turkey are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of Turkey follow random walk. That exists in all data daily, weekly and monthly.**

In the daily data of Africa we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria. The same results are found in both weekly and monthly data. In the KPSS test we accept the null hypothesis of a non-unit root only in monthly data at the 1% level. In the other data we reject the null hypothesis.

**The ADF and PP tests show that the index prices of Africa are not-stationary in levels. On the other hand, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow a random walk as far as the daily and weekly data concern. In monthly data despite the fact that all other tests show non stationarity the KPSS test for the significance level of 1% shows that the monthly prices do not follow random walk.**



In the data of Egypt we take the ADF and the PP tests and because of the high probabilities we also take the 1<sup>st</sup> difference. But it doesn't happen this with the monthly data. Taking the ADF test we take probabilities lower than 0,05 which means that we reject the null hypothesis of a unit root and the prices are characterised by stationarity. In the DF-GLS test we accept the null hypothesis of a unit root in daily data. In the weekly data we reject the null hypothesis of a unit root at 10% level. In monthly data, we find that the null hypothesis of a unit root is rejected at all levels. In the Ng Perron test, we accept the null hypothesis in daily data but we reject it at the 5% and 10% level in weekly data in both criteria. We also don't take the Ng Perron test in the monthly data because it gives very high numbers which cannot be compared with the critical values. In the KPSS test we reject the null hypothesis of a non unit root at all levels.

**The ADF and PP tests show that prices of Egypt are not stationary in level. So we have to take the first difference to achieve stationarity. That means that the data contain unit root. But this happens only with the daily and weekly data. In the monthly data from the test in level anyone can see that the prices do not follow random walk. This is strongly supported from the other tests where the null hypothesis of a unit root is rejected. In daily data the prices follow random walk and we confirm it with the other tests. On the other hand, in weekly data the hypothesis of a unit root is rejected once in the DF-GLS test in 10% significance level and twice in the Ng Perron test at the 5% and 10% levels. The KPSS test strongly shows that the prices follow random walk.**

In the daily data of Israel we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the

null hypothesis of a unit root in both criteria and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Using the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Israel are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of Israel follow random walk. That exists in all data daily, weekly and monthly.**

In the daily and weekly data of Argentina we take the 1<sup>st</sup> difference to achieve stationarity in both criteria. On the other hand in monthly data we have to take the 2<sup>nd</sup> difference in Akaike criteria because the propability remains in high level. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria and in the KPPS test we reject the null hypothesis of a non unit root at all levels. Using the unit root tests in the weekly and monthly data we find the same results.

**Under the ADF and PP tests the prices of Argentina are characterised by non-stationarity. On the other hand if we take the 1<sup>st</sup> difference we find that they become stationary. In the monthly data taking the first differences is not enough and to achieve stationarity the second differences are taken. Based on the other tests the prices seem to follow random walk. This happens if we take the tests with both criteria.**

In the daily data of Brazil we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the

null hypothesis of a unit root and in the KPSS test we reject the null hypothesis of a non unit root at all levels. Using the unit root tests in Brazil's weekly and monthly data we find the same results.

**Under the ADF and the PP tests we find that the index prices of Brazil are non-stationary in levels. Although, they are stationary after the first difference. That means that they contain a unit root. Using the other tests such as the DF-GLS, the KPSS and the Ng Perron tests which have more predictive power we find that the prices of Brazil follow random walk. That exists in all data daily, weekly and monthly.**

In the daily data of Chile we take the 1<sup>st</sup> difference in the ADF and in the PP tests. In the DF-GLS and in the Ng Perron tests we accept the null hypothesis of a unit root in both criteria. The same results are found in both weekly and monthly data. In the KPSS test only in monthly data we accept the null hypothesis of a non-unit root at the 1% level.

**The ADF and PP tests show that the index prices of Chile are not-stationary in levels. On the other hand, they are stationary after the first difference. That means that they contain a unit root. Using the other tests we find that the prices follow a random walk as far as the daily and weekly data concern. In monthly data despite the fact that all other tests show non stationarity the KPSS test for the significance level of 1% shows that the monthly prices do not follow random walk.**

Based on the DF-GLS test the null hypothesis of random walk is rejected for Egypt at 10% level in weekly data and at all levels in monthly data. In Greece, the hypothesis of a random walk is rejected at the 10% level in monthly data. In addition, it can be seen that in many markets the

results from the unit root tests are different when they are taken with Schwartz criteria or Akaike criteria.

Based on the Ng Perron test the null hypothesis of random walk is rejected for Czech, Hungary and Russia at all levels in monthly data, at the 5% and 10% levels in weekly data and at all levels in monthly data for Egypt, at the 5% and 10% in weekly data and at the 10% in daily and monthly data for China. Finally, the hypothesis of random walk can be rejected at the 5% level in monthly data for Greece.

As far the KPPS test concerns, the null hypothesis of random walk can be rejected in favor of mean reversion at the 1% percent significance level for 6 markets out of 22 based on the KPPS test. These markets are Korea, Taiwan, Poland, Africa, Chile and Hungary. The same rejection is for the Indonesia's market with the exception that the hypothesis is rejected for all significance levels. In China, the hypothesis of random walk is accepted only at 10% level in daily data. In Greece, the hypothesis of random walk is rejected in monthly data and at 1% and 5% level in weekly data.

Based on all the tests the null hypothesis of random walk is accepted for 10 markets out of 22 markets (India, Malaysia, Philippines, Thailand, Portugal, Slovenia, Turkey, Israel, Brazil and Argentina).

## 14. CONCLUDING REMARKS

A random walk process implies that any shock to stock price is permanent and there is no tendency for the price level to return to a trend path over time. This suggests that future returns are unpredictable based on historical observations.

In this study, 22 indexes were chosen from each emerging market in order to prove whether the index's prices follow random walk or not. We take daily, weekly and monthly data from each index and we use two classical unit root tests such as the Augmented Dickey Fuller test and the Phillips Perron test. These tests were made with Schwartz and Akaike criteria. What we find is that for all emerging markets except Egypt's monthly data the prices follow random walk. Many analysts believe that classical tests, such as the Augmented Dickey Fuller and Phillips Perron tests, have insufficient power against the alternative hypothesis of mean reversion in samples. Because of this belief and the results we have, we use other unit root tests which have greater power and examine for predictability. The tests are the Dickey-Fuller Test with GLS Detrending (DFGLS), the NG and Perron (NP) tests and the Kwiatkowski, Phillips, Schmidt, and Shin (KPSS) Test. The fact that KPSS test has a different null hypothesis makes it more reliable and that is the main reason which is generally used for examining predictability. Using these tests we conclude to the following:

In monthly data the null hypothesis of random walk is rejected for China, Indonesia, Korea, Russia, Taiwan, Greece, Czech, Hungary, Poland, Africa, Egypt and Chile.

In weekly data the null hypothesis of random walk is rejected for China, Greece and Egypt.

In daily data the null hypothesis of random walk is rejected only for China. It is worth knowing that using the above tests with different criteria (Schwartz and Akaike) leads us to different results. For example, when in one hand the null hypothesis is rejected with Akaike criteria for some countries, on the other hand it is accepted with the Schwartz criteria.

Finally, the null hypothesis of random walk is accepted for India, Malaysia, Philippines, Thailand, Portugal, Slovenia, Turkey, Israel, Argentina and Brazil in all data and with all unit root tests. Hence, these markets are weak form efficient.

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- [www.google.com](http://www.google.com)
- [www.emergingmarkets.org](http://www.emergingmarkets.org)
- [www.securities.com](http://www.securities.com) (ISI emerging markets)

# **A P P E N D I X**

### CHINA DAILY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.009212	0.2830
Test critical values:		
1% level	-3.435720	
5% level	-2.863799	
10% level	-2.568023	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 2092 3262

Included observations: 1171 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.009278	0.004618	-2.009212	0.0447
C	10.28534	4.951149	2.077365	0.0380
R-squared	0.003441	Mean dependent var		0.438532
Adjusted R-squared	0.002589	S.D. dependent var		24.12491
S.E. of regression	24.09366	Akaike info criterion		9.203481
Sum squared resid	678609.7	Schwarz criterion		9.212133
Log likelihood	-5386.638	F-statistic		4.036934
Durbin-Watson stat	1.939631	Prob(F-statistic)		0.044744

### CHINA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-33.34821	0.0000
Test critical values:		
1% level	-3.435724	
5% level	-2.863801	
10% level	-2.568024	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 2093 3262

Included observations: 1170 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.975493	0.029252	-33.34821	0.0000
C	0.427738	0.705808	0.606026	0.5446
R-squared	0.487742	Mean dependent var		-0.002849
Adjusted R-squared	0.487304	S.D. dependent var		33.71139
S.E. of regression	24.13830	Akaike info criterion		9.207185
Sum squared resid	680544.2	Schwarz criterion		9.215843
Log likelihood	-5384.203	F-statistic		1112.103
Durbin-Watson stat	1.997757	Prob(F-statistic)		0.000000

### CHINA DAILY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on AIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.009212	0.2830
Test critical values:		
1% level	-3.435720	
5% level	-2.863799	
10% level	-2.568023	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 2092 3262

Included observations: 1171 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.009278	0.004618	-2.009212	0.0447
C	10.28534	4.951149	2.077365	0.0380
R-squared	0.003441	Mean dependent var		0.438532
Adjusted R-squared	0.002589	S.D. dependent var		24.12491
S.E. of regression	24.09366	Akaike info criterion		9.203481
Sum squared resid	678609.7	Schwarz criterion		9.212133
Log likelihood	-5386.638	F-statistic		4.036934
Durbin-Watson stat	1.939631	Prob(F-statistic)		0.044744

### CHINA(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on AIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-33.34821	0.0000
Test critical values:		
1% level	-3.435724	
5% level	-2.863801	
10% level	-2.568024	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 2093 3262

Included observations: 1170 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.975493	0.029252	-33.34821	0.0000
C	0.427738	0.705808	0.606026	0.5446
R-squared	0.487742	Mean dependent var		-0.002849
Adjusted R-squared	0.487304	S.D. dependent var		33.71139
S.E. of regression	24.13830	Akaike info criterion		9.207185
Sum squared resid	680544.2	Schwarz criterion		9.215843
Log likelihood	-5384.203	F-statistic		1112.103
Durbin-Watson stat	1.997757	Prob(F-statistic)		0.000000

### CHINA DAILY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Bandwidth: 7 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.053065	0.2642
Test critical values:		
1% level	-3.435720	
5% level	-2.863799	
10% level	-2.568023	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	579.5130
HAC corrected variance (Bartlett kernel)	594.6278

Phillips-Perron Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 2092 3262

Included observations: 1171 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.009278	0.004618	-2.009212	0.0447
C	10.28534	4.951149	2.077365	0.0380
R-squared	0.003441	Mean dependent var		0.438532
Adjusted R-squared	0.002589	S.D. dependent var		24.12491
S.E. of regression	24.09366	Akaike info criterion		9.203481
Sum squared resid	678609.7	Schwarz criterion		9.212133
Log likelihood	-5386.638	F-statistic		4.036934
Durbin-Watson stat	1.939631	Prob(F-statistic)		0.044744

### CHINA DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-33.33793	0.0000
Test critical values:		
1% level	-3.435724	
5% level	-2.863801	
10% level	-2.568024	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	581.6617
HAC corrected variance (Bartlett kernel)	546.9034

Phillips-Perron Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 2093 3262

Included observations: 1170 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.975493	0.029252	-33.34821	0.0000
C	0.427738	0.705808	0.606026	0.5446
R-squared	0.487742	Mean dependent var		-0.002849
Adjusted R-squared	0.487304	S.D. dependent var		33.71139

S.E. of regression	24.13830	Akaike info criterion	9.207185
Sum squared resid	680544.2	Schwarz criterion	9.215843
Log likelihood	-5384.203	F-statistic	1112.103
Durbin-Watson stat	1.997757	Prob(F-statistic)	0.000000

### CHINA DAILY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=22)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.496477
Test critical values:	
1% level	-2.566938
5% level	-1.941094
10% level	-1.616517

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 2092 3262

Included observations: 1171 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.006138	0.004102	-1.496477	0.1348
R-squared	0.001580	Mean dependent var	0.438532	
Adjusted R-squared	0.001580	S.D. dependent var	24.12491	
S.E. of regression	24.10584	Akaike info criterion	9.203639	
Sum squared resid	679877.0	Schwarz criterion	9.207965	
Log likelihood	-5387.731	Durbin-Watson stat	1.942102	

### CHINA DAILY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on AIC, MAXLAG=22)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.496477
Test critical values:	
1% level	-2.566938
5% level	-1.941094
10% level	-1.616517

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 2092 3262

Included observations: 1171 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.006138	0.004102	-1.496477	0.1348
R-squared	0.001580	Mean dependent var	0.438532	
Adjusted R-squared	0.001580	S.D. dependent var	24.12491	
S.E. of regression	24.10584	Akaike info criterion	9.203639	
Sum squared resid	679877.0	Schwarz criterion	9.207965	
Log likelihood	-5387.731	Durbin-Watson stat	1.942102	

### CHINA DAILY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=22)

Sample(adjusted): 2091 3262

Included observations: 1172 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-7.16496	-1.49238	0.20829	4.77173
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 580.5952

### CHINA DAILY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=22)

Sample(adjusted): 2091 3262

Included observations: 1172 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-7.16496	-1.49238	0.20829	4.77173
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 580.5952

### CHINA DAILY

Null Hypothesis: CHINA is stationary

Exogenous: Constant

Bandwidth: 26 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.447637
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 23386.44

HAC corrected variance (Bartlett kernel) 547750.9

KPSS Test Equation

Dependent Variable: CHINA

Method: Least Squares

Sample(adjusted): 2091 3262



Included observations: 1172 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1061.711	4.468930	237.5762	0.0000
R-squared	0.000000	Mean dependent var		1061.711
Adjusted R-squared	0.000000	S.D. dependent var		152.9915
S.E. of regression	152.9915	Akaike info criterion		12.89950
Sum squared resid	27408905	Schwarz criterion		12.90382
Log likelihood	-7558.104	Durbin-Watson stat		0.024852

## CHINA WEEKLY(LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.161110	0.9397
Test critical values:		
1% level	-3.466377	
5% level	-2.877274	
10% level	-2.575236	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 1986 2167

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.002830	0.017565	-0.161110	0.8722
C	5.841930	18.91258	0.308891	0.7578
R-squared	0.000144	Mean dependent var		2.819286
Adjusted R-squared	-0.005411	S.D. dependent var		32.11743
S.E. of regression	32.20420	Akaike info criterion		9.792999
Sum squared resid	186679.9	Schwarz criterion		9.828208
Log likelihood	-889.1629	F-statistic		0.025957
Durbin-Watson stat	1.863819	Prob(F-statistic)		0.872187

## CHINA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.64639	0.0000
Test critical values:		
1% level	-3.466580	
5% level	-2.877363	
10% level	-2.575284	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 1987 2167

Included observations: 181 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.949337	0.075068	-12.64639	0.0000

C	2.449921	2.392067	1.024186	0.3071
R-squared	0.471869	Mean dependent var	0.105210	
Adjusted R-squared	0.468919	S.D. dependent var	44.02747	
S.E. of regression	32.08516	Akaike info criterion	9.785652	
Sum squared resid	184272.8	Schwarz criterion	9.820995	
Log likelihood	-883.6015	F-statistic	159.9313	
Durbin-Watson stat	2.002429	Prob(F-statistic)	0.000000	

### CHINA WEEKLY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 6 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.404445	0.5792
Test critical values:		
1% level	-3.467633	
5% level	-2.877823	
10% level	-2.575530	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 1992 2167

Included observations: 176 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.027050	0.019260	-1.404445	0.1620
D(CHINA(-1))	0.034655	0.076551	0.452702	0.6513
D(CHINA(-2))	0.220256	0.076084	2.894920	0.0043
D(CHINA(-3))	-0.050816	0.076290	-0.666095	0.5063
D(CHINA(-4))	-0.132934	0.078748	-1.688106	0.0932
D(CHINA(-5))	0.170537	0.078076	2.184245	0.0303
D(CHINA(-6))	0.273388	0.079480	3.439705	0.0007
C	29.85499	20.51814	1.455053	0.1475
R-squared	0.126682	Mean dependent var	2.136432	
Adjusted R-squared	0.090294	S.D. dependent var	32.07628	
S.E. of regression	30.59387	Akaike info criterion	9.723866	
Sum squared resid	157245.5	Schwarz criterion	9.867979	
Log likelihood	-847.7002	F-statistic	3.481413	
Durbin-Watson stat	1.991242	Prob(F-statistic)	0.001644	

### CHINA WEEKLY (1ST DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.777618	0.0038
Test critical values:		
1% level	-3.467633	
5% level	-2.877823	
10% level	-2.575530	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 1992 2167

Included observations: 176 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.613488	0.162401	-3.777618	0.0002
D(CHINA(-1),2)	-0.369968	0.151962	-2.434609	0.0159
D(CHINA(-2),2)	-0.170674	0.134558	-1.268411	0.2064
D(CHINA(-3),2)	-0.239715	0.119290	-2.009517	0.0461
D(CHINA(-4),2)	-0.395074	0.103102	-3.831870	0.0002
D(CHINA(-5),2)	-0.246250	0.077317	-3.184945	0.0017
C	1.224776	2.336565	0.524178	0.6008
R-squared	0.535317	Mean dependent var		0.338420
Adjusted R-squared	0.518820	S.D. dependent var		44.23097
S.E. of regression	30.68177	Akaike info criterion		9.724175
Sum squared resid	159091.7	Schwarz criterion		9.850273
Log likelihood	-848.7274	F-statistic		32.44817
Durbin-Watson stat	1.982216	Prob(F-statistic)		0.000000

### CHINA WEEKLY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.237467	0.9300
Test critical values:		
1% level	-3.466377	
5% level	-2.877274	
10% level	-2.575236	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1025.713
HAC corrected variance (Bartlett kernel)	1078.906

Phillips-Perron Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 1986 2167

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.002830	0.017565	-0.161110	0.8722
C	5.841930	18.91258	0.308891	0.7578
R-squared	0.000144	Mean dependent var		2.819286
Adjusted R-squared	-0.005411	S.D. dependent var		32.11743
S.E. of regression	32.20420	Akaike info criterion		9.792999
Sum squared resid	186679.9	Schwarz criterion		9.828208
Log likelihood	-889.1629	F-statistic		0.025957
Durbin-Watson stat	1.863819	Prob(F-statistic)		0.872187

### CHINA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-12.69638	0.0000
Test critical values:		
1% level	-3.466580	
5% level	-2.877363	

10% level -2.575284

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1018.082
HAC corrected variance (Bartlett kernel)	1111.174

Phillips-Perron Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 1987 2167

Included observations: 181 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.949337	0.075068	-12.64639	0.0000
C	2.449921	2.392067	1.024186	0.3071
R-squared	0.471869	Mean dependent var		0.105210
Adjusted R-squared	0.468919	S.D. dependent var		44.02747
S.E. of regression	32.08516	Akaike info criterion		9.785652
Sum squared resid	184272.8	Schwarz criterion		9.820995
Log likelihood	-883.6015	F-statistic		159.9313
Durbin-Watson stat	2.002429	Prob(F-statistic)		0.000000

## CHINA WEEKLY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	0.307617
Test critical values:	
1% level	-2.577730
5% level	-1.942584
10% level	-1.615541

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1986 2167

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.004988	0.016215	0.307617	0.7587
R-squared	-0.007221	Mean dependent var		2.819286
Adjusted R-squared	-0.007221	S.D. dependent var		32.11743
S.E. of regression	32.23319	Akaike info criterion		9.789349
Sum squared resid	188055.1	Schwarz criterion		9.806954
Log likelihood	-889.8308	Durbin-Watson stat		1.864621

## CHINA WEEKLY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 6 (Automatic based on AIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.116785
Test critical values:	
1% level	-2.578167
5% level	-1.942645

10% level

-1.615502

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1992 2167

Included observations: 176 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.020034	0.017939	-1.116785	0.2657
D(GLSRESID(-1))	0.033057	0.076535	0.431921	0.6663
D(GLSRESID(-2))	0.218214	0.076057	2.869097	0.0046
D(GLSRESID(-3))	-0.053372	0.076247	-0.699980	0.4849
D(GLSRESID(-4))	-0.135594	0.078703	-1.722849	0.0867
D(GLSRESID(-5))	0.169203	0.078065	2.167464	0.0316
D(GLSRESID(-6))	0.271306	0.079453	3.414665	0.0008
R-squared	0.121476	Mean dependent var	2.136432	
Adjusted R-squared	0.090286	S.D. dependent var	32.07628	
S.E. of regression	30.59402	Akaike info criterion	9.718446	
Sum squared resid	158183.0	Schwarz criterion	9.844545	
Log likelihood	-848.2233	Durbin-Watson stat	1.989644	

**CHINA WEEKLY**

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=13)

Sample(adjusted): 1985 2167

Included observations: 183 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	0.93793	0.31871	0.33980	14.1273
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 1033.270

**CHINA WEEKLY**

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag length: 6 (Spectral GLS-detrended AR based on AIC, MAXLAG=13)

Sample(adjusted): 1985 2167

Included observations: 183 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-9.96957	-1.80592	0.18114	4.01478
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 3635.885

## CHINA WEEKLY

Null Hypothesis: CHINA is stationary

Exogenous: Constant

Bandwidth: 10 (Newey-West using Bartlett kernel)

		LM-Stat.		
Kwiatkowski-Phillips-Schmidt-Shin test statistic		0.315420		
Asymptotic critical values*:	1% level	0.739000		
	5% level	0.463000		
	10% level	0.347000		
*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)				
Residual variance (no correction)		19333.48		
HAC corrected variance (Bartlett kernel)		173532.0		
KPSS Test Equation				
Dependent Variable: CHINA				
Method: Least Squares				
Sample(adjusted): 1985 2167				
Included observations: 183 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1070.409	10.30669	103.8557	0.0000
R-squared	0.000000	Mean dependent var	1070.409	
Adjusted R-squared	0.000000	S.D. dependent var	139.4264	
S.E. of regression	139.4264	Akaike info criterion	12.71840	
Sum squared resid	3538027.	Schwarz criterion	12.73594	
Log likelihood	-1162.734	Durbin-Watson stat	0.053180	

## CHINA MONTHLY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=9)

		t-Statistic	Prob.*	
Augmented Dickey-Fuller test statistic		-1.057333	0.7231	
Test critical values:	1% level	-3.605593		
	5% level	-2.936942		
	10% level	-2.606857		
*MacKinnon (1996) one-sided p-values.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(CHINA)				
Method: Least Squares				
Date: 08/23/06 Time: 22:10				
Sample(adjusted): 461 500				
Included observations: 40 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.101528	0.096022	-1.057333	0.2972
D(CHINA(-1))	0.322120	0.179162	1.797925	0.0804
C	115.1549	102.2355	1.126369	0.2673
R-squared	0.081590	Mean dependent var	10.00098	
Adjusted R-squared	0.031946	S.D. dependent var	76.91222	
S.E. of regression	75.67373	Akaike info criterion	11.56278	
Sum squared resid	211881.0	Schwarz criterion	11.68944	
Log likelihood	-228.2556	F-statistic	1.643503	
Durbin-Watson stat	2.124210	Prob(F-statistic)	0.207100	

### CHINA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.857668	0.0003
Test critical values:		
1% level	-3.605593	
5% level	-2.936942	
10% level	-2.606857	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 461 500

Included observations: 40 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.767628	0.158024	-4.857668	0.0000
C	7.812265	12.07570	0.646941	0.5216
R-squared	0.383086	Mean dependent var		0.582000
Adjusted R-squared	0.366852	S.D. dependent var		95.25010
S.E. of regression	75.79109	Akaike info criterion		11.54255
Sum squared resid	218283.0	Schwarz criterion		11.62699
Log likelihood	-228.8509	F-statistic		23.59694
Durbin-Watson stat	2.059770	Prob(F-statistic)		0.000021

### CHINA MONTHLY (LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on AIC, MAXLAG=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.057333	0.7231
Test critical values:		
1% level	-3.605593	
5% level	-2.936942	
10% level	-2.606857	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 461 500

Included observations: 40 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.101528	0.096022	-1.057333	0.2972
D(CHINA(-1))	0.322120	0.179162	1.797925	0.0804
C	115.1549	102.2355	1.126369	0.2673
R-squared	0.081590	Mean dependent var		10.00098
Adjusted R-squared	0.031946	S.D. dependent var		76.91222
S.E. of regression	75.67373	Akaike info criterion		11.56278
Sum squared resid	211881.0	Schwarz criterion		11.68944
Log likelihood	-228.2556	F-statistic		1.643503
Durbin-Watson stat	2.124210	Prob(F-statistic)		0.207100

### CHINA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on AIC, MAXLAG=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.857668	0.0003
Test critical values:		
1% level	-3.605593	
5% level	-2.936942	
10% level	-2.606857	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHINA,2)

Method: Least Squares

Sample(adjusted): 461 500

Included observations: 40 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.767628	0.158024	-4.857668	0.0000
C	7.812265	12.07570	0.646941	0.5216
R-squared	0.383086	Mean dependent var		0.582000
Adjusted R-squared	0.366852	S.D. dependent var		95.25010
S.E. of regression	75.79109	Akaike info criterion		11.54255
Sum squared resid	218283.0	Schwarz criterion		11.62699
Log likelihood	-228.8509	F-statistic		23.59694
Durbin-Watson stat	2.059770	Prob(F-statistic)		0.000021

### CHINA MONTHLY(LEVEL)

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.828723	0.8002
Test critical values:		
1% level	-3.600987	
5% level	-2.935001	
10% level	-2.605836	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	5619.578
HAC corrected variance (Bartlett kernel)	8139.609

Phillips-Perron Test Equation

Dependent Variable: D(CHINA)

Method: Least Squares

Sample(adjusted): 460 500

Included observations: 41 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHINA(-1)	-0.019571	0.085801	-0.228093	0.8208
C	30.93539	92.29956	0.335163	0.7393
R-squared	0.001332	Mean dependent var		10.06132
Adjusted R-squared	-0.024275	S.D. dependent var		75.94572
S.E. of regression	76.86197	Akaike info criterion		11.56945
Sum squared resid	230402.7	Schwarz criterion		11.65304
Log likelihood	-235.1737	F-statistic		0.052026
Durbin-Watson stat	1.506192	Prob(F-statistic)		0.820766

### CHINA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHINA) has a unit root

Exogenous: Constant



Bandwidth: 0 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*		
Phillips-Perron test statistic	-4.857668	0.0003		
Test critical values:				
1% level	-3.605593			
5% level	-2.936942			
10% level	-2.606857			
*MacKinnon (1996) one-sided p-values.				
Residual variance (no correction)		5457.075		
HAC corrected variance (Bartlett kernel)		5457.075		
Phillips-Perron Test Equation				
Dependent Variable: D(CHINA,2)				
Method: Least Squares				
Sample(adjusted): 461 500				
Included observations: 40 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHINA(-1))	-0.767628	0.158024	-4.857668	0.0000
C	7.812265	12.07570	0.646941	0.5216
R-squared	0.383086	Mean dependent var		0.582000
Adjusted R-squared	0.366852	S.D. dependent var		95.25010
S.E. of regression	75.79109	Akaike info criterion		11.54255
Sum squared resid	218283.0	Schwarz criterion		11.62699
Log likelihood	-228.8509	F-statistic		23.59694
Durbin-Watson stat	2.059770	Prob(F-statistic)		0.000021

## CHINA MONTHLY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=9)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-1.249943
Test critical values:	
1% level	-2.624057
5% level	-1.949319
10% level	-1.611711

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 461 500

Included observations: 40 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.106770	0.085420	-1.249943	0.2190
D(GLSRESID(-1))	0.328964	0.168512	1.952166	0.0583
R-squared	0.081195	Mean dependent var		10.00098
Adjusted R-squared	0.057016	S.D. dependent var		76.91222
S.E. of regression	74.68742	Akaike info criterion		11.51321
Sum squared resid	211972.0	Schwarz criterion		11.59765
Log likelihood	-228.2641	Durbin-Watson stat		2.129047

## CHINA MONTHLY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on AIC, MAXLAG=9)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.249943
Test critical values:	
1% level	-2.624057
5% level	-1.949319
10% level	-1.611711

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 461 500

Included observations: 40 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.106770	0.085420	-1.249943	0.2190
D(GLSRESID(-1))	0.328964	0.168512	1.952166	0.0583
R-squared	0.081195	Mean dependent var		10.00098
Adjusted R-squared	0.057016	S.D. dependent var		76.91222
S.E. of regression	74.68742	Akaike info criterion		11.51321
Sum squared resid	211972.0	Schwarz criterion		11.59765
Log likelihood	-228.2641	Durbin-Watson stat		2.129047

## CHINA MONTHLY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=9)

Sample(adjusted): 459 500

Included observations: 42 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-7.23875	-1.55180	0.21437	4.53876
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 11768.66

## CHINA MONTHLY

Null Hypothesis: CHINA has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=9)

Sample(adjusted): 459 500

Included observations: 42 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-7.23875	-1.55180	0.21437	4.53876
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 11768.66

## CHINA MONTHLY

Null Hypothesis: CHINA is stationary

Exogenous: Constant

Bandwidth: 4 (Newey-West using Bartlett kernel)

		LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic		0.173676
Asymptotic critical values*:	1% level	0.739000
	5% level	0.463000
	10% level	0.347000
*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)		
Residual variance (no correction)		23873.55
HAC corrected variance (Bartlett kernel)		77471.75

KPSS Test Equation  
 Dependent Variable: CHINA  
 Method: Least Squares  
 Sample(adjusted): 459 500  
 Included observations: 42 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1077.390	24.13051	44.64847	0.0000
R-squared	0.000000	Mean dependent var		1077.390
Adjusted R-squared	0.000000	S.D. dependent var		156.3836
S.E. of regression	156.3836	Akaike info criterion		12.96602
Sum squared resid	1002689.	Schwarz criterion		13.00740
Log likelihood	-271.2865	Durbin-Watson stat		0.234231

### INDIA DAILY (LEVEL)

Null Hypothesis: INDIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 4 (Automatic based on SIC, MAXLAG=29)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.500425	0.9836
Test critical values:	1% level	-3.960465	
	5% level	-3.410993	
	10% level	-3.127309	

\*MacKinnon (1996) one-sided p-values.  
 Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(INDIA)  
 Method: Least Squares  
 Sample(adjusted): 3132 6915  
 Included observations: 3784 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.000458	0.000916	-0.500425	0.6168
D(INDIA(-1))	0.086218	0.016319	5.283403	0.0000
D(INDIA(-2))	-0.044448	0.016379	-2.713759	0.0067
D(INDIA(-3))	-0.000220	0.016377	-0.013407	0.9893
D(INDIA(-4))	0.074283	0.016325	4.550368	0.0000
C	-6.143989	5.794544	-1.060306	0.2891
@TREND(1)	0.002016	0.001463	1.377762	0.1684
R-squared	0.014972	Mean dependent var		2.299260
Adjusted R-squared	0.013407	S.D. dependent var		75.28310
S.E. of regression	74.77673	Akaike info criterion		11.46874
Sum squared resid	21119321	Schwarz criterion		11.48028
Log likelihood	-21691.85	F-statistic		9.568048
Durbin-Watson stat	1.991648	Prob(F-statistic)		0.000000

## INDIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on SIC, MAXLAG=29)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-28.33339	0.0000
Test critical values:		
1% level	-3.960465	
5% level	-3.410993	
10% level	-3.127309	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDIA,2)

Method: Least Squares

Sample(adjusted): 3132 6915

Included observations: 3784 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.885702	0.031260	-28.33339	0.0000
D(INDIA(-1),2)	-0.028464	0.027083	-1.050992	0.2933
D(INDIA(-2),2)	-0.073300	0.022090	-3.318280	0.0009
D(INDIA(-3),2)	-0.073889	0.016304	-4.531945	0.0000
C	-5.687806	5.721821	-0.994055	0.3203
@TREND(1)	0.001541	0.001114	1.383651	0.1665
R-squared	0.460934	Mean dependent var		0.118153
Adjusted R-squared	0.460221	S.D. dependent var		101.7690
S.E. of regression	74.76931	Akaike info criterion		11.46828
Sum squared resid	21120722	Schwarz criterion		11.47817
Log likelihood	-21691.98	F-statistic		646.0844
Durbin-Watson stat	1.991660	Prob(F-statistic)		0.000000

## INDIA DAILY (LEVEL)

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 20 (Automatic based on AIC, MAXLAG=29)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.576700	0.9799
Test critical values:		
1% level	-3.960475	
5% level	-3.410998	
10% level	-3.127312	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDIA)

Method: Least Squares

Sample(adjusted): 3148 6915

Included observations: 3768 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.000533	0.000925	-0.576700	0.5642
D(INDIA(-1))	0.089878	0.016413	5.476138	0.0000
D(INDIA(-2))	-0.041357	0.016475	-2.510250	0.0121
D(INDIA(-3))	0.011267	0.016486	0.683448	0.4944
D(INDIA(-4))	0.071635	0.016423	4.361781	0.0000
D(INDIA(-5))	0.009791	0.016478	0.594177	0.5524
D(INDIA(-6))	-0.034427	0.016467	-2.090742	0.0366
D(INDIA(-7))	-0.037617	0.016480	-2.282540	0.0225
D(INDIA(-8))	-0.015366	0.016502	-0.931168	0.3518

D(INDIA(-9))	0.039549	0.016513	2.394968	0.0167
D(INDIA(-10))	0.057614	0.016534	3.484477	0.0005
D(INDIA(-11))	-0.010482	0.016559	-0.632998	0.5268
D(INDIA(-12))	0.002173	0.016663	0.130402	0.8963
D(INDIA(-13))	0.002212	0.016669	0.132671	0.8945
D(INDIA(-14))	-0.025338	0.016716	-1.515723	0.1297
D(INDIA(-15))	0.060958	0.016763	3.636362	0.0003
D(INDIA(-16))	-0.072868	0.016899	-4.311963	0.0000
D(INDIA(-17))	0.101357	0.017022	5.954532	0.0000
D(INDIA(-18))	0.008744	0.017106	0.511162	0.6093
D(INDIA(-19))	-0.021357	0.017120	-1.247451	0.2123
D(INDIA(-20))	-0.038251	0.017085	-2.238929	0.0252
C	-6.484445	5.783432	-1.121211	0.2623
@TREND(1)	0.002118	0.001457	1.453365	0.1462
R-squared	0.040742	Mean dependent var	2.254124	
Adjusted R-squared	0.035107	S.D. dependent var	75.41033	
S.E. of regression	74.07480	Akaike info criterion	11.45411	
Sum squared resid	20549101	Schwarz criterion	11.49217	
Log likelihood	-21556.55	F-statistic	7.229947	
Durbin-Watson stat	1.992478	Prob(F-statistic)	0.000000	

### INDIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 19 (Automatic based on AIC, MAXLAG=29)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.99981	0.0000
Test critical values: 1% level	-3.960475	
5% level	-3.410998	
10% level	-3.127312	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDIA,2)

Method: Least Squares

Sample(adjusted): 3148 6915

Included observations: 3768 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.850133	0.065396	-12.99981	0.0000
D(INDIA(-1),2)	-0.060365	0.064095	-0.941794	0.3464
D(INDIA(-2),2)	-0.102097	0.062782	-1.626227	0.1040
D(INDIA(-3),2)	-0.091216	0.061407	-1.485445	0.1375
D(INDIA(-4),2)	-0.020001	0.059636	-0.335377	0.7374
D(INDIA(-5),2)	-0.010641	0.058005	-0.183457	0.8544
D(INDIA(-6),2)	-0.045513	0.056134	-0.810792	0.4175
D(INDIA(-7),2)	-0.083541	0.054310	-1.538216	0.1241
D(INDIA(-8),2)	-0.099301	0.052397	-1.895154	0.0581
D(INDIA(-9),2)	-0.060160	0.050411	-1.193374	0.2328
D(INDIA(-10),2)	-0.002932	0.048400	-0.060583	0.9517
D(INDIA(-11),2)	-0.013807	0.046063	-0.299749	0.7644
D(INDIA(-12),2)	-0.011984	0.043569	-0.275049	0.7833
D(INDIA(-13),2)	-0.010131	0.040928	-0.247537	0.8045
D(INDIA(-14),2)	-0.035861	0.038058	-0.942280	0.3461
D(INDIA(-15),2)	0.024684	0.035112	0.703016	0.4821
D(INDIA(-16),2)	-0.048541	0.032063	-1.513937	0.1301
D(INDIA(-17),2)	0.052377	0.028009	1.870023	0.0616
D(INDIA(-18),2)	0.060650	0.023010	2.635766	0.0084
D(INDIA(-19),2)	0.038812	0.017056	2.275604	0.0229

C	-5.992864	5.719760	-1.047747	0.2948
@TREND(1)	0.001576	0.001113	1.415176	0.1571
R-squared	0.474865	Mean dependent var		0.116361
Adjusted R-squared	0.471922	S.D. dependent var		101.9254
S.E. of regression	74.06820	Akaike info criterion		11.45367
Sum squared resid	20550926	Schwarz criterion		11.49007
Log likelihood	-21556.72	F-statistic		161.3053
Durbin-Watson stat	1.992614	Prob(F-statistic)		0.000000

### INDIA DAILY (LEVEL)

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.374656	0.9884
Test critical values:		
1% level	-3.960462	
5% level	-3.410992	
10% level	-3.127309	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	5656.530
HAC corrected variance (Bartlett kernel)	6436.319

Phillips-Perron Test Equation

Dependent Variable: D(INDIA)

Method: Least Squares

Sample(adjusted): 3128 6915

Included observations: 3788 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.000147	0.000917	-0.160304	0.8727
C	-6.443793	5.819441	-1.107287	0.2682
@TREND(1)	0.001864	0.001470	1.267950	0.2049
R-squared	0.000625	Mean dependent var		2.296832
Adjusted R-squared	0.000097	S.D. dependent var		75.24337
S.E. of regression	75.23971	Akaike info criterion		11.48003
Sum squared resid	21426935	Schwarz criterion		11.48497
Log likelihood	-21740.17	F-statistic		1.184327
Durbin-Watson stat	1.828286	Prob(F-statistic)		0.306065

### INDIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 12 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-56.42463	0.0000
Test critical values:		
1% level	-3.960463	
5% level	-3.410992	
10% level	-3.127309	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	5620.431
HAC corrected variance (Bartlett kernel)	5662.790

Phillips-Perron Test Equation

Dependent Variable: D(INDIA,2)

Method: Least Squares

Date: 08/23/06 Time: 22:19

Sample(adjusted): 3129 6915

Included observations: 3787 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.918074	0.016277	-56.40468	0.0000
C	-5.847207	5.729345	-1.020572	0.3075
@TREND(1)	0.001587	0.001115	1.422797	0.1549
R-squared	0.456752	Mean dependent var	0.118059	
Adjusted R-squared	0.456465	S.D. dependent var	101.7286	
S.E. of regression	74.99925	Akaike info criterion	11.47363	
Sum squared resid	21284573	Schwarz criterion	11.47857	
Log likelihood	-21722.31	F-statistic	1590.758	
Durbin-Watson stat	1.983160	Prob(F-statistic)	0.000000	

## INDIA DAILY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 4 (Automatic based on SIC, MAXLAG=29)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.000189
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 3132 6915

Included observations: 3784 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000855	0.000855	-1.000189	0.3173
D(GLSRESID(-1))	0.087012	0.016306	5.336327	0.0000
D(GLSRESID(-2))	-0.043692	0.016367	-2.669559	0.0076
D(GLSRESID(-3))	0.000525	0.016366	0.032076	0.9744
D(GLSRESID(-4))	0.075071	0.016312	4.602262	0.0000
R-squared	0.014550	Mean dependent var	0.908772	
Adjusted R-squared	0.013507	S.D. dependent var	75.28310	
S.E. of regression	74.77295	Akaike info criterion	11.46811	
Sum squared resid	21128368	Schwarz criterion	11.47635	
Log likelihood	-21692.66	Durbin-Watson stat	1.991590	

## INDIA DAILY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 20 (Automatic based on AIC, MAXLAG=29)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.090453
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 3148 6915

Included observations: 3768 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000935	0.000857	-1.090453	0.2756
D(GLSRESID(-1))	0.090561	0.016402	5.521369	0.0000
D(GLSRESID(-2))	-0.040722	0.016466	-2.473070	0.0134
D(GLSRESID(-3))	0.011936	0.016476	0.724452	0.4688
D(GLSRESID(-4))	0.072347	0.016412	4.408252	0.0000
D(GLSRESID(-5))	0.010492	0.016467	0.637152	0.5241
D(GLSRESID(-6))	-0.033715	0.016455	-2.048906	0.0405
D(GLSRESID(-7))	-0.036945	0.016470	-2.243218	0.0249
D(GLSRESID(-8))	-0.014708	0.016492	-0.891815	0.3725
D(GLSRESID(-9))	0.040240	0.016502	2.438433	0.0148
D(GLSRESID(-10))	0.058245	0.016525	3.524649	0.0004
D(GLSRESID(-11))	-0.009878	0.016550	-0.596842	0.5506
D(GLSRESID(-12))	0.002697	0.016656	0.161919	0.8714
D(GLSRESID(-13))	0.002752	0.016662	0.165195	0.8688
D(GLSRESID(-14))	-0.024734	0.016708	-1.480368	0.1389
D(GLSRESID(-15))	0.061616	0.016754	3.677761	0.0002
D(GLSRESID(-16))	-0.072350	0.016893	-4.282950	0.0000
D(GLSRESID(-17))	0.102063	0.017011	5.999894	0.0000
D(GLSRESID(-18))	0.009450	0.017095	0.552816	0.5804
D(GLSRESID(-19))	-0.020631	0.017109	-1.205910	0.2279
D(GLSRESID(-20))	-0.037379	0.017068	-2.189967	0.0286
R-squared	0.040351	Mean dependent var	0.863636	
Adjusted R-squared	0.035228	S.D. dependent var	75.41033	
S.E. of regression	74.07013	Akaike info criterion	11.45346	
Sum squared resid	20557483	Schwarz criterion	11.48820	
Log likelihood	-21557.32	Durbin-Watson stat	1.992228	

## INDIA DAILY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 4 (Spectral GLS-detrended AR based on SIC, MAXLAG=29)

Sample(adjusted): 3127 6915

Included observations: 3789 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.80263	-1.03783	0.27292	19.8595
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000



10 -14.2000 -2.62000 0.18500 6.67000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 7192.505

### INDIA DAILY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 20 (Spectral GLS-detrended AR based on AIC, MAXLAG=29)

Sample(adjusted): 3127 6915

Included observations: 3789 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.50506	-1.16985	0.25967	17.9782
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 7945.170

### INDIA DAILY

Null Hypothesis: INDIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 46 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.822607
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 1781787.

HAC corrected variance (Bartlett kernel) 79697160

KPSS Test Equation

Dependent Variable: INDIA

Method: Least Squares

Sample(adjusted): 3127 6915

Included observations: 3789 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1023.806	101.8877	-10.04838	0.0000
@TREND(1)	1.043270	0.019831	52.60785	0.0000
R-squared	0.422237	Mean dependent var		4213.411
Adjusted R-squared	0.422084	S.D. dependent var		1756.347
S.E. of regression	1335.189	Akaike info criterion		17.23206
Sum squared resid	6.75E+09	Schwarz criterion		17.23535
Log likelihood	-32644.14	F-statistic		2767.586
Durbin-Watson stat	0.003177	Prob(F-statistic)		0.000000

### INDIA WEEKLY (LEVEL)

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.119524	0.9945
Test critical values: 1% level	-3.970221	
5% level	-3.415764	
10% level	-3.130137	

\*MacKinnon (1996) one-sided p-values.  
Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(INDIA)  
Method: Least Squares  
Sample(adjusted): 1411 2167  
Included observations: 757 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.000544	0.004552	-0.119524	0.9049
C	-67.84332	54.97126	-1.234160	0.2175
@TREND(1)	0.045652	0.036404	1.254041	0.2102
R-squared	0.003180	Mean dependent var		11.49326
Adjusted R-squared	0.000536	S.D. dependent var		166.5601
S.E. of regression	166.5154	Akaike info criterion		13.07201
Sum squared resid	20906455	Schwarz criterion		13.09035
Log likelihood	-4944.755	F-statistic		1.202856
Durbin-Watson stat	1.869943	Prob(F-statistic)		0.300911

## INDIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-25.73132	0.0000
Test critical values: 1% level	-3.970237	
5% level	-3.415772	
10% level	-3.130141	

\*MacKinnon (1996) one-sided p-values.  
Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(INDIA,2)  
Method: Least Squares  
Sample(adjusted): 1412 2167  
Included observations: 756 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.936342	0.036389	-25.73132	0.0000
C	-62.99664	49.97196	-1.260640	0.2078
@TREND(1)	0.041193	0.027747	1.484614	0.1381
R-squared	0.467886	Mean dependent var		0.159127
Adjusted R-squared	0.466473	S.D. dependent var		227.6139
S.E. of regression	166.2559	Akaike info criterion		13.06889
Sum squared resid	20813688	Schwarz criterion		13.08726
Log likelihood	-4937.042	F-statistic		331.0557
Durbin-Watson stat	2.001911	Prob(F-statistic)		0.000000

## INDIA WEEKLY (LEVEL)

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend  
Lag Length: 9 (Automatic based on AIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.597078	0.9785
Test critical values:		
1% level	-3.970368	
5% level	-3.415835	
10% level	-3.130179	

\*MacKinnon (1996) one-sided p-values.  
Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(INDIA)  
Method: Least Squares  
Sample(adjusted): 1420 2167  
Included observations: 748 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.002992	0.005010	-0.597078	0.5506
D(INDIA(-1))	0.058986	0.036924	1.597492	0.1106
D(INDIA(-2))	0.027389	0.037139	0.737485	0.4611
D(INDIA(-3))	0.080541	0.037072	2.172517	0.0301
D(INDIA(-4))	-0.037238	0.037484	-0.993442	0.3208
D(INDIA(-5))	-0.023831	0.037658	-0.632838	0.5270
D(INDIA(-6))	-0.064347	0.037676	-1.707883	0.0881
D(INDIA(-7))	-0.024425	0.039818	-0.613427	0.5398
D(INDIA(-8))	0.042938	0.039868	1.076993	0.2818
D(INDIA(-9))	0.094094	0.040052	2.349306	0.0191
C	-86.80369	55.58319	-1.561690	0.1188
@TREND(1)	0.060346	0.036902	1.635309	0.1024
R-squared	0.029003	Mean dependent var		10.49469
Adjusted R-squared	0.014491	S.D. dependent var		166.8533
S.E. of regression	165.6399	Akaike info criterion		13.07342
Sum squared resid	20193318	Schwarz criterion		13.14750
Log likelihood	-4877.460	F-statistic		1.998562
Durbin-Watson stat	1.998694	Prob(F-statistic)		0.026017

## INDIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 8 (Automatic based on AIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.336734	0.0000
Test critical values:		
1% level	-3.970368	
5% level	-3.415835	
10% level	-3.130179	

\*MacKinnon (1996) one-sided p-values.  
Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(INDIA,2)  
Method: Least Squares  
Sample(adjusted): 1420 2167  
Included observations: 748 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.875147	0.104975	-8.336734	0.0000
D(INDIA(-1),2)	-0.068621	0.099149	-0.692103	0.4891
D(INDIA(-2),2)	-0.043674	0.093027	-0.469477	0.6389
D(INDIA(-3),2)	0.034644	0.087207	0.397265	0.6913
D(INDIA(-4),2)	-0.005167	0.081020	-0.063772	0.9492

D(INDIA(-5),2)	-0.031961	0.073528	-0.434677	0.6639
D(INDIA(-6),2)	-0.099282	0.065324	-1.519846	0.1290
D(INDIA(-7),2)	-0.128106	0.054576	-2.347288	0.0192
D(INDIA(-8),2)	-0.089833	0.039394	-2.280391	0.0229
C	-74.14156	51.35616	-1.443674	0.1493
@TREND(1)	0.046416	0.028579	1.624143	0.1048
R-squared	0.480392	Mean dependent var	-0.129158	
Adjusted R-squared	0.473342	S.D. dependent var	228.1450	
S.E. of regression	165.5676	Akaike info criterion	13.07123	
Sum squared resid	20203099	Schwarz criterion	13.13914	
Log likelihood	-4877.641	F-statistic	68.13782	
Durbin-Watson stat	1.998160	Prob(F-statistic)	0.000000	

## INDIA WEEKLY (LEVEL)

Null Hypothesis: INDIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.387753	0.9879
Test critical values: 1% level	-3.970221	
5% level	-3.415764	
10% level	-3.130137	
*MacKinnon (1996) one-sided p-values.		
HAC corrected variance (Bartlett kernel)		32448.03

Phillips-Perron Test Equation  
 Dependent Variable: D(INDIA)  
 Method: Least Squares  
 Sample(adjusted): 1411 2167  
 Included observations: 757 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.000544	0.004552	-0.119524	0.9049
C	-67.84332	54.97126	-1.234160	0.2175
@TREND(1)	0.045652	0.036404	1.254041	0.2102
R-squared	0.003180	Mean dependent var	11.49326	
Adjusted R-squared	0.000536	S.D. dependent var	166.5601	
S.E. of regression	166.5154	Akaike info criterion	13.07201	
Sum squared resid	20906455	Schwarz criterion	13.09035	
Log likelihood	-4944.755	F-statistic	1.202856	
Durbin-Watson stat	1.869943	Prob(F-statistic)	0.300911	

## INDIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 7 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-25.76089	0.0000
Test critical values: 1% level	-3.970237	
5% level	-3.415772	

10% level -3.130141

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)				27531.33
HAC corrected variance (Bartlett kernel)				28391.55
Phillips-Perron Test Equation				
Dependent Variable: D(INDIA,2)				
Method: Least Squares				
Sample(adjusted): 1412 2167				
Included observations: 756 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.936342	0.036389	-25.73132	0.0000
C	-62.99664	49.97196	-1.260640	0.2078
@TREND(1)	0.041193	0.027747	1.484614	0.1381
R-squared	0.467886	Mean dependent var		0.159127
Adjusted R-squared	0.466473	S.D. dependent var		227.6139
S.E. of regression	166.2559	Akaike info criterion		13.06889
Sum squared resid	20813688	Schwarz criterion		13.08726
Log likelihood	-4937.042	F-statistic		331.0557
Durbin-Watson stat	2.001911	Prob(F-statistic)		0.000000

## INDIA WEEKLY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=19)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.704639
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1411 2167

Included observations: 757 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.002999	0.004256	-0.704639	0.4813
R-squared	-0.000079	Mean dependent var		4.516615
Adjusted R-squared	-0.000079	S.D. dependent var		166.5601
S.E. of regression	166.5667	Akaike info criterion		13.06999
Sum squared resid	20974827	Schwarz criterion		13.07610
Log likelihood	-4945.991	Durbin-Watson stat		1.859282

## INDIA WEEKLY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 9 (Automatic based on AIC, MAXLAG=19)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.245574
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1420 2167

Included observations: 748 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005561	0.004465	-1.245574	0.2133
D(GLSRESID(-1))	0.063986	0.036686	1.744127	0.0816
D(GLSRESID(-2))	0.031571	0.036970	0.853978	0.3934
D(GLSRESID(-3))	0.084202	0.036939	2.279474	0.0229
D(GLSRESID(-4))	-0.033062	0.037315	-0.886016	0.3759
D(GLSRESID(-5))	-0.018965	0.037429	-0.506697	0.6125
D(GLSRESID(-6))	-0.059383	0.037439	-1.586116	0.1131
D(GLSRESID(-7))	-0.016867	0.039297	-0.429212	0.6679
D(GLSRESID(-8))	0.051037	0.039275	1.299494	0.1942
D(GLSRESID(-9))	0.101266	0.039584	2.558268	0.0107
R-squared	0.026825	Mean dependent var	3.518044	
Adjusted R-squared	0.014957	S.D. dependent var	166.8533	
S.E. of regression	165.6007	Akaike info criterion	13.07032	
Sum squared resid	20238616	Schwarz criterion	13.13205	
Log likelihood	-4878.298	Durbin-Watson stat	1.999276	

## INDIA WEEKLY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=19)

Sample(adjusted): 1410 2167

Included observations: 758 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.26676	-0.70403	0.31059	25.7287
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	27707.83
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## INDIA WEEKLY

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 9 (Spectral GLS-detrended AR based on AIC, MAXLAG=19)

Sample(adjusted): 1410 2167

Included observations: 758 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.06747	-1.26814	0.25025	16.7033
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000

5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	42679.45
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## INDIA WEEKLY

Null Hypothesis: INDIA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 22 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.373925
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	1790968.
HAC corrected variance (Bartlett kernel)	35749061

### KPSS Test Equation

Dependent Variable: INDIA  
 Method: Least Squares  
 Sample(adjusted): 1410 2167  
 Included observations: 758 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5143.644	400.5721	-12.84074	0.0000
@TREND(1)	5.236460	0.222436	23.54144	0.0000
R-squared	0.422989	Mean dependent var		4216.529
Adjusted R-squared	0.422225	S.D. dependent var		1762.943
S.E. of regression	1340.040	Akaike info criterion		17.24142
Sum squared resid	1.36E+09	Schwarz criterion		17.25364
Log likelihood	-6532.499	F-statistic		554.1994
Durbin-Watson stat	0.015471	Prob(F-statistic)		0.000000

## INDIA MONTHLY(LEVEL)

Null Hypothesis: INDIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.344993	0.9888
Test critical values:		
1% level	-4.011663	
5% level	-3.435858	
10% level	-3.141996	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(INDIA)  
 Method: Least Squares  
 Sample(adjusted): 327 500

Included observations: 174 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.007517	0.021788	-0.344993	0.7305
C	-331.8166	262.1363	-1.265817	0.2073
@TREND(1)	1.002598	0.752162	1.332955	0.1843
R-squared	0.012926	Mean dependent var		50.21799
Adjusted R-squared	0.001381	S.D. dependent var		379.9989
S.E. of regression	379.7364	Akaike info criterion		14.73392
Sum squared resid	24658150	Schwarz criterion		14.78839
Log likelihood	-1278.851	F-statistic		1.119655
Durbin-Watson stat	1.974101	Prob(F-statistic)		0.328773

### INDIA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.01526	0.0000
Test critical values:		
1% level	-4.011977	
5% level	-3.436009	
10% level	-3.142085	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDIA,2)

Method: Least Squares

Sample(adjusted): 328 500

Included observations: 173 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-1.001097	0.076917	-13.01526	0.0000
C	-324.3684	241.5226	-1.343015	0.1811
@TREND(1)	0.903401	0.581382	1.553885	0.1221

R-squared	0.499238	Mean dependent var	1.782428
Adjusted R-squared	0.493346	S.D. dependent var	533.9777
S.E. of regression	380.0832	Akaike info criterion	14.73585
Sum squared resid	24558754	Schwarz criterion	14.79053
Log likelihood	-1271.651	F-statistic	84.74120
Durbin-Watson stat	1.972169	Prob(F-statistic)	0.000000

### INDIA MONTHLY (LEVEL)

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.344993	0.9888
Test critical values:		
1% level	-4.011663	
5% level	-3.435858	
10% level	-3.141996	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDIA)

Method: Least Squares

Sample(adjusted): 327 500



Included observations: 174 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.007517	0.021788	-0.344993	0.7305
C	-331.8166	262.1363	-1.265817	0.2073
@TREND(1)	1.002598	0.752162	1.332955	0.1843
R-squared	0.012926	Mean dependent var		50.21799
Adjusted R-squared	0.001381	S.D. dependent var		379.9989
S.E. of regression	379.7364	Akaike info criterion		14.73392
Sum squared resid	24658150	Schwarz criterion		14.78839
Log likelihood	-1278.851	F-statistic		1.119655
Durbin-Watson stat	1.974101	Prob(F-statistic)		0.328773

### INDIA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.733589	0.0000
Test critical values:		
1% level	-4.012296	
5% level	-3.436163	
10% level	-3.142175	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDIA,2)

Method: Least Squares

Sample(adjusted): 329 500

Included observations: 172 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-0.951271	0.108921	-8.733589	0.0000
D(INDIA(-1),2)	-0.067650	0.081706	-0.827974	0.4089
C	-400.3102	241.0297	-1.660834	0.0986
@TREND(1)	1.064278	0.581240	1.831047	0.0689
R-squared	0.520639	Mean dependent var		-2.538372
Adjusted R-squared	0.512079	S.D. dependent var		532.4950
S.E. of regression	371.9550	Akaike info criterion		14.69840
Sum squared resid	23242882	Schwarz criterion		14.77160
Log likelihood	-1260.063	F-statistic		60.82216
Durbin-Watson stat	2.032808	Prob(F-statistic)		0.000000

### INDIA MONTHLY (LEVEL)

Null Hypothesis: INDIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.406067	0.9867
Test critical values:		
1% level	-4.011663	
5% level	-3.435858	
10% level	-3.141996	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	141713.5
HAC corrected variance (Bartlett kernel)	146871.7

Phillips-Perron Test Equation

Dependent Variable: D(INDIA)

Method: Least Squares  
Sample(adjusted): 327 500  
Included observations: 174 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDIA(-1)	-0.007517	0.021788	-0.344993	0.7305
C	-331.8166	262.1363	-1.265817	0.2073
@TREND(1)	1.002598	0.752162	1.332955	0.1843
R-squared	0.012926	Mean dependent var	50.21799	
Adjusted R-squared	0.001381	S.D. dependent var	379.9989	
S.E. of regression	379.7364	Akaike info criterion	14.73392	
Sum squared resid	24658150	Schwarz criterion	14.78839	
Log likelihood	-1278.851	F-statistic	1.119655	
Durbin-Watson stat	1.974101	Prob(F-statistic)	0.328773	

### INDIA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDIA) has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-13.01458	0.0000
Test critical values:		
1% level	-4.011977	
5% level	-3.436009	
10% level	-3.142085	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	141958.1
HAC corrected variance (Bartlett kernel)	135772.9

Phillips-Perron Test Equation  
Dependent Variable: D(INDIA,2)  
Method: Least Squares  
Sample(adjusted): 328 500  
Included observations: 173 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDIA(-1))	-1.001097	0.076917	-13.01526	0.0000
C	-324.3684	241.5226	-1.343015	0.1811
@TREND(1)	0.903401	0.581382	1.553885	0.1221
R-squared	0.499238	Mean dependent var	1.782428	
Adjusted R-squared	0.493346	S.D. dependent var	533.9777	
S.E. of regression	380.0832	Akaike info criterion	14.73585	
Sum squared resid	24558754	Schwarz criterion	14.79053	
Log likelihood	-1271.651	F-statistic	84.74120	
Durbin-Watson stat	1.972169	Prob(F-statistic)	0.000000	

### INDIA MONTHLY

Null Hypothesis: INDIA has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.895524
Test critical values:	
1% level	-3.491200
5% level	-2.956000

10% level -2.666000

\*Elliott-Rothenberg-Stock (1996, Table 1)  
 DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 327 500  
 Included observations: 174 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.018147	0.020264	-0.895524	0.3718
R-squared	0.001907	Mean dependent var		19.75894
Adjusted R-squared	0.001907	S.D. dependent var		379.9989
S.E. of regression	379.6363	Akaike info criterion		14.72204
Sum squared resid	24933408	Schwarz criterion		14.74019
Log likelihood	-1279.817	Durbin-Watson stat		1.931799

### INDIA MONTHLY

Null Hypothesis: INDIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 2 (Automatic based on AIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.332956
Test critical values:	
1% level	-3.493600
5% level	-2.958000
10% level	-2.668000

\*Elliott-Rothenberg-Stock (1996, Table 1)  
 DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 329 500  
 Included observations: 172 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.027930	0.020953	-1.332956	0.1843
D(GLSRESID(-1))	0.012553	0.076342	0.164435	0.8696
D(GLSRESID(-2))	0.121879	0.083611	1.457678	0.1468
R-squared	0.016909	Mean dependent var		12.34333
Adjusted R-squared	0.005274	S.D. dependent var		373.7019
S.E. of regression	372.7151	Akaike info criterion		14.69679
Sum squared resid	23476899	Schwarz criterion		14.75169
Log likelihood	-1260.924	Durbin-Watson stat		2.015848

### INDIA MONTHLY

Null Hypothesis: INDIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=13)  
 Sample(adjusted): 326 500  
 Included observations: 175 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.12770	-0.88960	0.28443	21.8651
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	143295.4
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### INDIA MONTHLY

Null Hypothesis: INDIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 2 (Spectral GLS-detrended AR based on AIC, MAXLAG=13)  
 Sample(adjusted): 326 500  
 Included observations: 175 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.80502	-1.21207	0.25225	17.1978
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	182183.8
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### INDIA MONTHLY

Null Hypothesis: INDIA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 10 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.218478
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	1851114.
HAC corrected variance (Bartlett kernel)	15057967

### KPSS Test Equation

Dependent Variable: INDIA  
 Method: Least Squares  
 Sample(adjusted): 326 500  
 Included observations: 175 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5342.783	849.9451	-6.286033	0.0000
@TREND(1)	23.24176	2.047638	11.35052	0.0000
R-squared	0.426838	Mean dependent var		4232.820
Adjusted R-squared	0.423525	S.D. dependent var		1802.280
S.E. of regression	1368.399	Akaike info criterion		17.29203
Sum squared resid	3.24E+08	Schwarz criterion		17.32820
Log likelihood	-1511.053	F-statistic		128.8342
Durbin-Watson stat	0.077506	Prob(F-statistic)		0.000000

### INDONESIA DAILY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend  
Lag Length: 1 (Automatic based on SIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.211879	0.9072
Test critical values: 1% level	-3.959550	
5% level	-3.410545	
10% level	-3.127044	

\*MacKinnon (1996) one-sided p-values.  
Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(INDONESIA)  
Method: Least Squares  
Sample(adjusted): 853 6915  
Included observations: 6063 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.000716	0.000591	-1.211879	0.2256
D(INDONESIA(-1))	0.187838	0.012649	14.85040	0.0000
C	-0.189571	0.241822	-0.783928	0.4331
@TREND(1)	0.000169	9.56E-05	1.772724	0.0763
R-squared	0.035604	Mean dependent var		0.199278
Adjusted R-squared	0.035126	S.D. dependent var		7.706143
S.E. of regression	7.569589	Akaike info criterion		6.886814
Sum squared resid	347172.7	Schwarz criterion		6.891241
Log likelihood	-20873.38	F-statistic		74.56221
Durbin-Watson stat	1.989659	Prob(F-statistic)		0.000000

## INDONESIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-64.29217	0.0000
Test critical values: 1% level	-3.959550	
5% level	-3.410545	
10% level	-3.127044	

\*MacKinnon (1996) one-sided p-values.  
Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(INDONESIA,2)  
Method: Least Squares  
Sample(adjusted): 853 6915  
Included observations: 6063 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.812715	0.012641	-64.29217	0.0000
C	-0.128872	0.236587	-0.544713	0.5860
@TREND(1)	7.52E-05	5.56E-05	1.353231	0.1760
R-squared	0.405503	Mean dependent var		0.005850
Adjusted R-squared	0.405307	S.D. dependent var		9.816184
S.E. of regression	7.569882	Akaike info criterion		6.886727
Sum squared resid	347256.9	Schwarz criterion		6.890047
Log likelihood	-20874.11	F-statistic		2066.747
Durbin-Watson stat	1.989520	Prob(F-statistic)		0.000000

## INDONESIA DAILY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend  
 Lag Length: 32 (Automatic based on AIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.661317	0.7682
Test critical values: 1% level	-3.959558	
5% level	-3.410549	
10% level	-3.127046	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA)

Method: Least Squares

Sample(adjusted): 884 6915

Included observations: 6032 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.001006	0.000605	-1.661317	0.0967
D(INDONESIA(-1))	0.192105	0.012927	14.86055	0.0000
D(INDONESIA(-2))	-0.016689	0.013157	-1.268407	0.2047
D(INDONESIA(-3))	-0.006964	0.013160	-0.529207	0.5967
D(INDONESIA(-4))	-0.015459	0.013160	-1.174699	0.2402
D(INDONESIA(-5))	0.039450	0.013162	2.997195	0.0027
D(INDONESIA(-6))	-0.040345	0.013181	-3.060907	0.0022
D(INDONESIA(-7))	-0.032173	0.013192	-2.438815	0.0148
D(INDONESIA(-8))	-0.013487	0.013192	-1.022376	0.3066
D(INDONESIA(-9))	0.037167	0.013193	2.817088	0.0049
D(INDONESIA(-10))	0.022106	0.013214	1.672950	0.0944
D(INDONESIA(-11))	0.012682	0.013288	0.954401	0.3399
D(INDONESIA(-12))	0.015938	0.013288	1.199419	0.2304
D(INDONESIA(-13))	0.047619	0.013284	3.584769	0.0003
D(INDONESIA(-14))	-0.011713	0.013321	-0.879293	0.3793
D(INDONESIA(-15))	0.020542	0.013321	1.542109	0.1231
D(INDONESIA(-16))	-0.009561	0.013341	-0.716661	0.4736
D(INDONESIA(-17))	0.029585	0.013378	2.211473	0.0270
D(INDONESIA(-18))	0.023405	0.013386	1.748484	0.0804
D(INDONESIA(-19))	-0.042452	0.013403	-3.167286	0.0015
D(INDONESIA(-20))	0.049265	0.013412	3.673316	0.0002
D(INDONESIA(-21))	-0.001613	0.013436	-0.120084	0.9044
D(INDONESIA(-22))	-0.007105	0.013437	-0.528786	0.5970
D(INDONESIA(-23))	0.011151	0.013468	0.827962	0.4077
D(INDONESIA(-24))	0.001382	0.013483	0.102474	0.9184
D(INDONESIA(-25))	0.031293	0.013482	2.321121	0.0203
D(INDONESIA(-26))	-0.020748	0.013482	-1.538972	0.1239
D(INDONESIA(-27))	-0.000324	0.013481	-0.024036	0.9808
D(INDONESIA(-28))	0.009033	0.013477	0.670240	0.5027
D(INDONESIA(-29))	0.005753	0.013490	0.426475	0.6698
D(INDONESIA(-30))	-0.017652	0.013650	-1.293164	0.1960
D(INDONESIA(-31))	-0.036789	0.013656	-2.694041	0.0071
D(INDONESIA(-32))	0.039904	0.013457	2.965368	0.0030
C	-0.199178	0.243295	-0.818671	0.4130
@TREND(1)	0.000197	9.66E-05	2.041638	0.0412
R-squared	0.054367	Mean dependent var	0.200068	
Adjusted R-squared	0.049006	S.D. dependent var	7.725904	
S.E. of regression	7.534220	Akaike info criterion	6.882573	
Sum squared resid	340416.5	Schwarz criterion	6.921477	
Log likelihood	-20722.84	F-statistic	10.14069	
Durbin-Watson stat	1.996321	Prob(F-statistic)	0.000000	

## INDONESIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 31 (Automatic based on AIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.47686	0.0000
Test critical values: 1% level	-3.959558	
5% level	-3.410549	
10% level	-3.127046	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA,2)

Method: Least Squares

Sample(adjusted): 884 6915

Included observations: 6032 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.707649	0.056717	-12.47686	0.0000
D(INDONESIA(-1),2)	-0.100771	0.056056	-1.797691	0.0723
D(INDONESIA(-2),2)	-0.118042	0.055338	-2.133107	0.0330
D(INDONESIA(-3),2)	-0.125583	0.054645	-2.298165	0.0216
D(INDONESIA(-4),2)	-0.141621	0.053926	-2.626222	0.0087
D(INDONESIA(-5),2)	-0.102736	0.053197	-1.931249	0.0535
D(INDONESIA(-6),2)	-0.143700	0.052427	-2.740940	0.0061
D(INDONESIA(-7),2)	-0.176415	0.051733	-3.410143	0.0007
D(INDONESIA(-8),2)	-0.190474	0.050962	-3.737565	0.0002
D(INDONESIA(-9),2)	-0.153853	0.050210	-3.064175	0.0022
D(INDONESIA(-10),2)	-0.132372	0.049368	-2.681340	0.0074
D(INDONESIA(-11),2)	-0.120193	0.048610	-2.472579	0.0134
D(INDONESIA(-12),2)	-0.104788	0.047793	-2.192521	0.0284
D(INDONESIA(-13),2)	-0.057740	0.046873	-1.231832	0.2181
D(INDONESIA(-14),2)	-0.070089	0.045930	-1.526005	0.1271
D(INDONESIA(-15),2)	-0.050190	0.044924	-1.117218	0.2639
D(INDONESIA(-16),2)	-0.060372	0.043859	-1.376507	0.1687
D(INDONESIA(-17),2)	-0.031476	0.042727	-0.736689	0.4613
D(INDONESIA(-18),2)	-0.008809	0.041508	-0.212222	0.8319
D(INDONESIA(-19),2)	-0.052056	0.040225	-1.294123	0.1957
D(INDONESIA(-20),2)	-0.003588	0.038826	-0.092409	0.9264
D(INDONESIA(-21),2)	-0.005994	0.037328	-0.160578	0.8724
D(INDONESIA(-22),2)	-0.013918	0.035714	-0.389700	0.6968
D(INDONESIA(-23),2)	-0.003685	0.033884	-0.108741	0.9134
D(INDONESIA(-24),2)	-0.003197	0.031854	-0.100379	0.9200
D(INDONESIA(-25),2)	0.027220	0.029743	0.915166	0.3601
D(INDONESIA(-26),2)	0.005606	0.027638	0.202846	0.8393
D(INDONESIA(-27),2)	0.004463	0.025489	0.175116	0.8610
D(INDONESIA(-28),2)	0.012626	0.022921	0.550825	0.5818
D(INDONESIA(-29),2)	0.017601	0.020319	0.866245	0.3864
D(INDONESIA(-30),2)	-0.001011	0.017093	-0.059151	0.9528
D(INDONESIA(-31),2)	-0.038672	0.013438	-2.877724	0.0040
C	-0.115717	0.238086	-0.486031	0.6270
@TREND(1)	6.64E-05	5.60E-05	1.186557	0.2354
R-squared	0.416945	Mean dependent var		0.005910
Adjusted R-squared	0.413737	S.D. dependent var		9.841372
S.E. of regression	7.535325	Akaike info criterion		6.882702
Sum squared resid	340573.2	Schwarz criterion		6.920494
Log likelihood	-20724.23	F-statistic		129.9753
Durbin-Watson stat	1.996366	Prob(F-statistic)		0.000000

### INDONESIA DAILY (LEVEL)

Null Hypothesis: INDONESIA has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.100082	0.9276
Test critical values:		
1% level	-3.959550	
5% level	-3.410545	
10% level	-3.127043	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	59.33527
HAC corrected variance (Bartlett kernel)	79.06753

Phillips-Perron Test Equation  
Dependent Variable: D(INDONESIA)  
Method: Least Squares  
Sample(adjusted): 852 6915  
Included observations: 6064 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.000399	0.000601	-0.664352	0.5065
C	-0.188545	0.246058	-0.766260	0.4436
@TREND(1)	0.000144	9.73E-05	1.477969	0.1395
R-squared	0.000502	Mean dependent var		0.199253
Adjusted R-squared	0.000172	S.D. dependent var		7.705507
S.E. of regression	7.704845	Akaike info criterion		6.922070
Sum squared resid	359809.1	Schwarz criterion		6.925390
Log likelihood	-20984.72	F-statistic		1.521318
Durbin-Watson stat	1.622768	Prob(F-statistic)		0.218507

### INDONESIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 16 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-64.17162	0.0000
Test critical values:		
1% level	-3.959550	
5% level	-3.410545	
10% level	-3.127044	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	57.27476
HAC corrected variance (Bartlett kernel)	56.13630

Phillips-Perron Test Equation  
Dependent Variable: D(INDONESIA,2)



Method: Least Squares  
Sample(adjusted): 853 6915  
Included observations: 6063 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.812715	0.012641	-64.29217	0.0000
C	-0.128872	0.236587	-0.544713	0.5860
@TREND(1)	7.52E-05	5.56E-05	1.353231	0.1760
R-squared	0.405503	Mean dependent var		0.005850
Adjusted R-squared	0.405307	S.D. dependent var		9.816184
S.E. of regression	7.569882	Akaike info criterion		6.886727
Sum squared resid	347256.9	Schwarz criterion		6.890047
Log likelihood	-20874.11	F-statistic		2066.747
Durbin-Watson stat	1.989520	Prob(F-statistic)		0.000000

## INDONESIA DAILY

Null Hypothesis: INDONESIA has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 1 (Automatic based on SIC, MAXLAG=33)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.323940
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)  
DF-GLS Test Equation on GLS Detrended Residuals  
Dependent Variable: D(GLSRESID)  
Method: Least Squares  
Sample(adjusted): 853 6915  
Included observations: 6063 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000722	0.000545	-1.323940	0.1856
D(GLSRESID(-1))	0.188189	0.012643	14.88435	0.0000
R-squared	0.035302	Mean dependent var		0.069179
Adjusted R-squared	0.035143	S.D. dependent var		7.706143
S.E. of regression	7.569523	Akaike info criterion		6.886467
Sum squared resid	347281.3	Schwarz criterion		6.888681
Log likelihood	-20874.33	Durbin-Watson stat		1.989711

## INDONESIA DAILY

Null Hypothesis: INDONESIA has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 32 (Automatic based on AIC, MAXLAG=33)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.732173
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)  
DF-GLS Test Equation on GLS Detrended Residuals  
Dependent Variable: D(GLSRESID)  
Method: Least Squares  
Sample(adjusted): 884 6915

Included observations: 6032 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000960	0.000554	-1.732173	0.0833
D(GLSRESID(-1))	0.192290	0.012924	14.87889	0.0000
D(GLSRESID(-2))	-0.016556	0.013154	-1.258606	0.2082
D(GLSRESID(-3))	-0.006825	0.013157	-0.518697	0.6040
D(GLSRESID(-4))	-0.015317	0.013157	-1.164171	0.2444
D(GLSRESID(-5))	0.039593	0.013159	3.008767	0.0026
D(GLSRESID(-6))	-0.040200	0.013177	-3.050681	0.0023
D(GLSRESID(-7))	-0.032033	0.013189	-2.428718	0.0152
D(GLSRESID(-8))	-0.013330	0.013189	-1.010704	0.3122
D(GLSRESID(-9))	0.037323	0.013190	2.829565	0.0047
D(GLSRESID(-10))	0.022270	0.013210	1.685802	0.0919
D(GLSRESID(-11))	0.012803	0.013285	0.963716	0.3352
D(GLSRESID(-12))	0.016062	0.013285	1.208960	0.2267
D(GLSRESID(-13))	0.047744	0.013281	3.594953	0.0003
D(GLSRESID(-14))	-0.011584	0.013318	-0.869787	0.3845
D(GLSRESID(-15))	0.020677	0.013318	1.552565	0.1206
D(GLSRESID(-16))	-0.009443	0.013338	-0.708011	0.4790
D(GLSRESID(-17))	0.029727	0.013375	2.222646	0.0263
D(GLSRESID(-18))	0.023549	0.013382	1.759721	0.0785
D(GLSRESID(-19))	-0.042299	0.013399	-3.156923	0.0016
D(GLSRESID(-20))	0.049431	0.013407	3.686929	0.0002
D(GLSRESID(-21))	-0.001469	0.013432	-0.109352	0.9129
D(GLSRESID(-22))	-0.006953	0.013433	-0.517645	0.6047
D(GLSRESID(-23))	0.011333	0.013463	0.841788	0.3999
D(GLSRESID(-24))	0.001550	0.013478	0.114971	0.9085
D(GLSRESID(-25))	0.031457	0.013477	2.334085	0.0196
D(GLSRESID(-26))	-0.020596	0.013477	-1.528204	0.1265
D(GLSRESID(-27))	-0.000175	0.013477	-0.012993	0.9896
D(GLSRESID(-28))	0.009193	0.013472	0.682419	0.4950
D(GLSRESID(-29))	0.005887	0.013486	0.436507	0.6625
D(GLSRESID(-30))	-0.017468	0.013645	-1.280214	0.2005
D(GLSRESID(-31))	-0.036621	0.013651	-2.682677	0.0073
D(GLSRESID(-32))	0.040169	0.013446	2.987387	0.0028
R-squared	0.054140	Mean dependent var		0.069969
Adjusted R-squared	0.049094	S.D. dependent var		7.725904
S.E. of regression	7.533868	Akaike info criterion		6.882150
Sum squared resid	340498.3	Schwarz criterion		6.918831
Log likelihood	-20723.56	Durbin-Watson stat		1.996301

## INDONESIA DAILY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=33)

Sample(adjusted): 851 6915

Included observations: 6065 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.49968	-1.35181	0.24580	15.8742
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

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HAC corrected variance (Spectral GLS-detrended AR) 86.91282

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### INDONESIA DAILY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 32 (Spectral GLS-detrended AR based on AIC, MAXLAG=33)

Sample(adjusted): 851 6915

Included observations: 6065 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.85448	-1.83588	0.20734	11.2954
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

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HAC corrected variance (Spectral GLS-detrended AR) 122.1446

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### INDONESIA DAILY

Null Hypothesis: INDONESIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 58 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.473168
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

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Residual variance (no correction) 27164.12  
HAC corrected variance (Bartlett kernel) 1526440.

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KPSS Test Equation

Dependent Variable: INDONESIA

Method: Least Squares

Date: 09/07/06 Time: 10:30

Sample(adjusted): 851 6915

Included observations: 6065 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-84.95527	5.148443	-16.50116	0.0000
@TREND(1)	0.131834	0.001209	109.0470	0.0000
R-squared	0.662308	Mean dependent var		426.8244
Adjusted R-squared	0.662253	S.D. dependent var		283.6439
S.E. of regression	164.8426	Akaike info criterion		13.04819
Sum squared resid	1.65E+08	Schwarz criterion		13.05040
Log likelihood	-39566.63	F-statistic		11891.24
Durbin-Watson stat	0.002185	Prob(F-statistic)		0.000000

### INDONESIA WEEKLY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.972722	0.9458
Test critical values:		
1% level	-3.965636	
5% level	-3.413524	
10% level	-3.128810	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA)

Method: Least Squares

Sample(adjusted): 956 2167

Included observations: 1212 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.003236	0.003327	-0.972722	0.3309
C	-4.504949	3.205954	-1.405182	0.1602
@TREND(1)	0.004411	0.002695	1.636724	0.1019
R-squared	0.002527	Mean dependent var		0.996917
Adjusted R-squared	0.000877	S.D. dependent var		19.06973
S.E. of regression	19.06137	Akaike info criterion		8.735677
Sum squared resid	439273.1	Schwarz criterion		8.748301
Log likelihood	-5290.820	F-statistic		1.531401
Durbin-Watson stat	1.974291	Prob(F-statistic)		0.216652

### INDONESIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on SIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-17.17775	0.0000
Test critical values:		
1% level	-3.965655	
5% level	-3.413533	
10% level	-3.128815	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA,2)

Method: Least Squares

Sample(adjusted): 959 2167

Included observations: 1209 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.826062	0.048089	-17.17775	0.0000
D(INDONESIA(-1),2)	-0.171856	0.040322	-4.262084	0.0000
D(INDONESIA(-2),2)	-0.099162	0.028736	-3.450757	0.0006
C	-2.146510	2.503727	-0.857326	0.3914
@TREND(1)	0.001904	0.001566	1.215459	0.2244
R-squared	0.502456	Mean dependent var		0.016054
Adjusted R-squared	0.500804	S.D. dependent var		26.83748
S.E. of regression	18.96171	Akaike info criterion		8.726848
Sum squared resid	432893.9	Schwarz criterion		8.747929
Log likelihood	-5270.379	F-statistic		303.9722
Durbin-Watson stat	1.997020	Prob(F-statistic)		0.000000

## INDONESIA WEEKLY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 6 (Automatic based on AIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.557934	0.8089
Test critical values:		
1% level	-3.965674	
5% level	-3.413542	
10% level	-3.128821	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA)

Method: Least Squares

Sample(adjusted): 962 2167

Included observations: 1206 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.005274	0.003385	-1.557934	0.1195
D(INDONESIA(-1))	0.014897	0.028854	0.516295	0.6057
D(INDONESIA(-2))	0.065608	0.028753	2.281803	0.0227
D(INDONESIA(-3))	0.104467	0.028846	3.621515	0.0003
D(INDONESIA(-4))	-0.002428	0.029062	-0.083559	0.9334
D(INDONESIA(-5))	0.102066	0.029058	3.512529	0.0005
D(INDONESIA(-6))	-0.079244	0.029433	-2.692360	0.0072
C	-5.289870	3.209328	-1.648280	0.0996
@TREND(1)	0.005343	0.002703	1.976548	0.0483
R-squared	0.034666	Mean dependent var		1.000906
Adjusted R-squared	0.028214	S.D. dependent var		19.11701
S.E. of regression	18.84540	Akaike info criterion		8.717849
Sum squared resid	425113.3	Schwarz criterion		8.755872
Log likelihood	-5247.863	F-statistic		5.373195
Durbin-Watson stat	1.999326	Prob(F-statistic)		0.000001

## INDONESIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on AIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.08652	0.0000
Test critical values:		
1% level	-3.965674	
5% level	-3.413542	
10% level	-3.128821	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA,2)

Method: Least Squares

Sample(adjusted): 962 2167

Included observations: 1206 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.817707	0.062485	-13.08652	0.0000
D(INDONESIA(-1),2)	-0.170012	0.059106	-2.876386	0.0041
D(INDONESIA(-2),2)	-0.107688	0.054215	-1.986304	0.0472

D(INDONESIA(-3),2)	-0.006325	0.048968	-0.129166	0.8972
D(INDONESIA(-4),2)	-0.013128	0.040733	-0.322302	0.7473
D(INDONESIA(-5),2)	0.084530	0.029254	2.889488	0.0039
C	-2.159583	2.504025	-0.862445	0.3886
@TREND(1)	0.001910	0.001567	1.219116	0.2230
R-squared	0.510407	Mean dependent var		0.017628
Adjusted R-squared	0.507547	S.D. dependent var		26.87084
S.E. of regression	18.85662	Akaike info criterion		8.718216
Sum squared resid	425975.3	Schwarz criterion		8.752015
Log likelihood	-5249.084	F-statistic		178.4188
Durbin-Watson stat	2.000707	Prob(F-statistic)		0.000000

### INDONESIA WEEKLY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.448295	0.8463
Test critical values: 1% level	-3.965636	
5% level	-3.413524	
10% level	-3.128810	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	362.4366
HAC corrected variance (Bartlett kernel)	490.6827

Phillips-Perron Test Equation

Dependent Variable: D(INDONESIA)

Method: Least Squares

Sample(adjusted): 956 2167

Included observations: 1212 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.003236	0.003327	-0.972722	0.3309
C	-4.504949	3.205954	-1.405182	0.1602
@TREND(1)	0.004411	0.002695	1.636724	0.1019
R-squared	0.002527	Mean dependent var		0.996917
Adjusted R-squared	0.000877	S.D. dependent var		19.06973
S.E. of regression	19.06137	Akaike info criterion		8.735677
Sum squared resid	439273.1	Schwarz criterion		8.748301
Log likelihood	-5290.820	F-statistic		1.531401
Durbin-Watson stat	1.974291	Prob(F-statistic)		0.216652

### INDONESIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-34.76019	0.0000
Test critical values: 1% level	-3.965642	
5% level	-3.413527	
10% level	-3.128812	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	362.9820
HAC corrected variance (Bartlett kernel)	474.5004

Phillips-Perron Test Equation  
 Dependent Variable: D(INDONESIA,2)  
 Method: Least Squares  
 Sample(adjusted): 957 2167  
 Included observations: 1211 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.989920	0.028781	-34.39542	0.0000
C	-2.538579	2.509331	-1.011656	0.3119
@TREND(1)	0.002259	0.001569	1.439313	0.1503
R-squared	0.494782	Mean dependent var		0.016060
Adjusted R-squared	0.493946	S.D. dependent var		26.81529
S.E. of regression	19.07573	Akaike info criterion		8.737185
Sum squared resid	439571.2	Schwarz criterion		8.749817
Log likelihood	-5287.365	F-statistic		591.5236
Durbin-Watson stat	2.000757	Prob(F-statistic)		0.000000

## INDONESIA WEEKLY

Null Hypothesis: INDONESIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=22)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.126723
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 956 2167  
 Included observations: 1212 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003471	0.003080	-1.126723	0.2601
R-squared	0.000729	Mean dependent var		0.340360
Adjusted R-squared	0.000729	S.D. dependent var		19.06973
S.E. of regression	19.06279	Akaike info criterion		8.734178
Sum squared resid	440065.0	Schwarz criterion		8.738386
Log likelihood	-5291.912	Durbin-Watson stat		1.970276

## INDONESIA WEEKLY

Null Hypothesis: INDONESIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 6 (Automatic based on AIC, MAXLAG=22)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.654235
Test critical values: 1% level	-3.480000

5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 962 2167

Included observations: 1206 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005142	0.003108	-1.654235	0.0983
D(GLSRESID(-1))	0.015802	0.028818	0.548338	0.5836
D(GLSRESID(-2))	0.066675	0.028702	2.323011	0.0203
D(GLSRESID(-3))	0.105351	0.028806	3.657242	0.0003
D(GLSRESID(-4))	-0.001345	0.028996	-0.046393	0.9630
D(GLSRESID(-5))	0.103148	0.028992	3.557860	0.0004
D(GLSRESID(-6))	-0.078054	0.029346	-2.659744	0.0079
R-squared	0.033489	Mean dependent var	0.344350	
Adjusted R-squared	0.028652	S.D. dependent var	19.11701	
S.E. of regression	18.84115	Akaike info criterion	8.715751	
Sum squared resid	425631.8	Schwarz criterion	8.745325	
Log likelihood	-5248.598	Durbin-Watson stat	1.998939	

## INDONESIA WEEKLY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=22)

Sample(adjusted): 955 2167

Included observations: 1213 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.19886	-1.12510	0.26795	18.8379
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 363.0900

## INDONESIA WEEKLY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 6 (Spectral GLS-detrended AR based on AIC, MAXLAG=22)

Sample(adjusted): 955 2167

Included observations: 1213 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.12438	-1.74090	0.21428	12.0470
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)



HAC corrected variance (Spectral GLS-detrended AR) 567.7643

### INDONESIA WEEKLY

Null Hypothesis: INDONESIA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 26 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.224041
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	27259.22
HAC corrected variance (Bartlett kernel)	650185.3

### KPSS Test Equation

Dependent Variable: INDONESIA  
 Method: Least Squares  
 Sample(adjusted): 955 2167  
 Included observations: 1213 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-604.3342	21.66273	-27.89742	0.0000
@TREND(1)	0.661536	0.013549	48.82463	0.0000
R-squared	0.663129	Mean dependent var		427.6621
Adjusted R-squared	0.662851	S.D. dependent var		284.5796
S.E. of regression	165.2399	Akaike info criterion		13.05432
Sum squared resid	33065433	Schwarz criterion		13.06273
Log likelihood	-7915.446	F-statistic		2383.844
Durbin-Watson stat	0.013323	Prob(F-statistic)		0.000000

### INDONESIA MONTHLY (LEVEL)

Null Hypothesis: INDONESIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.176127	0.9126
Test critical values:		
1% level	-3.991412	
5% level	-3.426073	
10% level	-3.136231	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA)  
 Method: Least Squares  
 Sample(adjusted): 223 500  
 Included observations: 278 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.018826	0.016007	-1.176127	0.2406

C	-23.05054	15.40609	-1.496197	0.1357
@TREND(1)	0.098346	0.055989	1.756513	0.0801
R-squared	0.011756	Mean dependent var	4.401565	
Adjusted R-squared	0.004569	S.D. dependent var	43.75524	
S.E. of regression	43.65517	Akaike info criterion	10.40125	
Sum squared resid	524087.9	Schwarz criterion	10.44040	
Log likelihood	-1442.774	F-statistic	1.635695	
Durbin-Watson stat	1.836714	Prob(F-statistic)	0.196706	

## INDONESIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.44933	0.0000
Test critical values: 1% level	-3.991534	
5% level	-3.426132	
10% level	-3.136266	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA,2)

Method: Least Squares

Sample(adjusted): 224 500

Included observations: 277 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.931129	0.060270	-15.44933	0.0000
C	-10.96455	12.17369	-0.900676	0.3686
@TREND(1)	0.041781	0.032979	1.266887	0.2063
R-squared	0.465555	Mean dependent var	0.026047	
Adjusted R-squared	0.461654	S.D. dependent var	59.61466	
S.E. of regression	43.74049	Akaike info criterion	10.40520	
Sum squared resid	524225.2	Schwarz criterion	10.44445	
Log likelihood	-1438.120	F-statistic	119.3409	
Durbin-Watson stat	1.992351	Prob(F-statistic)	0.000000	

## INDONESIA MONTHLY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.176127	0.9126
Test critical values: 1% level	-3.991412	
5% level	-3.426073	
10% level	-3.136231	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA)

Method: Least Squares

Sample(adjusted): 223 500

Included observations: 278 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.018826	0.016007	-1.176127	0.2406
C	-23.05054	15.40609	-1.496197	0.1357
@TREND(1)	0.098346	0.055989	1.756513	0.0801
R-squared	0.011756	Mean dependent var		4.401565
Adjusted R-squared	0.004569	S.D. dependent var		43.75524
S.E. of regression	43.65517	Akaike info criterion		10.40125
Sum squared resid	524087.9	Schwarz criterion		10.44040
Log likelihood	-1442.774	F-statistic		1.635695
Durbin-Watson stat	1.836714	Prob(F-statistic)		0.196706

### INDONESIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.44933	0.0000
Test critical values:		
1% level	-3.991534	
5% level	-3.426132	
10% level	-3.136266	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INDONESIA,2)

Method: Least Squares

Sample(adjusted): 224 500

Included observations: 277 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.931129	0.060270	-15.44933	0.0000
C	-10.96455	12.17369	-0.900676	0.3686
@TREND(1)	0.041781	0.032979	1.266887	0.2063
R-squared	0.465555	Mean dependent var		0.026047
Adjusted R-squared	0.461654	S.D. dependent var		59.61466
S.E. of regression	43.74049	Akaike info criterion		10.40520
Sum squared resid	524225.2	Schwarz criterion		10.44445
Log likelihood	-1438.120	F-statistic		119.3409
Durbin-Watson stat	1.992351	Prob(F-statistic)		0.000000

### INDONESIA MONTHLY (LEVEL)

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend  
 Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.320533	0.8807
Test critical values:		
1% level	-3.991412	
5% level	-3.426073	
10% level	-3.136231	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1885.208
HAC corrected variance (Bartlett kernel)	2058.912

Phillips-Perron Test Equation  
 Dependent Variable: D(INDONESIA)  
 Method: Least Squares  
 Sample(adjusted): 223 500  
 Included observations: 278 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDONESIA(-1)	-0.018826	0.016007	-1.176127	0.2406
C	-23.05054	15.40609	-1.496197	0.1357
@TREND(1)	0.098346	0.055989	1.756513	0.0801
R-squared	0.011756	Mean dependent var		4.401565
Adjusted R-squared	0.004569	S.D. dependent var		43.75524
S.E. of regression	43.65517	Akaike info criterion		10.40125
Sum squared resid	524087.9	Schwarz criterion		10.44040
Log likelihood	-1442.774	F-statistic		1.635695
Durbin-Watson stat	1.836714	Prob(F-statistic)		0.196706

## INDONESIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(INDONESIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-15.40652	0.0000
Test critical values:		
1% level	-3.991534	
5% level	-3.426132	
10% level	-3.136266	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1892.510
HAC corrected variance (Bartlett kernel)	1653.403

Phillips-Perron Test Equation  
 Dependent Variable: D(INDONESIA,2)  
 Method: Least Squares  
 Sample(adjusted): 224 500

Included observations: 277 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDONESIA(-1))	-0.931129	0.060270	-15.44933	0.0000
C	-10.96455	12.17369	-0.900676	0.3686
@TREND(1)	0.041781	0.032979	1.266887	0.2063
R-squared	0.465555	Mean dependent var		0.026047
Adjusted R-squared	0.461654	S.D. dependent var		59.61466
S.E. of regression	43.74049	Akaike info criterion		10.40520
Sum squared resid	524225.2	Schwarz criterion		10.44445
Log likelihood	-1438.120	F-statistic		119.3409
Durbin-Watson stat	1.992351	Prob(F-statistic)		0.000000

## INDONESIA MONTHLY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.357674
Test critical values: 1% level	-3.467800
5% level	-2.914400
10% level	-2.612700

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 223 500

Included observations: 278 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.020213	0.014888	-1.357674	0.1757
R-squared	0.005493	Mean dependent var		1.464708
Adjusted R-squared	0.005493	S.D. dependent var		43.75524
S.E. of regression	43.63490	Akaike info criterion		10.39318
Sum squared resid	527409.2	Schwarz criterion		10.40623
Log likelihood	-1443.652	Durbin-Watson stat		1.822625

## INDONESIA MONTHLY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.592317
Test critical values: 1% level	-3.467700
5% level	-2.914600
10% level	-2.613050

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 224 500

Included observations: 277 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.024029	0.015091	-1.592317	0.1125
D(GLSRESID(-1))	0.092329	0.060700	1.521061	0.1294
R-squared	0.013759	Mean dependent var		1.484280
Adjusted R-squared	0.010172	S.D. dependent var		43.83322
S.E. of regression	43.60971	Akaike info criterion		10.39563
Sum squared resid	522996.8	Schwarz criterion		10.42180
Log likelihood	-1437.795	Durbin-Watson stat		1.993756

### INDONESIA MONTHLY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=15)

Sample(adjusted): 222 500

Included observations: 279 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.55457	-1.34450	0.24205	15.7220
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1897.156
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### INDONESIA MONTHLY

Null Hypothesis: INDONESIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=15)

Sample(adjusted): 222 500

Included observations: 279 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-7.32946	-1.61418	0.22023	13.0152
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	2291.722
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### INDONESIA MONTHLY

Null Hypothesis: INDONESIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 13 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.118406
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	27563.95
HAC corrected variance (Bartlett kernel)	293699.0

KPSS Test Equation

Dependent Variable: INDONESIA

Method: Least Squares

Sample(adjusted): 222 500

Included observations: 279 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-609.0594	45.69070	-13.33005	0.0000
@TREND(1)	2.881418	0.123857	23.26410	0.0000
R-squared	0.661459	Mean dependent var		428.2510
Adjusted R-squared	0.660237	S.D. dependent var		285.8545
S.E. of regression	166.6222	Akaike info criterion		13.07648
Sum squared resid	7690342.	Schwarz criterion		13.10251
Log likelihood	-1822.169	F-statistic		541.2182
Durbin-Watson stat	0.069043	Prob(F-statistic)		0.000000

**KOREA DAILY(LEVEL)**

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.061036	0.5666
Test critical values:		
1% level	-3.964461	
5% level	-3.412949	
10% level	-3.128469	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA)

Method: Least Squares

Sample(adjusted): 1570 3002

Included observations: 1433 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.006099	0.002959	-2.061036	0.0395
C	-5.828906	4.642148	-1.255648	0.2094
@TREND(1)	0.007599	0.003689	2.060050	0.0396
R-squared	0.003135	Mean dependent var		1.177523
Adjusted R-squared	0.001741	S.D. dependent var		26.56725
S.E. of regression	26.54411	Akaike info criterion		9.397584
Sum squared resid	1007563.	Schwarz criterion		9.408612
Log likelihood	-6730.369	F-statistic		2.248666
Durbin-Watson stat	1.966820	Prob(F-statistic)		0.105913

**KOREA DAILY (1<sup>ST</sup> DIFFERENCE)**

Null Hypothesis: D(KOREA) has a unit root

Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-37.29278	0.0000
Test critical values:		
1% level	-3.964466	
5% level	-3.412951	
10% level	-3.128471	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(KOREA,2)  
 Method: Least Squares  
 Sample(adjusted): 1571 3002  
 Included observations: 1432 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-0.988408	0.026504	-37.29278	0.0000
C	-0.732274	3.948049	-0.185477	0.8529
@TREND(1)	0.000831	0.001700	0.488779	0.6251
R-squared	0.493220	Mean dependent var		0.046802
Adjusted R-squared	0.492510	S.D. dependent var		37.32673
S.E. of regression	26.59093	Akaike info criterion		9.401110
Sum squared resid	1010414.	Schwarz criterion		9.412144
Log likelihood	-6728.195	F-statistic		695.3811
Durbin-Watson stat	1.989520	Prob(F-statistic)		0.000000

### KOREA DAILY(LEVEL)

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.061036	0.5666
Test critical values:		
1% level	-3.964461	
5% level	-3.412949	
10% level	-3.128469	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(KOREA)  
 Method: Least Squares  
 Sample(adjusted): 1570 3002  
 Included observations: 1433 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.006099	0.002959	-2.061036	0.0395
C	-5.828906	4.642148	-1.255648	0.2094
@TREND(1)	0.007599	0.003689	2.060050	0.0396
R-squared	0.003135	Mean dependent var		1.177523
Adjusted R-squared	0.001741	S.D. dependent var		26.56725
S.E. of regression	26.54411	Akaike info criterion		9.397584
Sum squared resid	1007563.	Schwarz criterion		9.408612
Log likelihood	-6730.369	F-statistic		2.248666
Durbin-Watson stat	1.966820	Prob(F-statistic)		0.105913



### KOREA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-27.64534	0.0000
Test critical values:		
1% level	-3.964470	
5% level	-3.412954	
10% level	-3.128472	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA,2)

Method: Least Squares

Sample(adjusted): 1572 3002

Included observations: 1431 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-1.029412	0.037236	-27.64534	0.0000
D(KOREA(-1),2)	0.041571	0.026459	1.571113	0.1164
C	-1.275648	3.941860	-0.323616	0.7463
@TREND(1)	0.001066	0.001697	0.628189	0.5300
R-squared	0.495315	Mean dependent var		-0.005996
Adjusted R-squared	0.494254	S.D. dependent var		37.28625
S.E. of regression	26.51642	Akaike info criterion		9.396196
Sum squared resid	1003353.	Schwarz criterion		9.410916
Log likelihood	-6718.978	F-statistic		466.8358
Durbin-Watson stat	2.001290	Prob(F-statistic)		0.000000

### KOREA DAILY(LEVEL)

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.015696	0.5917
Test critical values:		
1% level	-3.964461	
5% level	-3.412949	
10% level	-3.128469	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	703.1147
HAC corrected variance (Bartlett kernel)	674.1199

Phillips-Perron Test Equation

Dependent Variable: D(KOREA)

Method: Least Squares

Sample(adjusted): 1570 3002

Included observations: 1433 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.006099	0.002959	-2.061036	0.0395
C	-5.828906	4.642148	-1.255648	0.2094
@TREND(1)	0.007599	0.003689	2.060050	0.0396
R-squared	0.003135	Mean dependent var		1.177523

Adjusted R-squared	0.001741	S.D. dependent var	26.56725
S.E. of regression	26.54411	Akaike info criterion	9.397584
Sum squared resid	1007563.	Schwarz criterion	9.408612
Log likelihood	-6730.369	F-statistic	2.248666
Durbin-Watson stat	1.966820	Prob(F-statistic)	0.105913

### KOREA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-37.30689	0.0000
Test critical values:		
1% level	-3.964466	
5% level	-3.412951	
10% level	-3.128471	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	705.5961
HAC corrected variance (Bartlett kernel)	639.9599

Phillips-Perron Test Equation

Dependent Variable: D(KOREA,2)

Method: Least Squares

Sample(adjusted): 1571 3002

Included observations: 1432 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-0.988408	0.026504	-37.29278	0.0000
C	-0.732274	3.948049	-0.185477	0.8529
@TREND(1)	0.000831	0.001700	0.488779	0.6251
R-squared	0.493220	Mean dependent var	0.046802	
Adjusted R-squared	0.492510	S.D. dependent var	37.32673	
S.E. of regression	26.59093	Akaike info criterion	9.401110	
Sum squared resid	1010414.	Schwarz criterion	9.412144	
Log likelihood	-6728.195	F-statistic	695.3811	
Durbin-Watson stat	1.989520	Prob(F-statistic)	0.000000	

### KOREA DAILY

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.995741
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1570 3002

Included observations: 1433 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005762	0.002887	-1.995741	0.0462
R-squared	0.002749	Mean dependent var		0.132751
Adjusted R-squared	0.002749	S.D. dependent var		26.56725
S.E. of regression	26.53071	Akaike info criterion		9.395180
Sum squared resid	1007954.	Schwarz criterion		9.398856
Log likelihood	-6730.647	Durbin-Watson stat		1.966718

### KOREA DAILY

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=23)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.995741
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1570 3002

Included observations: 1433 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005762	0.002887	-1.995741	0.0462
R-squared	0.002749	Mean dependent var		0.132751
Adjusted R-squared	0.002749	S.D. dependent var		26.56725
S.E. of regression	26.53071	Akaike info criterion		9.395180
Sum squared resid	1007954.	Schwarz criterion		9.398856
Log likelihood	-6730.647	Durbin-Watson stat		1.966718

### KOREA DAILY

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=23)

Sample(adjusted): 1569 3002

Included observations: 1434 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.23365	-1.99065	0.24177	11.1955
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	703.3872
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## KOREA DAILY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=23)  
 Sample(adjusted): 1569 3002  
 Included observations: 1434 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.23365	-1.99065	0.24177	11.1955
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 703.3872

## KOREA DAILY

Null Hypothesis: KOREA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 30 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.605875
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 56141.38  
 HAC corrected variance (Bartlett kernel) 1630579.

KPSS Test Equation  
 Dependent Variable: KOREA  
 Method: Least Squares  
 Sample(adjusted): 1569 3002  
 Included observations: 1434 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-831.6872	35.11706	-23.68328	0.0000
@TREND(1)	1.107728	0.015126	73.23551	0.0000
R-squared	0.789270	Mean dependent var		1698.919
Adjusted R-squared	0.789123	S.D. dependent var		516.3335
S.E. of regression	237.1071	Akaike info criterion		13.77629
Sum squared resid	80506737	Schwarz criterion		13.78364
Log likelihood	-9875.603	F-statistic		5363.440
Durbin-Watson stat	0.012555	Prob(F-statistic)		0.000000

## KOREA WEEKLY( LEVEL)

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.119252	0.5324
Test critical values:		
1% level	-3.990470	
5% level	-3.425616	
10% level	-3.135961	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA)

Method: Least Squares

Sample(adjusted): 1882 2167

Included observations: 286 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.031142	0.014695	-2.119252	0.0349
C	-348.5351	163.5863	-2.130589	0.0340
@TREND(1)	0.201108	0.091559	2.196477	0.0289
R-squared	0.017233	Mean dependent var		5.509476
Adjusted R-squared	0.010288	S.D. dependent var		59.44047
S.E. of regression	59.13391	Akaike info criterion		11.00792
Sum squared resid	989599.9	Schwarz criterion		11.04627
Log likelihood	-1571.133	F-statistic		2.481302
Durbin-Watson stat	2.224512	Prob(F-statistic)		0.085452

### KOREA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-19.17649	0.0000
Test critical values:		
1% level	-3.990585	
5% level	-3.425671	
10% level	-3.135994	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA,2)

Method: Least Squares

Sample(adjusted): 1883 2167

Included observations: 285 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-1.140723	0.059486	-19.17649	0.0000
C	-61.18495	86.23484	-0.709515	0.4786
@TREND(1)	0.033274	0.042575	0.781540	0.4351
R-squared	0.566026	Mean dependent var		0.424211
Adjusted R-squared	0.562948	S.D. dependent var		89.41337
S.E. of regression	59.11108	Akaike info criterion		11.00718
Sum squared resid	985341.7	Schwarz criterion		11.04563
Log likelihood	-1565.524	F-statistic		183.9043
Durbin-Watson stat	1.969593	Prob(F-statistic)		0.000000

## KOREA WEEKLY( LEVEL)

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.880126	0.6622
Test critical values: 1% level	-3.990585	
5% level	-3.425671	
10% level	-3.135994	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(KOREA)  
 Method: Least Squares  
 Sample(adjusted): 1883 2167  
 Included observations: 285 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.027726	0.014747	-1.880126	0.0611
D(KOREA(-1))	-0.127382	0.059644	-2.135711	0.0336
C	-324.4057	164.2275	-1.975343	0.0492
@TREND(1)	0.186587	0.091901	2.030291	0.0433
R-squared	0.033375	Mean dependent var		5.453579
Adjusted R-squared	0.023055	S.D. dependent var		59.53750
S.E. of regression	58.84718	Akaike info criterion		11.00170
Sum squared resid	973100.5	Schwarz criterion		11.05296
Log likelihood	-1563.742	F-statistic		3.234014
Durbin-Watson stat	1.966994	Prob(F-statistic)		0.022751

## KOREA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-19.17649	0.0000
Test critical values: 1% level	-3.990585	
5% level	-3.425671	
10% level	-3.135994	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(KOREA,2)  
 Method: Least Squares  
 Sample(adjusted): 1883 2167  
 Included observations: 285 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-1.140723	0.059486	-19.17649	0.0000
C	-61.18495	86.23484	-0.709515	0.4786
@TREND(1)	0.033274	0.042575	0.781540	0.4351
R-squared	0.566026	Mean dependent var		0.424211
Adjusted R-squared	0.562948	S.D. dependent var		89.41337

S.E. of regression	59.11108	Akaike info criterion	11.00718
Sum squared resid	985341.7	Schwarz criterion	11.04563
Log likelihood	-1565.524	F-statistic	183.9043
Durbin-Watson stat	1.969593	Prob(F-statistic)	0.000000

### KOREA WEEKLY( LEVEL)

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.106685	0.5394
Test critical values:		
1% level	-3.990470	
5% level	-3.425616	
10% level	-3.135961	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3460.140
HAC corrected variance (Bartlett kernel)	3418.076

Phillips-Perron Test Equation  
 Dependent Variable: D(KOREA)  
 Method: Least Squares  
 Sample(adjusted): 1882 2167  
 Included observations: 286 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.031142	0.014695	-2.119252	0.0349
C	-348.5351	163.5863	-2.130589	0.0340
@TREND(1)	0.201108	0.091559	2.196477	0.0289
R-squared	0.017233	Mean dependent var		5.509476
Adjusted R-squared	0.010288	S.D. dependent var		59.44047
S.E. of regression	59.13391	Akaike info criterion		11.00792
Sum squared resid	989599.9	Schwarz criterion		11.04627
Log likelihood	-1571.133	F-statistic		2.481302
Durbin-Watson stat	2.224512	Prob(F-statistic)		0.085452

### KOREA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-19.05252	0.0000
Test critical values:		
1% level	-3.990585	
5% level	-3.425671	
10% level	-3.135994	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3457.339
HAC corrected variance (Bartlett kernel)	4058.946

Phillips-Perron Test Equation  
 Dependent Variable: D(KOREA,2)  
 Method: Least Squares  
 Sample(adjusted): 1883 2167  
 Included observations: 285 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-1.140723	0.059486	-19.17649	0.0000
C	-61.18495	86.23484	-0.709515	0.4786
@TREND(1)	0.033274	0.042575	0.781540	0.4351
R-squared	0.566026	Mean dependent var		0.424211
Adjusted R-squared	0.562948	S.D. dependent var		89.41337
S.E. of regression	59.11108	Akaike info criterion		11.00718
Sum squared resid	985341.7	Schwarz criterion		11.04563
Log likelihood	-1565.524	F-statistic		183.9043
Durbin-Watson stat	1.969593	Prob(F-statistic)		0.000000

### KOREA WEEKLY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.886335
Test critical values: 1% level	-3.468600
5% level	-2.912800
10% level	-2.609900

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1882 2167  
 Included observations: 286 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.025946	0.013755	-1.886335	0.0603
R-squared	0.012205	Mean dependent var		0.669768
Adjusted R-squared	0.012205	S.D. dependent var		59.44047
S.E. of regression	59.07661	Akaike info criterion		10.99904
Sum squared resid	994663.1	Schwarz criterion		11.01182
Log likelihood	-1571.862	Durbin-Watson stat		2.224669

### KOREA WEEKLY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on AIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.634088
Test critical values: 1% level	-3.468500
5% level	-2.913000
10% level	-2.610250

\*Elliott-Rothenberg-Stock (1996, Table 1)



DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1883 2167

Included observations: 285 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.022524	0.013784	-1.634088	0.1034
D(GLSRESID(-1))	-0.128101	0.059553	-2.151019	0.0323
R-squared	0.028149	Mean dependent var		0.613871
Adjusted R-squared	0.024714	S.D. dependent var		59.53750
S.E. of regression	58.79717	Akaike info criterion		10.99306
Sum squared resid	978361.5	Schwarz criterion		11.01869
Log likelihood	-1564.511	Durbin-Watson stat		1.965146

## KOREA WEEKLY

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=15)

Sample(adjusted): 1881 2167

Included observations: 287 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-7.31525	-1.86280	0.25465	12.5590
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	3477.843
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## KOREA WEEKLY

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=15)

Sample(adjusted): 1881 2167

Included observations: 287 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.58512	-1.61490	0.28914	16.1923
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	2697.483
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### KOREA WEEKLY

Null Hypothesis: KOREA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 14 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.281760
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	56555.74
HAC corrected variance (Bartlett kernel)	716685.3

### KPSS Test Equation

Dependent Variable: KOREA  
 Method: Least Squares  
 Sample(adjusted): 1881 2167  
 Included observations: 287 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9501.892	344.2604	-27.60089	0.0000
@TREND(1)	5.538267	0.170031	32.57217	0.0000
R-squared	0.788253	Mean dependent var		1702.023
Adjusted R-squared	0.787510	S.D. dependent var		517.7113
S.E. of regression	238.6475	Akaike info criterion		13.79480
Sum squared resid	16231498	Schwarz criterion		13.82030
Log likelihood	-1977.553	F-statistic		1060.946
Durbin-Watson stat	0.062037	Prob(F-statistic)		0.000000

### KOREA MONTHLY (LEVEL)

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=10)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.032327	0.5728
Test critical values:		
1% level	-4.105534	
5% level	-3.480463	
10% level	-3.168039	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA)  
 Method: Least Squares  
 Sample(adjusted): 436 500

Included observations: 65 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.117456	0.057794	-2.032327	0.0464
C	-1418.575	657.1110	-2.158805	0.0347
@TREND(1)	3.514155	1.590505	2.209459	0.0308
R-squared	0.073284	Mean dependent var		23.07062
Adjusted R-squared	0.043390	S.D. dependent var		112.2783
S.E. of regression	109.8154	Akaike info criterion		12.28053
Sum squared resid	747684.1	Schwarz criterion		12.38089
Log likelihood	-396.1173	F-statistic		2.451458
Durbin-Watson stat	1.845141	Prob(F-statistic)		0.094481

### KOREA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=10)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.687832	0.0000
Test critical values:		
1% level	-4.107947	
5% level	-3.481595	
10% level	-3.168695	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA,2)

Method: Least Squares

Sample(adjusted): 437 500

Included observations: 64 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-0.980192	0.127499	-7.687832	0.0000
C	-202.0490	361.9745	-0.558186	0.5788
@TREND(1)	0.484357	0.774414	0.625450	0.5340
R-squared	0.492443	Mean dependent var		1.272344
Adjusted R-squared	0.475802	S.D. dependent var		156.9648
S.E. of regression	113.6449	Akaike info criterion		12.34977
Sum squared resid	787824.5	Schwarz criterion		12.45097
Log likelihood	-392.1928	F-statistic		29.59183
Durbin-Watson stat	2.008762	Prob(F-statistic)		0.000000

### KOREA MONTHLY (LEVEL)

Null Hypothesis: KOREA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=10)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.032327	0.5728
Test critical values:		
1% level	-4.105534	
5% level	-3.480463	
10% level	-3.168039	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KOREA)  
 Method: Least Squares  
 Sample(adjusted): 436 500  
 Included observations: 65 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.117456	0.057794	-2.032327	0.0464
C	-1418.575	657.1110	-2.158805	0.0347
@TREND(1)	3.514155	1.590505	2.209459	0.0308
R-squared	0.073284	Mean dependent var		23.07062
Adjusted R-squared	0.043390	S.D. dependent var		112.2783
S.E. of regression	109.8154	Akaike info criterion		12.28053
Sum squared resid	747684.1	Schwarz criterion		12.38089
Log likelihood	-396.1173	F-statistic		2.451458
Durbin-Watson stat	1.845141	Prob(F-statistic)		0.094481

### KOREA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=10)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.687832	0.0000
Test critical values: 1% level	-4.107947	
5% level	-3.481595	
10% level	-3.168695	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(KOREA,2)  
 Method: Least Squares  
 Sample(adjusted): 437 500  
 Included observations: 64 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-0.980192	0.127499	-7.687832	0.0000
C	-202.0490	361.9745	-0.558186	0.5788
@TREND(1)	0.484357	0.774414	0.625450	0.5340
R-squared	0.492443	Mean dependent var		1.272344
Adjusted R-squared	0.475802	S.D. dependent var		156.9648
S.E. of regression	113.6449	Akaike info criterion		12.34977
Sum squared resid	787824.5	Schwarz criterion		12.45097
Log likelihood	-392.1928	F-statistic		29.59183
Durbin-Watson stat	2.008762	Prob(F-statistic)		0.000000

### KOREA MONTHLY (LEVEL)

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.237412	0.4612
Test critical values: 1% level	-4.105534	
5% level	-3.480463	

10% level -3.168039

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	11502.83
HAC corrected variance (Bartlett kernel)	14523.85

Phillips-Perron Test Equation  
 Dependent Variable: D(KOREA)  
 Method: Least Squares  
 Sample(adjusted): 436 500  
 Included observations: 65 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KOREA(-1)	-0.117456	0.057794	-2.032327	0.0464
C	-1418.575	657.1110	-2.158805	0.0347
@TREND(1)	3.514155	1.590505	2.209459	0.0308
R-squared	0.073284	Mean dependent var		23.07062
Adjusted R-squared	0.043390	S.D. dependent var		112.2783
S.E. of regression	109.8154	Akaike info criterion		12.28053
Sum squared resid	747684.1	Schwarz criterion		12.38089
Log likelihood	-396.1173	F-statistic		2.451458
Durbin-Watson stat	1.845141	Prob(F-statistic)		0.094481

### KOREA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(KOREA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.692464	0.0000
Test critical values:		
1% level	-4.107947	
5% level	-3.481595	
10% level	-3.168695	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	12309.76
HAC corrected variance (Bartlett kernel)	12657.84

Phillips-Perron Test Equation  
 Dependent Variable: D(KOREA,2)  
 Method: Least Squares  
 Sample(adjusted): 437 500  
 Included observations: 64 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KOREA(-1))	-0.980192	0.127499	-7.687832	0.0000
C	-202.0490	361.9745	-0.558186	0.5788
@TREND(1)	0.484357	0.774414	0.625450	0.5340
R-squared	0.492443	Mean dependent var		1.272344
Adjusted R-squared	0.475802	S.D. dependent var		156.9648
S.E. of regression	113.6449	Akaike info criterion		12.34977
Sum squared resid	787824.5	Schwarz criterion		12.45097

Log likelihood	-392.1928	F-statistic	29.59183
Durbin-Watson stat	2.008762	Prob(F-statistic)	0.000000

## KOREA MONTHLY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=10)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.812809
Test critical values: 1% level	-3.713000
5% level	-3.142000
10% level	-2.845000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 436 500  
 Included observations: 65 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.100078	0.055206	-1.812809	0.0746
R-squared	0.048781	Mean dependent var	0.879434	
Adjusted R-squared	0.048781	S.D. dependent var	112.2783	
S.E. of regression	109.5055	Akaike info criterion	12.24509	
Sum squared resid	767453.4	Schwarz criterion	12.27854	
Log likelihood	-396.9655	Durbin-Watson stat	1.829207	

## KOREA MONTHLY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=10)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.812809
Test critical values: 1% level	-3.713000
5% level	-3.142000
10% level	-2.845000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 436 500  
 Included observations: 65 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.100078	0.055206	-1.812809	0.0746
R-squared	0.048781	Mean dependent var	0.879434	

Adjusted R-squared	0.048781	S.D. dependent var	112.2783
S.E. of regression	109.5055	Akaike info criterion	12.24509
Sum squared resid	767453.4	Schwarz criterion	12.27854
Log likelihood	-396.9655	Durbin-Watson stat	1.829207

### KOREA MONTHLY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=10)  
 Sample(adjusted): 435 500  
 Included observations: 66 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-6.01650	-1.68970	0.28084	15.1018
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	11806.98
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### KOREA MONTHLY

Null Hypothesis: KOREA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=10)  
 Sample(adjusted): 435 500  
 Included observations: 66 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-6.01650	-1.68970	0.28084	15.1018
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	11806.98
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### KOREA MONTHLY

Null Hypothesis: KOREA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 6 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.174496
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	55155.26
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HAC corrected variance (Bartlett kernel) 271912.7

KPSS Test Equation

Dependent Variable: KOREA

Method: Least Squares

Sample(adjusted): 435 500

Included observations: 66 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9822.218	719.4713	-13.65199	0.0000
@TREND(1)	24.72748	1.540991	16.04648	0.0000
R-squared	0.800927	Mean dependent var		1713.150
Adjusted R-squared	0.797816	S.D. dependent var		530.3984
S.E. of regression	238.4929	Akaike info criterion		13.81639
Sum squared resid	3640247.	Schwarz criterion		13.88274
Log likelihood	-453.9409	F-statistic		257.4895
Durbin-Watson stat	0.221685	Prob(F-statistic)		0.000000

### MALAYSIA DAILY (LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.875250	0.3443
Test critical values:		
1% level	-3.431393	
5% level	-2.861886	
10% level	-2.566996	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 1571 6915

Included observations: 5345 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.000877	0.000467	-1.875250	0.0608
D(MALAYSIA(-1))	0.126884	0.013568	9.351654	0.0000
C	0.413708	0.198084	2.088543	0.0368
R-squared	0.016682	Mean dependent var		0.079955
Adjusted R-squared	0.016313	S.D. dependent var		5.521783
S.E. of regression	5.476558	Akaike info criterion		6.239392
Sum squared resid	160221.0	Schwarz criterion		6.243087
Log likelihood	-16671.78	F-statistic		45.31225
Durbin-Watson stat	2.002775	Prob(F-statistic)		0.000000

### MALAYSIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant



Lag Length: 0 (Automatic based on SIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-64.35759	0.0001
Test critical values:		
1% level	-3.431393	
5% level	-2.861886	
10% level	-2.566996	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 1571 6915

Included observations: 5345 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.873373	0.013571	-64.35759	0.0000
C	0.069842	0.074934	0.932035	0.3514
R-squared	0.436684	Mean dependent var		8.61E-05
Adjusted R-squared	0.436578	S.D. dependent var		7.297820
S.E. of regression	5.477848	Akaike info criterion		6.239676
Sum squared resid	160326.4	Schwarz criterion		6.242139
Log likelihood	-16673.53	F-statistic		4141.899
Durbin-Watson stat	2.002690	Prob(F-statistic)		0.000000

### MALAYSIA DAILY (LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 25 (Automatic based on AIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.029545	0.2742
Test critical values:		
1% level	-3.431398	
5% level	-2.861888	
10% level	-2.566998	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 1595 6915

Included observations: 5321 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.000955	0.000471	-2.029545	0.0425
D(MALAYSIA(-1))	0.129494	0.013735	9.428353	0.0000
D(MALAYSIA(-2))	0.011774	0.013848	0.850175	0.3953
D(MALAYSIA(-3))	0.007123	0.013841	0.514600	0.6069
D(MALAYSIA(-4))	-0.019184	0.013839	-1.386198	0.1657
D(MALAYSIA(-5))	0.040608	0.013841	2.933831	0.0034
D(MALAYSIA(-6))	-0.033018	0.013852	-2.383660	0.0172
D(MALAYSIA(-7))	-0.028867	0.013855	-2.083524	0.0373
D(MALAYSIA(-8))	-0.002999	0.013857	-0.216447	0.8286
D(MALAYSIA(-9))	0.027135	0.013851	1.959100	0.0502
D(MALAYSIA(-10))	0.011657	0.013848	0.841794	0.3999
D(MALAYSIA(-11))	-0.037214	0.013838	-2.689314	0.0072
D(MALAYSIA(-12))	0.018870	0.013846	1.362828	0.1730

D(MALAYSIA(-13))	0.020498	0.013847	1.480337	0.1388
D(MALAYSIA(-14))	-0.012635	0.013849	-0.912352	0.3616
D(MALAYSIA(-15))	0.042444	0.013840	3.066651	0.0022
D(MALAYSIA(-16))	-0.034159	0.013852	-2.465994	0.0137
D(MALAYSIA(-17))	0.031311	0.013856	2.259811	0.0239
D(MALAYSIA(-18))	0.023269	0.013862	1.678558	0.0933
D(MALAYSIA(-19))	-0.024969	0.013861	-1.801385	0.0717
D(MALAYSIA(-20))	-0.010477	0.013857	-0.756066	0.4496
D(MALAYSIA(-21))	-0.008702	0.013847	-0.628420	0.5298
D(MALAYSIA(-22))	0.019699	0.013844	1.422852	0.1548
D(MALAYSIA(-23))	0.035125	0.013847	2.536639	0.0112
D(MALAYSIA(-24))	-0.012300	0.013855	-0.887790	0.3747
D(MALAYSIA(-25))	0.025953	0.013742	1.888596	0.0590
C	0.439622	0.199490	2.203731	0.0276
R-squared	0.031948	Mean dependent var	0.081737	
Adjusted R-squared	0.027194	S.D. dependent var	5.533193	
S.E. of regression	5.457440	Akaike info criterion	6.236898	
Sum squared resid	157674.7	Schwarz criterion	6.270284	
Log likelihood	-16566.27	F-statistic	6.719789	
Durbin-Watson stat	1.999628	Prob(F-statistic)	0.000000	

### MALAYSIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Lag Length: 22 (Automatic based on AIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.10994	0.0000
Test critical values: 1% level	-3.431398	
5% level	-2.861888	
10% level	-2.566998	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 1593 6915

Included observations: 5323 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.800808	0.056755	-14.10994	0.0000
D(MALAYSIA(-1),2)	-0.070443	0.055652	-1.265773	0.2057
D(MALAYSIA(-2),2)	-0.058238	0.054411	-1.070338	0.2845
D(MALAYSIA(-3),2)	-0.050831	0.053167	-0.956064	0.3391
D(MALAYSIA(-4),2)	-0.070494	0.051921	-1.357715	0.1746
D(MALAYSIA(-5),2)	-0.030188	0.050730	-0.595067	0.5518
D(MALAYSIA(-6),2)	-0.064402	0.049434	-1.302803	0.1927
D(MALAYSIA(-7),2)	-0.093288	0.048005	-1.943279	0.0520
D(MALAYSIA(-8),2)	-0.095444	0.046659	-2.045547	0.0409
D(MALAYSIA(-9),2)	-0.069862	0.045124	-1.548227	0.1216
D(MALAYSIA(-10),2)	-0.057283	0.043577	-1.314502	0.1887
D(MALAYSIA(-11),2)	-0.095357	0.041890	-2.276351	0.0229
D(MALAYSIA(-12),2)	-0.076434	0.040063	-1.907817	0.0565
D(MALAYSIA(-13),2)	-0.055388	0.038304	-1.446014	0.1482
D(MALAYSIA(-14),2)	-0.069457	0.036393	-1.908524	0.0564
D(MALAYSIA(-15),2)	-0.027252	0.034258	-0.795482	0.4264
D(MALAYSIA(-16),2)	-0.061096	0.031978	-1.910557	0.0561
D(MALAYSIA(-17),2)	-0.029920	0.029694	-1.007610	0.3137

D(MALAYSIA(-18),2)	-0.007437	0.027409	-0.271345	0.7861
D(MALAYSIA(-19),2)	-0.034030	0.024649	-1.380546	0.1675
D(MALAYSIA(-20),2)	-0.043642	0.021696	-2.011552	0.0443
D(MALAYSIA(-21),2)	-0.053300	0.018209	-2.927197	0.0034
D(MALAYSIA(-22),2)	-0.033868	0.013735	-2.465733	0.0137
C	0.065450	0.074962	0.873114	0.3826
R-squared	0.444930	Mean dependent var	0.000496	
Adjusted R-squared	0.442521	S.D. dependent var	7.311377	
S.E. of regression	5.459006	Akaike info criterion	6.236909	
Sum squared resid	157914.2	Schwarz criterion	6.266576	
Log likelihood	-16575.53	F-statistic	184.6757	
Durbin-Watson stat	1.999331	Prob(F-statistic)	0.000000	

### MALAYSIA DAILY (LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.858240	0.3525
Test critical values:		
1% level	-3.431392	
5% level	-2.861885	
10% level	-2.566996	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	30.46137
HAC corrected variance (Bartlett kernel)	37.24433

Phillips-Perron Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 1570 6915

Included observations: 5346 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.000836	0.000471	-1.774430	0.0760
C	0.408127	0.199582	2.044908	0.0409
R-squared	0.000589	Mean dependent var	0.080299	
Adjusted R-squared	0.000402	S.D. dependent var	5.521324	
S.E. of regression	5.520215	Akaike info criterion	6.255085	
Sum squared resid	162846.5	Schwarz criterion	6.257548	
Log likelihood	-16717.84	F-statistic	3.148603	
Durbin-Watson stat	1.746270	Prob(F-statistic)	0.076049	

### MALAYSIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-64.44371	0.0001
Test critical values:		
1% level	-3.431393	
5% level	-2.861886	
10% level	-2.566996	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	29.99559
HAC corrected variance (Bartlett kernel)	30.61028

Phillips-Perron Test Equation  
 Dependent Variable: D(MALAYSIA,2)  
 Method: Least Squares  
 Sample(adjusted): 1571 6915  
 Included observations: 5345 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.873373	0.013571	-64.35759	0.0000
C	0.069842	0.074934	0.932035	0.3514
R-squared	0.436684	Mean dependent var		8.61E-05
Adjusted R-squared	0.436578	S.D. dependent var		7.297820
S.E. of regression	5.477848	Akaike info criterion		6.239676
Sum squared resid	160326.4	Schwarz criterion		6.242139
Log likelihood	-16673.53	F-statistic		4141.899
Durbin-Watson stat	2.002690	Prob(F-statistic)		0.000000

## MALAYSIA DAILY

Null Hypothesis: MALAYSIA has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=32)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.093945
Test critical values: 1% level	-2.565395
5% level	-1.940883
10% level	-1.616660

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1571 6915  
 Included observations: 5345 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-2.13E-05	0.000227	-0.093945	0.9252
D(GLSRESID(-1))	0.126832	0.013572	9.344883	0.0000
R-squared	0.015876	Mean dependent var		0.079955
Adjusted R-squared	0.015692	S.D. dependent var		5.521783
S.E. of regression	5.478289	Akaike info criterion		6.239837
Sum squared resid	160352.2	Schwarz criterion		6.242300
Log likelihood	-16673.96	Durbin-Watson stat		2.002740

## MALAYSIA DAILY

Null Hypothesis: MALAYSIA has a unit root  
 Exogenous: Constant

Lag Length: 23 (Automatic based on AIC, MAXLAG=32)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-0.202981
Test critical values: 1% level	-2.565397
5% level	-1.940884
10% level	-1.616660

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1593 6915

Included observations: 5323 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-4.60E-05	0.000227	-0.202981	0.8392
D(GLSRESID(-1))	0.128936	0.013731	9.390159	0.0000
D(GLSRESID(-2))	0.012377	0.013842	0.894160	0.3713
D(GLSRESID(-3))	0.007578	0.013843	0.547430	0.5841
D(GLSRESID(-4))	-0.019497	0.013843	-1.408484	0.1590
D(GLSRESID(-5))	0.040470	0.013840	2.924037	0.0035
D(GLSRESID(-6))	-0.034053	0.013848	-2.458986	0.0140
D(GLSRESID(-7))	-0.028715	0.013850	-2.073345	0.0382
D(GLSRESID(-8))	-0.001989	0.013848	-0.143648	0.8858
D(GLSRESID(-9))	0.025757	0.013835	1.861679	0.0627
D(GLSRESID(-10))	0.012750	0.013839	0.921309	0.3569
D(GLSRESID(-11))	-0.037904	0.013838	-2.739212	0.0062
D(GLSRESID(-12))	0.019104	0.013845	1.379794	0.1677
D(GLSRESID(-13))	0.021217	0.013839	1.533207	0.1253
D(GLSRESID(-14))	-0.013895	0.013843	-1.003753	0.3155
D(GLSRESID(-15))	0.042386	0.013840	3.062629	0.0022
D(GLSRESID(-16))	-0.033669	0.013852	-2.430637	0.0151
D(GLSRESID(-17))	0.031351	0.013855	2.262902	0.0237
D(GLSRESID(-18))	0.022647	0.013853	1.634777	0.1022
D(GLSRESID(-19))	-0.026422	0.013846	-1.908230	0.0564
D(GLSRESID(-20))	-0.009441	0.013848	-0.681793	0.4954
D(GLSRESID(-21))	-0.009484	0.013848	-0.684848	0.4935
D(GLSRESID(-22))	0.019609	0.013848	1.416062	0.1568
D(GLSRESID(-23))	0.034069	0.013738	2.479991	0.0132
R-squared	0.030346	Mean dependent var	0.081646	
Adjusted R-squared	0.026138	S.D. dependent var	5.532155	
S.E. of regression	5.459378	Akaike info criterion	6.237045	
Sum squared resid	157935.7	Schwarz criterion	6.266712	
Log likelihood	-16575.90	Durbin-Watson stat	1.999338	

## MALAYSIA DAILY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=32)

Sample(adjusted): 1569 6915

Included observations: 5347 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.13195	-0.09508	0.72056	31.4809
Asymptotic critical values*: 1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000

10 -5.70000 -1.62000 0.27500 4.45000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 39.34886

### MALAYSIA DAILY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag length: 23 (Spectral GLS-detrended AR based on AIC, MAXLAG=32)

Sample(adjusted): 1569 6915

Included observations: 5347 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.31262	-0.20670	0.66120	26.5078
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 46.73101

### MALAYSIA DAILY

Null Hypothesis: MALAYSIA is stationary

Exogenous: Constant

Bandwidth: 56 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	4.290217
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 25689.50  
HAC corrected variance (Bartlett kernel) 1431198.

KPSS Test Equation

Dependent Variable: MALAYSIA

Method: Least Squares

Sample(adjusted): 1569 6915

Included observations: 5347 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	392.2497	2.192115	178.9366	0.0000
R-squared	0.000000	Mean dependent var	392.2497	
Adjusted R-squared	0.000000	S.D. dependent var	160.2944	
S.E. of regression	160.2944	Akaike info criterion	12.99209	
Sum squared resid	1.37E+08	Schwarz criterion	12.99332	
Log likelihood	-34733.35	Durbin-Watson stat	0.001186	

**MALAYSIA WEEKLY(LEVEL)**

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.797221	0.3822
Test critical values:		
1% level	-3.436250	
5% level	-2.864033	
10% level	-2.568149	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 1099 2167

Included observations: 1069 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.004390	0.002443	-1.797221	0.0726
C	2.123066	1.035921	2.049447	0.0407
R-squared	0.003018	Mean dependent var		0.399775
Adjusted R-squared	0.002084	S.D. dependent var		12.83205
S.E. of regression	12.81868	Akaike info criterion		7.941552
Sum squared resid	175327.8	Schwarz criterion		7.950859
Log likelihood	-4242.760	F-statistic		3.230002
Durbin-Watson stat	1.864311	Prob(F-statistic)		0.072583

**MALAYSIA WEEKLY (1<sup>ST</sup> DIFFERENCE)**

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-30.54454	0.0000
Test critical values:		
1% level	-3.436255	
5% level	-2.864036	
10% level	-2.568150	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 1100 2167

Included observations: 1068 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.933493	0.030562	-30.54454	0.0000
C	0.371413	0.392333	0.946677	0.3440
R-squared	0.466725	Mean dependent var		0.002107
Adjusted R-squared	0.466225	S.D. dependent var		17.54104
S.E. of regression	12.81547	Akaike info criterion		7.941055
Sum squared resid	175076.0	Schwarz criterion		7.950368
Log likelihood	-4238.523	F-statistic		932.9690
Durbin-Watson stat	2.004356	Prob(F-statistic)		0.000000

### MALAYSIA WEEKLY(LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 15 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.124806	0.2350
Test critical values:		
1% level	-3.436336	
5% level	-2.864071	
10% level	-2.568169	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 1114 2167

Included observations: 1054 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.005343	0.002514	-2.124806	0.0338
D(MALAYSIA(-1))	0.053831	0.030925	1.740703	0.0820
D(MALAYSIA(-2))	0.030121	0.030938	0.973611	0.3305
D(MALAYSIA(-3))	0.036827	0.030817	1.195045	0.2323
D(MALAYSIA(-4))	0.011473	0.030842	0.371978	0.7100
D(MALAYSIA(-5))	0.054355	0.030780	1.765933	0.0777
D(MALAYSIA(-6))	0.017260	0.030814	0.560127	0.5755
D(MALAYSIA(-7))	0.067857	0.030802	2.203052	0.0278
D(MALAYSIA(-8))	0.052567	0.030832	1.704974	0.0885
D(MALAYSIA(-9))	0.048896	0.030809	1.587072	0.1128
D(MALAYSIA(-10))	-0.027956	0.030842	-0.906432	0.3649
D(MALAYSIA(-11))	-0.059785	0.030813	-1.940229	0.0526
D(MALAYSIA(-12))	0.005028	0.030869	0.162882	0.8706
D(MALAYSIA(-13))	-0.094947	0.030861	-3.076619	0.0021
D(MALAYSIA(-14))	-0.045706	0.030988	-1.474961	0.1405
D(MALAYSIA(-15))	0.068600	0.030979	2.214380	0.0270
C	2.447453	1.067291	2.293145	0.0220
R-squared	0.043843	Mean dependent var		0.422306
Adjusted R-squared	0.029090	S.D. dependent var		12.91349
S.E. of regression	12.72427	Akaike info criterion		7.940897
Sum squared resid	167897.7	Schwarz criterion		8.020903
Log likelihood	-4167.853	F-statistic		2.971873
Durbin-Watson stat	2.000216	Prob(F-statistic)		0.000073

### MALAYSIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Lag Length: 14 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.319818	0.0000
Test critical values:		
1% level	-3.436336	
5% level	-2.864071	
10% level	-2.568169	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA,2)



Method: Least Squares  
Sample(adjusted): 1114 2167  
Included observations: 1054 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.810897	0.097466	-8.319818	0.0000
D(MALAYSIA(-1),2)	-0.136443	0.093773	-1.455026	0.1460
D(MALAYSIA(-2),2)	-0.107598	0.090285	-1.191758	0.2336
D(MALAYSIA(-3),2)	-0.072004	0.087451	-0.823365	0.4105
D(MALAYSIA(-4),2)	-0.061907	0.084461	-0.732968	0.4637
D(MALAYSIA(-5),2)	-0.008779	0.081867	-0.107229	0.9146
D(MALAYSIA(-6),2)	0.006990	0.079414	0.088015	0.9299
D(MALAYSIA(-7),2)	0.073115	0.076515	0.955565	0.3395
D(MALAYSIA(-8),2)	0.123474	0.073062	1.689985	0.0913
D(MALAYSIA(-9),2)	0.169859	0.068783	2.469512	0.0137
D(MALAYSIA(-10),2)	0.139149	0.064110	2.170478	0.0302
D(MALAYSIA(-11),2)	0.076621	0.058219	1.316080	0.1884
D(MALAYSIA(-12),2)	0.079128	0.051381	1.540037	0.1239
D(MALAYSIA(-13),2)	-0.018422	0.042779	-0.430633	0.6668
D(MALAYSIA(-14),2)	-0.066426	0.031015	-2.141780	0.0324
C	0.339923	0.394755	0.861099	0.3894
R-squared	0.485560	Mean dependent var		0.006366
Adjusted R-squared	0.478126	S.D. dependent var		17.64348
S.E. of regression	12.74580	Akaike info criterion		7.943344
Sum squared resid	168628.6	Schwarz criterion		8.018643
Log likelihood	-4170.142	F-statistic		65.31525
Durbin-Watson stat	1.999867	Prob(F-statistic)		0.000000

### MALAYSIA WEEKLY(LEVEL)

Null Hypothesis: MALAYSIA has a unit root  
Exogenous: Constant  
Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.993769	0.2897
Test critical values:		
1% level	-3.436250	
5% level	-2.864033	
10% level	-2.568149	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	164.0110
HAC corrected variance (Bartlett kernel)	243.4794

Phillips-Perron Test Equation  
Dependent Variable: D(MALAYSIA)  
Method: Least Squares  
Sample(adjusted): 1099 2167  
Included observations: 1069 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.004390	0.002443	-1.797221	0.0726
C	2.123066	1.035921	2.049447	0.0407
R-squared	0.003018	Mean dependent var		0.399775
Adjusted R-squared	0.002084	S.D. dependent var		12.83205
S.E. of regression	12.81868	Akaike info criterion		7.941552
Sum squared resid	175327.8	Schwarz criterion		7.950859
Log likelihood	-4242.760	F-statistic		3.230002

Durbin-Watson stat      1.864311      Prob(F-statistic)      0.072583

### MALAYSIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-31.03796	0.0000
Test critical values:		
1% level	-3.436255	
5% level	-2.864036	
10% level	-2.568150	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	163.9288
HAC corrected variance (Bartlett kernel)	210.1827

Phillips-Perron Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 1100 2167

Included observations: 1068 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.933493	0.030562	-30.54454	0.0000
C	0.371413	0.392333	0.946677	0.3440
R-squared	0.466725	Mean dependent var		0.002107
Adjusted R-squared	0.466225	S.D. dependent var		17.54104
S.E. of regression	12.81547	Akaike info criterion		7.941055
Sum squared resid	175076.0	Schwarz criterion		7.950368
Log likelihood	-4238.523	F-statistic		932.9690
Durbin-Watson stat	2.004356	Prob(F-statistic)		0.000000

### MALAYSIA WEEKLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=21)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-0.024471
Test critical values:	
1% level	-2.567127
5% level	-1.941120
10% level	-1.616500

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1099 2167

Included observations: 1069 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-3.02E-05	0.001232	-0.024471	0.9805
R-squared	-0.000971	Mean dependent var		0.399775
Adjusted R-squared	-0.000971	S.D. dependent var		12.83205
S.E. of regression	12.83828	Akaike info criterion		7.943675
Sum squared resid	176029.3	Schwarz criterion		7.948328
Log likelihood	-4244.894	Durbin-Watson stat		1.864994

### MALAYSIA WEEKLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 15 (Automatic based on AIC, MAXLAG=21)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-0.294478
Test critical values:	
1% level	-2.567158
5% level	-1.941124
10% level	-1.616497

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1114 2167

Included observations: 1054 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000365	0.001240	-0.294478	0.7685
D(GLSRESID(-1))	0.053709	0.030987	1.733287	0.0833
D(GLSRESID(-2))	0.029779	0.030999	0.960631	0.3370
D(GLSRESID(-3))	0.036439	0.030878	1.180088	0.2382
D(GLSRESID(-4))	0.010960	0.030903	0.354654	0.7229
D(GLSRESID(-5))	0.053926	0.030841	1.748508	0.0807
D(GLSRESID(-6))	0.016510	0.030874	0.534736	0.5929
D(GLSRESID(-7))	0.066940	0.030861	2.169108	0.0303
D(GLSRESID(-8))	0.051163	0.030887	1.656445	0.0979
D(GLSRESID(-9))	0.047220	0.030862	1.530036	0.1263
D(GLSRESID(-10))	-0.029886	0.030893	-0.967411	0.3336
D(GLSRESID(-11))	-0.061647	0.030864	-1.997362	0.0460
D(GLSRESID(-12))	0.003442	0.030923	0.111301	0.9114
D(GLSRESID(-13))	-0.096617	0.030914	-3.125334	0.0018
D(GLSRESID(-14))	-0.046989	0.031045	-1.513574	0.1304
D(GLSRESID(-15))	0.067527	0.031038	2.175641	0.0298
R-squared	0.039074	Mean dependent var		0.422306
Adjusted R-squared	0.025188	S.D. dependent var		12.91349
S.E. of regression	12.74982	Akaike info criterion		7.943975
Sum squared resid	168735.0	Schwarz criterion		8.019274
Log likelihood	-4170.475	Durbin-Watson stat		1.999972

### MALAYSIA WEEKLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=21)

Sample(adjusted): 1098 2167

Included observations: 1070 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.03107	-0.02360	0.75942	35.0019
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	164.6672
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### MALAYSIA WEEKLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag length: 15 (Spectral GLS-detrended AR based on AIC, MAXLAG=21)

Sample(adjusted): 1098 2167

Included observations: 1070 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.48928	-0.30054	0.61425	22.8993
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	251.6961
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### MALAYSIA WEEKLY

Null Hypothesis: MALAYSIA is stationary

Exogenous: Constant

Bandwidth: 25 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.947296
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	25755.42
HAC corrected variance (Bartlett kernel)	631931.3

### KPSS Test Equation

Dependent Variable: MALAYSIA

Method: Least Squares

Sample(adjusted): 1098 2167

Included observations: 1070 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	392.6759	4.908462	79.99977	0.0000
R-squared	0.000000	Mean dependent var		392.6759
Adjusted R-squared	0.000000	S.D. dependent var		160.5600
S.E. of regression	160.5600	Akaike info criterion		12.99615
Sum squared resid	27558295	Schwarz criterion		13.00080

Log likelihood                    -6951.938    Durbin-Watson stat            0.006388

### MALAYSIA MONTHLY (LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 3 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.158152	0.2224
Test critical values:    1% level	-3.457286	
5% level	-2.873289	
10% level	-2.573106	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 259 500

Included observations: 242 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.027556	0.012768	-2.158152	0.0319
D(MALAYSIA(-1))	0.053009	0.063300	0.837424	0.4032
D(MALAYSIA(-2))	0.211971	0.062139	3.411265	0.0008
D(MALAYSIA(-3))	-0.170416	0.063607	-2.679185	0.0079
C	12.58846	5.414931	2.324768	0.0209
R-squared	0.090781	Mean dependent var		1.864587
Adjusted R-squared	0.075435	S.D. dependent var		32.34153
S.E. of regression	31.09776	Akaike info criterion		9.732594
Sum squared resid	229195.8	Schwarz criterion		9.804679
Log likelihood	-1172.644	F-statistic		5.915795
Durbin-Watson stat	2.016052	Prob(F-statistic)		0.000149

### MALAYSIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.258118	0.0000
Test critical values:    1% level	-3.457286	
5% level	-2.873289	
10% level	-2.573106	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 259 500

Included observations: 242 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.936953	0.101203	-9.258118	0.0000

D(MALAYSIA(-1),2)	-0.016830	0.088788	-0.189547	0.8498
D(MALAYSIA(-2),2)	0.184936	0.063735	2.901645	0.0041
C	1.735219	2.023138	0.857687	0.3919
R-squared	0.531177	Mean dependent var	0.009215	
Adjusted R-squared	0.525268	S.D. dependent var	45.47960	
S.E. of regression	31.33581	Akaike info criterion	9.743791	
Sum squared resid	233700.1	Schwarz criterion	9.801459	
Log likelihood	-1174.999	F-statistic	89.88494	
Durbin-Watson stat	2.019827	Prob(F-statistic)	0.000000	

## MALAYSIA MONTHLY (LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 8 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.265617	0.1841
Test critical values: 1% level	-3.457865	
5% level	-2.873543	
10% level	-2.573242	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 264 500

Included observations: 237 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.030222	0.013340	-2.265617	0.0244
D(MALAYSIA(-1))	0.038900	0.065189	0.596731	0.5513
D(MALAYSIA(-2))	0.234474	0.064756	3.620884	0.0004
D(MALAYSIA(-3))	-0.169317	0.065757	-2.574866	0.0107
D(MALAYSIA(-4))	0.007078	0.066648	0.106193	0.9155
D(MALAYSIA(-5))	-0.019515	0.066618	-0.292939	0.7698
D(MALAYSIA(-6))	-0.143018	0.065444	-2.185330	0.0299
D(MALAYSIA(-7))	0.137918	0.064552	2.136551	0.0337
D(MALAYSIA(-8))	0.146666	0.065221	2.248759	0.0255
C	13.52890	5.672588	2.384961	0.0179
R-squared	0.143148	Mean dependent var	1.807384	
Adjusted R-squared	0.109176	S.D. dependent var	32.66138	
S.E. of regression	30.82694	Akaike info criterion	9.735933	
Sum squared resid	215718.2	Schwarz criterion	9.882265	
Log likelihood	-1143.708	F-statistic	4.213700	
Durbin-Watson stat	2.019753	Prob(F-statistic)	0.000047	

## MALAYSIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Lag Length: 7 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.773756	0.0001
Test critical values: 1% level	-3.457865	

5% level	-2.873543
10% level	-2.573242

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 264 500

Included observations: 237 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.851982	0.178472	-4.773756	0.0000
D(MALAYSIA(-1),2)	-0.119373	0.166329	-0.717694	0.4737
D(MALAYSIA(-2),2)	0.102495	0.149137	0.687253	0.4926
D(MALAYSIA(-3),2)	-0.082457	0.134857	-0.611438	0.5415
D(MALAYSIA(-4),2)	-0.086159	0.119802	-0.719179	0.4728
D(MALAYSIA(-5),2)	-0.115957	0.102698	-1.129110	0.2600
D(MALAYSIA(-6),2)	-0.266451	0.090224	-2.953232	0.0035
D(MALAYSIA(-7),2)	-0.135840	0.065632	-2.069712	0.0396
C	1.527126	2.047170	0.745969	0.4565
R-squared	0.556447	Mean dependent var	-0.012996	
Adjusted R-squared	0.540884	S.D. dependent var	45.90607	
S.E. of regression	31.10509	Akaike info criterion	9.749855	
Sum squared resid	220596.1	Schwarz criterion	9.881554	
Log likelihood	-1146.358	F-statistic	35.75384	
Durbin-Watson stat	2.013215	Prob(F-statistic)	0.000000	

### MALAYSIA MONTHLY (LEVEL)

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.090488	0.2488
Test critical values:		
1% level	-3.456950	
5% level	-2.873142	
10% level	-2.573028	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1012.891
HAC corrected variance (Bartlett kernel)	1179.889

Phillips-Perron Test Equation

Dependent Variable: D(MALAYSIA)

Method: Least Squares

Sample(adjusted): 256 500

Included observations: 245 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MALAYSIA(-1)	-0.025396	0.012692	-2.000966	0.0465
C	11.74384	5.380787	2.182550	0.0300
R-squared	0.016210	Mean dependent var	1.782204	
Adjusted R-squared	0.012161	S.D. dependent var	32.15276	
S.E. of regression	31.95665	Akaike info criterion	9.774767	
Sum squared resid	248158.3	Schwarz criterion	9.803349	
Log likelihood	-1195.409	F-statistic	4.003863	

Durbin-Watson stat      1.958625      Prob(F-statistic)      0.046508

### MALAYSIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(MALAYSIA) has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-15.40969	0.0000
Test critical values:		
1% level	-3.457061	
5% level	-2.873190	
10% level	-2.573054	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1033.551
HAC corrected variance (Bartlett kernel)	1148.041

Phillips-Perron Test Equation

Dependent Variable: D(MALAYSIA,2)

Method: Least Squares

Sample(adjusted): 257 500

Included observations: 244 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MALAYSIA(-1))	-0.988420	0.064285	-15.37557	0.0000
C	1.782336	2.069915	0.861067	0.3901
R-squared	0.494156	Mean dependent var	-0.015779	
Adjusted R-squared	0.492065	S.D. dependent var	45.29490	
S.E. of regression	32.28146	Akaike info criterion	9.795026	
Sum squared resid	252186.5	Schwarz criterion	9.823692	
Log likelihood	-1192.993	F-statistic	236.4081	
Durbin-Watson stat	2.004415	Prob(F-statistic)	0.000000	

### MALAYSIA MONTHLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 3 (Automatic based on SIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.458724
Test critical values:	
1% level	-2.574553
5% level	-1.942142
10% level	-1.615825

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 259 500

Included observations: 242 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003244	0.007073	-0.458724	0.6469
D(GLSRESID(-1))	0.050682	0.063846	0.793816	0.4281
D(GLSRESID(-2))	0.207413	0.062651	3.310631	0.0011



D(GLSRESID(-3))	-0.179636	0.064035	-2.805277	0.0054
R-squared	0.070868	Mean dependent var	1.864587	
Adjusted R-squared	0.059157	S.D. dependent var	32.34153	
S.E. of regression	31.37034	Akaike info criterion	9.745993	
Sum squared resid	234215.3	Schwarz criterion	9.803662	
Log likelihood	-1175.265	Durbin-Watson stat	2.017236	

### MALAYSIA MONTHLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag Length: 8 (Automatic based on AIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.560394
Test critical values:	
1% level	-2.574756
5% level	-1.942170
10% level	-1.615807

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 264 500

Included observations: 237 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.004009	0.007154	-0.560394	0.5758
D(GLSRESID(-1))	0.034604	0.065786	0.526013	0.5994
D(GLSRESID(-2))	0.228812	0.065328	3.502482	0.0006
D(GLSRESID(-3))	-0.179367	0.066242	-2.707772	0.0073
D(GLSRESID(-4))	0.001914	0.067247	0.028461	0.9773
D(GLSRESID(-5))	-0.024053	0.067226	-0.357796	0.7208
D(GLSRESID(-6))	-0.146017	0.066057	-2.210472	0.0281
D(GLSRESID(-7))	0.136509	0.065166	2.094791	0.0373
D(GLSRESID(-8))	0.141970	0.065812	2.157198	0.0320
R-squared	0.122842	Mean dependent var	1.807384	
Adjusted R-squared	0.092065	S.D. dependent var	32.66138	
S.E. of regression	31.12160	Akaike info criterion	9.750916	
Sum squared resid	220830.4	Schwarz criterion	9.882615	
Log likelihood	-1146.484	Durbin-Watson stat	2.015700	

### MALAYSIA MONTHLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag length: 3 (Spectral GLS-detrended AR based on SIC, MAXLAG=15)

Sample(adjusted): 255 500

Included observations: 246 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.83163	-0.45176	0.54323	18.0094
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1139.649
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## MALAYSIA MONTHLY

Null Hypothesis: MALAYSIA has a unit root

Exogenous: Constant

Lag length: 8 (Spectral GLS-detrended AR based on AIC, MAXLAG=15)

Sample(adjusted): 255 500

Included observations: 246 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.27167	-0.61549	0.48400	14.2965
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1435.622
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## MALAYSIA MONTHLY

Null Hypothesis: MALAYSIA is stationary

Exogenous: Constant

Bandwidth: 11 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.016558
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	25850.79
HAC corrected variance (Bartlett kernel)	273355.0

KPSS Test Equation

Dependent Variable: MALAYSIA

Method: Least Squares

Sample(adjusted): 255 500

Included observations: 246 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	392.8254	10.27197	38.24245	0.0000
R-squared	0.000000	Mean dependent var		392.8254
Adjusted R-squared	0.000000	S.D. dependent var		161.1096
S.E. of regression	161.1096	Akaike info criterion		13.00610
Sum squared resid	6359293.	Schwarz criterion		13.02035
Log likelihood	-1598.751	Durbin-Watson stat		0.039788

## PHILIPPINES DAILY (LEVEL)

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.147314	0.5184
Test critical values:		
1% level	-3.961702	
5% level	-3.411599	
10% level	-3.127669	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINES)

Method: Least Squares

Sample(adjusted): 494 3002

Included observations: 2509 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.002230	0.001039	-2.147314	0.0319
D(PHILIPPINES(-1))	0.157761	0.019800	7.967567	0.0000
C	0.110561	0.696833	0.158662	0.8739
@TREND(1)	0.001060	0.000337	3.147474	0.0017
R-squared	0.029134	Mean dependent var		0.135241
Adjusted R-squared	0.027971	S.D. dependent var		9.631577
S.E. of regression	9.495919	Akaike info criterion		7.341194
Sum squared resid	225882.1	Schwarz criterion		7.350485
Log likelihood	-9205.528	F-statistic		25.05668
Durbin-Watson stat	1.981668	Prob(F-statistic)		0.000000

## PHILIPPINES DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-42.52696	0.0000
Test critical values:		
1% level	-3.961702	
5% level	-3.411599	
10% level	-3.127669	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINES,2)

Method: Least Squares

Sample(adjusted): 494 3002

Included observations: 2509 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.842621	0.019814	-42.52696	0.0000
C	-0.941648	0.495800	-1.899248	0.0576
@TREND(1)	0.000606	0.000262	2.310133	0.0210
R-squared	0.419177	Mean dependent var		0.018115
Adjusted R-squared	0.418714	S.D. dependent var		12.46392
S.E. of regression	9.502758	Akaike info criterion		7.342236
Sum squared resid	226297.8	Schwarz criterion		7.349204
Log likelihood	-9207.835	F-statistic		904.2848

Durbin-Watson stat      1.981709      Prob(F-statistic)      0.000000

### PHILIPPINES DAILY (LEVEL)

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on AIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.098867	0.5456
Test critical values:      1% level	-3.961705	
5% level	-3.411600	
10% level	-3.127669	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINE)

Method: Least Squares

Sample(adjusted): 496 3002

Included observations: 2507 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.002184	0.001040	-2.098867	0.0359
D(PHILIPPINES(-1))	0.163597	0.020043	8.162303	0.0000
D(PHILIPPINES(-2))	-0.034236	0.020284	-1.687804	0.0916
D(PHILIPPINES(-3))	0.040863	0.020041	2.038963	0.0416
C	0.122679	0.697066	0.175994	0.8603
@TREND(1)	0.001032	0.000338	3.056575	0.0023
R-squared	0.031400	Mean dependent var		0.141767
Adjusted R-squared	0.029463	S.D. dependent var		9.629035
S.E. of regression	9.486124	Akaike info criterion		7.339928
Sum squared resid	225056.3	Schwarz criterion		7.353873
Log likelihood	-9194.599	F-statistic		16.21522
Durbin-Watson stat	1.992979	Prob(F-statistic)		0.000000

### PHILIPPINES DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on AIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-26.55120	0.0000
Test critical values:      1% level	-3.961705	
5% level	-3.411600	
10% level	-3.127669	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINES,2)

Method: Least Squares

Sample(adjusted): 496 3002

Included observations: 2507 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.831294	0.031309	-26.55120	0.0000
D(PHILIPPINES(-1),2)	-0.005467	0.026179	-0.208841	0.8346
D(PHILIPPINES(-1),2)	-0.040237	0.020052	-2.006611	0.0449

2),2)				
C	-0.904602	0.496668	-1.821340	0.0687
@TREND(1)	0.000587	0.000263	2.232261	0.0257
R-squared	0.420378	Mean dependent var	0.017615	
Adjusted R-squared	0.419452	S.D. dependent var	12.45848	
S.E. of regression	9.492577	Akaike info criterion	7.340890	
Sum squared resid	225452.8	Schwarz criterion	7.352511	
Log likelihood	-9196.805	F-statistic	453.6524	
Durbin-Watson stat	1.993069	Prob(F-statistic)	0.000000	

### PHILIPPINES DAILY (LEVEL)

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.122736	0.5322
Test critical values:		
1% level	-3.961700	
5% level	-3.411598	
10% level	-3.127668	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	92.27467
HAC corrected variance (Bartlett kernel)	115.2645

Phillips-Perron Test Equation

Dependent Variable: D(PHILIPPINES)

Method: Least Squares

Sample(adjusted): 493 3002

Included observations: 2510 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.002146	0.001050	-2.044389	0.0410
C	-0.090967	0.704852	-0.129059	0.8973
@TREND(1)	0.001146	0.000340	3.371522	0.0008
R-squared	0.004517	Mean dependent var	0.135187	
Adjusted R-squared	0.003723	S.D. dependent var	9.629658	
S.E. of regression	9.611717	Akaike info criterion	7.365037	
Sum squared resid	231609.4	Schwarz criterion	7.372003	
Log likelihood	-9240.122	F-statistic	5.687655	
Durbin-Watson stat	1.678627	Prob(F-statistic)	0.003431	

### PHILIPPINES DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-42.45503	0.0000
Test critical values:		
1% level	-3.961702	
5% level	-3.411599	
10% level	-3.127669	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	90.19444
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HAC corrected variance (Bartlett kernel) 88.34282

Phillips-Perron Test Equation  
 Dependent Variable: D(PHILIPPINES,2)  
 Method: Least Squares  
 Sample(adjusted): 494 3002  
 Included observations: 2509 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.842621	0.019814	-42.52696	0.0000
C	-0.941648	0.495800	-1.899248	0.0576
@TREND(1)	0.000606	0.000262	2.310133	0.0210
R-squared	0.419177	Mean dependent var		0.018115
Adjusted R-squared	0.418714	S.D. dependent var		12.46392
S.E. of regression	9.502758	Akaike info criterion		7.342236
Sum squared resid	226297.8	Schwarz criterion		7.349204
Log likelihood	-9207.835	F-statistic		904.2848
Durbin-Watson stat	1.981709	Prob(F-statistic)		0.000000

### PHILIPPINES DAILY

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=26)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.428538
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 494 3002  
 Included observations: 2509 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000276	0.000644	-0.428538	0.6683
D(GLSRESID(-1))	0.160122	0.019811	8.082323	0.0000
R-squared	0.025141	Mean dependent var		0.160972
Adjusted R-squared	0.024752	S.D. dependent var		9.631577
S.E. of regression	9.511629	Akaike info criterion		7.343704
Sum squared resid	226811.0	Schwarz criterion		7.348350
Log likelihood	-9210.677	Durbin-Watson stat		1.981976

### PHILIPPINES DAILY

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 3 (Automatic based on AIC, MAXLAG=26)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.450433
Test critical values: 1% level	-3.480000

5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 496 3002

Included observations: 2507 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000290	0.000644	-0.450433	0.6524
D(GLSRESID(-1))	0.165573	0.020057	8.254949	0.0000
D(GLSRESID(-2))	-0.032833	0.020305	-1.616954	0.1060
D(GLSRESID(-3))	0.042651	0.020056	2.126626	0.0335
R-squared	0.027624	Mean dependent var		0.167498
Adjusted R-squared	0.026459	S.D. dependent var		9.629035
S.E. of regression	9.500794	Akaike info criterion		7.342222
Sum squared resid	225933.5	Schwarz criterion		7.351519
Log likelihood	-9199.475	Durbin-Watson stat		1.992969

### PHILIPPINES DAILY

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=26)

Sample(adjusted): 492 3002

Included observations: 2511 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.86668	-0.45062	0.51993	56.9701
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	128.1538
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### PHILIPPINES DAILY

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag length: 3 (Spectral GLS-detrended AR based on AIC, MAXLAG=26)

Sample(adjusted): 492 3002

Included observations: 2511 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.92991	-0.47543	0.51127	55.0868
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	132.5351
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## PHILIPPINES DAILY

Null Hypothesis: PHILIPPINES is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 40 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.973704
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	33409.59
HAC corrected variance (Bartlett kernel)	1303350.

KPSS Test Equation  
 Dependent Variable: PHILIPPINES  
 Method: Least Squares  
 Sample(adjusted): 492 3002  
 Included observations: 2511 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	472.3993	9.517064	49.63708	0.0000
@TREND(1)	0.203370	0.005034	40.39786	0.0000
R-squared	0.394106	Mean dependent var	827.4839	
Adjusted R-squared	0.393864	S.D. dependent var	234.8679	
S.E. of regression	182.8558	Akaike info criterion	13.25607	
Sum squared resid	83891491	Schwarz criterion	13.26071	
Log likelihood	-16640.99	F-statistic	1631.987	
Durbin-Watson stat	0.002773	Prob(F-statistic)	0.000000	

## PHILIPPINES WEEKLY (LEVEL)

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.086630	0.5515
Test critical values:		
1% level	-3.976443	
5% level	-3.418798	
10% level	-3.131933	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(PHILIPPINES)  
 Method: Least Squares  
 Sample(adjusted): 1666 2167



Included observations: 502 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.011726	0.005619	-2.086630	0.0374
C	-46.21337	15.01359	-3.078102	0.0022
@TREND(1)	0.029547	0.009099	3.247308	0.0012
R-squared	0.020707	Mean dependent var		0.675936
Adjusted R-squared	0.016782	S.D. dependent var		23.30044
S.E. of regression	23.10409	Akaike info criterion		9.123855
Sum squared resid	266365.8	Schwarz criterion		9.149066
Log likelihood	-2287.088	F-statistic		5.275740
Durbin-Watson stat	1.865018	Prob(F-statistic)		0.005403

### PHILIPPINES WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-20.92839	0.0000
Test critical values:		
1% level	-3.976480	
5% level	-3.418816	
10% level	-3.131943	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINES,2)

Method: Least Squares

Sample(adjusted): 1667 2167

Included observations: 501 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.936903	0.044767	-20.92839	0.0000
C	-30.55405	13.82936	-2.209361	0.0276
@TREND(1)	0.016299	0.007199	2.264006	0.0240
R-squared	0.467948	Mean dependent var		0.100160
Adjusted R-squared	0.465812	S.D. dependent var		31.70560
S.E. of regression	23.17305	Akaike info criterion		9.129827
Sum squared resid	267421.1	Schwarz criterion		9.155076
Log likelihood	-2284.022	F-statistic		218.9997
Durbin-Watson stat	2.000306	Prob(F-statistic)		0.000000

### PHILIPPINES WEEKLY (LEVEL)

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.086630	0.5515
Test critical values:		
1% level	-3.976443	
5% level	-3.418798	
10% level	-3.131933	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINES)

Method: Least Squares  
Sample(adjusted): 1666 2167  
Included observations: 502 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.011726	0.005619	-2.086630	0.0374
C	-46.21337	15.01359	-3.078102	0.0022
@TREND(1)	0.029547	0.009099	3.247308	0.0012
R-squared	0.020707	Mean dependent var		0.675936
Adjusted R-squared	0.016782	S.D. dependent var		23.30044
S.E. of regression	23.10409	Akaike info criterion		9.123855
Sum squared resid	266365.8	Schwarz criterion		9.149066
Log likelihood	-2287.088	F-statistic		5.275740
Durbin-Watson stat	1.865018	Prob(F-statistic)		0.005403

### PHILIPPINES WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on AIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-20.92839	0.0000
Test critical values:		
1% level	-3.976480	
5% level	-3.418816	
10% level	-3.131943	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(PHILIPPINES,2)  
Method: Least Squares  
Sample(adjusted): 1667 2167  
Included observations: 501 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.936903	0.044767	-20.92839	0.0000
C	-30.55405	13.82936	-2.209361	0.0276
@TREND(1)	0.016299	0.007199	2.264006	0.0240
R-squared	0.467948	Mean dependent var		0.100160
Adjusted R-squared	0.465812	S.D. dependent var		31.70560
S.E. of regression	23.17305	Akaike info criterion		9.129827
Sum squared resid	267421.1	Schwarz criterion		9.155076
Log likelihood	-2284.022	F-statistic		218.9997
Durbin-Watson stat	2.000306	Prob(F-statistic)		0.000000

### PHILIPPINES WEEKLY (LEVEL)

Null Hypothesis: PHILIPPINES has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.149645	0.5162
Test critical values:		
1% level	-3.976443	
5% level	-3.418798	
10% level	-3.131933	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction) 530.6091

## Phillips-Perron Test Equation

Dependent Variable: D(PHILIPPINES)

Method: Least Squares

Sample(adjusted): 1666 2167

Included observations: 502 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.011726	0.005619	-2.086630	0.0374
C	-46.21337	15.01359	-3.078102	0.0022
@TREND(1)	0.029547	0.009099	3.247308	0.0012
R-squared	0.020707	Mean dependent var		0.675936
Adjusted R-squared	0.016782	S.D. dependent var		23.30044
S.E. of regression	23.10409	Akaike info criterion		9.123855
Sum squared resid	266365.8	Schwarz criterion		9.149066
Log likelihood	-2287.088	F-statistic		5.275740
Durbin-Watson stat	1.865018	Prob(F-statistic)		0.005403

**PHILIPPINES WEEKLY(1<sup>ST</sup> DIFFERENCE)**

Null Hypothesis: D(PHILIPPINES) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 0 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-20.92839	0.0000
Test critical values:		
1% level	-3.976480	
5% level	-3.418816	
10% level	-3.131943	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	533.7747
HAC corrected variance (Bartlett kernel)	533.7747

## Phillips-Perron Test Equation

Dependent Variable: D(PHILIPPINES,2)

Method: Least Squares

Sample(adjusted): 1667 2167

Included observations: 501 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.936903	0.044767	-20.92839	0.0000
C	-30.55405	13.82936	-2.209361	0.0276
@TREND(1)	0.016299	0.007199	2.264006	0.0240
R-squared	0.467948	Mean dependent var		0.100160
Adjusted R-squared	0.465812	S.D. dependent var		31.70560
S.E. of regression	23.17305	Akaike info criterion		9.129827
Sum squared resid	267421.1	Schwarz criterion		9.155076
Log likelihood	-2284.022	F-statistic		218.9997
Durbin-Watson stat	2.000306	Prob(F-statistic)		0.000000

## PHILIPPINES WEEKLY

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.391360
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1666 2167

Included observations: 502 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001449	0.003702	-0.391360	0.6957
R-squared	-0.000614	Mean dependent var	0.706023	
Adjusted R-squared	-0.000614	S.D. dependent var	23.30044	
S.E. of regression	23.30759	Akaike info criterion	9.137425	
Sum squared resid	272165.2	Schwarz criterion	9.145829	
Log likelihood	-2292.494	Durbin-Watson stat	1.844104	

## PHILIPPINES WEEKLY

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=17)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.490328
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1667 2167

Included observations: 501 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001816	0.003704	-0.490328	0.6241
D(GLSRESID(-1))	0.076031	0.044775	1.698058	0.0901
R-squared	0.005029	Mean dependent var	0.743141	
Adjusted R-squared	0.003035	S.D. dependent var	23.30887	
S.E. of regression	23.27347	Akaike info criterion	9.136489	
Sum squared resid	270285.6	Schwarz criterion	9.153322	
Log likelihood	-2286.691	Durbin-Watson stat	2.001997	

## PHILIPPINES WEEKLY

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=17)  
 Sample(adjusted): 1665 2167  
 Included observations: 503 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.71412	-0.38461	0.53858	61.3402
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	542.1617
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## PHILIPPINES WEEKLY

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=17)  
 Sample(adjusted): 1665 2167  
 Included observations: 503 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.99954	-0.49863	0.49886	52.6264
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	631.9318
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## PHILIPPINES WEEKLY

Null Hypothesis: PHILIPPINES is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 17 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.480253
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	33771.07
HAC corrected variance (Bartlett kernel)	537490.0

KPSS Test Equation  
 Dependent Variable: PHILIPPINES  
 Method: Least Squares  
 Sample(adjusted): 1665 2167  
 Included observations: 503 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1116.500	108.5902	-10.28177	0.0000
@TREND(1)	1.015905	0.056543	17.96702	0.0000
R-squared	0.391853	Mean dependent var		828.9585
Adjusted R-squared	0.390639	S.D. dependent var		235.8850
S.E. of regression	184.1355	Akaike info criterion		13.27319
Sum squared resid	16986848	Schwarz criterion		13.28997
Log likelihood	-3336.207	F-statistic		322.8140
Durbin-Watson stat	0.016016	Prob(F-statistic)		0.000000

### PHILIPPINES MONTHLY(LEVEL)

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.012727	0.5880
Test critical values: 1% level	-4.039797	
5% level	-3.449365	
10% level	-3.149922	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(PHILIPPINES)  
 Method: Least Squares  
 Sample(adjusted): 386 500  
 Included observations: 115 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.051474	0.025574	-2.012727	0.0465
C	-197.7305	68.45461	-2.888490	0.0046
@TREND(1)	0.550800	0.179070	3.075898	0.0026
R-squared	0.078100	Mean dependent var		3.194696
Adjusted R-squared	0.061638	S.D. dependent var		52.04372
S.E. of regression	50.41428	Akaike info criterion		10.70417
Sum squared resid	284659.1	Schwarz criterion		10.77577
Log likelihood	-612.4896	F-statistic		4.744134
Durbin-Watson stat	1.689404	Prob(F-statistic)		0.010527

### PHILIPPINES MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.114251	0.0000
Test critical values: 1% level	-4.040532	
5% level	-3.449716	

10% level -3.150127

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(PHILIPPINES,2)  
 Method: Least Squares  
 Sample(adjusted): 387 500  
 Included observations: 114 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.868402	0.095280	-9.114251	0.0000
C	-127.4806	66.25002	-1.924235	0.0569
@TREND(1)	0.294018	0.149518	1.966434	0.0517
R-squared	0.428151	Mean dependent var	-0.675351	
Adjusted R-squared	0.417847	S.D. dependent var	66.90174	
S.E. of regression	51.04532	Akaike info criterion	10.72927	
Sum squared resid	289224.3	Schwarz criterion	10.80127	
Log likelihood	-608.5683	F-statistic	41.55356	
Durbin-Watson stat	1.928371	Prob(F-statistic)	0.000000	

### PHILIPPINES MONTHLY(LEVEL)

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.386157	0.3847
Test critical values:		
1% level	-4.040532	
5% level	-3.449716	
10% level	-3.150127	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(PHILIPPINES)  
 Method: Least Squares  
 Sample(adjusted): 387 500  
 Included observations: 114 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.062470	0.026180	-2.386157	0.0187
D(PHILIPPINES(-1))	0.157841	0.093973	1.679655	0.0959
C	-195.7026	70.91141	-2.759818	0.0068
@TREND(1)	0.564382	0.185167	3.047962	0.0029
R-squared	0.109214	Mean dependent var	3.122105	
Adjusted R-squared	0.084920	S.D. dependent var	52.26764	
S.E. of regression	49.99913	Akaike info criterion	10.69635	
Sum squared resid	274990.4	Schwarz criterion	10.79235	
Log likelihood	-605.6917	F-statistic	4.495491	
Durbin-Watson stat	1.953674	Prob(F-statistic)	0.005140	

### PHILIPPINES MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.114251	0.0000
Test critical values:		
1% level	-4.040532	
5% level	-3.449716	
10% level	-3.150127	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHILIPPINES,2)

Method: Least Squares

Sample(adjusted): 387 500

Included observations: 114 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.868402	0.095280	-9.114251	0.0000
C	-127.4806	66.25002	-1.924235	0.0569
@TREND(1)	0.294018	0.149518	1.966434	0.0517
R-squared	0.428151	Mean dependent var		-0.675351
Adjusted R-squared	0.417847	S.D. dependent var		66.90174
S.E. of regression	51.04532	Akaike info criterion		10.72927
Sum squared resid	289224.3	Schwarz criterion		10.80127
Log likelihood	-608.5683	F-statistic		41.55356
Durbin-Watson stat	1.928371	Prob(F-statistic)		0.000000

## PHILIPPINES MONTHLY(LEVEL)

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.052341	0.5663
Test critical values:		
1% level	-4.039797	
5% level	-3.449365	
10% level	-3.149922	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2475.297
HAC corrected variance (Bartlett kernel)	2694.743

Phillips-Perron Test Equation

Dependent Variable: D(PHILIPPINES)

Method: Least Squares

Sample(adjusted): 386 500

Included observations: 115 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PHILIPPINES(-1)	-0.051474	0.025574	-2.012727	0.0465
C	-197.7305	68.45461	-2.888490	0.0046
@TREND(1)	0.550800	0.179070	3.075898	0.0026
R-squared	0.078100	Mean dependent var		3.194696
Adjusted R-squared	0.061638	S.D. dependent var		52.04372
S.E. of regression	50.41428	Akaike info criterion		10.70417
Sum squared resid	284659.1	Schwarz criterion		10.77577



Log likelihood	-612.4896	F-statistic	4.744134
Durbin-Watson stat	1.689404	Prob(F-statistic)	0.010527

### PHILIPPINES MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PHILIPPINES) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-9.001492	0.0000
Test critical values: 1% level	-4.040532	
5% level	-3.449716	
10% level	-3.150127	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2537.055
HAC corrected variance (Bartlett kernel)	2090.451

Phillips-Perron Test Equation  
 Dependent Variable: D(PHILIPPINES,2)  
 Method: Least Squares  
 Sample(adjusted): 387 500  
 Included observations: 114 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHILIPPINES(-1))	-0.868402	0.095280	-9.114251	0.0000
C	-127.4806	66.25002	-1.924235	0.0569
@TREND(1)	0.294018	0.149518	1.966434	0.0517
R-squared	0.428151	Mean dependent var	-0.675351	
Adjusted R-squared	0.417847	S.D. dependent var	66.90174	
S.E. of regression	51.04532	Akaike info criterion	10.72927	
Sum squared resid	289224.3	Schwarz criterion	10.80127	
Log likelihood	-608.5683	F-statistic	41.55356	
Durbin-Watson stat	1.928371	Prob(F-statistic)	0.000000	

### PHILIPPINES MONTHLY

Null Hypothesis: PHILIPPINES has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.779648
Test critical values: 1% level	-3.562000
5% level	-3.015000
10% level	-2.725000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 386 500

Included observations: 115 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.016036	0.020568	-0.779648	0.4372
R-squared	0.004107	Mean dependent var		1.797298
Adjusted R-squared	0.004107	S.D. dependent var		52.04372
S.E. of regression	51.93673	Akaike info criterion		10.74659
Sum squared resid	307506.4	Schwarz criterion		10.77046
Log likelihood	-616.9288	Durbin-Watson stat		1.619021

## PHILIPPINES MONTHLY

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.131466
Test critical values: 1% level	-3.563200
5% level	-3.016000
10% level	-2.726000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 387 500

Included observations: 114 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.023405	0.020685	-1.131466	0.2603
D(GLSRESID(-1))	0.194789	0.094463	2.062077	0.0415
R-squared	0.040807	Mean dependent var		1.724708
Adjusted R-squared	0.032242	S.D. dependent var		52.26764
S.E. of regression	51.41812	Akaike info criterion		10.73525
Sum squared resid	296108.2	Schwarz criterion		10.78325
Log likelihood	-609.9091	Durbin-Watson stat		1.958986

## PHILIPPINES MONTHLY

Null Hypothesis: PHILIPPINES has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)

Sample(adjusted): 385 500

Included observations: 116 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.62694	-0.69083	0.42462	38.8013
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000

10 -14.2000 -2.62000 0.18500 6.67000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 2673.968

## PHILIPPINES MONTHLY

Null Hypothesis: PHILIPPINES has a unit root  
Exogenous: Constant, Linear Trend  
Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)  
Sample(adjusted): 385 500  
Included observations: 116 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.00853	-1.04368	0.34691	25.8986
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 4006.142

## PHILIPPINES MONTHLY

Null Hypothesis: PHILIPPINES is stationary  
Exogenous: Constant, Linear Trend  
Bandwidth: 8 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.264279
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 34252.41  
HAC corrected variance (Bartlett kernel) 229290.2

KPSS Test Equation  
Dependent Variable: PHILIPPINES  
Method: Least Squares  
Sample(adjusted): 385 500  
Included observations: 116 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1119.691	229.2019	-4.885176	0.0000
@TREND(1)	4.418194	0.517657	8.534988	0.0000
R-squared	0.389872	Mean dependent var	830.9413	

Adjusted R-squared	0.384520	S.D. dependent var	237.9661
S.E. of regression	186.6905	Akaike info criterion	13.31387
Sum squared resid	3973279.	Schwarz criterion	13.36135
Log likelihood	-770.2046	F-statistic	72.84602
Durbin-Watson stat	0.077756	Prob(F-statistic)	0.000000

### RUSSIA DAILY (LEVEL)

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on SIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.123012	0.9945
Test critical values:		
1% level	-3.961297	
5% level	-3.411400	
10% level	-3.127551	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RUSSIA)

Method: Least Squares

Sample(adjusted): 183 3002

Included observations: 2820 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	-0.000117	0.000954	-0.123012	0.9021
D(RUSSIA(-1))	0.080054	0.018831	4.251180	0.0000
D(RUSSIA(-2))	0.021779	0.018890	1.152918	0.2490
D(RUSSIA(-3))	0.048918	0.018881	2.590892	0.0096
D(RUSSIA(-4))	-0.043359	0.018952	-2.287850	0.0222
D(RUSSIA(-5))	0.101580	0.018922	5.368468	0.0000
C	-0.417822	0.456756	-0.914760	0.3604
@TREND(1)	0.000541	0.000377	1.434057	0.1517
R-squared	0.022640	Mean dependent var		0.494089
Adjusted R-squared	0.020207	S.D. dependent var		10.97935
S.E. of regression	10.86786	Akaike info criterion		7.612329
Sum squared resid	332126.3	Schwarz criterion		7.629193
Log likelihood	-10725.38	F-statistic		9.305454
Durbin-Watson stat	1.993640	Prob(F-statistic)		0.000000

### RUSSIA DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 4 (Automatic based on SIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-20.43184	0.0000
Test critical values:		
1% level	-3.961297	
5% level	-3.411400	
10% level	-3.127551	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RUSSIA,2)

Method: Least Squares

Sample(adjusted): 183 3002  
 Included observations: 2820 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.791569	0.038742	-20.43184	0.0000
D(RUSSIA(-1),2)	-0.128492	0.034971	-3.674259	0.0002
D(RUSSIA(-2),2)	-0.106819	0.030976	-3.448451	0.0006
D(RUSSIA(-3),2)	-0.058009	0.025805	-2.247977	0.0247
D(RUSSIA(-4),2)	-0.101470	0.018897	-5.369604	0.0000
C	-0.407973	0.449605	-0.907404	0.3643
@TREND(1)	0.000506	0.000252	2.007271	0.0448
R-squared	0.467246	Mean dependent var		0.016564
Adjusted R-squared	0.466109	S.D. dependent var		14.87106
S.E. of regression	10.86596	Akaike info criterion		7.611625
Sum squared resid	332128.1	Schwarz criterion		7.626381
Log likelihood	-10725.39	F-statistic		411.1847
Durbin-Watson stat	1.993635	Prob(F-statistic)		0.000000

### RUSSIA DAILY (LEVEL)

Null Hypothesis: RUSSIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 27 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.245972	0.9983
Test critical values:		
1% level	-3.961322	
5% level	-3.411413	
10% level	-3.127558	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 205 3002  
 Included observations: 2798 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	0.000242	0.000983	0.245972	0.8057
D(RUSSIA(-1))	0.083597	0.019075	4.382579	0.0000
D(RUSSIA(-2))	0.028090	0.019146	1.467154	0.1424
D(RUSSIA(-3))	0.047473	0.019160	2.477647	0.0133
D(RUSSIA(-4))	-0.048038	0.019207	-2.501115	0.0124
D(RUSSIA(-5))	0.108957	0.019228	5.666662	0.0000
D(RUSSIA(-6))	-0.002839	0.019344	-0.146753	0.8833
D(RUSSIA(-7))	-0.067643	0.019324	-3.500522	0.0005
D(RUSSIA(-8))	-0.004628	0.019364	-0.238981	0.8111
D(RUSSIA(-9))	-0.004177	0.019381	-0.215520	0.8294
D(RUSSIA(-10))	-0.016597	0.019326	-0.858778	0.3905
D(RUSSIA(-11))	0.009209	0.019300	0.477126	0.6333
D(RUSSIA(-12))	-0.030691	0.019485	-1.575146	0.1153
D(RUSSIA(-13))	0.031821	0.019568	1.626122	0.1040
D(RUSSIA(-14))	-0.017667	0.020101	-0.878877	0.3795
D(RUSSIA(-15))	-0.014183	0.020056	-0.707155	0.4795
D(RUSSIA(-16))	0.011265	0.020061	0.561544	0.5745
D(RUSSIA(-17))	0.076229	0.020216	3.770637	0.0002
D(RUSSIA(-18))	-0.075333	0.020332	-3.705121	0.0002
D(RUSSIA(-19))	0.008543	0.020470	0.417346	0.6765

D(RUSSIA(-20))	-0.009917	0.020474	-0.484353	0.6282
D(RUSSIA(-21))	0.076617	0.020601	3.719025	0.0002
D(RUSSIA(-22))	0.007569	0.020653	0.366487	0.7140
D(RUSSIA(-23))	-0.000627	0.020587	-0.030472	0.9757
D(RUSSIA(-24))	-0.019684	0.020583	-0.956323	0.3390
D(RUSSIA(-25))	0.028722	0.020591	1.394876	0.1632
D(RUSSIA(-26))	-0.047558	0.020633	-2.304984	0.0212
D(RUSSIA(-27))	-0.058961	0.020746	-2.842076	0.0045
C	-0.405347	0.461736	-0.877876	0.3801
@TREND(1)	0.000479	0.000380	1.263040	0.2067
R-squared	0.049406	Mean dependent var	0.506866	
Adjusted R-squared	0.039447	S.D. dependent var	11.01976	
S.E. of regression	10.80023	Akaike info criterion	7.607676	
Sum squared resid	322873.4	Schwarz criterion	7.671329	
Log likelihood	-10613.14	F-statistic	4.960797	
Durbin-Watson stat	1.995166	Prob(F-statistic)	0.000000	

### RUSSIA DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 26 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.42093	0.0000
Test critical values: 1% level	-3.961322	
5% level	-3.411413	
10% level	-3.127558	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RUSSIA,2)

Method: Least Squares

Sample(adjusted): 205 3002

Included observations: 2798 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.894387	0.085826	-10.42093	0.0000
D(RUSSIA(-1),2)	-0.021787	0.084315	-0.258404	0.7961
D(RUSSIA(-2),2)	0.006501	0.082932	0.078391	0.9375
D(RUSSIA(-3),2)	0.054166	0.081492	0.664681	0.5063
D(RUSSIA(-4),2)	0.006298	0.080148	0.078580	0.9374
D(RUSSIA(-5),2)	0.115426	0.078794	1.464918	0.1431
D(RUSSIA(-6),2)	0.112763	0.077416	1.456593	0.1453
D(RUSSIA(-7),2)	0.045330	0.075690	0.598888	0.5493
D(RUSSIA(-8),2)	0.040910	0.073953	0.553190	0.5802
D(RUSSIA(-9),2)	0.036931	0.072147	0.511891	0.6088
D(RUSSIA(-10),2)	0.020515	0.070606	0.290556	0.7714
D(RUSSIA(-11),2)	0.029930	0.068728	0.435493	0.6632
D(RUSSIA(-12),2)	-0.000585	0.066747	-0.008758	0.9930
D(RUSSIA(-13),2)	0.031389	0.064825	0.484207	0.6283
D(RUSSIA(-14),2)	0.013928	0.062798	0.221784	0.8245
D(RUSSIA(-15),2)	-3.00E-05	0.060300	-0.000497	0.9996
D(RUSSIA(-16),2)	0.011451	0.057759	0.198258	0.8429
D(RUSSIA(-17),2)	0.087926	0.055167	1.593832	0.1111
D(RUSSIA(-18),2)	0.012860	0.052510	0.244912	0.8065
D(RUSSIA(-19),2)	0.021694	0.049907	0.434685	0.6638

D(RUSSIA(-20),2)	0.012055	0.047215	0.255330	0.7985
D(RUSSIA(-21),2)	0.088910	0.044407	2.002194	0.0454
D(RUSSIA(-22),2)	0.096719	0.041424	2.334840	0.0196
D(RUSSIA(-23),2)	0.096366	0.037394	2.577064	0.0100
D(RUSSIA(-24),2)	0.076956	0.033288	2.311839	0.0209
D(RUSSIA(-25),2)	0.105968	0.028309	3.743221	0.0002
D(RUSSIA(-26),2)	0.058693	0.020714	2.833536	0.0046
C	-0.424419	0.455102	-0.932582	0.3511
@TREND(1)	0.000548	0.000257	2.129960	0.0333
R-squared	0.481934	Mean dependent var	0.016998	
Adjusted R-squared	0.476695	S.D. dependent var	14.92733	
S.E. of regression	10.79840	Akaike info criterion	7.606983	
Sum squared resid	322880.4	Schwarz criterion	7.668514	
Log likelihood	-10613.17	F-statistic	91.99573	
Durbin-Watson stat	1.995094	Prob(F-statistic)	0.000000	

### RUSSIA DAILY (LEVEL)

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.080674	0.9971
Test critical values:		
1% level	-3.961291	
5% level	-3.411398	
10% level	-3.127549	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	120.0263
HAC corrected variance (Bartlett kernel)	154.6702

Phillips-Perron Test Equation

Dependent Variable: D(RUSSIA)

Method: Least Squares

Sample(adjusted): 178 3002

Included observations: 2825 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	0.000460	0.000956	0.481175	0.6304
C	-0.451585	0.458886	-0.984090	0.3252
@TREND(1)	0.000483	0.000379	1.274293	0.2027
R-squared	0.002203	Mean dependent var	0.493674	
Adjusted R-squared	0.001496	S.D. dependent var	10.96968	
S.E. of regression	10.96147	Akaike info criterion	7.627712	
Sum squared resid	339074.4	Schwarz criterion	7.634027	
Log likelihood	-10771.14	F-statistic	3.115422	
Durbin-Watson stat	1.839459	Prob(F-statistic)	0.044512	

### RUSSIA DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 7 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-49.27321	0.0000
Test critical values:		
1% level	-3.961292	
5% level	-3.411398	
10% level	-3.127550	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	119.3486
HAC corrected variance (Bartlett kernel)	133.6024

Phillips-Perron Test Equation

Dependent Variable: D(RUSSIA,2)

Method: Least Squares

Sample(adjusted): 179 3002

Included observations: 2824 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.921789	0.018828	-48.95928	0.0000
C	-0.455429	0.450796	-1.010276	0.3124
@TREND(1)	0.000574	0.000253	2.271935	0.0232
R-squared	0.459374	Mean dependent var		0.016611
Adjusted R-squared	0.458991	S.D. dependent var		14.86063
S.E. of regression	10.93049	Akaike info criterion		7.622050
Sum squared resid	337040.5	Schwarz criterion		7.628367
Log likelihood	-10759.34	F-statistic		1198.515
Durbin-Watson stat	1.999058	Prob(F-statistic)		0.000000

## RUSSIA DAILY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on SIC, MAXLAG=27)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.390044
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 183 3002

Included observations: 2820 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000333	0.000855	-0.390044	0.6965
D(GLSRESID(-1))	0.081976	0.018814	4.357222	0.0000
D(GLSRESID(-2))	0.023438	0.018880	1.241448	0.2145
D(GLSRESID(-3))	0.050586	0.018870	2.680806	0.0074
D(GLSRESID(-4))	-0.041848	0.018944	-2.208994	0.0273
D(GLSRESID(-5))	0.103276	0.018910	5.461405	0.0000
R-squared	0.021031	Mean dependent var		0.215076
Adjusted R-squared	0.019292	S.D. dependent var		10.97935



S.E. of regression	10.87293	Akaike info criterion	7.612555
Sum squared resid	332672.8	Schwarz criterion	7.625203
Log likelihood	-10727.70	Durbin-Watson stat	1.993738

## RUSSIA DAILY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 27 (Automatic based on AIC, MAXLAG=27)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.200511
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 205 3002

Included observations: 2798 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000174	0.000868	-0.200511	0.8411
D(GLSRESID(-1))	0.085728	0.019062	4.497400	0.0000
D(GLSRESID(-2))	0.029830	0.019141	1.558431	0.1192
D(GLSRESID(-3))	0.049125	0.019157	2.564318	0.0104
D(GLSRESID(-4))	-0.046652	0.019208	-2.428825	0.0152
D(GLSRESID(-5))	0.110452	0.019227	5.744496	0.0000
D(GLSRESID(-6))	-0.001503	0.019346	-0.077672	0.9381
D(GLSRESID(-7))	-0.066023	0.019321	-3.417238	0.0006
D(GLSRESID(-8))	-0.002904	0.019360	-0.150015	0.8808
D(GLSRESID(-9))	-0.002510	0.019377	-0.129535	0.8969
D(GLSRESID(-10))	-0.015080	0.019326	-0.780309	0.4353
D(GLSRESID(-11))	0.010969	0.019295	0.568488	0.5697
D(GLSRESID(-12))	-0.029146	0.019484	-1.495861	0.1348
D(GLSRESID(-13))	0.033260	0.019570	1.699566	0.0893
D(GLSRESID(-14))	-0.015924	0.020098	-0.792321	0.4282
D(GLSRESID(-15))	-0.012241	0.020048	-0.610562	0.5415
D(GLSRESID(-16))	0.013165	0.020054	0.656464	0.5116
D(GLSRESID(-17))	0.078315	0.020206	3.875827	0.0001
D(GLSRESID(-18))	-0.073244	0.020321	-3.604345	0.0003
D(GLSRESID(-19))	0.010928	0.020452	0.534347	0.5931
D(GLSRESID(-20))	-0.007641	0.020459	-0.373457	0.7088
D(GLSRESID(-21))	0.078618	0.020593	3.817630	0.0001
D(GLSRESID(-22))	0.009435	0.020648	0.456942	0.6477
D(GLSRESID(-23))	0.001516	0.020575	0.073680	0.9413
D(GLSRESID(-24))	-0.017570	0.020571	-0.854090	0.3931
D(GLSRESID(-25))	0.030997	0.020577	1.506412	0.1321
D(GLSRESID(-26))	-0.045354	0.020620	-2.199566	0.0279
D(GLSRESID(-27))	-0.056746	0.020734	-2.736913	0.0062
R-squared	0.047521	Mean dependent var	0.227853	
Adjusted R-squared	0.038237	S.D. dependent var	11.01976	
S.E. of regression	10.80703	Akaike info criterion	7.608227	
Sum squared resid	323513.5	Schwarz criterion	7.667636	
Log likelihood	-10615.91	Durbin-Watson stat	1.994614	

### RUSSIA DAILY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 5 (Spectral GLS-detrended AR based on SIC, MAXLAG=27)

Sample(adjusted): 177 3002

Included observations: 2826 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.48724	-0.48442	0.32571	29.2557
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 192.6286

### RUSSIA DAILY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 27 (Spectral GLS-detrended AR based on AIC, MAXLAG=27)

Sample(adjusted): 177 3002

Included observations: 2826 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.68787	-0.24587	0.35743	35.2313
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 159.9567

### RUSSIA DAILY

Null Hypothesis: RUSSIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 42 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.067200
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 46679.78  
HAC corrected variance (Bartlett kernel) 1919319.

KPSS Test Equation

Dependent Variable: RUSSIA

Method: Least Squares

Sample(adjusted): 177 3002  
 Included observations: 2826 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-85.04220	8.899548	-9.555788	0.0000
@TREND(1)	0.296228	0.004984	59.43963	0.0000
R-squared	0.555770	Mean dependent var		385.5166
Adjusted R-squared	0.555613	S.D. dependent var		324.2182
S.E. of regression	216.1315	Akaike info criterion		13.59036
Sum squared resid	1.32E+08	Schwarz criterion		13.59457
Log likelihood	-19201.18	F-statistic		3533.069
Durbin-Watson stat	0.002577	Prob(F-statistic)		0.000000

## RUSSIA WEEKLY(LEVEL)

Null Hypothesis: RUSSIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.176451	0.9979
Test critical values: 1% level	-3.974381	
5% level	-3.417793	
10% level	-3.131338	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 1603 2167  
 Included observations: 565 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	0.000927	0.005256	0.176451	0.8600
C	-24.45929	18.21349	-1.342922	0.1798
@TREND(1)	0.014104	0.010420	1.353486	0.1764
R-squared	0.008768	Mean dependent var		2.468372
Adjusted R-squared	0.005240	S.D. dependent var		27.05803
S.E. of regression	26.98704	Akaike info criterion		9.433886
Sum squared resid	409304.8	Schwarz criterion		9.456914
Log likelihood	-2662.073	F-statistic		2.485588
Durbin-Watson stat	1.794578	Prob(F-statistic)		0.084192

## RUSSIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-21.24160	0.0000
Test critical values: 1% level	-3.974410	
5% level	-3.417807	
10% level	-3.131347	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA,2)  
 Method: Least Squares  
 Sample(adjusted): 1604 2167  
 Included observations: 564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.917225	0.043181	-21.24160	0.0000
C	-24.99030	13.20465	-1.892537	0.0589
@TREND(1)	0.014475	0.006985	2.072314	0.0387
R-squared	0.445851	Mean dependent var		0.263174
Adjusted R-squared	0.443875	S.D. dependent var		36.10312
S.E. of regression	26.92346	Akaike info criterion		9.429178
Sum squared resid	406653.6	Schwarz criterion		9.452237
Log likelihood	-2656.028	F-statistic		225.6814
Durbin-Watson stat	1.940334	Prob(F-statistic)		0.000000

### RUSSIA WEEKLY(LEVEL)

Null Hypothesis: RUSSIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 17 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.011500	0.9961
Test critical values: 1% level	-3.974890	
5% level	-3.418041	
10% level	-3.131485	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 1620 2167  
 Included observations: 548 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	-7.59E-05	0.006597	-0.011500	0.9908
D(RUSSIA(-1))	0.092934	0.044007	2.111816	0.0352
D(RUSSIA(-2))	-0.037467	0.044154	-0.848541	0.3965
D(RUSSIA(-3))	-0.057976	0.044247	-1.310281	0.1907
D(RUSSIA(-4))	0.128003	0.046244	2.767954	0.0058
D(RUSSIA(-5))	-0.013397	0.046575	-0.287651	0.7737
D(RUSSIA(-6))	-0.163121	0.046660	-3.495920	0.0005
D(RUSSIA(-7))	0.044760	0.051248	0.873387	0.3828
D(RUSSIA(-8))	-0.062422	0.051630	-1.209012	0.2272
D(RUSSIA(-9))	-0.047112	0.052225	-0.902102	0.3674
D(RUSSIA(-10))	0.278960	0.052261	5.337796	0.0000
D(RUSSIA(-11))	0.016876	0.053657	0.314508	0.7533
D(RUSSIA(-12))	-0.027521	0.053625	-0.513215	0.6080
D(RUSSIA(-13))	0.126077	0.054049	2.332656	0.0200
D(RUSSIA(-14))	-0.102833	0.054174	-1.898174	0.0582
D(RUSSIA(-15))	0.087448	0.053546	1.633143	0.1030
D(RUSSIA(-16))	-0.085978	0.053831	-1.597169	0.1108
D(RUSSIA(-17))	-0.112305	0.055388	-2.027619	0.0431
C	-24.39692	18.72149	-1.303150	0.1931
@TREND(1)	0.014141	0.010740	1.316718	0.1885
R-squared	0.132265	Mean dependent var		2.576113

Adjusted R-squared	0.101040	S.D. dependent var	27.45625
S.E. of regression	26.03223	Akaike info criterion	9.392362
Sum squared resid	357813.5	Schwarz criterion	9.549525
Log likelihood	-2553.507	F-statistic	4.235829
Durbin-Watson stat	1.992279	Prob(F-statistic)	0.000000

### RUSSIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 16 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.528747	0.0000
Test critical values:		
1% level	-3.974890	
5% level	-3.418041	
10% level	-3.131485	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RUSSIA,2)

Method: Least Squares

Sample(adjusted): 1620 2167

Included observations: 548 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.936665	0.169417	-5.528747	0.0000
D(RUSSIA(-1),2)	0.029546	0.165807	0.178195	0.8586
D(RUSSIA(-2),2)	-0.007972	0.162410	-0.049087	0.9609
D(RUSSIA(-3),2)	-0.066007	0.158399	-0.416715	0.6771
D(RUSSIA(-4),2)	0.061915	0.154755	0.400084	0.6893
D(RUSSIA(-5),2)	0.048436	0.150503	0.321832	0.7477
D(RUSSIA(-6),2)	-0.114752	0.146437	-0.783630	0.4336
D(RUSSIA(-7),2)	-0.070104	0.142705	-0.491252	0.6235
D(RUSSIA(-8),2)	-0.132660	0.137870	-0.962211	0.3364
D(RUSSIA(-9),2)	-0.179887	0.131595	-1.366977	0.1722
D(RUSSIA(-10),2)	0.098958	0.125222	0.790257	0.4297
D(RUSSIA(-11),2)	0.115717	0.117560	0.984327	0.3254
D(RUSSIA(-12),2)	0.088090	0.109550	0.804105	0.4217
D(RUSSIA(-13),2)	0.214073	0.099087	2.160463	0.0312
D(RUSSIA(-14),2)	0.111134	0.084384	1.317006	0.1884
D(RUSSIA(-15),2)	0.198491	0.071680	2.769144	0.0058
D(RUSSIA(-16),2)	0.112429	0.054287	2.070987	0.0388
C	-24.25753	14.25558	-1.701617	0.0894
@TREND(1)	0.014054	0.007595	1.850273	0.0648
R-squared	0.512070	Mean dependent var	0.268577	
Adjusted R-squared	0.495467	S.D. dependent var	36.61474	
S.E. of regression	26.00762	Akaike info criterion	9.388712	
Sum squared resid	357813.6	Schwarz criterion	9.538017	
Log likelihood	-2553.507	F-statistic	30.84286	
Durbin-Watson stat	1.992319	Prob(F-statistic)	0.000000	

### RUSSIA WEEKLY(LEVEL)

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend  
 Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.067188	0.9969
Test critical values:		
1% level	-3.974381	
5% level	-3.417793	
10% level	-3.131338	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	724.4333
HAC corrected variance (Bartlett kernel)	776.7224

Phillips-Perron Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 1603 2167  
 Included observations: 565 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	0.000927	0.005256	0.176451	0.8600
C	-24.45929	18.21349	-1.342922	0.1798
@TREND(1)	0.014104	0.010420	1.353486	0.1764
R-squared	0.008768	Mean dependent var		2.468372
Adjusted R-squared	0.005240	S.D. dependent var		27.05803
S.E. of regression	26.98704	Akaike info criterion		9.433886
Sum squared resid	409304.8	Schwarz criterion		9.456914
Log likelihood	-2662.073	F-statistic		2.485588
Durbin-Watson stat	1.794578	Prob(F-statistic)		0.084192

## RUSSIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-21.15127	0.0000
Test critical values:		
1% level	-3.974410	
5% level	-3.417807	
10% level	-3.131347	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	721.0169
HAC corrected variance (Bartlett kernel)	674.2077

Phillips-Perron Test Equation  
 Dependent Variable: D(RUSSIA,2)  
 Method: Least Squares  
 Sample(adjusted): 1604 2167

Included observations: 564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.917225	0.043181	-21.24160	0.0000
C	-24.99030	13.20465	-1.892537	0.0589
@TREND(1)	0.014475	0.006985	2.072314	0.0387
R-squared	0.445851	Mean dependent var		0.263174
Adjusted R-squared	0.443875	S.D. dependent var		36.10312
S.E. of regression	26.92346	Akaike info criterion		9.429178
Sum squared resid	406653.6	Schwarz criterion		9.452237
Log likelihood	-2656.028	F-statistic		225.6814
Durbin-Watson stat	1.940334	Prob(F-statistic)		0.000000

### RUSSIA WEEKLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.156426
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1603 2167

Included observations: 565 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000748	0.004779	-0.156426	0.8758
R-squared	-0.001431	Mean dependent var		1.038155
Adjusted R-squared	-0.001431	S.D. dependent var		27.05803
S.E. of regression	27.07739	Akaike info criterion		9.437043
Sum squared resid	413516.3	Schwarz criterion		9.444719
Log likelihood	-2664.965	Durbin-Watson stat		1.773428

### RUSSIA WEEKLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 17 (Automatic based on AIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.805401
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1620 2167

Included observations: 548 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.004209	0.005225	-0.805401	0.4209
D(GLSRESID(-1))	0.100535	0.043804	2.295132	0.0221
D(GLSRESID(-2))	-0.030657	0.043995	-0.696826	0.4862
D(GLSRESID(-3))	-0.050021	0.044010	-1.136597	0.2562
D(GLSRESID(-4))	0.138822	0.045773	3.032836	0.0025
D(GLSRESID(-5))	-0.003300	0.046158	-0.071488	0.9430
D(GLSRESID(-6))	-0.154602	0.046384	-3.333090	0.0009
D(GLSRESID(-7))	0.059671	0.050401	1.183922	0.2370
D(GLSRESID(-8))	-0.044995	0.050438	-0.892090	0.3727
D(GLSRESID(-9))	-0.031611	0.051339	-0.615732	0.5383
D(GLSRESID(-10))	0.294757	0.051354	5.739764	0.0000
D(GLSRESID(-11))	0.031040	0.052911	0.586645	0.5577
D(GLSRESID(-12))	-0.014900	0.053041	-0.280917	0.7789
D(GLSRESID(-13))	0.137675	0.053595	2.568793	0.0105
D(GLSRESID(-14))	-0.090388	0.053630	-1.685380	0.0925
D(GLSRESID(-15))	0.098469	0.053141	1.852971	0.0644
D(GLSRESID(-16))	-0.076113	0.053520	-1.422130	0.1556
D(GLSRESID(-17))	-0.097132	0.054589	-1.779320	0.0758
R-squared	0.126768	Mean dependent var	1.145896	
Adjusted R-squared	0.098759	S.D. dependent var	27.45625	
S.E. of regression	26.06524	Akaike info criterion	9.391377	
Sum squared resid	360080.2	Schwarz criterion	9.532824	
Log likelihood	-2555.237	Durbin-Watson stat	1.987304	

## RUSSIA WEEKLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=18)

Sample(adjusted): 1602 2167

Included observations: 566 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.41925	-0.15541	0.37070	37.8505
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	731.8873
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## RUSSIA WEEKLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 17 (Spectral GLS-detrended AR based on AIC, MAXLAG=18)

Sample(adjusted): 1602 2167

Included observations: 566 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.86478	-0.82125	0.28667	22.6364
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000



5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1223.794
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### RUSSIA WEEKLY

Null Hypothesis: RUSSIA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 18 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.516927
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	47426.96
HAC corrected variance (Bartlett kernel)	803411.7

### KPSS Test Equation

Dependent Variable: RUSSIA  
 Method: Least Squares  
 Sample(adjusted): 1602 2167  
 Included observations: 566 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2416.789	106.1064	-22.77703	0.0000
@TREND(1)	1.488321	0.056124	26.51847	0.0000
R-squared	0.554935	Mean dependent var		386.4629
Adjusted R-squared	0.554145	S.D. dependent var		326.7268
S.E. of regression	218.1631	Akaike info criterion		13.61189
Sum squared resid	26843658	Schwarz criterion		13.62722
Log likelihood	-3850.165	F-statistic		703.2294
Durbin-Watson stat	0.015403	Prob(F-statistic)		0.000000

### RUSSIA MONTHLY(LEVEL)

Null Hypothesis: RUSSIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.353339	0.9987
Test critical values:		
1% level	-4.030157	
5% level	-3.444756	
10% level	-3.147221	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 371 500  
 Included observations: 130 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	0.007949	0.022496	0.353339	0.7244
C	-100.0428	77.52391	-1.290477	0.1992
@TREND(1)	0.248307	0.192286	1.291337	0.1989
R-squared	0.042314	Mean dependent var		10.86185
Adjusted R-squared	0.027232	S.D. dependent var		55.39682
S.E. of regression	54.63733	Akaike info criterion		10.86212
Sum squared resid	379125.2	Schwarz criterion		10.92829
Log likelihood	-703.0377	F-statistic		2.805623
Durbin-Watson stat	2.158265	Prob(F-statistic)		0.064222

### RUSSIA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.03816	0.0000
Test critical values: 1% level	-4.030729	
5% level	-3.445030	
10% level	-3.147382	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA,2)  
 Method: Least Squares  
 Sample(adjusted): 372 500  
 Included observations: 129 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-1.070379	0.088915	-12.03816	0.0000
C	-125.8491	57.44111	-2.190923	0.0303
@TREND(1)	0.316480	0.131989	2.397784	0.0180
R-squared	0.534916	Mean dependent var		0.535271
Adjusted R-squared	0.527533	S.D. dependent var		79.63675
S.E. of regression	54.73928	Akaike info criterion		10.86602
Sum squared resid	377544.9	Schwarz criterion		10.93253
Log likelihood	-697.8584	F-statistic		72.45932
Durbin-Watson stat	1.985515	Prob(F-statistic)		0.000000

### RUSSIA MONTHLY(LEVEL)

Null Hypothesis: RUSSIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 7 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.045517	0.9329
Test critical values: 1% level	-4.034356	
5% level	-3.446765	
10% level	-3.148399	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 378 500  
 Included observations: 123 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	-0.035406	0.033864	-1.045517	0.2980
D(RUSSIA(-1))	-0.021312	0.095710	-0.222677	0.8242
D(RUSSIA(-2))	0.102250	0.106419	0.960825	0.3387
D(RUSSIA(-3))	0.087813	0.108206	0.811539	0.4188
D(RUSSIA(-4))	-0.070106	0.109257	-0.641662	0.5224
D(RUSSIA(-5))	0.173069	0.109142	1.585728	0.1156
D(RUSSIA(-6))	0.036915	0.113197	0.326111	0.7449
D(RUSSIA(-7))	0.380589	0.113078	3.365715	0.0010
C	-144.9022	85.81386	-1.688564	0.0941
@TREND(1)	0.375063	0.213746	1.754710	0.0820
R-squared	0.164781	Mean dependent var	11.66244	
Adjusted R-squared	0.098259	S.D. dependent var	56.81186	
S.E. of regression	53.94858	Akaike info criterion	10.89174	
Sum squared resid	328880.7	Schwarz criterion	11.12038	
Log likelihood	-659.8423	F-statistic	2.477088	
Durbin-Watson stat	1.930156	Prob(F-statistic)	0.012817	

## RUSSIA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 6 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.497962	0.3287
Test critical values:		
1% level	-4.034356	
5% level	-3.446765	
10% level	-3.148399	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA,2)  
 Method: Least Squares  
 Sample(adjusted): 378 500  
 Included observations: 123 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-0.577859	0.231332	-2.497962	0.0139
D(RUSSIA(-1),2)	-0.478148	0.219513	-2.178223	0.0314
D(RUSSIA(-2),2)	-0.420556	0.218630	-1.923596	0.0569
D(RUSSIA(-3),2)	-0.374825	0.199692	-1.877017	0.0631
D(RUSSIA(-4),2)	-0.489277	0.180166	-2.715700	0.0076
D(RUSSIA(-5),2)	-0.356499	0.154885	-2.301706	0.0232
D(RUSSIA(-6),2)	-0.352012	0.109770	-3.206818	0.0017
C	-87.50522	65.98309	-1.326176	0.1874

@TREND(1)	0.218466	0.152553	1.432060	0.1549
R-squared	0.590494	Mean dependent var	0.363577	
Adjusted R-squared	0.561757	S.D. dependent var	81.52665	
S.E. of regression	53.97060	Akaike info criterion	10.88511	
Sum squared resid	332062.2	Schwarz criterion	11.09088	
Log likelihood	-660.4344	F-statistic	20.54801	
Durbin-Watson stat	1.920450	Prob(F-statistic)	0.000000	

## RUSSIA MONTHLY(2<sup>ND</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA,2) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 5 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.302649	0.0000
Test critical values:		
1% level	-4.034356	
5% level	-3.446765	
10% level	-3.148399	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(RUSSIA,3)  
 Method: Least Squares  
 Sample(adjusted): 378 500  
 Included observations: 123 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1),2)	-5.383017	0.578654	-9.302649	0.0000
D(RUSSIA(-1),3)	3.399327	0.531690	6.393435	0.0000
D(RUSSIA(-2),3)	2.533292	0.438994	5.770672	0.0000
D(RUSSIA(-3),3)	1.793538	0.331253	5.414414	0.0000
D(RUSSIA(-4),3)	1.014114	0.217510	4.662372	0.0000
D(RUSSIA(-5),3)	0.455824	0.103888	4.387660	0.0000
C	-22.66310	62.02920	-0.365362	0.7155
@TREND(1)	0.057019	0.141299	0.403536	0.6873
R-squared	0.859622	Mean dependent var	1.878455	
Adjusted R-squared	0.851078	S.D. dependent var	143.0055	
S.E. of regression	55.18646	Akaike info criterion	10.92214	
Sum squared resid	350237.7	Schwarz criterion	11.10505	
Log likelihood	-663.7117	F-statistic	100.6028	
Durbin-Watson stat	1.948889	Prob(F-statistic)	0.000000	

## RUSSIA MONTHLY(LEVEL)

Null Hypothesis: RUSSIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.424195	0.9990
Test critical values:		
1% level	-4.030157	

5% level	-3.444756
10% level	-3.147221

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2916.348
HAC corrected variance (Bartlett kernel)	2791.839

Phillips-Perron Test Equation  
 Dependent Variable: D(RUSSIA)  
 Method: Least Squares  
 Sample(adjusted): 371 500  
 Included observations: 130 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RUSSIA(-1)	0.007949	0.022496	0.353339	0.7244
C	-100.0428	77.52391	-1.290477	0.1992
@TREND(1)	0.248307	0.192286	1.291337	0.1989
R-squared	0.042314	Mean dependent var		10.86185
Adjusted R-squared	0.027232	S.D. dependent var		55.39682
S.E. of regression	54.63733	Akaike info criterion		10.86212
Sum squared resid	379125.2	Schwarz criterion		10.92829
Log likelihood	-703.0377	F-statistic		2.805623
Durbin-Watson stat	2.158265	Prob(F-statistic)		0.064222

## RUSSIA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(RUSSIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-12.03572	0.0000
Test critical values:		
1% level	-4.030729	
5% level	-3.445030	
10% level	-3.147382	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2926.705
HAC corrected variance (Bartlett kernel)	2947.721

Phillips-Perron Test Equation  
 Dependent Variable: D(RUSSIA,2)  
 Method: Least Squares  
 Sample(adjusted): 372 500  
 Included observations: 129 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RUSSIA(-1))	-1.070379	0.088915	-12.03816	0.0000
C	-125.8491	57.44111	-2.190923	0.0303
@TREND(1)	0.316480	0.131989	2.397784	0.0180
R-squared	0.534916	Mean dependent var		0.535271
Adjusted R-squared	0.527533	S.D. dependent var		79.63675
S.E. of regression	54.73928	Akaike info criterion		10.86602
Sum squared resid	377544.9	Schwarz criterion		10.93253

Log likelihood	-697.8584	F-statistic	72.45932
Durbin-Watson stat	1.985515	Prob(F-statistic)	0.000000

### RUSSIA MONTHLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.134158
Test critical values: 1% level	-3.544000
5% level	-3.000000
10% level	-2.710000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 371 500

Included observations: 130 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.002829	0.021088	-0.134158	0.8935
R-squared	-0.005439	Mean dependent var	4.121901	
Adjusted R-squared	-0.005439	S.D. dependent var	55.39682	
S.E. of regression	55.54726	Akaike info criterion	10.88001	
Sum squared resid	398029.3	Schwarz criterion	10.90207	
Log likelihood	-706.2005	Durbin-Watson stat	2.033833	

### RUSSIA MONTHLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 7 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.736884
Test critical values: 1% level	-3.552400
5% level	-3.007000
10% level	-2.717000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 378 500

Included observations: 123 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.042147	0.024266	-1.736884	0.0851
D(GLSRESID(-1))	-0.005191	0.089289	-0.058132	0.9537
D(GLSRESID(-2))	0.122768	0.096804	1.268214	0.2073
D(GLSRESID(-3))	0.106722	0.100591	1.060949	0.2909
D(GLSRESID(-4))	-0.051236	0.101274	-0.505912	0.6139
D(GLSRESID(-5))	0.191508	0.102170	1.874418	0.0634
D(GLSRESID(-6))	0.051444	0.109204	0.471085	0.6385

D(GLSRESID(-7))	0.394144	0.109909	3.586097	0.0005
R-squared	0.159362	Mean dependent var	4.922494	
Adjusted R-squared	0.108193	S.D. dependent var	56.81186	
S.E. of regression	53.65058	Akaike info criterion	10.86569	
Sum squared resid	331014.3	Schwarz criterion	11.04860	
Log likelihood	-660.2400	Durbin-Watson stat	1.933469	

### RUSSIA MONTHLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)

Sample(adjusted): 370 500

Included observations: 131 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.32534	-0.11913	0.36619	37.5725
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	3061.764
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### RUSSIA MONTHLY

Null Hypothesis: RUSSIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 7 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)

Sample(adjusted): 370 500

Included observations: 131 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-87.5371	-6.49081	0.07415	1.54054
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	74674.02
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### RUSSIA MONTHLY

Null Hypothesis: RUSSIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.275356
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	48806.29
HAC corrected variance (Bartlett kernel)	368590.4

KPSS Test Equation

Dependent Variable: RUSSIA

Method: Least Squares

Sample(adjusted): 370 500

Included observations: 131 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2493.088	224.0821	-11.12578	0.0000
@TREND(1)	6.638505	0.514369	12.90611	0.0000
R-squared	0.563552	Mean dependent var		388.0227
Adjusted R-squared	0.560168	S.D. dependent var		335.6877
S.E. of regression	222.6274	Akaike info criterion		13.66403
Sum squared resid	6393624.	Schwarz criterion		13.70792
Log likelihood	-892.9937	F-statistic		166.5676
Durbin-Watson stat	0.062280	Prob(F-statistic)		0.000000

**THAILAND DAILY(LEVEL)**

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=34)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.431996	0.5681
Test critical values:		
1% level	-3.431118	
5% level	-2.861764	
10% level	-2.566931	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 4 6915

Included observations: 6912 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.000451	0.000315	-1.431996	0.1522
D(THAILAND(-1))	0.136936	0.011917	11.49070	0.0000
C	0.305211	0.204922	1.489404	0.1364
R-squared	0.018991	Mean dependent var		0.076664
Adjusted R-squared	0.018707	S.D. dependent var		9.990093
S.E. of regression	9.896211	Akaike info criterion		7.422615
Sum squared resid	676632.9	Schwarz criterion		7.425584
Log likelihood	-25649.56	F-statistic		66.87298
Durbin-Watson stat	2.003566	Prob(F-statistic)		0.000000

**THAILAND DAILY(1<sup>ST</sup> DIFFERENCE)**

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant



Lag Length: 0 (Automatic based on SIC, MAXLAG=34)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-72.43652	0.0001
Test critical values:		
1% level	-3.431118	
5% level	-2.861764	
10% level	-2.566931	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 4 6915

Included observations: 6912 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.863249	0.011917	-72.43652	0.0000
C	0.066350	0.119045	0.557349	0.5773
R-squared	0.431605	Mean dependent var		0.001243
Adjusted R-squared	0.431523	S.D. dependent var		13.12640
S.E. of regression	9.896964	Akaike info criterion		7.422622
Sum squared resid	676833.7	Schwarz criterion		7.424602
Log likelihood	-25650.58	F-statistic		5247.049
Durbin-Watson stat	2.003499	Prob(F-statistic)		0.000000

### THAILAND DAILY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 34 (Automatic based on AIC, MAXLAG=34)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.702058	0.4302
Test critical values:		
1% level	-3.431123	
5% level	-2.861766	
10% level	-2.566932	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 37 6915

Included observations: 6879 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.000537	0.000315	-1.702058	0.0888
D(THAILAND(-1))	0.130909	0.012082	10.83494	0.0000
D(THAILAND(-2))	0.009553	0.012185	0.784020	0.4331
D(THAILAND(-3))	0.040925	0.012179	3.360168	0.0008
D(THAILAND(-4))	0.001352	0.012186	0.110966	0.9116
D(THAILAND(-5))	0.030279	0.012173	2.487505	0.0129
D(THAILAND(-6))	-0.015349	0.012178	-1.260470	0.2075
D(THAILAND(-7))	-0.054305	0.012178	-4.459083	0.0000
D(THAILAND(-8))	0.019666	0.012188	1.613581	0.1067
D(THAILAND(-9))	0.009914	0.012184	0.813731	0.4158
D(THAILAND(-10))	0.007774	0.012184	0.638080	0.5234
D(THAILAND(-11))	0.002637	0.012186	0.216405	0.8287
D(THAILAND(-12))	0.010021	0.012184	0.822457	0.4108

D(THAILAND(-13))	0.038622	0.012187	3.169200	0.0015
D(THAILAND(-14))	0.004899	0.012192	0.401841	0.6878
D(THAILAND(-15))	-0.011645	0.012191	-0.955196	0.3395
D(THAILAND(-16))	-0.012850	0.012189	-1.054279	0.2918
D(THAILAND(-17))	0.012014	0.012186	0.985899	0.3242
D(THAILAND(-18))	0.028712	0.012187	2.356002	0.0185
D(THAILAND(-19))	-0.022125	0.012191	-1.814769	0.0696
D(THAILAND(-20))	-0.013734	0.012194	-1.126219	0.2601
D(THAILAND(-21))	0.026029	0.012197	2.134023	0.0329
D(THAILAND(-22))	0.024812	0.012192	2.035080	0.0419
D(THAILAND(-23))	0.018125	0.012196	1.486185	0.1373
D(THAILAND(-24))	-0.015443	0.012198	-1.265999	0.2056
D(THAILAND(-25))	-0.009301	0.012200	-0.762377	0.4459
D(THAILAND(-26))	-0.034659	0.012203	-2.840341	0.0045
D(THAILAND(-27))	-0.037945	0.012209	-3.108110	0.0019
D(THAILAND(-28))	0.016038	0.012200	1.314584	0.1887
D(THAILAND(-29))	0.009764	0.012201	0.800264	0.4236
D(THAILAND(-30))	0.048349	0.012200	3.963060	0.0001
D(THAILAND(-31))	-0.023026	0.012214	-1.885221	0.0594
D(THAILAND(-32))	0.032664	0.012209	2.675330	0.0075
D(THAILAND(-33))	0.008596	0.012215	0.703721	0.4816
D(THAILAND(-34))	0.028036	0.012113	2.314616	0.0207
C	0.339005	0.205054	1.653250	0.0983
R-squared	0.038679	Mean dependent var	0.078807	
Adjusted R-squared	0.033762	S.D. dependent var	10.01358	
S.E. of regression	9.843084	Akaike info criterion	7.416635	
Sum squared resid	662993.0	Schwarz criterion	7.452411	
Log likelihood	-25473.52	F-statistic	7.866585	
Durbin-Watson stat	2.000644	Prob(F-statistic)	0.000000	

### THAILAND DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Lag Length: 33 (Automatic based on AIC, MAXLAG=34)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.57107	0.0000
Test critical values:		
1% level	-3.431123	
5% level	-2.861766	
10% level	-2.566932	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 37 6915

Included observations: 6879 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.698745	0.055584	-12.57107	0.0000
D(THAILAND(-1),2)	-0.170468	0.055008	-3.098974	0.0019
D(THAILAND(-2),2)	-0.161095	0.054327	-2.965258	0.0030
D(THAILAND(-3),2)	-0.120365	0.053569	-2.246918	0.0247
D(THAILAND(-4),2)	-0.119217	0.052832	-2.256530	0.0241
D(THAILAND(-5),2)	-0.089159	0.051980	-1.715248	0.0863
D(THAILAND(-6),2)	-0.104747	0.051083	-2.050533	0.0404
D(THAILAND(-7),2)	-0.159288	0.050140	-3.176889	0.0015
D(THAILAND(-8),2)	-0.139821	0.049291	-2.836672	0.0046

D(THAILAND(-9),2)	-0.130103	0.048494	-2.682873	0.0073
D(THAILAND(-10),2)	-0.122526	0.047700	-2.568676	0.0102
D(THAILAND(-11),2)	-0.120082	0.046932	-2.558647	0.0105
D(THAILAND(-12),2)	-0.110262	0.046109	-2.391327	0.0168
D(THAILAND(-13),2)	-0.071857	0.045199	-1.589781	0.1119
D(THAILAND(-14),2)	-0.067200	0.044194	-1.520542	0.1284
D(THAILAND(-15),2)	-0.079083	0.043202	-1.830527	0.0672
D(THAILAND(-16),2)	-0.092160	0.042249	-2.181373	0.0292
D(THAILAND(-17),2)	-0.080378	0.041198	-1.951031	0.0511
D(THAILAND(-18),2)	-0.051909	0.040080	-1.295143	0.1953
D(THAILAND(-19),2)	-0.074285	0.038956	-1.906914	0.0566
D(THAILAND(-20),2)	-0.088259	0.037840	-2.332400	0.0197
D(THAILAND(-21),2)	-0.062463	0.036688	-1.702536	0.0887
D(THAILAND(-22),2)	-0.037907	0.035363	-1.071957	0.2838
D(THAILAND(-23),2)	-0.020054	0.033943	-0.590813	0.5547
D(THAILAND(-24),2)	-0.035778	0.032450	-1.102558	0.2703
D(THAILAND(-25),2)	-0.045354	0.030862	-1.469588	0.1417
D(THAILAND(-26),2)	-0.080287	0.029152	-2.754051	0.0059
D(THAILAND(-27),2)	-0.118500	0.027253	-4.348082	0.0000
D(THAILAND(-28),2)	-0.102695	0.025495	-4.028029	0.0001
D(THAILAND(-29),2)	-0.093165	0.023670	-3.935959	0.0001
D(THAILAND(-30),2)	-0.045070	0.021520	-2.094314	0.0363
D(THAILAND(-31),2)	-0.068369	0.019106	-3.578419	0.0003
D(THAILAND(-32),2)	-0.035986	0.016044	-2.242876	0.0249
D(THAILAND(-33),2)	-0.027687	0.012113	-2.285784	0.0223
C	0.054490	0.118780	0.458748	0.6464
R-squared	0.442967	Mean dependent var	0.001099	
Adjusted R-squared	0.440200	S.D. dependent var	13.15755	
S.E. of regression	9.844448	Akaike info criterion	7.416767	
Sum squared resid	663273.6	Schwarz criterion	7.451550	
Log likelihood	-25474.97	F-statistic	160.0745	
Durbin-Watson stat	2.000617	Prob(F-statistic)	0.000000	

## THAILAND DAILY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Bandwidth: 14 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.471993	0.5480
Test critical values: 1% level	-3.431118	
5% level	-2.861764	
10% level	-2.566931	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	99.74915
HAC corrected variance (Bartlett kernel)	141.3771

Phillips-Perron Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 3 6915

Included observations: 6913 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.000411	0.000318	-1.293879	0.1958
C	0.294289	0.206809	1.422996	0.1548
R-squared	0.000242	Mean dependent var		0.076483
Adjusted R-squared	0.000098	S.D. dependent var		9.989382
S.E. of regression	9.988894	Akaike info criterion		7.441114
Sum squared resid	689565.8	Schwarz criterion		7.443093
Log likelihood	-25718.21	F-statistic		1.674124
Durbin-Watson stat	1.726147	Prob(F-statistic)		0.195750

### THAILAND DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Bandwidth: 9 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-72.78031	0.0001
Test critical values:		
1% level	-3.431118	
5% level	-2.861764	
10% level	-2.566931	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	97.92155
HAC corrected variance (Bartlett kernel)	104.2069

Phillips-Perron Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 4 6915

Included observations: 6912 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.863249	0.011917	-72.43652	0.0000
C	0.066350	0.119045	0.557349	0.5773
R-squared	0.431605	Mean dependent var		0.001243
Adjusted R-squared	0.431523	S.D. dependent var		13.12640
S.E. of regression	9.896964	Akaike info criterion		7.422622
Sum squared resid	676833.7	Schwarz criterion		7.424602
Log likelihood	-25650.58	F-statistic		5247.049
Durbin-Watson stat	2.003499	Prob(F-statistic)		0.000000

### THAILAND DAILY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=34)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.620218
Test critical values:	
1% level	-2.565297
5% level	-1.940870
10% level	-1.616669

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 4 6915  
 Included observations: 6912 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000138	0.000223	-0.620218	0.5351
D(GLSRESID(-1))	0.136897	0.011918	11.48668	0.0000
R-squared	0.018710	Mean dependent var		0.076664
Adjusted R-squared	0.018568	S.D. dependent var		9.990093
S.E. of regression	9.896911	Akaike info criterion		7.422612
Sum squared resid	676826.5	Schwarz criterion		7.424591
Log likelihood	-25650.55	Durbin-Watson stat		2.003540

### THAILAND DAILY

Null Hypothesis: THAILAND has a unit root  
 Exogenous: Constant  
 Lag Length: 34 (Automatic based on AIC, MAXLAG=34)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-0.877217
Test critical values: 1% level	-2.565298
5% level	-1.940870
10% level	-1.616669

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 37 6915  
 Included observations: 6879 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000195	0.000223	-0.877217	0.3804
D(GLSRESID(-1))	0.130905	0.012083	10.83350	0.0000
D(GLSRESID(-2))	0.009503	0.012186	0.779795	0.4355
D(GLSRESID(-3))	0.040866	0.012181	3.355034	0.0008
D(GLSRESID(-4))	0.001283	0.012187	0.105263	0.9162
D(GLSRESID(-5))	0.030203	0.012174	2.480983	0.0131
D(GLSRESID(-6))	-0.015438	0.012179	-1.267620	0.2050
D(GLSRESID(-7))	-0.054391	0.012180	-4.465799	0.0000
D(GLSRESID(-8))	0.019603	0.012189	1.608304	0.1078
D(GLSRESID(-9))	0.009852	0.012185	0.808498	0.4188
D(GLSRESID(-10))	0.007710	0.012185	0.632730	0.5269
D(GLSRESID(-11))	0.002570	0.012187	0.210890	0.8330
D(GLSRESID(-12))	0.009950	0.012185	0.816588	0.4142
D(GLSRESID(-13))	0.038547	0.012188	3.162747	0.0016
D(GLSRESID(-14))	0.004807	0.012193	0.394236	0.6934
D(GLSRESID(-15))	-0.011737	0.012192	-0.962689	0.3357
D(GLSRESID(-16))	-0.012935	0.012190	-1.061134	0.2887
D(GLSRESID(-17))	0.011931	0.012187	0.979003	0.3276
D(GLSRESID(-18))	0.028624	0.012188	2.348574	0.0189
D(GLSRESID(-19))	-0.022220	0.012192	-1.822436	0.0684
D(GLSRESID(-20))	-0.013819	0.012196	-1.133110	0.2572
D(GLSRESID(-21))	0.025947	0.012198	2.127115	0.0334

D(GLSRESID(-22))	0.024716	0.012193	2.027044	0.0427
D(GLSRESID(-23))	0.018020	0.012197	1.477437	0.1396
D(GLSRESID(-24))	-0.015553	0.012199	-1.274894	0.2024
D(GLSRESID(-25))	-0.009406	0.012201	-0.770960	0.4408
D(GLSRESID(-26))	-0.034765	0.012204	-2.848803	0.0044
D(GLSRESID(-27))	-0.038042	0.012210	-3.115765	0.0018
D(GLSRESID(-28))	0.015964	0.012201	1.308412	0.1908
D(GLSRESID(-29))	0.009685	0.012202	0.793758	0.4274
D(GLSRESID(-30))	0.048263	0.012201	3.955713	0.0001
D(GLSRESID(-31))	-0.023129	0.012215	-1.893462	0.0583
D(GLSRESID(-32))	0.032564	0.012210	2.666947	0.0077
D(GLSRESID(-33))	0.008483	0.012216	0.694404	0.4875
D(GLSRESID(-34))	0.027902	0.012114	2.303335	0.0213
R-squared	0.038351	Mean dependent var	0.078807	
Adjusted R-squared	0.033573	S.D. dependent var	10.01358	
S.E. of regression	9.844046	Akaike info criterion	7.416686	
Sum squared resid	663219.5	Schwarz criterion	7.451468	
Log likelihood	-25474.69	Durbin-Watson stat	2.000631	

### THAILAND DAILY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=34)

Sample(adjusted): 2 6915

Included observations: 6914 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.11040	-0.62166	0.55985	17.4853
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 131.4464

### THAILAND DAILY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag length: 34 (Spectral GLS-detrended AR based on AIC, MAXLAG=34)

Sample(adjusted): 2 6915

Included observations: 6914 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.94776	-0.88305	0.45337	11.4665
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 200.4437

## THAILAND DAILY

Null Hypothesis: THAILAND is stationary  
 Exogenous: Constant  
 Bandwidth: 65 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	3.047027
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	142771.2
HAC corrected variance (Bartlett kernel)	9291578.

### KPSS Test Equation

Dependent Variable: THAILAND  
 Method: Least Squares  
 Sample(adjusted): 2 6915  
 Included observations: 6914 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	529.4871	4.544509	116.5114	0.0000
R-squared	0.000000	Mean dependent var		529.4871
Adjusted R-squared	0.000000	S.D. dependent var		377.8781
S.E. of regression	377.8781	Akaike info criterion		14.70716
Sum squared resid	9.87E+08	Schwarz criterion		14.70815
Log likelihood	-50841.67	Durbin-Watson stat		0.000699

## THAILAND WEEKLY(LEVEL)

Null Hypothesis: THAILAND has a unit root  
 Exogenous: Constant  
 Lag Length: 2 (Automatic based on SIC, MAXLAG=24)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.536476	0.5150
Test critical values:		
1% level	-3.434172	
5% level	-2.863115	
10% level	-2.567656	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND)  
 Method: Least Squares  
 Sample(adjusted): 544 2167  
 Included observations: 1624 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.002337	0.001521	-1.536476	0.1246
D(THAILAND(-1))	0.034906	0.024744	1.410691	0.1585
D(THAILAND(-2))	0.088751	0.024746	3.586460	0.0003

C	1.423661	0.918032	1.550775	0.1212
R-squared	0.010497	Mean dependent var	0.362488	
Adjusted R-squared	0.008665	S.D. dependent var	23.14036	
S.E. of regression	23.03988	Akaike info criterion	9.114791	
Sum squared resid	859954.8	Schwarz criterion	9.128073	
Log likelihood	-7397.210	F-statistic	5.728701	
Durbin-Watson stat	1.998910	Prob(F-statistic)	0.000674	

### THAILAND WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=24)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-25.58244	0.0000
Test critical values:		
1% level	-3.434172	
5% level	-2.863115	
10% level	-2.567656	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 544 2167

Included observations: 1624 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.878411	0.034336	-25.58244	0.0000
D(THAILAND(-1),2)	-0.087668	0.024746	-3.542653	0.0004
C	0.320207	0.572089	0.559715	0.5758
R-squared	0.485307	Mean dependent var	0.015887	
Adjusted R-squared	0.484672	S.D. dependent var	32.10855	
S.E. of regression	23.04955	Akaike info criterion	9.115015	
Sum squared resid	861207.9	Schwarz criterion	9.124977	
Log likelihood	-7398.392	F-statistic	764.2262	
Durbin-Watson stat	1.998711	Prob(F-statistic)	0.000000	

### THAILAND WEEKLY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 18 (Automatic based on AIC, MAXLAG=24)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.458491	0.5546
Test critical values:		
1% level	-3.434212	
5% level	-2.863132	
10% level	-2.567666	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 560 2167



Included observations: 1608 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.002241	0.001536	-1.458491	0.1449
D(THAILAND(-1))	0.025190	0.025062	1.005119	0.3150
D(THAILAND(-2))	0.087854	0.024953	3.520764	0.0004
D(THAILAND(-3))	0.003409	0.025039	0.136163	0.8917
D(THAILAND(-4))	0.041761	0.025077	1.665281	0.0961
D(THAILAND(-5))	-0.011920	0.025090	-0.475073	0.6348
D(THAILAND(-6))	0.036051	0.025094	1.436592	0.1510
D(THAILAND(-7))	0.044204	0.025107	1.760635	0.0785
D(THAILAND(-8))	0.018785	0.025067	0.749384	0.4537
D(THAILAND(-9))	0.020909	0.025067	0.834130	0.4043
D(THAILAND(-10))	-0.015897	0.025066	-0.634215	0.5260
D(THAILAND(-11))	-0.071403	0.025072	-2.847910	0.0045
D(THAILAND(-12))	-0.045750	0.025115	-1.821636	0.0687
D(THAILAND(-13))	0.030468	0.025151	1.211409	0.2259
D(THAILAND(-14))	0.028917	0.025160	1.149340	0.2506
D(THAILAND(-15))	0.013449	0.025151	0.534738	0.5929
D(THAILAND(-16))	0.031667	0.025155	1.258877	0.2083
D(THAILAND(-17))	-0.094582	0.025091	-3.769599	0.0002
D(THAILAND(-18))	-0.047378	0.025196	-1.880367	0.0602
C	1.397910	0.925394	1.510612	0.1311
R-squared	0.039000	Mean dependent var	0.361561	
Adjusted R-squared	0.027502	S.D. dependent var	23.25473	
S.E. of regression	22.93273	Akaike info criterion	9.115367	
Sum squared resid	835145.1	Schwarz criterion	9.182317	
Log likelihood	-7308.755	F-statistic	3.391833	
Durbin-Watson stat	1.998319	Prob(F-statistic)	0.000001	

### THAILAND WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Lag Length: 17 (Automatic based on AIC, MAXLAG=24)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.31922	0.0000
Test critical values: 1% level	-3.434212	
5% level	-2.863132	
10% level	-2.567666	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 560 2167

Included observations: 1608 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.923184	0.089463	-10.31922	0.0000
D(THAILAND(-1),2)	-0.052462	0.086762	-0.604666	0.5455
D(THAILAND(-2),2)	0.034630	0.084556	0.409552	0.6822
D(THAILAND(-3),2)	0.037124	0.082093	0.452211	0.6512
D(THAILAND(-4),2)	0.077919	0.079455	0.980675	0.3269
D(THAILAND(-5),2)	0.064950	0.076548	0.848487	0.3963

D(THAILAND(-6),2)	0.099920	0.073314	1.362895	0.1731
D(THAILAND(-7),2)	0.143023	0.070322	2.033842	0.0421
D(THAILAND(-8),2)	0.160748	0.067787	2.371357	0.0178
D(THAILAND(-9),2)	0.180597	0.065313	2.765082	0.0058
D(THAILAND(-10),2)	0.163588	0.062600	2.613220	0.0091
D(THAILAND(-11),2)	0.091091	0.059606	1.528222	0.1267
D(THAILAND(-12),2)	0.044283	0.055943	0.791574	0.4287
D(THAILAND(-13),2)	0.073742	0.051600	1.429111	0.1532
D(THAILAND(-14),2)	0.101626	0.047047	2.160110	0.0309
D(THAILAND(-15),2)	0.113941	0.041447	2.749049	0.0060
D(THAILAND(-16),2)	0.144468	0.034990	4.128831	0.0000
D(THAILAND(-17),2)	0.048581	0.025191	1.928487	0.0540
C	0.338083	0.573193	0.589823	0.5554
R-squared	0.500173	Mean dependent var	0.012600	
Adjusted R-squared	0.494511	S.D. dependent var	32.26665	
S.E. of regression	22.94086	Akaike info criterion	9.115462	
Sum squared resid	836263.8	Schwarz criterion	9.179064	
Log likelihood	-7309.831	F-statistic	88.33889	
Durbin-Watson stat	1.998425	Prob(F-statistic)	0.000000	

### THAILAND WEEKLY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Bandwidth: 16 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.583550	0.4908
Test critical values: 1% level	-3.434167	
5% level	-2.863113	
10% level	-2.567655	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	533.9090
HAC corrected variance (Bartlett kernel)	749.6414

Phillips-Perron Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 542 2167

Included observations: 1626 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.002097	0.001524	-1.376086	0.1690
C	1.345625	0.919996	1.462642	0.1438
R-squared	0.001165	Mean dependent var	0.355578	
Adjusted R-squared	0.000550	S.D. dependent var	23.12705	
S.E. of regression	23.12069	Akaike info criterion	9.120562	
Sum squared resid	868136.0	Schwarz criterion	9.127197	
Log likelihood	-7413.017	F-statistic	1.893614	
Durbin-Watson stat	1.923383	Prob(F-statistic)	0.168985	

### THAILAND WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant  
 Bandwidth: 16 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-39.32227	0.0000
Test critical values:		
1% level	-3.434169	
5% level	-2.863114	
10% level	-2.567656	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	534.1112
HAC corrected variance (Bartlett kernel)	691.4184

Phillips-Perron Test Equation  
 Dependent Variable: D(THAILAND,2)  
 Method: Least Squares  
 Sample(adjusted): 543 2167  
 Included observations: 1625 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.962773	0.024810	-38.80646	0.0000
C	0.345021	0.573726	0.601369	0.5477
R-squared	0.481294	Mean dependent var		0.013495
Adjusted R-squared	0.480975	S.D. dependent var		32.09881
S.E. of regression	23.12508	Akaike info criterion		9.120943
Sum squared resid	867930.7	Schwarz criterion		9.127581
Log likelihood	-7408.766	F-statistic		1505.941
Durbin-Watson stat	2.006130	Prob(F-statistic)		0.000000

## THAILAND WEEKLY

Null Hypothesis: THAILAND has a unit root  
 Exogenous: Constant  
 Lag Length: 2 (Automatic based on SIC, MAXLAG=24)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.724399
Test critical values:	
1% level	-2.566387
5% level	-1.941019
10% level	-1.616568

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 544 2167  
 Included observations: 1624 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000797	0.001100	-0.724399	0.4689
D(GLSRESID(-1))	0.034636	0.024752	1.399301	0.1619

D(GLSRESID(-2))	0.088418	0.024754	3.571883	0.0004
R-squared	0.009185	Mean dependent var	0.362488	
Adjusted R-squared	0.007962	S.D. dependent var	23.14036	
S.E. of regression	23.04805	Akaike info criterion	9.114885	
Sum squared resid	861095.6	Schwarz criterion	9.124847	
Log likelihood	-7398.287	Durbin-Watson stat	1.998800	

### THAILAND WEEKLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 18 (Automatic based on AIC, MAXLAG=24)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.639934
Test critical values: 1% level	-2.566401
5% level	-1.941021
10% level	-1.616567

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 560 2167

Included observations: 1608 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000708	0.001106	-0.639934	0.5223
D(GLSRESID(-1))	0.024964	0.025070	0.995784	0.3195
D(GLSRESID(-2))	0.087630	0.024961	3.510670	0.0005
D(GLSRESID(-3))	0.003061	0.025046	0.122215	0.9027
D(GLSRESID(-4))	0.041421	0.025085	1.651243	0.0989
D(GLSRESID(-5))	-0.012328	0.025097	-0.491222	0.6233
D(GLSRESID(-6))	0.035655	0.025101	1.420453	0.1557
D(GLSRESID(-7))	0.043791	0.025114	1.743718	0.0814
D(GLSRESID(-8))	0.018338	0.025074	0.731378	0.4647
D(GLSRESID(-9))	0.020452	0.025073	0.815686	0.4148
D(GLSRESID(-10))	-0.016384	0.025072	-0.653497	0.5135
D(GLSRESID(-11))	-0.071879	0.025078	-2.866181	0.0042
D(GLSRESID(-12))	-0.046144	0.025122	-1.836802	0.0664
D(GLSRESID(-13))	0.030110	0.025158	1.196810	0.2316
D(GLSRESID(-14))	0.028524	0.025167	1.133407	0.2572
D(GLSRESID(-15))	0.013006	0.025157	0.516991	0.6052
D(GLSRESID(-16))	0.031208	0.025161	1.240301	0.2150
D(GLSRESID(-17))	-0.095114	0.025096	-3.789927	0.0002
D(GLSRESID(-18))	-0.047803	0.025203	-1.896741	0.0580
R-squared	0.037750	Mean dependent var	0.361561	
Adjusted R-squared	0.026849	S.D. dependent var	23.25473	
S.E. of regression	22.94042	Akaike info criterion	9.115423	
Sum squared resid	836231.4	Schwarz criterion	9.179025	
Log likelihood	-7309.800	Durbin-Watson stat	1.998324	

### THAILAND WEEKLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag length: 2 (Spectral GLS-detrended AR based on SIC, MAXLAG=24)

Sample(adjusted): 541 2167

Included observations: 1627 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.48331	-0.72839	0.49106	13.8071
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	689.4754
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## THAILAND WEEKLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag length: 18 (Spectral GLS-detrended AR based on AIC, MAXLAG=24)

Sample(adjusted): 541 2167

Included observations: 1627 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.29224	-0.66600	0.51538	15.2085
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	625.9432
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## THAILAND WEEKLY

Null Hypothesis: THAILAND is stationary

Exogenous: Constant

Bandwidth: 32 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.966450
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	141499.9
HAC corrected variance (Bartlett kernel)	4519005.

KPSS Test Equation

Dependent Variable: THAILAND

Method: Least Squares

Sample(adjusted): 541 2167

Included observations: 1627 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	472.2343	9.328629	50.62205	0.0000
R-squared	0.000000	Mean dependent var	472.2343	
Adjusted R-squared	0.000000	S.D. dependent var	376.2804	
S.E. of regression	376.2804	Akaike info criterion	14.69916	
Sum squared resid	2.30E+08	Schwarz criterion	14.70248	
Log likelihood	-11956.77	Durbin-Watson stat	0.003776	

### THAILAND MONTHLY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=16)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.549613	0.5074
Test critical values:		
1% level	-3.447627	
5% level	-2.869050	
10% level	-2.570838	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 127 500

Included observations: 374 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.011886	0.007671	-1.549613	0.1221
C	7.155082	4.625275	1.546953	0.1227
R-squared	0.006414	Mean dependent var	1.561444	
Adjusted R-squared	0.003743	S.D. dependent var	56.03214	
S.E. of regression	55.92718	Akaike info criterion	10.89131	
Sum squared resid	1163560.	Schwarz criterion	10.91230	
Log likelihood	-2034.675	F-statistic	2.401300	
Durbin-Watson stat	1.946510	Prob(F-statistic)	0.122085	

### THAILAND MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=16)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.69773	0.0000
Test critical values:		
1% level	-3.447722	
5% level	-2.869092	
10% level	-2.570860	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 129 500

Included observations: 372 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.845684	0.072295	-11.69773	0.0000
D(THAILAND(-1),2)	-0.135927	0.051668	-2.630783	0.0089
C	1.317436	2.895716	0.454960	0.6494
R-squared	0.498707	Mean dependent var	-0.076425	
Adjusted R-squared	0.495990	S.D. dependent var	78.59604	
S.E. of regression	55.79819	Akaike info criterion	10.88939	
Sum squared resid	1148859.	Schwarz criterion	10.92100	
Log likelihood	-2022.427	F-statistic	183.5484	
Durbin-Watson stat	1.969428	Prob(F-statistic)	0.000000	

### THAILAND MONTHLY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 10 (Automatic based on AIC, MAXLAG=16)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.866253	0.3482
Test critical values:		
1% level	-3.448111	
5% level	-2.869263	
10% level	-2.570952	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 137 500

Included observations: 364 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.014470	0.007753	-1.866253	0.0628
D(THAILAND(-1))	0.010845	0.052098	0.208167	0.8352
D(THAILAND(-2))	0.145116	0.052145	2.782920	0.0057
D(THAILAND(-3))	-0.097430	0.052742	-1.847290	0.0655
D(THAILAND(-4))	-0.060605	0.052710	-1.149767	0.2510
D(THAILAND(-5))	-0.056163	0.052768	-1.064340	0.2879
D(THAILAND(-6))	-0.042449	0.052793	-0.804065	0.4219
D(THAILAND(-7))	0.119955	0.052752	2.273949	0.0236
D(THAILAND(-8))	0.001971	0.052837	0.037311	0.9703
D(THAILAND(-9))	0.042116	0.052332	0.804779	0.4215
D(THAILAND(-10))	0.207777	0.052384	3.966442	0.0001
C	8.174998	4.655190	1.756104	0.0799
R-squared	0.108945	Mean dependent var	1.657308	
Adjusted R-squared	0.081099	S.D. dependent var	56.78994	
S.E. of regression	54.43845	Akaike info criterion	10.86443	
Sum squared resid	1043168.	Schwarz criterion	10.99291	
Log likelihood	-1965.326	F-statistic	3.912467	
Durbin-Watson stat	1.989402	Prob(F-statistic)	0.000023	

### THAILAND MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Lag Length: 9 (Automatic based on AIC, MAXLAG=16)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.768262	0.0001
Test critical values:		
1% level	-3.448111	
5% level	-2.869263	
10% level	-2.570952	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 137 500

Included observations: 364 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.795717	0.166878	-4.768262	0.0000
D(THAILAND(-1),2)	-0.199952	0.158608	-1.260666	0.2083
D(THAILAND(-2),2)	-0.061876	0.149185	-0.414760	0.6786
D(THAILAND(-3),2)	-0.167599	0.138782	-1.207642	0.2280
D(THAILAND(-4),2)	-0.236487	0.125090	-1.890531	0.0595
D(THAILAND(-5),2)	-0.299955	0.111475	-2.690793	0.0075
D(THAILAND(-6),2)	-0.348515	0.098173	-3.550006	0.0004
D(THAILAND(-7),2)	-0.233441	0.085716	-2.723412	0.0068
D(THAILAND(-8),2)	-0.236603	0.073660	-3.212087	0.0014
D(THAILAND(-9),2)	-0.200926	0.052438	-3.831652	0.0002
C	1.331676	2.877959	0.462715	0.6439
R-squared	0.540272	Mean dependent var	-0.067280	
Adjusted R-squared	0.527249	S.D. dependent var	79.45319	
S.E. of regression	54.62957	Akaike info criterion	10.86878	
Sum squared resid	1053490.	Schwarz criterion	10.98655	
Log likelihood	-1967.118	F-statistic	41.48454	
Durbin-Watson stat	1.986137	Prob(F-statistic)	0.000000	

### THAILAND MONTHLY(LEVEL)

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Bandwidth: 13 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.632461	0.4649
Test critical values:		
1% level	-3.447627	
5% level	-2.869050	
10% level	-2.570838	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3111.123
HAC corrected variance (Bartlett kernel)	3514.376

Phillips-Perron Test Equation

Dependent Variable: D(THAILAND)

Method: Least Squares

Sample(adjusted): 127 500

Included observations: 374 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
THAILAND(-1)	-0.011886	0.007671	-1.549613	0.1221



C	7.155082	4.625275	1.546953	0.1227
R-squared	0.006414	Mean dependent var	1.561444	
Adjusted R-squared	0.003743	S.D. dependent var	56.03214	
S.E. of regression	55.92718	Akaike info criterion	10.89131	
Sum squared resid	1163560.	Schwarz criterion	10.91230	
Log likelihood	-2034.675	F-statistic	2.401300	
Durbin-Watson stat	1.946510	Prob(F-statistic)	0.122085	

### THAILAND MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(THAILAND) has a unit root

Exogenous: Constant

Bandwidth: 15 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-18.87277	0.0000
Test critical values:		
1% level	-3.447675	
5% level	-2.869071	
10% level	-2.570849	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3137.822
HAC corrected variance (Bartlett kernel)	3301.475

Phillips-Perron Test Equation

Dependent Variable: D(THAILAND,2)

Method: Least Squares

Sample(adjusted): 128 500

Included observations: 373 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(THAILAND(-1))	-0.978952	0.051920	-18.85500	0.0000
C	1.559260	2.909460	0.535928	0.5923
R-squared	0.489340	Mean dependent var	-0.042493	
Adjusted R-squared	0.487964	S.D. dependent var	78.49306	
S.E. of regression	56.16705	Akaike info criterion	10.89989	
Sum squared resid	1170407.	Schwarz criterion	10.92091	
Log likelihood	-2030.829	F-statistic	355.5112	
Durbin-Watson stat	2.005078	Prob(F-statistic)	0.000000	

### THAILAND MONTHLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=16)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.834809
Test critical values:	
1% level	-2.571160
5% level	-1.941673
10% level	-1.616131

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 127 500

Included observations: 374 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.004900	0.005869	-0.834809	0.4044
R-squared	0.001088	Mean dependent var		1.561444
Adjusted R-squared	0.001088	S.D. dependent var		56.03214
S.E. of regression	56.00166	Akaike info criterion		10.89131
Sum squared resid	1169797.	Schwarz criterion		10.90180
Log likelihood	-2035.675	Durbin-Watson stat		1.949699

### THAILAND MONTHLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag Length: 10 (Automatic based on AIC, MAXLAG=16)

	t-Statistic
Elliott-Lothberg-Stock DF-GLS test statistic	-1.103894
Test critical values:	
1% level	-2.571330
5% level	-1.941697
10% level	-1.616116

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 137 500

Included observations: 364 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.006481	0.005871	-1.103894	0.2704
D(GLSRESID(-1))	0.009171	0.052196	0.175704	0.8606
D(GLSRESID(-2))	0.143352	0.052242	2.744001	0.0064
D(GLSRESID(-3))	-0.100237	0.052822	-1.897647	0.0586
D(GLSRESID(-4))	-0.063040	0.052798	-1.193989	0.2333
D(GLSRESID(-5))	-0.057909	0.052866	-1.095378	0.2741
D(GLSRESID(-6))	-0.043706	0.052897	-0.826253	0.4092
D(GLSRESID(-7))	0.119155	0.052859	2.254185	0.0248
D(GLSRESID(-8))	0.000855	0.052942	0.016146	0.9871
D(GLSRESID(-9))	0.040578	0.052433	0.773915	0.4395
D(GLSRESID(-10))	0.205865	0.052479	3.922815	0.0001
R-squared	0.102680	Mean dependent var		1.657308
Adjusted R-squared	0.077260	S.D. dependent var		56.78994
S.E. of regression	54.55205	Akaike info criterion		10.86594
Sum squared resid	1050502.	Schwarz criterion		10.98371
Log likelihood	-1966.601	Durbin-Watson stat		1.988190

### THAILAND MONTHLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=16)

Sample(adjusted): 126 500

Included observations: 375 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.82242	-0.83131	0.45616	11.8824
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000

10 -5.70000 -1.62000 0.27500 4.45000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 3127.800

### THAILAND MONTHLY

Null Hypothesis: THAILAND has a unit root

Exogenous: Constant

Lag length: 10 (Spectral GLS-detrended AR based on AIC, MAXLAG=16)

Sample(adjusted): 126 500

Included observations: 375 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.40441	-1.20592	0.35422	7.16519
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 5187.002

### THAILAND MONTHLY

Null Hypothesis: THAILAND is stationary

Exogenous: Constant

Bandwidth: 15 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.964383
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 141885.2  
HAC corrected variance (Bartlett kernel) 2113118.

KPSS Test Equation

Dependent Variable: THAILAND

Method: Least Squares

Sample(adjusted): 126 500

Included observations: 375 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	471.1636	19.47748	24.19018	0.0000
R-squared	0.000000	Mean dependent var		471.1636
Adjusted R-squared	0.000000	S.D. dependent var		377.1797
S.E. of regression	377.1797	Akaike info criterion		14.70598
Sum squared resid	53206933	Schwarz criterion		14.71646
Log likelihood	-2756.372	Durbin-Watson stat		0.022027

### TAIWAN DAILY(LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.710617	0.2326
Test critical values:		
1% level	-3.971934	
5% level	-3.416600	
10% level	-3.130632	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(TWAIWAN)  
 Method: Least Squares  
 Sample(adjusted): 2339 3002  
 Included observations: 664 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.021908	0.008082	-2.710617	0.0069
C	45.93876	37.61440	1.221308	0.2224
@TREND(1)	0.021244	0.013221	1.606892	0.1086
R-squared	0.011202	Mean dependent var		0.734985
Adjusted R-squared	0.008210	S.D. dependent var		57.84913
S.E. of regression	57.61118	Akaike info criterion		10.94982
Sum squared resid	2193891.	Schwarz criterion		10.97014
Log likelihood	-3632.340	F-statistic		3.744035
Durbin-Watson stat	1.958971	Prob(F-statistic)		0.024162

### TAIWAN DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-25.45318	0.0000
Test critical values:		
1% level	-3.971955	
5% level	-3.416610	
10% level	-3.130638	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(TWAIWAN,2)  
 Method: Least Squares  
 Sample(adjusted): 2340 3002  
 Included observations: 663 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-0.992150	0.038979	-25.45318	0.0000
C	-9.474116	31.48137	-0.300944	0.7636
@TREND(1)	0.003844	0.011761	0.326815	0.7439
R-squared	0.495362	Mean dependent var		0.192127
Adjusted R-squared	0.493833	S.D. dependent var		81.45934
S.E. of regression	57.95460	Akaike info criterion		10.96171
Sum squared resid	2216765.	Schwarz criterion		10.98206
Log likelihood	-3630.807	F-statistic		323.9340
Durbin-Watson stat	1.993377	Prob(F-statistic)		0.000000

### TAIWAN DAILY(LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 4 (Automatic based on AIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.440673	0.3580
Test critical values: 1% level	-3.972019	
5% level	-3.416641	
10% level	-3.130656	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN)

Method: Least Squares

Sample(adjusted): 2343 3002

Included observations: 660 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.020087	0.008230	-2.440673	0.0149
D(TWAIWAN(-1))	0.024362	0.039118	0.622796	0.5336
D(TWAIWAN(-2))	-0.071620	0.039121	-1.830739	0.0676
D(TWAIWAN(-3))	0.056498	0.038952	1.450427	0.1474
D(TWAIWAN(-4))	-0.069587	0.039007	-1.783950	0.0749
C	46.55631	37.96907	1.226164	0.2206
@TREND(1)	0.017934	0.013339	1.344474	0.1793
R-squared	0.023188	Mean dependent var		0.968091
Adjusted R-squared	0.014213	S.D. dependent var		57.82710
S.E. of regression	57.41468	Akaike info criterion		10.94903
Sum squared resid	2152579.	Schwarz criterion		10.99667
Log likelihood	-3606.179	F-statistic		2.583564
Durbin-Watson stat	1.988142	Prob(F-statistic)		0.017586

### TAIWAN DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on AIC, MAXLAG=19)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.84907	0.0000
Test critical values: 1% level	-3.972019	
5% level	-3.416641	
10% level	-3.130656	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN,2)

Method: Least Squares

Sample(adjusted): 2343 3002

Included observations: 660 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.100332	0.079452	-13.84907	0.0000
D(TWAIWAN(-1),2)	0.114444	0.068764	1.664304	0.0965

D(TWAIWAN(-2),2)	0.032054	0.054751	0.585452	0.5584
D(TWAIWAN(-3),2)	0.079326	0.038950	2.036625	0.0421
C	-5.477728	31.53742	-0.173690	0.8622
@TREND(1)	0.002437	0.011775	0.206957	0.8361
R-squared	0.502940	Mean dependent var		0.153545
Adjusted R-squared	0.499140	S.D. dependent var		81.43374
S.E. of regression	57.63185	Akaike info criterion		10.95508
Sum squared resid	2172215.	Schwarz criterion		10.99592
Log likelihood	-3609.175	F-statistic		132.3473
Durbin-Watson stat	1.989114	Prob(F-statistic)		0.000000

### TAIWAN DAILY(LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.699744	0.2370
Test critical values: 1% level	-3.971934	
5% level	-3.416600	
10% level	-3.130632	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3304.052
HAC corrected variance (Bartlett kernel)	3276.932

Phillips-Perron Test Equation

Dependent Variable: D(TWAIWAN)

Method: Least Squares

Sample(adjusted): 2339 3002

Included observations: 664 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.021908	0.008082	-2.710617	0.0069
C	45.93876	37.61440	1.221308	0.2224
@TREND(1)	0.021244	0.013221	1.606892	0.1086
R-squared	0.011202	Mean dependent var		0.734985
Adjusted R-squared	0.008210	S.D. dependent var		57.84913
S.E. of regression	57.61118	Akaike info criterion		10.94982
Sum squared resid	2193891.	Schwarz criterion		10.97014
Log likelihood	-3632.340	F-statistic		3.744035
Durbin-Watson stat	1.958971	Prob(F-statistic)		0.024162

### TAIWAN DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-25.45379	0.0000
Test critical values: 1% level	-3.971955	
5% level	-3.416610	
10% level	-3.130638	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3343.538
HAC corrected variance (Bartlett kernel)	3162.839

Phillips-Perron Test Equation  
 Dependent Variable: D(TWAIWAN,2)  
 Method: Least Squares  
 Sample(adjusted): 2340 3002  
 Included observations: 663 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-0.992150	0.038979	-25.45318	0.0000
C	-9.474116	31.48137	-0.300944	0.7636
@TREND(1)	0.003844	0.011761	0.326815	0.7439
R-squared	0.495362	Mean dependent var		0.192127
Adjusted R-squared	0.493833	S.D. dependent var		81.45934
S.E. of regression	57.95460	Akaike info criterion		10.96171
Sum squared resid	2216765.	Schwarz criterion		10.98206
Log likelihood	-3630.807	F-statistic		323.9340
Durbin-Watson stat	1.993377	Prob(F-statistic)		0.000000

### TAIWAN DAILY

Null Hypothesis: TWAIWAN has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=19)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-2.548685
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2339 3002  
 Included observations: 664 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.019706	0.007732	-2.548685	0.0110
R-squared	0.009683	Mean dependent var		0.257951
Adjusted R-squared	0.009683	S.D. dependent var		57.84913
S.E. of regression	57.56838	Akaike info criterion		10.94533
Sum squared resid	2197260.	Schwarz criterion		10.95210
Log likelihood	-3632.849	Durbin-Watson stat		1.960272

### TAIWAN DAILY

Null Hypothesis: TWAIWAN has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 4 (Automatic based on AIC, MAXLAG=19)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-2.343554
Test critical values: 1% level	-3.480000
5% level	-2.890000

10% level

-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 2343 3002

Included observations: 660 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.018411	0.007856	-2.343554	0.0194
D(GLSRESID(-1))	0.023556	0.039053	0.603178	0.5466
D(GLSRESID(-2))	-0.072517	0.039053	-1.856878	0.0638
D(GLSRESID(-3))	0.055921	0.038896	1.437701	0.1510
D(GLSRESID(-4))	-0.070180	0.038951	-1.801734	0.0720
R-squared	0.022334	Mean dependent var		0.491057
Adjusted R-squared	0.016363	S.D. dependent var		57.82710
S.E. of regression	57.35203	Akaike info criterion		10.94384
Sum squared resid	2154462.	Schwarz criterion		10.97787
Log likelihood	-3606.467	Durbin-Watson stat		1.988093

**TAIWAN DAILY**

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=19)

Sample(adjusted): 2338 3002

Included observations: 665 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-12.9551	-2.52526	0.19492	7.14951
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 3309.127

**TAIWAN DAILY**

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag length: 4 (Spectral GLS-detrended AR based on AIC, MAXLAG=19)

Sample(adjusted): 2338 3002

Included observations: 665 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-11.2791	-2.35355	0.20866	8.19296
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 2887.677



## TAIWAN DAILY

Null Hypothesis: TWAIWAN is stationary  
Exogenous: Constant, Linear Trend  
Bandwidth: 21 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.401023
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	76435.26
HAC corrected variance (Bartlett kernel)	1439763.

### KPSS Test Equation

Dependent Variable: TWAIWAN  
Method: Least Squares  
Sample(adjusted): 2338 3002  
Included observations: 665 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2591.868	149.6679	17.31747	0.0000
@TREND(1)	0.772039	0.055932	13.80320	0.0000
R-squared	0.223224	Mean dependent var		4652.441
Adjusted R-squared	0.222053	S.D. dependent var		313.9250
S.E. of regression	276.8860	Akaike info criterion		14.08809
Sum squared resid	50829447	Schwarz criterion		14.10162
Log likelihood	-4682.290	F-statistic		190.5284
Durbin-Watson stat	0.043651	Prob(F-statistic)		0.000000

## TAIWAN WEEKLY(LEVEL)

Null Hypothesis: TWAIWAN has a unit root  
Exogenous: Constant  
Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.198792	0.2078
Test critical values:		
1% level	-3.480425	
5% level	-2.883408	
10% level	-2.578510	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN)  
Method: Least Squares  
Sample(adjusted): 2036 2167  
Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.075290	0.034242	-2.198792	0.0297
C	355.5583	159.8683	2.224070	0.0279
R-squared	0.035856	Mean dependent var		4.840455
Adjusted R-squared	0.028440	S.D. dependent var		125.5897
S.E. of regression	123.7909	Akaike info criterion		12.49010

Sum squared resid	1992146.	Schwarz criterion	12.53378
Log likelihood	-822.3467	F-statistic	4.834685
Durbin-Watson stat	2.142772	Prob(F-statistic)	0.029662

### TAIWAN WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.77936	0.0000
Test critical values: 1% level	-3.480818	
5% level	-2.883579	
10% level	-2.578601	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN,2)

Method: Least Squares

Sample(adjusted): 2037 2167

Included observations: 131 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.123125	0.087886	-12.77936	0.0000
C	4.766233	10.96676	0.434607	0.6646
R-squared	0.558691	Mean dependent var	0.761221	
Adjusted R-squared	0.555270	S.D. dependent var	188.1431	
S.E. of regression	125.4690	Akaike info criterion	12.51714	
Sum squared resid	2030780.	Schwarz criterion	12.56104	
Log likelihood	-817.8730	F-statistic	163.3120	
Durbin-Watson stat	1.963089	Prob(F-statistic)	0.000000	

### TAIWAN WEEKLY(LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.675902	0.4410
Test critical values: 1% level	-3.482453	
5% level	-2.884291	
10% level	-2.578981	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN)

Method: Least Squares

Sample(adjusted): 2041 2167

Included observations: 127 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.061636	0.036778	-1.675902	0.0964
D(TWAIWAN(-1))	-0.077403	0.092779	-0.834267	0.4058
D(TWAIWAN(-2))	0.135094	0.092086	1.467045	0.1450
D(TWAIWAN(-3))	-0.214423	0.089072	-2.407303	0.0176
D(TWAIWAN(-4))	-0.081433	0.093096	-0.874715	0.3835
D(TWAIWAN(-5))	0.182387	0.092819	1.964971	0.0517

C	288.9197	171.4246	1.685404	0.0945
R-squared	0.132535	Mean dependent var	2.054567	
Adjusted R-squared	0.089162	S.D. dependent var	126.6483	
S.E. of regression	120.8704	Akaike info criterion	12.48086	
Sum squared resid	1753160.	Schwarz criterion	12.63762	
Log likelihood	-785.5344	F-statistic	3.055682	
Durbin-Watson stat	2.014604	Prob(F-statistic)	0.008108	

### TAIWAN WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.090545	0.0000
Test critical values:		
1% level	-3.481623	
5% level	-2.883930	
10% level	-2.578788	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN,2)

Method: Least Squares

Sample(adjusted): 2039 2167

Included observations: 129 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.269632	0.156928	-8.090545	0.0000
D(TWAIWAN(-1),2)	0.159581	0.128973	1.237324	0.2183
D(TWAIWAN(-2),2)	0.224663	0.086935	2.584258	0.0109
C	2.868527	10.77076	0.266325	0.7904
R-squared	0.593651	Mean dependent var	0.305116	
Adjusted R-squared	0.583898	S.D. dependent var	189.4456	
S.E. of regression	122.2036	Akaike info criterion	12.47977	
Sum squared resid	1866716.	Schwarz criterion	12.56845	
Log likelihood	-800.9453	F-statistic	60.87241	
Durbin-Watson stat	2.055065	Prob(F-statistic)	0.000000	

### TAIWAN WEEKLY(LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant

Bandwidth: 7 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.166453	0.2196
Test critical values:		
1% level	-3.480425	
5% level	-2.883408	
10% level	-2.578510	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	15092.01
HAC corrected variance (Bartlett kernel)	14668.29

Phillips-Perron Test Equation  
 Dependent Variable: D(TWAIWAN)  
 Method: Least Squares  
 Sample(adjusted): 2036 2167  
 Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.075290	0.034242	-2.198792	0.0297
C	355.5583	159.8683	2.224070	0.0279
R-squared	0.035856	Mean dependent var		4.840455
Adjusted R-squared	0.028440	S.D. dependent var		125.5897
S.E. of regression	123.7909	Akaike info criterion		12.49010
Sum squared resid	1992146.	Schwarz criterion		12.53378
Log likelihood	-822.3467	F-statistic		4.834685
Durbin-Watson stat	2.142772	Prob(F-statistic)		0.029662

### TAIWAN WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root  
 Exogenous: Constant  
 Bandwidth: 13 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-13.10728	0.0000
Test critical values:		
1% level	-3.480818	
5% level	-2.883579	
10% level	-2.578601	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	15502.14
HAC corrected variance (Bartlett kernel)	11626.76

Phillips-Perron Test Equation  
 Dependent Variable: D(TWAIWAN,2)  
 Method: Least Squares  
 Sample(adjusted): 2037 2167  
 Included observations: 131 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.123125	0.087886	-12.77936	0.0000
C	4.766233	10.96676	0.434607	0.6646
R-squared	0.558691	Mean dependent var		0.761221
Adjusted R-squared	0.555270	S.D. dependent var		188.1431
S.E. of regression	125.4690	Akaike info criterion		12.51714
Sum squared resid	2030780.	Schwarz criterion		12.56104
Log likelihood	-817.8730	F-statistic		163.3120
Durbin-Watson stat	1.963089	Prob(F-statistic)		0.000000

### TAIWAN WEEKLY

Null Hypothesis: TWAIWAN has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-2.638557
Test critical values:	
1% level	-3.541600
5% level	-2.998000

10% level

-2.708000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 2036 2167

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.101547	0.038486	-2.638557	0.0093
R-squared	0.050427	Mean dependent var		0.774452
Adjusted R-squared	0.050427	S.D. dependent var		125.5897
S.E. of regression	122.3822	Akaike info criterion		12.45972
Sum squared resid	1962040.	Schwarz criterion		12.48156
Log likelihood	-821.3416	Durbin-Watson stat		2.119171

**TAIWAN WEEKLY**

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-2.398230
Test critical values:	
1% level	-3.547600
5% level	-3.003000
10% level	-2.713000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 2041 2167

Included observations: 127 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.100534	0.041920	-2.398230	0.0180
D(GLSRESID(-1))	-0.057292	0.091589	-0.625533	0.5328
D(GLSRESID(-2))	0.151382	0.090716	1.668757	0.0978
D(GLSRESID(-3))	-0.197064	0.088064	-2.237725	0.0271
D(GLSRESID(-4))	-0.068838	0.091629	-0.751260	0.4540
D(GLSRESID(-5))	0.193127	0.091388	2.113262	0.0366
R-squared	0.152051	Mean dependent var		-2.011436
Adjusted R-squared	0.117012	S.D. dependent var		126.6483
S.E. of regression	119.0082	Akaike info criterion		12.44235
Sum squared resid	1713717.	Schwarz criterion		12.57672
Log likelihood	-784.0894	Durbin-Watson stat		2.024322

**TAIWAN WEEKLY**

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)

Sample(adjusted): 2035 2167

Included observations: 133 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-12.7228	-2.51398	0.19760	7.20925
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	14863.94
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### TAIWAN WEEKLY

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag length: 5 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)

Sample(adjusted): 2035 2167

Included observations: 133 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-12.0544	-2.44661	0.20296	7.60631
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	14088.03
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### TAIWAN WEEKLY

Null Hypothesis: TWAIWAN is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.213284
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	75908.91
HAC corrected variance (Bartlett kernel)	557206.9

KPSS Test Equation

Dependent Variable: TWAIWAN

Method: Least Squares

Sample(adjusted): 2035 2167

Included observations: 133 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3732.021	1316.903	-2.833937	0.0053
@TREND(1)	3.996769	0.626992	6.374514	0.0000
R-squared	0.236750	Mean dependent var	4661.194	
Adjusted R-squared	0.230924	S.D. dependent var	316.5569	
S.E. of regression	277.6109	Akaike info criterion	14.10524	

Sum squared resid	10095884	Schwarz criterion	14.14871
Log likelihood	-935.9986	F-statistic	40.63442
Durbin-Watson stat	0.204670	Prob(F-statistic)	0.000000

### TAIWAN MONTHLY (LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.794851	0.3757
Test critical values:		
1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN)

Method: Least Squares

Sample(adjusted): 471 500

Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.229125	0.127657	-1.794851	0.0835
C	1082.951	594.7020	1.820998	0.0793
R-squared	0.103182	Mean dependent var		17.85467
Adjusted R-squared	0.071153	S.D. dependent var		222.0130
S.E. of regression	213.9688	Akaike info criterion		13.63388
Sum squared resid	1281915.	Schwarz criterion		13.72729
Log likelihood	-202.5082	F-statistic		3.221491
Durbin-Watson stat	1.925962	Prob(F-statistic)		0.083481

### TAIWAN MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.854551	0.0000
Test critical values:		
1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN,2)

Method: Least Squares

Sample(adjusted): 472 500

Included observations: 29 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.106898	0.189066	-5.854551	0.0000
C	13.23845	42.05098	0.314819	0.7553
R-squared	0.559369	Mean dependent var		-9.736552

Adjusted R-squared	0.543049	S.D. dependent var	333.5347
S.E. of regression	225.4632	Akaike info criterion	13.74066
Sum squared resid	1372509.	Schwarz criterion	13.83496
Log likelihood	-197.2396	F-statistic	34.27577
Durbin-Watson stat	2.043199	Prob(F-statistic)	0.000003

### TAIWAN MONTHLY (LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on AIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.794851	0.3757
Test critical values:		
1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN)

Method: Least Squares

Sample(adjusted): 471 500

Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.229125	0.127657	-1.794851	0.0835
C	1082.951	594.7020	1.820998	0.0793
R-squared	0.103182	Mean dependent var		17.85467
Adjusted R-squared	0.071153	S.D. dependent var		222.0130
S.E. of regression	213.9688	Akaike info criterion		13.63388
Sum squared resid	1281915.	Schwarz criterion		13.72729
Log likelihood	-202.5082	F-statistic		3.221491
Durbin-Watson stat	1.925962	Prob(F-statistic)		0.083481

### TAIWAN MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on AIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.854551	0.0000
Test critical values:		
1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TWAIWAN,2)

Method: Least Squares

Sample(adjusted): 472 500

Included observations: 29 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.106898	0.189066	-5.854551	0.0000



C	13.23845	42.05098	0.314819	0.7553
R-squared	0.559369	Mean dependent var	-9.736552	
Adjusted R-squared	0.543049	S.D. dependent var	333.5347	
S.E. of regression	225.4632	Akaike info criterion	13.74066	
Sum squared resid	1372509.	Schwarz criterion	13.83496	
Log likelihood	-197.2396	F-statistic	34.27577	
Durbin-Watson stat	2.043199	Prob(F-statistic)	0.000003	

### TAIWAN MONTHLY (LEVEL)

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.792178	0.3770
Test critical values:		
1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	42730.48
HAC corrected variance (Bartlett kernel)	42610.66

Phillips-Perron Test Equation

Dependent Variable: D(TWAIWAN)

Method: Least Squares

Sample(adjusted): 471 500

Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TWAIWAN(-1)	-0.229125	0.127657	-1.794851	0.0835
C	1082.951	594.7020	1.820998	0.0793
R-squared	0.103182	Mean dependent var	17.85467	
Adjusted R-squared	0.071153	S.D. dependent var	222.0130	
S.E. of regression	213.9688	Akaike info criterion	13.63388	
Sum squared resid	1281915.	Schwarz criterion	13.72729	
Log likelihood	-202.5082	F-statistic	3.221491	
Durbin-Watson stat	1.925962	Prob(F-statistic)	0.083481	

### TAIWAN MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TWAIWAN) has a unit root

Exogenous: Constant

Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-5.884367	0.0000
Test critical values:		
1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	47327.88
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HAC corrected variance (Bartlett kernel) 43413.01

Phillips-Perron Test Equation

Dependent Variable: D(TWAIWAN,2)

Method: Least Squares

Sample(adjusted): 472 500

Included observations: 29 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TWAIWAN(-1))	-1.106898	0.189066	-5.854551	0.0000
C	13.23845	42.05098	0.314819	0.7553
R-squared	0.559369	Mean dependent var	-9.736552	
Adjusted R-squared	0.543049	S.D. dependent var	333.5347	
S.E. of regression	225.4632	Akaike info criterion	13.74066	
Sum squared resid	1372509.	Schwarz criterion	13.83496	
Log likelihood	-197.2396	F-statistic	34.27577	
Durbin-Watson stat	2.043199	Prob(F-statistic)	0.000003	

**TAIWAN MONTHLY**

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-2.382569
Test critical values:	
1% level	-3.770000
5% level	-3.190000
10% level	-2.890000

\*Elliott-Rootenber-Stock (1996, Table 1)

Warning: Test critical values calculated for 50 observations  
and may not be accurate for a sample size of 30

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 471 500

Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.328584	0.137911	-2.382569	0.0240
R-squared	0.163692	Mean dependent var	0.755027	
Adjusted R-squared	0.163692	S.D. dependent var	222.0130	
S.E. of regression	203.0306	Akaike info criterion	13.49736	
Sum squared resid	1195421.	Schwarz criterion	13.54406	
Log likelihood	-201.4603	Durbin-Watson stat	1.870536	

**TAIWAN MONTHLY**

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=8)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-2.382569

Test critical values:	1% level	-3.770000
	5% level	-3.190000
	10% level	-2.890000

\*Elliott-Rothenberg-Stock (1996, Table 1)

Warning: Test critical values calculated for 50 observations  
and may not be accurate for a sample size of 30

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 471 500

Included observations: 30 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.328584	0.137911	-2.382569	0.0240
R-squared	0.163692	Mean dependent var		0.755027
Adjusted R-squared	0.163692	S.D. dependent var		222.0130
S.E. of regression	203.0306	Akaike info criterion		13.49736
Sum squared resid	1195421.	Schwarz criterion		13.54406
Log likelihood	-201.4603	Durbin-Watson stat		1.870536

### TAIWAN MONTHLY

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=8)

Sample(adjusted): 470 500

Included observations: 31 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.16607	-2.00749	0.24583	11.1963
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 39847.37

### TAIWAN MONTHLY

Null Hypothesis: TWAIWAN has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=8)

Sample(adjusted): 470 500

Included observations: 31 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.16607	-2.00749	0.24583	11.1963
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 39847.37

## TAIWAN MONTHLY

Null Hypothesis: TWAIWAN is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 3 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.160880
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	70133.92
HAC corrected variance (Bartlett kernel)	173342.3

KPSS Test Equation  
 Dependent Variable: TWAIWAN  
 Method: Least Squares  
 Sample(adjusted): 470 500  
 Included observations: 31 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4016.857	2661.580	-1.509200	0.1421
@TREND(1)	17.93100	5.498194	3.261253	0.0028
R-squared	0.268338	Mean dependent var		4661.749
Adjusted R-squared	0.243108	S.D. dependent var		314.7233
S.E. of regression	273.8079	Akaike info criterion		14.12507
Sum squared resid	2174151.	Schwarz criterion		14.21759
Log likelihood	-216.9386	F-statistic		10.63577
Durbin-Watson stat	0.657453	Prob(F-statistic)		0.002836

## GREECE DAILY(LEVEL)

Null Hypothesis: GREECE has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.553461	0.5063
Test critical values:		
1% level	-3.433020	
5% level	-2.862605	
10% level	-2.567383	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(GREECE)  
 Method: Least Squares  
 Sample(adjusted): 716 3002  
 Included observations: 2282  
 Excluded observations: 5 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.001739	0.001120	-1.553461	0.1205
D(GREECE(-1))	0.143723	0.020753	6.925392	0.0000

C	3.244663	1.961603	1.654088	0.0982
R-squared	0.021422	Mean dependent var	0.439479	
Adjusted R-squared	0.020563	S.D. dependent var	32.48107	
S.E. of regression	32.14538	Akaike info criterion	9.779728	
Sum squared resid	2354949.	Schwarz criterion	9.787265	
Log likelihood	-11155.67	F-statistic	24.94461	
Durbin-Watson stat	1.988943	Prob(F-statistic)	0.000000	

### GREECE DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-41.29647	0.0000
Test critical values: 1% level	-3.433020	
5% level	-2.862605	
10% level	-2.567383	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE,2)

Method: Least Squares

Sample(adjusted): 716 3002

Included observations: 2282

Excluded observations: 5 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-0.857047	0.020754	-41.29647	0.0000
C	0.382330	0.673176	0.567950	0.5701
R-squared	0.427912	Mean dependent var	0.039706	
Adjusted R-squared	0.427661	S.D. dependent var	42.50366	
S.E. of regression	32.15534	Akaike info criterion	9.779910	
Sum squared resid	2357443.	Schwarz criterion	9.784935	
Log likelihood	-11156.88	F-statistic	1705.398	
Durbin-Watson stat	1.988825	Prob(F-statistic)	0.000000	

### GREECE DAILY(LEVEL)

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 7 (Automatic based on AIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.209325	0.6726
Test critical values: 1% level	-3.433035	
5% level	-2.862612	
10% level	-2.567386	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE)

Method: Least Squares

Sample(adjusted): 722 3002

Included observations: 2270

Excluded observations: 11 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.001360	0.001124	-1.209325	0.2267
D(GREECE(-1))	0.146007	0.020989	6.956198	0.0000
D(GREECE(-2))	-0.038826	0.021210	-1.830548	0.0673
D(GREECE(-3))	0.014046	0.021240	0.661269	0.5085
D(GREECE(-4))	-0.040752	0.021224	-1.920086	0.0550
D(GREECE(-5))	0.011667	0.021239	0.549309	0.5828
D(GREECE(-6))	-0.022672	0.021225	-1.068174	0.2856
D(GREECE(-7))	-0.068596	0.021020	-3.263413	0.0011
C	2.753026	1.967237	1.399438	0.1618
R-squared	0.029348	Mean dependent var		0.517868
Adjusted R-squared	0.025914	S.D. dependent var		32.51297
S.E. of regression	32.08894	Akaike info criterion		9.778857
Sum squared resid	2328152.	Schwarz criterion		9.801565
Log likelihood	-11090.00	F-statistic		8.545243
Durbin-Watson stat	1.993459	Prob(F-statistic)		0.000000

### GREECE DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root

Exogenous: Constant

Lag Length: 6 (Automatic based on AIC, MAXLAG=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-19.87559	0.0000
Test critical values:		
1% level	-3.433035	
5% level	-2.862612	
10% level	-2.567386	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE,2)

Method: Least Squares

Sample(adjusted): 722 3002

Included observations: 2270

Excluded observations: 11 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-1.003748	0.050502	-19.87559	0.0000
D(GREECE(-1),2)	0.149127	0.046540	3.204302	0.0014
D(GREECE(-2),2)	0.109620	0.042566	2.575263	0.0101
D(GREECE(-3),2)	0.122981	0.037995	3.236778	0.0012
D(GREECE(-4),2)	0.081575	0.033317	2.448425	0.0144
D(GREECE(-5),2)	0.092595	0.027575	3.357900	0.0008
D(GREECE(-6),2)	0.069309	0.021014	3.298265	0.0010
C	0.517922	0.673930	0.768511	0.4423
R-squared	0.434143	Mean dependent var		0.075141
Adjusted R-squared	0.432392	S.D. dependent var		42.59665
S.E. of regression	32.09222	Akaike info criterion		9.778623
Sum squared resid	2329658.	Schwarz criterion		9.798808
Log likelihood	-11090.74	F-statistic		247.9250
Durbin-Watson stat	1.993622	Prob(F-statistic)		0.000000

### GREECE DAILY(LEVEL)

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Bandwidth: 21 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.404604	0.5815
Test critical values:		
1% level	-3.433017	
5% level	-2.862604	
10% level	-2.567382	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1052.839
HAC corrected variance (Bartlett kernel)	1086.325

Phillips-Perron Test Equation

Dependent Variable: D(GREECE)

Method: Least Squares

Sample(adjusted): 715 3002

Included observations: 2284

Excluded observations: 4 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.001565	0.001130	-1.385752	0.1660
C	3.021057	1.979483	1.526185	0.1271
R-squared	0.000841	Mean dependent var		0.444532
Adjusted R-squared	0.000403	S.D. dependent var		32.46824
S.E. of regression	32.46170	Akaike info criterion		9.798874
Sum squared resid	2404685.	Schwarz criterion		9.803895
Log likelihood	-11188.31	F-statistic		1.920310
Durbin-Watson stat	1.711715	Prob(F-statistic)		0.165958

### GREECE DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root

Exogenous: Constant

Bandwidth: 25 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-40.85872	0.0000
Test critical values:		
1% level	-3.433020	
5% level	-2.862605	
10% level	-2.567383	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1033.060
HAC corrected variance (Bartlett kernel)	797.6841

Phillips-Perron Test Equation

Dependent Variable: D(EUROPE,2)

Method: Least Squares

Sample(adjusted): 716 3002

Included observations: 2282

Excluded observations: 5 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-0.857047	0.020754	-41.29647	0.0000
C	0.382330	0.673176	0.567950	0.5701
R-squared	0.427912	Mean dependent var		0.039706
Adjusted R-squared	0.427661	S.D. dependent var		42.50366

S.E. of regression	32.15534	Akaike info criterion	9.779910
Sum squared resid	2357443.	Schwarz criterion	9.784935
Log likelihood	-11156.88	F-statistic	1705.398
Durbin-Watson stat	1.988825	Prob(F-statistic)	0.000000

### GREECE DAILY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=26)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.706495
Test critical values: 1% level	-2.565976
5% level	-1.940963
10% level	-1.616606

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 716 3002

Included observations: 2281

Excluded observations: 6 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000563	0.000798	-0.706495	0.4800
D(GLSRESID(-1))	0.143476	0.020763	6.910314	0.0000
R-squared	0.020462	Mean dependent var	0.439671	
Adjusted R-squared	0.020032	S.D. dependent var	32.48819	
S.E. of regression	32.16115	Akaike info criterion	9.780272	
Sum squared resid	2357260.	Schwarz criterion	9.785298	
Log likelihood	-11152.40	Durbin-Watson stat	1.988165	

### GREECE DAILY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 7 (Automatic based on AIC, MAXLAG=26)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.382665
Test critical values: 1% level	-2.565982
5% level	-1.940963
10% level	-1.616606

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 722 3002

Included observations: 2269

Excluded observations: 12 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000306	0.000800	-0.382665	0.7020
D(GLSRESID(-1))	0.147043	0.020993	7.004355	0.0000
D(GLSRESID(-2))	-0.038589	0.021204	-1.819908	0.0689
D(GLSRESID(-3))	0.014633	0.021238	0.689001	0.4909



D(GLSRESID(-4))	-0.040880	0.021216	-1.926821	0.0541
D(GLSRESID(-5))	0.012463	0.021239	0.586784	0.5574
D(GLSRESID(-6))	-0.023079	0.021217	-1.087765	0.2768
D(GLSRESID(-7))	-0.068702	0.021012	-3.269674	0.0011
R-squared	0.028874	Mean dependent var	0.494773	
Adjusted R-squared	0.025868	S.D. dependent var	32.50151	
S.E. of regression	32.07838	Akaike info criterion	9.777761	
Sum squared resid	2326620.	Schwarz criterion	9.797954	
Log likelihood	-11084.87	Durbin-Watson stat	1.993959	

### GREECE DAILY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=26)

Sample(adjusted): 714 3002

Included observations: 2285

Excluded observations: 4 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.59889	-0.75333	0.47116	12.9075
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1408.649
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### GREECE DAILY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag length: 7 (Spectral GLS-detrended AR based on AIC, MAXLAG=26)

Sample(adjusted): 714 3002

Included observations: 2285

Excluded observations: 4 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.99561	-0.54822	0.55064	17.6296
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1031.344
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### GREECE DAILY

Null Hypothesis: GREECE is stationary

Exogenous: Constant

Bandwidth: 39 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.977101
Asymptotic critical values*:	
1% level	0.739000

5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	361579.3
HAC corrected variance (Bartlett kernel)	14085999

KPSS Test Equation

Dependent Variable: GREECE

Method: Least Squares

Sample(adjusted): 714 3002

Included observations: 2286

Excluded observations: 3 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1646.399	12.57936	130.8810	0.0000
R-squared	0.000000	Mean dependent var	1646.399	
Adjusted R-squared	0.000000	S.D. dependent var	601.4462	
S.E. of regression	601.4462	Akaike info criterion	15.63699	
Sum squared resid	8.27E+08	Schwarz criterion	15.63950	
Log likelihood	-17872.08	Durbin-Watson stat	0.002914	

### GREECE WEEKLY (LEVEL)

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.492793	0.5366
Test critical values:		
1% level	-3.444436	
5% level	-2.867645	
10% level	-2.570085	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE)

Method: Least Squares

Sample(adjusted): 1711 2167

Included observations: 457 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.009048	0.006061	-1.492793	0.1362
C	17.02381	10.64313	1.599512	0.1104
R-squared	0.004874	Mean dependent var	2.100985	
Adjusted R-squared	0.002687	S.D. dependent var	78.19794	
S.E. of regression	78.09283	Akaike info criterion	11.55804	
Sum squared resid	2774813.	Schwarz criterion	11.57609	
Log likelihood	-2639.012	F-statistic	2.228432	
Durbin-Watson stat	2.073662	Prob(F-statistic)	0.136184	

### GREECE WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root

Exogenous: Constant  
Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-22.20765	0.0000
Test critical values:		
1% level	-3.444467	
5% level	-2.867658	
10% level	-2.570092	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(GREECE,2)  
Method: Least Squares  
Sample(adjusted): 1712 2167  
Included observations: 456 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-1.042003	0.046921	-22.20765	0.0000
C	2.137962	3.667650	0.582924	0.5602
R-squared	0.520682	Mean dependent var		0.092917
Adjusted R-squared	0.519626	S.D. dependent var		112.9650
S.E. of regression	78.29487	Akaike info criterion		11.56322
Sum squared resid	2783060.	Schwarz criterion		11.58130
Log likelihood	-2634.414	F-statistic		493.1795
Durbin-Watson stat	2.007115	Prob(F-statistic)		0.000000

### GREECE WEEKLY (LEVEL)

Null Hypothesis: GREECE has a unit root  
Exogenous: Constant  
Lag Length: 2 (Automatic based on AIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.316323	0.6233
Test critical values:		
1% level	-3.444499	
5% level	-2.867672	
10% level	-2.570100	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(GREECE)  
Method: Least Squares  
Sample(adjusted): 1713 2167  
Included observations: 455 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.008011	0.006086	-1.316323	0.1887
D(GREECE(-1))	-0.042426	0.046874	-0.905107	0.3659
D(GREECE(-2))	-0.098835	0.046857	-2.109298	0.0355
C	15.57760	10.68829	1.457445	0.1457
R-squared	0.015974	Mean dependent var		2.065824
Adjusted R-squared	0.009429	S.D. dependent var		78.36363
S.E. of regression	77.99332	Akaike info criterion		11.55988
Sum squared resid	2743414.	Schwarz criterion		11.59610
Log likelihood	-2625.872	F-statistic		2.440474
Durbin-Watson stat	1.989015	Prob(F-statistic)		0.063753

### GREECE WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on AIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-16.99491	0.0000
Test critical values:		
1% level	-3.444499	
5% level	-2.867672	
10% level	-2.570100	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE,2)

Method: Least Squares

Sample(adjusted): 1713 2167

Included observations: 455 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-1.148547	0.067582	-16.99491	0.0000
D(GREECE(-1),2)	0.102307	0.046820	2.185092	0.0294
C	2.358338	3.661730	0.644050	0.5199
R-squared	0.525641	Mean dependent var		0.149077
Adjusted R-squared	0.523543	S.D. dependent var		113.0829
S.E. of regression	78.05651	Akaike info criterion		11.55931
Sum squared resid	2753954.	Schwarz criterion		11.58648
Log likelihood	-2626.744	F-statistic		250.4329
Durbin-Watson stat	1.989447	Prob(F-statistic)		0.000000

### GREECE WEEKLY (LEVEL)

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.442931	0.5617
Test critical values:		
1% level	-3.444436	
5% level	-2.867645	
10% level	-2.570085	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	6071.800
HAC corrected variance (Bartlett kernel)	5603.146

Phillips-Perron Test Equation

Dependent Variable: D(GREECE)

Method: Least Squares

Sample(adjusted): 1711 2167

Included observations: 457 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.009048	0.006061	-1.492793	0.1362
C	17.02381	10.64313	1.599512	0.1104
R-squared	0.004874	Mean dependent var		2.100985
Adjusted R-squared	0.002687	S.D. dependent var		78.19794
S.E. of regression	78.09283	Akaike info criterion		11.55804

Sum squared resid	2774813.	Schwarz criterion	11.57609
Log likelihood	-2639.012	F-statistic	2.228432
Durbin-Watson stat	2.073662	Prob(F-statistic)	0.136184

### GREECE WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root  
 Exogenous: Constant  
 Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-22.24580	0.0000
Test critical values:		
1% level	-3.444467	
5% level	-2.867658	
10% level	-2.570092	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	6103.201
HAC corrected variance (Bartlett kernel)	5729.965

Phillips-Perron Test Equation  
 Dependent Variable: D(GREECE,2)  
 Method: Least Squares  
 Sample(adjusted): 1712 2167  
 Included observations: 456 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-1.042003	0.046921	-22.20765	0.0000
C	2.137962	3.667650	0.582924	0.5602
R-squared	0.520682	Mean dependent var		0.092917
Adjusted R-squared	0.519626	S.D. dependent var		112.9650
S.E. of regression	78.29487	Akaike info criterion		11.56322
Sum squared resid	2783060.	Schwarz criterion		11.58130
Log likelihood	-2634.414	F-statistic		493.1795
Durbin-Watson stat	2.007115	Prob(F-statistic)		0.000000

### GREECE WEEKLY

Null Hypothesis: GREECE has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic
Elliott-Lothman-Stock DF-GLS test statistic	-0.752410
Test critical values:	
1% level	-2.570032
5% level	-1.941518
10% level	-1.616234

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1711 2167

Included observations: 457 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003454	0.004590	-0.752410	0.4522
R-squared	0.000517	Mean dependent var		2.100985
Adjusted R-squared	0.000517	S.D. dependent var		78.19794
S.E. of regression	78.17771	Akaike info criterion		11.55803
Sum squared resid	2786960.	Schwarz criterion		11.56706
Log likelihood	-2640.010	Durbin-Watson stat		2.076201

## GREECE WEEKLY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic based on AIC, MAXLAG=17)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.571103
Test critical values: 1% level	-2.570054
5% level	-1.941521
10% level	-1.616232

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1713 2167

Included observations: 455 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.002627	0.004601	-0.571103	0.5682
D(GLSRESID(-1))	-0.043770	0.046906	-0.933142	0.3512
D(GLSRESID(-2))	-0.099904	0.046893	-2.130493	0.0337
R-squared	0.012000	Mean dependent var		2.065824
Adjusted R-squared	0.007629	S.D. dependent var		78.36363
S.E. of regression	78.06416	Akaike info criterion		11.55951
Sum squared resid	2754494.	Schwarz criterion		11.58668
Log likelihood	-2626.789	Durbin-Watson stat		1.988964

## GREECE WEEKLY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=17)

Sample(adjusted): 1710 2167

Included observations: 458 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.57183	-0.75008	0.47720	13.1428
Asymptotic critical values*: 1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	6098.381
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### GREECE WEEKLY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag length: 2 (Spectral GLS-detrended AR based on AIC, MAXLAG=17)

Sample(adjusted): 1710 2167

Included observations: 458 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.04255	-0.57107	0.54777	17.3172
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 4628.343

### GREECE WEEKLY

Null Hypothesis: GREECE is stationary

Exogenous: Constant

Bandwidth: 17 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.448385
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 362735.5  
HAC corrected variance (Bartlett kernel) 6157387.

KPSS Test Equation

Dependent Variable: GREECE

Method: Least Squares

Sample(adjusted): 1710 2167

Included observations: 458 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1650.071	28.17325	58.56871	0.0000
R-squared	0.000000	Mean dependent var		1650.071
Adjusted R-squared	0.000000	S.D. dependent var		602.9339
S.E. of regression	602.9339	Akaike info criterion		15.64367
Sum squared resid	1.66E+08	Schwarz criterion		15.65268
Log likelihood	-3581.401	Durbin-Watson stat		0.016796

### GREECE MONTHLY(LEVEL)

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.450872	0.5545
Test critical values:		
1% level	-3.493747	
5% level	-2.889200	
10% level	-2.581596	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE)

Method: Least Squares

Sample(adjusted): 396 500

Included observations: 105 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.037258	0.025679	-1.450872	0.1499
C	70.19117	45.02043	1.559096	0.1220
R-squared	0.020028	Mean dependent var		8.886762
Adjusted R-squared	0.010514	S.D. dependent var		160.0783
S.E. of regression	159.2346	Akaike info criterion		12.99750
Sum squared resid	2611631.	Schwarz criterion		13.04805
Log likelihood	-680.3686	F-statistic		2.105031
Durbin-Watson stat	2.010768	Prob(F-statistic)		0.149854

### GREECE MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.42010	0.0000
Test critical values:		
1% level	-3.494378	
5% level	-2.889474	
10% level	-2.581741	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE,2)

Method: Least Squares

Sample(adjusted): 397 500

Included observations: 104 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-1.027107	0.098570	-10.42010	0.0000
C	10.55965	15.79987	0.668338	0.5054
R-squared	0.515620	Mean dependent var		1.686827
Adjusted R-squared	0.510871	S.D. dependent var		230.0524
S.E. of regression	160.8935	Akaike info criterion		13.01841
Sum squared resid	2640444.	Schwarz criterion		13.06926
Log likelihood	-674.9571	F-statistic		108.5784
Durbin-Watson stat	2.007195	Prob(F-statistic)		0.000000

### GREECE MONTHLY(LEVEL)

Null Hypothesis: GREECE has a unit root



Exogenous: Constant  
Lag Length: 7 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.057008	0.2625
Test critical values: 1% level	-3.498439	
5% level	-2.891234	
10% level	-2.582678	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(GREECE)  
Method: Least Squares  
Sample(adjusted): 403 500  
Included observations: 98 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.050477	0.024539	-2.057008	0.0426
D(GREECE(-1))	-0.087578	0.091174	-0.960558	0.3394
D(GREECE(-2))	0.117862	0.089963	1.310115	0.1935
D(GREECE(-3))	0.207805	0.087868	2.364979	0.0202
D(GREECE(-4))	0.037548	0.090052	0.416961	0.6777
D(GREECE(-5))	-0.157361	0.088789	-1.772294	0.0798
D(GREECE(-6))	0.074598	0.090764	0.821893	0.4133
D(GREECE(-7))	0.394384	0.090777	4.344554	0.0000
C	82.41441	43.00471	1.916404	0.0585
R-squared	0.290222	Mean dependent var		3.692755
Adjusted R-squared	0.226422	S.D. dependent var		153.8980
S.E. of regression	135.3583	Akaike info criterion		12.74107
Sum squared resid	1630646.	Schwarz criterion		12.97846
Log likelihood	-615.3124	F-statistic		4.548924
Durbin-Watson stat	2.061065	Prob(F-statistic)		0.000114

### GREECE MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root  
Exogenous: Constant  
Lag Length: 12 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.693598	0.4311
Test critical values: 1% level	-3.503049	
5% level	-2.893230	
10% level	-2.583740	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(GREECE,2)  
Method: Least Squares  
Sample(adjusted): 409 500  
Included observations: 92 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-0.406311	0.239910	-1.693598	0.0943
D(GREECE(-1),2)	-0.632639	0.236095	-2.679598	0.0090
D(GREECE(-2),2)	-0.459944	0.241205	-1.906862	0.0602
D(GREECE(-3),2)	-0.276547	0.243462	-1.135892	0.2595
D(GREECE(-4),2)	-0.179363	0.245445	-0.730765	0.4671

D(GREECE(-5),2)	-0.265604	0.240744	-1.103261	0.2733
D(GREECE(-6),2)	-0.351332	0.231785	-1.515763	0.1336
D(GREECE(-7),2)	-0.063398	0.214956	-0.294932	0.7688
D(GREECE(-8),2)	0.002617	0.197303	0.013266	0.9894
D(GREECE(-9),2)	0.113987	0.183972	0.619591	0.5373
D(GREECE(-10),2)	0.073118	0.169341	0.431780	0.6671
D(GREECE(-11),2)	-0.109599	0.141934	-0.772183	0.4423
D(GREECE(-12),2)	-0.276542	0.096286	-2.872076	0.0052
C	1.337928	13.42577	0.099654	0.9209
R-squared	0.697150	Mean dependent var	-1.585543	
Adjusted R-squared	0.646675	S.D. dependent var	213.9857	
S.E. of regression	127.1955	Akaike info criterion	12.66860	
Sum squared resid	1261939.	Schwarz criterion	13.05235	
Log likelihood	-568.7554	F-statistic	13.81179	
Durbin-Watson stat	1.979918	Prob(F-statistic)	0.000000	

## GREECE MONTHLY(2<sup>ND</sup> DIFFERENCE)

Null Hypothesis: D(GREECE,2) has a unit root

Exogenous: Constant

Lag Length: 11 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.129595	0.0014
Test critical values: 1% level	-3.503049	
5% level	-2.893230	
10% level	-2.583740	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GREECE,3)

Method: Least Squares

Sample(adjusted): 409 500

Included observations: 92 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1),2)	-5.763319	1.395614	-4.129595	0.0001
D(GREECE(-1),3)	3.771686	1.365872	2.761375	0.0072
D(GREECE(-2),3)	2.994276	1.302941	2.298091	0.0242
D(GREECE(-3),3)	2.430430	1.208783	2.010642	0.0478
D(GREECE(-4),3)	1.984745	1.087044	1.825819	0.0717
D(GREECE(-5),3)	1.475668	0.944544	1.562307	0.1222
D(GREECE(-6),3)	0.912516	0.784574	1.163071	0.2483
D(GREECE(-7),3)	0.680770	0.631374	1.078234	0.2842
D(GREECE(-8),3)	0.542811	0.489913	1.107973	0.2712
D(GREECE(-9),3)	0.535852	0.351432	1.524768	0.1313
D(GREECE(-10),3)	0.505026	0.214576	2.353603	0.0211
D(GREECE(-11),3)	0.317884	0.094236	3.373291	0.0012
C	-1.961480	13.43983	-0.145945	0.8843
R-squared	0.898077	Mean dependent var	0.795978	
Adjusted R-squared	0.882595	S.D. dependent var	375.5818	
S.E. of regression	128.6908	Akaike info criterion	12.68297	

Sum squared resid	1308344.	Schwarz criterion	13.03931
Log likelihood	-570.4166	F-statistic	58.00802
Durbin-Watson stat	2.001022	Prob(F-statistic)	0.000000

### GREECE MONTHLY(LEVEL)

Null Hypothesis: GREECE has a unit root  
 Exogenous: Constant  
 Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.556900	0.5010
Test critical values:		
1% level	-3.493747	
5% level	-2.889200	
10% level	-2.581596	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	24872.68
HAC corrected variance (Bartlett kernel)	29349.98

Phillips-Perron Test Equation  
 Dependent Variable: D(GREECE)  
 Method: Least Squares  
 Sample(adjusted): 396 500  
 Included observations: 105 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GREECE(-1)	-0.037258	0.025679	-1.450872	0.1499
C	70.19117	45.02043	1.559096	0.1220
R-squared	0.020028	Mean dependent var		8.886762
Adjusted R-squared	0.010514	S.D. dependent var		160.0783
S.E. of regression	159.2346	Akaike info criterion		12.99750
Sum squared resid	2611631.	Schwarz criterion		13.04805
Log likelihood	-680.3686	F-statistic		2.105031
Durbin-Watson stat	2.010768	Prob(F-statistic)		0.149854

### GREECE MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(GREECE) has a unit root  
 Exogenous: Constant  
 Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-10.42397	0.0000
Test critical values:		
1% level	-3.494378	
5% level	-2.889474	
10% level	-2.581741	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	25388.89
HAC corrected variance (Bartlett kernel)	28809.66

Phillips-Perron Test Equation

Dependent Variable: D(GREECE,2)

Method: Least Squares

Sample(adjusted): 397 500

Included observations: 104 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GREECE(-1))	-1.027107	0.098570	-10.42010	0.0000
C	10.55965	15.79987	0.668338	0.5054
R-squared	0.515620	Mean dependent var		1.686827
Adjusted R-squared	0.510871	S.D. dependent var		230.0524
S.E. of regression	160.8935	Akaike info criterion		13.01841
Sum squared resid	2640444.	Schwarz criterion		13.06926
Log likelihood	-674.9571	F-statistic		108.5784
Durbin-Watson stat	2.007195	Prob(F-statistic)		0.000000

## GREECE MONTHLY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.969970
Test critical values: 1% level	-2.587172
5% level	-1.943912
10% level	-1.614713

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 396 500

Included observations: 105 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.021639	0.022309	-0.969970	0.3343
R-squared	0.005882	Mean dependent var		8.886762
Adjusted R-squared	0.005882	S.D. dependent var		160.0783
S.E. of regression	159.6068	Akaike info criterion		12.99278
Sum squared resid	2649331.	Schwarz criterion		13.01806
Log likelihood	-681.1211	Durbin-Watson stat		2.013476

## GREECE MONTHLY

Null Hypothesis: GREECE has a unit root

Exogenous: Constant

Lag Length: 7 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.784520
Test critical values: 1% level	-2.588772
5% level	-1.944140
10% level	-1.614575

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 403 500  
 Included observations: 98 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.036961	0.020712	-1.784520	0.0777
D(GLSRESID(-1))	-0.090196	0.091165	-0.989367	0.3251
D(GLSRESID(-2))	0.119334	0.089978	1.326258	0.1881
D(GLSRESID(-3))	0.210288	0.087860	2.393429	0.0188
D(GLSRESID(-4))	0.037113	0.090078	0.412009	0.6813
D(GLSRESID(-5))	-0.160813	0.088752	-1.811938	0.0733
D(GLSRESID(-6))	0.071883	0.090752	0.792079	0.4304
D(GLSRESID(-7))	0.390939	0.090741	4.308273	0.0000
R-squared	0.281822	Mean dependent var		3.692755
Adjusted R-squared	0.225964	S.D. dependent var		153.8980
S.E. of regression	135.3984	Akaike info criterion		12.73243
Sum squared resid	1649945.	Schwarz criterion		12.94345
Log likelihood	-615.8889	Durbin-Watson stat		2.057761

### GREECE MONTHLY

Null Hypothesis: GREECE has a unit root  
 Exogenous: Constant  
 Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)  
 Sample(adjusted): 395 500  
 Included observations: 106 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.19736	-0.94257	0.42896	10.3430
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	25231.72
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### GREECE MONTHLY

Null Hypothesis: GREECE has a unit root  
 Exogenous: Constant  
 Lag length: 7 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)  
 Sample(adjusted): 395 500  
 Included observations: 106 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-9.68809	-2.14413	0.22132	2.75327
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	94786.56
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## GREECE MONTHLY

Null Hypothesis: GREECE is stationary  
 Exogenous: Constant  
 Bandwidth: 8 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.220038
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	363978.0
HAC corrected variance (Bartlett kernel)	2835311.

KPSS Test Equation  
 Dependent Variable: GREECE  
 Method: Least Squares  
 Sample(adjusted): 395 500  
 Included observations: 106 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1648.852	58.87663	28.00520	0.0000
R-squared	0.000000	Mean dependent var	1648.852	
Adjusted R-squared	0.000000	S.D. dependent var	606.1720	
S.E. of regression	606.1720	Akaike info criterion	15.66159	
Sum squared resid	38581667	Schwarz criterion	15.68672	
Log likelihood	-829.0645	Durbin-Watson stat	0.069289	

## CZECH DAILY(LEVEL)

Null Hypothesis: CZECH has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.148790	0.9941
Test critical values:		
1% level	-3.961174	
5% level	-3.411340	
10% level	-3.127515	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(CZECH)  
 Method: Least Squares  
 Sample(adjusted): 73 3002  
 Included observations: 2930 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-8.94E-05	0.000601	-0.148790	0.8817
D(CZECH(-1))	0.111198	0.018487	6.015048	0.0000
C	-0.360815	0.392156	-0.920081	0.3576

@TREND(1)	0.000513	0.000263	1.950526	0.0512
R-squared	0.014791	Mean dependent var	0.400648	
Adjusted R-squared	0.013781	S.D. dependent var	8.992033	
S.E. of regression	8.929858	Akaike info criterion	7.218042	
Sum squared resid	233326.1	Schwarz criterion	7.226210	
Log likelihood	-10570.43	F-statistic	14.64308	
Durbin-Watson stat	1.996069	Prob(F-statistic)	0.000000	

### CZECH DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-48.11156	0.0000
Test critical values:	1% level	-3.961174	
	5% level	-3.411340	
	10% level	-3.127515	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH,2)

Method: Least Squares

Sample(adjusted): 73 3002

Included observations: 2930 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.888883	0.018475	-48.11156	0.0000
C	-0.389321	0.342115	-1.137985	0.2552
@TREND(1)	0.000487	0.000195	2.491863	0.0128
R-squared	0.441599	Mean dependent var	0.018567	
Adjusted R-squared	0.441218	S.D. dependent var	11.94402	
S.E. of regression	8.928366	Akaike info criterion	7.217367	
Sum squared resid	233327.9	Schwarz criterion	7.223493	
Log likelihood	-10570.44	F-statistic	1157.377	
Durbin-Watson stat	1.996065	Prob(F-statistic)	0.000000	

### CZECH DAILY(LEVEL)

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 27 (Automatic based on AIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.136075	0.9943
Test critical values:	1% level	-3.961202	
	5% level	-3.411354	
	10% level	-3.127524	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH)

Method: Least Squares

Sample(adjusted): 99 3002

Included observations: 2904 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-8.25E-05	0.000606	-0.136075	0.8918
D(CZECH(-1))	0.114051	0.018777	6.073884	0.0000
D(CZECH(-2))	0.035343	0.018896	1.870351	0.0615
D(CZECH(-3))	-0.010684	0.018932	-0.564345	0.5726
D(CZECH(-4))	-0.023853	0.018959	-1.258142	0.2084
D(CZECH(-5))	0.062478	0.019016	3.285473	0.0010
D(CZECH(-6))	-0.022728	0.019054	-1.192808	0.2330
D(CZECH(-7))	-0.060731	0.019081	-3.182837	0.0015
D(CZECH(-8))	0.000765	0.019064	0.040112	0.9680
D(CZECH(-9))	0.032213	0.019040	1.691797	0.0908
D(CZECH(-10))	0.055690	0.019072	2.920023	0.0035
D(CZECH(-11))	0.006795	0.019123	0.355321	0.7224
D(CZECH(-12))	0.026555	0.019577	1.356414	0.1751
D(CZECH(-13))	-0.004961	0.019605	-0.253045	0.8003
D(CZECH(-14))	0.016829	0.019725	0.853190	0.3936
D(CZECH(-15))	0.040086	0.019771	2.027494	0.0427
D(CZECH(-16))	-0.000300	0.019760	-0.015172	0.9879
D(CZECH(-17))	-0.006468	0.019975	-0.323816	0.7461
D(CZECH(-18))	-0.022430	0.020048	-1.118773	0.2633
D(CZECH(-19))	0.045511	0.020045	2.270478	0.0233
D(CZECH(-20))	-0.081883	0.020060	-4.081949	0.0000
D(CZECH(-21))	0.008565	0.020096	0.426220	0.6700
D(CZECH(-22))	0.025788	0.020117	1.281906	0.2000
D(CZECH(-23))	-0.025737	0.020076	-1.281991	0.1999
D(CZECH(-24))	-0.024401	0.020134	-1.211972	0.2256
D(CZECH(-25))	0.000639	0.020154	0.031695	0.9747
D(CZECH(-26))	-0.053885	0.020186	-2.669392	0.0076
D(CZECH(-27))	0.045376	0.020254	2.240271	0.0251
C	-0.350646	0.397436	-0.882271	0.3777
@TREND(1)	0.000492	0.000265	1.852136	0.0641
R-squared	0.044030	Mean dependent var		0.409263
Adjusted R-squared	0.034384	S.D. dependent var		9.031008
S.E. of regression	8.874391	Akaike info criterion		7.214493
Sum squared resid	226341.3	Schwarz criterion		7.276207
Log likelihood	-10445.44	F-statistic		4.564467
Durbin-Watson stat	1.987194	Prob(F-statistic)		0.000000

## CZECH DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 26 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.01853	0.0000
Test critical values:		
1% level	-3.961202	
5% level	-3.411354	
10% level	-3.127524	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH,2)

Method: Least Squares

Sample(adjusted): 99 3002



Included observations: 2904 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.823090	0.082157	-10.01853	0.0000
D(CZECH(-1),2)	-0.062927	0.080598	-0.780756	0.4350
D(CZECH(-2),2)	-0.027643	0.079192	-0.349068	0.7271
D(CZECH(-3),2)	-0.038390	0.077785	-0.493535	0.6217
D(CZECH(-4),2)	-0.062298	0.076440	-0.814987	0.4151
D(CZECH(-5),2)	0.000133	0.075167	0.001767	0.9986
D(CZECH(-6),2)	-0.022647	0.073753	-0.307071	0.7588
D(CZECH(-7),2)	-0.083435	0.072294	-1.154100	0.2486
D(CZECH(-8),2)	-0.082718	0.071108	-1.163269	0.2448
D(CZECH(-9),2)	-0.050556	0.069710	-0.725235	0.4684
D(CZECH(-10),2)	0.005090	0.068396	0.074419	0.9407
D(CZECH(-11),2)	0.011836	0.067044	0.176545	0.8599
D(CZECH(-12),2)	0.038361	0.065881	0.582282	0.5604
D(CZECH(-13),2)	0.033373	0.064674	0.516014	0.6059
D(CZECH(-14),2)	0.050164	0.063189	0.793874	0.4273
D(CZECH(-15),2)	0.090202	0.061392	1.469288	0.1419
D(CZECH(-16),2)	0.089847	0.059229	1.516940	0.1294
D(CZECH(-17),2)	0.083310	0.056906	1.463995	0.1433
D(CZECH(-18),2)	0.060798	0.054163	1.122518	0.2617
D(CZECH(-19),2)	0.106223	0.051021	2.081931	0.0374
D(CZECH(-20),2)	0.024253	0.047845	0.506908	0.6123
D(CZECH(-21),2)	0.032742	0.044861	0.729856	0.4655
D(CZECH(-22),2)	0.058458	0.041676	1.402693	0.1608
D(CZECH(-23),2)	0.032635	0.037398	0.872652	0.3829
D(CZECH(-24),2)	0.008143	0.032839	0.247960	0.8042
D(CZECH(-25),2)	0.008688	0.027713	0.313488	0.7539
D(CZECH(-26),2)	-0.045288	0.020241	-2.237469	0.0253
C	-0.376887	0.347456	-1.084705	0.2781
@TREND(1)	0.000468	0.000200	2.334445	0.0196
R-squared	0.458183	Mean dependent var	0.018113	
Adjusted R-squared	0.452907	S.D. dependent var	11.99592	
S.E. of regression	8.872876	Akaike info criterion	7.213811	
Sum squared resid	226342.8	Schwarz criterion	7.273467	
Log likelihood	-10445.45	F-statistic	86.82943	
Durbin-Watson stat	1.987207	Prob(F-statistic)	0.000000	

### CZECH DAILY(LEVEL)

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.169710	0.9937
Test critical values: 1% level	-3.961173	
5% level	-3.411340	
10% level	-3.127515	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	80.59110
HAC corrected variance (Bartlett kernel)	100.2147

Phillips-Perron Test Equation  
Dependent Variable: D(CZECH)

Method: Least Squares  
Sample(adjusted): 72 3002  
Included observations: 2931 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	1.58E-05	0.000604	0.026173	0.9791
C	-0.440118	0.394104	-1.116755	0.2642
@TREND(1)	0.000539	0.000264	2.040372	0.0414
R-squared	0.002619	Mean dependent var		0.400000
Adjusted R-squared	0.001938	S.D. dependent var		8.990567
S.E. of regression	8.981852	Akaike info criterion		7.229312
Sum squared resid	236212.5	Schwarz criterion		7.235436
Log likelihood	-10591.56	F-statistic		3.844271
Durbin-Watson stat	1.768991	Prob(F-statistic)		0.021510

### CZECH DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 14 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-48.28899	0.0000
Test critical values:		
1% level	-3.961174	
5% level	-3.411340	
10% level	-3.127515	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	79.63410
HAC corrected variance (Bartlett kernel)	84.00730

Phillips-Perron Test Equation  
Dependent Variable: D(CZECH,2)  
Method: Least Squares  
Sample(adjusted): 73 3002  
Included observations: 2930 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.888883	0.018475	-48.11156	0.0000
C	-0.389321	0.342115	-1.137985	0.2552
@TREND(1)	0.000487	0.000195	2.491863	0.0128
R-squared	0.441599	Mean dependent var		0.018567
Adjusted R-squared	0.441218	S.D. dependent var		11.94402
S.E. of regression	8.928366	Akaike info criterion		7.217367
Sum squared resid	233327.9	Schwarz criterion		7.223493
Log likelihood	-10570.44	F-statistic		1157.377
Durbin-Watson stat	1.996065	Prob(F-statistic)		0.000000

### CZECH DAILY

Null Hypothesis: CZECH has a unit root  
Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=27)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.020396
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 73 3002

Included observations: 2930 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-1.10E-05	0.000539	-0.020396	0.9837
D(GLSRESID(-1))	0.113668	0.018478	6.151414	0.0000
R-squared	0.012368	Mean dependent var		0.180643
Adjusted R-squared	0.012031	S.D. dependent var		8.992033
S.E. of regression	8.937778	Akaike info criterion		7.219133
Sum squared resid	233900.0	Schwarz criterion		7.223217
Log likelihood	-10574.03	Durbin-Watson stat		1.996379

## CZECH DAILY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 27 (Automatic based on AIC, MAXLAG=27)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.100670
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 99 3002

Included observations: 2904 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-5.45E-05	0.000542	-0.100670	0.9198
D(GLSRESID(-1))	0.116168	0.018772	6.188505	0.0000
D(GLSRESID(-2))	0.036997	0.018898	1.957646	0.0504
D(GLSRESID(-3))	-0.009058	0.018934	-0.478375	0.6324
D(GLSRESID(-4))	-0.022330	0.018963	-1.177601	0.2391
D(GLSRESID(-5))	0.063927	0.019022	3.360718	0.0008
D(GLSRESID(-6))	-0.021333	0.019060	-1.119241	0.2631
D(GLSRESID(-7))	-0.059224	0.019085	-3.103105	0.0019
D(GLSRESID(-8))	0.002234	0.019069	0.117142	0.9068
D(GLSRESID(-9))	0.033759	0.019045	1.772624	0.0764
D(GLSRESID(-10))	0.057044	0.019078	2.989976	0.0028
D(GLSRESID(-11))	0.008076	0.019130	0.422147	0.6729
D(GLSRESID(-12))	0.027541	0.019588	1.406012	0.1598

D(GLSRESID(-13))	-0.004046	0.019617	-0.206267	0.8366
D(GLSRESID(-14))	0.017927	0.019735	0.908388	0.3637
D(GLSRESID(-15))	0.041323	0.019780	2.089112	0.0368
D(GLSRESID(-16))	0.001001	0.019768	0.050640	0.9596
D(GLSRESID(-17))	-0.004965	0.019980	-0.248500	0.8038
D(GLSRESID(-18))	-0.020655	0.020050	-1.030174	0.3030
D(GLSRESID(-19))	0.047442	0.020044	2.366919	0.0180
D(GLSRESID(-20))	-0.080081	0.020061	-3.991944	0.0001
D(GLSRESID(-21))	0.010349	0.020097	0.514951	0.6066
D(GLSRESID(-22))	0.027480	0.020120	1.365816	0.1721
D(GLSRESID(-23))	-0.023815	0.020075	-1.186297	0.2356
D(GLSRESID(-24))	-0.022351	0.020131	-1.110311	0.2670
D(GLSRESID(-25))	0.002781	0.020149	0.138033	0.8902
D(GLSRESID(-26))	-0.051748	0.020182	-2.564072	0.0104
D(GLSRESID(-27))	0.047632	0.020249	2.352364	0.0187
R-squared	0.041898	Mean dependent var	0.189257	
Adjusted R-squared	0.032903	S.D. dependent var	9.031008	
S.E. of regression	8.881191	Akaike info criterion	7.215343	
Sum squared resid	226846.1	Schwarz criterion	7.272942	
Log likelihood	-10448.68	Durbin-Watson stat	1.987024	

### CZECH DAILY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=27)

Sample(adjusted): 71 3002

Included observations: 2932 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.07548	-0.04235	0.56115	71.1956
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	101.6177
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### CZECH DAILY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag length: 27 (Spectral GLS-detrended AR based on AIC, MAXLAG=27)

Sample(adjusted): 71 3002

Included observations: 2932 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.50459	-0.25123	0.49790	56.0485
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	129.0800
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### CZECH DAILY

Null Hypothesis: CZECH is stationary

Exogenous: Constant, Linear Trend  
 Bandwidth: 42 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.350296
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	75524.73
HAC corrected variance (Bartlett kernel)	3186825.

KPSS Test Equation

Dependent Variable: CZECH

Method: Least Squares

Sample(adjusted): 71 3002

Included observations: 2932 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	318.7313	10.51719	30.30575	0.0000
@TREND(1)	0.293513	0.005998	48.93172	0.0000
R-squared	0.449694	Mean dependent var	769.4211	
Adjusted R-squared	0.449506	S.D. dependent var	370.5243	
S.E. of regression	274.9114	Akaike info criterion	14.07146	
Sum squared resid	2.21E+08	Schwarz criterion	14.07554	
Log likelihood	-20626.76	F-statistic	2394.313	
Durbin-Watson stat	0.001070	Prob(F-statistic)	0.000000	

### CZECH WEEKLY (LEVEL)

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.074758	0.9952
Test critical values:		
1% level	-3.973793	
5% level	-3.417506	
10% level	-3.131168	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH)

Method: Least Squares

Sample(adjusted): 1582 2167

Included observations: 586 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-0.000240	0.003204	-0.074758	0.9404
C	-23.88571	11.64191	-2.051700	0.0406
@TREND(1)	0.013917	0.006999	1.988528	0.0472
R-squared	0.011552	Mean dependent var	2.003242	
Adjusted R-squared	0.008161	S.D. dependent var	21.37985	
S.E. of regression	21.29243	Akaike info criterion	8.959687	

Sum squared resid	264313.3	Schwarz criterion	8.982076
Log likelihood	-2622.188	F-statistic	3.406634
Durbin-Watson stat	1.836100	Prob(F-statistic)	0.033814

### CZECH WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.99905	0.0000
Test critical values:		
1% level	-3.973847	
5% level	-3.417533	
10% level	-3.131184	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH,2)

Method: Least Squares

Sample(adjusted): 1584 2167

Included observations: 584 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.811598	0.057975	-13.99905	0.0000
D(CZECH(-1),2)	-0.135276	0.042193	-3.206128	0.0014
C	-19.60869	9.825080	-1.995779	0.0464
@TREND(1)	0.011360	0.005227	2.173061	0.0302
R-squared	0.466829	Mean dependent var	0.209932	
Adjusted R-squared	0.464071	S.D. dependent var	28.85448	
S.E. of regression	21.12355	Akaike info criterion	8.945479	
Sum squared resid	258798.4	Schwarz criterion	8.975410	
Log likelihood	-2608.080	F-statistic	169.2769	
Durbin-Watson stat	1.948045	Prob(F-statistic)	0.000000	

### CZECH WEEKLY (LEVEL)

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.338948	0.9894
Test critical values:		
1% level	-3.973847	
5% level	-3.417533	
10% level	-3.131184	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH)

Method: Least Squares

Sample(adjusted): 1584 2167

Included observations: 584 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-0.001083	0.003195	-0.338948	0.7348
D(CZECH(-1))	0.053909	0.042278	1.275093	0.2028
D(CZECH(-2))	0.136101	0.042295	3.217871	0.0014

C	-21.72850	11.65305	-1.864620	0.0627
@TREND(1)	0.012933	0.006995	1.849005	0.0650
R-squared	0.032153	Mean dependent var	2.021747	
Adjusted R-squared	0.025467	S.D. dependent var	21.41411	
S.E. of regression	21.13968	Akaike info criterion	8.948706	
Sum squared resid	258747.1	Schwarz criterion	8.986119	
Log likelihood	-2608.022	F-statistic	4.808756	
Durbin-Watson stat	1.947841	Prob(F-statistic)	0.000802	

### CZECH WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 8 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.944242	0.0000
Test critical values:		
1% level	-3.974039	
5% level	-3.417627	
10% level	-3.131240	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH,2)

Method: Least Squares

Sample(adjusted): 1591 2167

Included observations: 577 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.906477	0.114105	-7.944242	0.0000
D(CZECH(-1),2)	-0.016401	0.110268	-0.148736	0.8818
D(CZECH(-2),2)	0.111256	0.105170	1.057867	0.2906
D(CZECH(-3),2)	0.088073	0.101977	0.863657	0.3881
D(CZECH(-4),2)	0.060809	0.094710	0.642054	0.5211
D(CZECH(-5),2)	0.032371	0.086439	0.374493	0.7082
D(CZECH(-6),2)	0.047428	0.076491	0.620039	0.5355
D(CZECH(-7),2)	-0.018469	0.064989	-0.284183	0.7764
D(CZECH(-8),2)	0.098775	0.047244	2.090729	0.0370
C	-21.87961	10.36322	-2.111276	0.0352
@TREND(1)	0.012675	0.005535	2.289922	0.0224
R-squared	0.479855	Mean dependent var	0.216984	
Adjusted R-squared	0.470665	S.D. dependent var	29.01886	
S.E. of regression	21.11278	Akaike info criterion	8.956514	
Sum squared resid	252294.2	Schwarz criterion	9.039593	
Log likelihood	-2572.954	F-statistic	52.21588	
Durbin-Watson stat	1.972348	Prob(F-statistic)	0.000000	

### CZECH WEEKLY (LEVEL)

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.246121	0.9919
Test critical values:		
1% level	-3.973793	
5% level	-3.417506	
10% level	-3.131168	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	451.0467
HAC corrected variance (Bartlett kernel)	545.4044

Phillips-Perron Test Equation  
 Dependent Variable: D(CZECH)  
 Method: Least Squares  
 Sample(adjusted): 1582 2167

Included observations: 586 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-0.000240	0.003204	-0.074758	0.9404
C	-23.88571	11.64191	-2.051700	0.0406
@TREND(1)	0.013917	0.006999	1.988528	0.0472
R-squared	0.011552	Mean dependent var		2.003242
Adjusted R-squared	0.008161	S.D. dependent var		21.37985
S.E. of regression	21.29243	Akaike info criterion		8.959687
Sum squared resid	264313.3	Schwarz criterion		8.982076
Log likelihood	-2622.188	F-statistic		3.406634
Durbin-Watson stat	1.836100	Prob(F-statistic)		0.033814

### CZECH WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 0 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-22.14541	0.0000
Test critical values:		
1% level	-3.973820	
5% level	-3.417519	
10% level	-3.131176	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	450.2376
HAC corrected variance (Bartlett kernel)	450.2376

Phillips-Perron Test Equation  
 Dependent Variable: D(CZECH,2)  
 Method: Least Squares  
 Sample(adjusted): 1583 2167

Included observations: 585 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.939321	0.042416	-22.14541	0.0000
C	-22.17650	9.836209	-2.254578	0.0245
@TREND(1)	0.012849	0.005231	2.456062	0.0143
R-squared	0.457374	Mean dependent var		0.207521
Adjusted R-squared	0.455509	S.D. dependent var		28.82982
S.E. of regression	21.27342	Akaike info criterion		8.957909
Sum squared resid	263389.0	Schwarz criterion		8.980328
Log likelihood	-2617.188	F-statistic		245.2805
Durbin-Watson stat	1.968021	Prob(F-statistic)		0.000000



## CZECH WEEKLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on SIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.265226
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1584 2167

Included observations: 584 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000772	0.002909	-0.265226	0.7909
D(GLSRESID(-1))	0.062877	0.042217	1.489355	0.1369
D(GLSRESID(-2))	0.144873	0.042242	3.429622	0.0006
R-squared	0.022995	Mean dependent var	0.873803	
Adjusted R-squared	0.019632	S.D. dependent var	21.41411	
S.E. of regression	21.20287	Akaike info criterion	8.951274	
Sum squared resid	261195.4	Schwarz criterion	8.973722	
Log likelihood	-2610.772	Durbin-Watson stat	1.947045	

## CZECH WEEKLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on AIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.265226
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1584 2167

Included observations: 584 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000772	0.002909	-0.265226	0.7909
D(GLSRESID(-1))	0.062877	0.042217	1.489355	0.1369
D(GLSRESID(-2))	0.144873	0.042242	3.429622	0.0006
R-squared	0.022995	Mean dependent var	0.873803	

Adjusted R-squared	0.019632	S.D. dependent var	21.41411
S.E. of regression	21.20287	Akaike info criterion	8.951274
Sum squared resid	261195.4	Schwarz criterion	8.973722
Log likelihood	-2610.772	Durbin-Watson stat	1.947045

### CZECH WEEKLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag length: 2 (Spectral GLS-detrended AR based on SIC, MAXLAG=18)

Sample(adjusted): 1581 2167

Included observations: 587 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.77757	-0.36344	0.46741	49.3736
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	712.5711
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### CZECH WEEKLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag length: 2 (Spectral GLS-detrended AR based on AIC, MAXLAG=18)

Sample(adjusted): 1581 2167

Included observations: 587 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.77757	-0.36344	0.46741	49.3736
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	712.5711
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### CZECH WEEKLY

Null Hypothesis: CZECH is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 18 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.631677
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	75742.69
HAC corrected variance (Bartlett kernel)	1368822.

KPSS Test Equation

Dependent Variable: CZECH

Method: Least Squares

Sample(adjusted): 1581 2167

Included observations: 587 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1986.028	126.2855	-15.72649	0.0000
@TREND(1)	1.471551	0.067150	21.91441	0.0000
R-squared	0.450829	Mean dependent var		770.1874
Adjusted R-squared	0.449890	S.D. dependent var		371.6949
S.E. of regression	275.6839	Akaike info criterion		14.07979
Sum squared resid	44460959	Schwarz criterion		14.09469
Log likelihood	-4130.418	F-statistic		480.2412
Durbin-Watson stat	0.006018	Prob(F-statistic)		0.000000

**CZECH MONTHLY(LEVEL)**

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.126352	0.9940
Test critical values:		
1% level	-4.027959	
5% level	-3.443704	
10% level	-3.146604	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH)

Method: Least Squares

Sample(adjusted): 367 500

Included observations: 134 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-0.001786	0.014137	-0.126352	0.8996
C	-104.7269	52.13442	-2.008787	0.0466
@TREND(1)	0.265643	0.135503	1.960423	0.0521
R-squared	0.046375	Mean dependent var		8.792537
Adjusted R-squared	0.031816	S.D. dependent var		45.88991
S.E. of regression	45.15399	Akaike info criterion		10.48017
Sum squared resid	267093.6	Schwarz criterion		10.54505
Log likelihood	-699.1713	F-statistic		3.185300
Durbin-Watson stat	1.713311	Prob(F-statistic)		0.044589

**CZECH MONTHLY (1<sup>ST</sup> DIFFERENCE)**

Null Hypothesis: D(CZECH) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.881329	0.0000
Test critical values:		
1% level	-4.028496	
5% level	-3.443961	

10% level -3.146755

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH,2)

Method: Least Squares

Sample(adjusted): 368 500

Included observations: 133 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.858626	0.086894	-9.881329	0.0000
C	-87.57645	44.88221	-1.951251	0.0532
@TREND(1)	0.220035	0.103605	2.123794	0.0356
R-squared	0.428939	Mean dependent var		0.388722
Adjusted R-squared	0.420153	S.D. dependent var		58.93163
S.E. of regression	44.87506	Akaike info criterion		10.46794
Sum squared resid	261790.2	Schwarz criterion		10.53314
Log likelihood	-693.1180	F-statistic		48.82321
Durbin-Watson stat	1.969429	Prob(F-statistic)		0.000000

### CZECH MONTHLY(LEVEL)

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 10 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.182801	0.9092
Test critical values:		
1% level	-4.033727	
5% level	-3.446464	
10% level	-3.148223	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CZECH)

Method: Least Squares

Sample(adjusted): 377 500

Included observations: 124 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-0.027994	0.023668	-1.182801	0.2394
D(CZECH(-1))	0.158250	0.094295	1.678246	0.0961
D(CZECH(-2))	0.001781	0.104664	0.017016	0.9865
D(CZECH(-3))	0.015958	0.104661	0.152474	0.8791
D(CZECH(-4))	-0.164080	0.109648	-1.496428	0.1374
D(CZECH(-5))	0.092324	0.111432	0.828525	0.4092
D(CZECH(-6))	0.210516	0.112690	1.868094	0.0644
D(CZECH(-7))	0.219518	0.108922	2.015375	0.0463
D(CZECH(-8))	-0.111445	0.109583	-1.016994	0.3114
D(CZECH(-9))	-0.039560	0.114421	-0.345739	0.7302
D(CZECH(-10))	0.297755	0.114569	2.598909	0.0106
C	-104.2567	65.63353	-1.588466	0.1150
@TREND(1)	0.294643	0.157448	1.871371	0.0639
R-squared	0.215210	Mean dependent var		8.893548
Adjusted R-squared	0.130368	S.D. dependent var		47.17891
S.E. of regression	43.99625	Akaike info criterion		10.50501
Sum squared resid	214859.3	Schwarz criterion		10.80069

Log likelihood	-638.3107	F-statistic	2.536598
Durbin-Watson stat	2.011056	Prob(F-statistic)	0.005394

### CZECH MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 9 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.622325	0.2713
Test critical values: 1% level	-4.033727	
5% level	-3.446464	
10% level	-3.148223	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(CZECH,2)  
 Method: Least Squares  
 Sample(adjusted): 377 500  
 Included observations: 124 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.780376	0.297589	-2.622325	0.0099
D(CZECH(-1),2)	-0.084790	0.284102	-0.298451	0.7659
D(CZECH(-2),2)	-0.121315	0.269958	-0.449385	0.6540
D(CZECH(-3),2)	-0.143760	0.257205	-0.558931	0.5773
D(CZECH(-4),2)	-0.358685	0.241938	-1.482550	0.1410
D(CZECH(-5),2)	-0.321126	0.219548	-1.462672	0.1464
D(CZECH(-6),2)	-0.170456	0.192441	-0.885759	0.3776
D(CZECH(-7),2)	0.000782	0.167509	0.004666	0.9963
D(CZECH(-8),2)	-0.156743	0.137837	-1.137165	0.2579
D(CZECH(-9),2)	-0.248593	0.106954	-2.324299	0.0219
C	-105.4610	65.74243	-1.604155	0.1115
@TREND(1)	0.257739	0.154600	1.667137	0.0983
R-squared	0.516585	Mean dependent var	0.200806	
Adjusted R-squared	0.469107	S.D. dependent var	60.49012	
S.E. of regression	44.07455	Akaike info criterion	10.50141	
Sum squared resid	217567.4	Schwarz criterion	10.77434	
Log likelihood	-639.0873	F-statistic	10.88047	
Durbin-Watson stat	1.994684	Prob(F-statistic)	0.000000	

### CZECH MONTHLY (2<sup>ND</sup> DIFFERENCE)

Null Hypothesis: D(CZECH,2) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 8 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.685924	0.0000
Test critical values: 1% level	-4.033727	
5% level	-3.446464	
10% level	-3.148223	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(CZECH,3)  
 Method: Least Squares  
 Sample(adjusted): 377 500  
 Included observations: 124 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1),2)	-6.161202	0.921518	-6.685924	0.0000
D(CZECH(-1),3)	4.368184	0.885979	4.930350	0.0000
D(CZECH(-2),3)	3.606341	0.818754	4.404668	0.0000
D(CZECH(-3),3)	2.889017	0.720933	4.007331	0.0001
D(CZECH(-4),3)	2.036269	0.597752	3.406546	0.0009
D(CZECH(-5),3)	1.323387	0.462697	2.860162	0.0050
D(CZECH(-6),3)	0.861894	0.331916	2.596721	0.0107
D(CZECH(-7),3)	0.646127	0.208359	3.101034	0.0024
D(CZECH(-8),3)	0.331643	0.104780	3.165140	0.0020
C	10.24228	49.98807	0.204894	0.8380
@TREND(1)	-0.024267	0.113920	-0.213021	0.8317
R-squared	0.808503	Mean dependent var	1.754839	
Adjusted R-squared	0.791557	S.D. dependent var	99.01544	
S.E. of regression	45.20608	Akaike info criterion	10.54487	
Sum squared resid	230925.6	Schwarz criterion	10.79505	
Log likelihood	-642.7817	F-statistic	47.70887	
Durbin-Watson stat	2.020847	Prob(F-statistic)	0.000000	

### CZECH MONTHLY(LEVEL)

Null Hypothesis: CZECH has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.240255	0.9915
Test critical values:		
1% level	-4.027959	
5% level	-3.443704	
10% level	-3.146604	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1993.236
HAC corrected variance (Bartlett kernel)	2270.017

Phillips-Perron Test Equation  
 Dependent Variable: D(CZECH)  
 Method: Least Squares  
 Sample(adjusted): 367 500  
 Included observations: 134 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CZECH(-1)	-0.001786	0.014137	-0.126352	0.8996
C	-104.7269	52.13442	-2.008787	0.0466
@TREND(1)	0.265643	0.135503	1.960423	0.0521
R-squared	0.046375	Mean dependent var	8.792537	
Adjusted R-squared	0.031816	S.D. dependent var	45.88991	
S.E. of regression	45.15399	Akaike info criterion	10.48017	
Sum squared resid	267093.6	Schwarz criterion	10.54505	
Log likelihood	-699.1713	F-statistic	3.185300	
Durbin-Watson stat	1.713311	Prob(F-statistic)	0.044589	

## CZECH MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CZECH) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-9.803291	0.0000
Test critical values:		
1% level	-4.028496	
5% level	-3.443961	
10% level	-3.146755	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1968.347
HAC corrected variance (Bartlett kernel)	1734.241

Phillips-Perron Test Equation  
 Dependent Variable: D(CZECH,2)  
 Method: Least Squares  
 Sample(adjusted): 368 500  
 Included observations: 133 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CZECH(-1))	-0.858626	0.086894	-9.881329	0.0000
C	-87.57645	44.88221	-1.951251	0.0532
@TREND(1)	0.220035	0.103605	2.123794	0.0356
R-squared	0.428939	Mean dependent var		0.388722
Adjusted R-squared	0.420153	S.D. dependent var		58.93163
S.E. of regression	44.87506	Akaike info criterion		10.46794
Sum squared resid	261790.2	Schwarz criterion		10.53314
Log likelihood	-693.1180	F-statistic		48.82321
Durbin-Watson stat	1.969429	Prob(F-statistic)		0.000000

## CZECH MONTHLY

Null Hypothesis: CZECH has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.144845
Test critical values:	
1% level	-3.539200
5% level	-2.996000
10% level	-2.706000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 367 500  
 Included observations: 134 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001968	0.013587	-0.144845	0.8851
R-squared	-0.004304	Mean dependent var		3.053967
Adjusted R-squared	-0.004304	S.D. dependent var		45.88991

S.E. of regression	45.98855	Akaike info criterion	10.50210
Sum squared resid	281288.0	Schwarz criterion	10.52372
Log likelihood	-702.6405	Durbin-Watson stat	1.626623

### CZECH MONTHLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 10 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.756552
Test critical values: 1% level	-3.551200
5% level	-3.006000
10% level	-2.716000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 377 500

Included observations: 124 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.027721	0.015782	-1.756552	0.0817
D(GLSRESID(-1))	0.170792	0.090455	1.888146	0.0616
D(GLSRESID(-2))	0.014661	0.097706	0.150048	0.8810
D(GLSRESID(-3))	0.028506	0.097674	0.291850	0.7709
D(GLSRESID(-4))	-0.147669	0.098363	-1.501268	0.1361
D(GLSRESID(-5))	0.113128	0.097700	1.157907	0.2493
D(GLSRESID(-6))	0.229923	0.097919	2.348094	0.0206
D(GLSRESID(-7))	0.232297	0.100155	2.319377	0.0222
D(GLSRESID(-8))	-0.102501	0.102808	-0.997013	0.3209
D(GLSRESID(-9))	-0.025060	0.104630	-0.239515	0.8111
D(GLSRESID(-10))	0.312198	0.106209	2.939468	0.0040
R-squared	0.206436	Mean dependent var	3.154978	
Adjusted R-squared	0.136209	S.D. dependent var	47.17891	
S.E. of regression	43.84824	Akaike info criterion	10.48387	
Sum squared resid	217261.5	Schwarz criterion	10.73406	
Log likelihood	-639.0001	Durbin-Watson stat	2.015117	

### CZECH MONTHLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)

Sample(adjusted): 366 500

Included observations: 135 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.22217	-0.12248	0.55130	67.8395
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	2099.164
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## CZECH MONTHLY

Null Hypothesis: CZECH has a unit root

Exogenous: Constant, Linear Trend

Lag length: 10 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)

Sample(adjusted): 366 500

Included observations: 135 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-44.0740	-4.62037	0.10483	2.45302
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	58053.36
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## CZECH MONTHLY

Null Hypothesis: CZECH is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.302801
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	77682.77
HAC corrected variance (Bartlett kernel)	682746.8

KPSS Test Equation

Dependent Variable: CZECH

Method: Least Squares

Sample(adjusted): 366 500

Included observations: 135 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2067.568	268.9979	-7.686185	0.0000
@TREND(1)	6.579464	0.620162	10.60926	0.0000
R-squared	0.458373	Mean dependent var		774.7607
Adjusted R-squared	0.454301	S.D. dependent var		380.1252
S.E. of regression	280.8041	Akaike info criterion		14.12790
Sum squared resid	10487174	Schwarz criterion		14.17094
Log likelihood	-951.6329	F-statistic		112.5565
Durbin-Watson stat	0.026770	Prob(F-statistic)		0.000000

## HUNGARY DAILY(LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.129356	0.9226
Test critical values:		
1% level	-3.960310	
5% level	-3.410917	
10% level	-3.127264	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY)

Method: Least Squares

Sample(adjusted): 2875 6915

Included observations: 4041 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.000918	0.000813	-1.129356	0.2588
D(HUNGARY(-1))	0.057531	0.015823	3.635989	0.0003
C	-23.74126	14.81835	-1.602153	0.1092
@TREND(1)	0.007073	0.003919	1.804756	0.0712
R-squared	0.004310	Mean dependent var		5.049743
Adjusted R-squared	0.003570	S.D. dependent var		138.5315
S.E. of regression	138.2840	Akaike info criterion		12.69748
Sum squared resid	77197342	Schwarz criterion		12.70373
Log likelihood	-25651.27	F-statistic		5.825431
Durbin-Watson stat	1.988263	Prob(F-statistic)		0.000574

### HUNGARY DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-59.62893	0.0000
Test critical values:		
1% level	-3.960310	
5% level	-3.410917	
10% level	-3.127264	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY,2)

Method: Least Squares

Sample(adjusted): 2875 6915

Included observations: 4041 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-0.943038	0.015815	-59.62893	0.0000
C	-10.78865	9.383538	-1.149742	0.2503
@TREND(1)	0.003180	0.001865	1.704922	0.0883
R-squared	0.468240	Mean dependent var		0.251349
Adjusted R-squared	0.467976	S.D. dependent var		189.5925
S.E. of regression	138.2887	Akaike info criterion		12.69731
Sum squared resid	77221732	Schwarz criterion		12.70199
Log likelihood	-25651.91	F-statistic		1777.825
Durbin-Watson stat	1.988309	Prob(F-statistic)		0.000000

## HUNGARY DAILY(LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 30 (Automatic based on AIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.986234	0.9442
Test critical values:		
1% level	-3.960326	
5% level	-3.410925	
10% level	-3.127269	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY)

Method: Least Squares

Sample(adjusted): 2904 6915

Included observations: 4012 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.000815	0.000827	-0.986234	0.3241
D(HUNGARY(-1))	0.051440	0.015966	3.221868	0.0013
D(HUNGARY(-2))	0.017676	0.015986	1.105694	0.2689
D(HUNGARY(-3))	-0.033120	0.015997	-2.070334	0.0385
D(HUNGARY(-4))	0.021957	0.016031	1.369647	0.1709
D(HUNGARY(-5))	0.053484	0.016038	3.334818	0.0009
D(HUNGARY(-6))	0.035242	0.016080	2.191714	0.0285
D(HUNGARY(-7))	-0.079590	0.016118	-4.938103	0.0000
D(HUNGARY(-8))	-0.019991	0.016175	-1.235913	0.2166
D(HUNGARY(-9))	0.060119	0.016176	3.716485	0.0002
D(HUNGARY(-10))	0.018144	0.016211	1.119273	0.2631
D(HUNGARY(-11))	-0.029118	0.016227	-1.794385	0.0728
D(HUNGARY(-12))	0.029782	0.016238	1.834076	0.0667
D(HUNGARY(-13))	-0.039810	0.016245	-2.450519	0.0143
D(HUNGARY(-14))	0.003013	0.016257	0.185313	0.8530
D(HUNGARY(-15))	0.003186	0.016288	0.195613	0.8449
D(HUNGARY(-16))	0.015019	0.016296	0.921601	0.3568
D(HUNGARY(-17))	0.061308	0.016347	3.750470	0.0002
D(HUNGARY(-18))	0.029109	0.016381	1.776971	0.0756
D(HUNGARY(-19))	0.012842	0.016428	0.781746	0.4344
D(HUNGARY(-20))	-0.012390	0.016424	-0.754370	0.4507
D(HUNGARY(-21))	0.012515	0.016429	0.761800	0.4462
D(HUNGARY(-22))	-0.015172	0.016418	-0.924121	0.3555
D(HUNGARY(-23))	-0.001922	0.016440	-0.116906	0.9069
D(HUNGARY(-24))	-0.010389	0.016454	-0.631428	0.5278
D(HUNGARY(-25))	0.005556	0.016464	0.337488	0.7358
D(HUNGARY(-26))	-0.028680	0.016501	-1.738091	0.0823
D(HUNGARY(-27))	-0.050257	0.016522	-3.041863	0.0024
D(HUNGARY(-28))	-0.002624	0.016583	-0.158226	0.8743
D(HUNGARY(-29))	-0.031102	0.016613	-1.872113	0.0613
D(HUNGARY(-30))	-0.042882	0.016697	-2.568196	0.0103
C	-23.16868	15.00863	-1.543691	0.1227
@TREND(1)	0.006839	0.003960	1.726967	0.0843
R-squared	0.033295	Mean dependent var	5.071650	
Adjusted R-squared	0.025520	S.D. dependent var	139.0281	
S.E. of regression	137.2426	Akaike info criterion	12.68957	
Sum squared resid	74946606	Schwarz criterion	12.74136	
Log likelihood	-25422.28	F-statistic	4.282575	
Durbin-Watson stat	1.986795	Prob(F-statistic)	0.000000	

## HUNGARY DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 29 (Automatic based on AIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.57594	0.0000
Test critical values: 1% level	-3.960326	
5% level	-3.410925	
10% level	-3.127269	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY,2)

Method: Least Squares

Sample(adjusted): 2904 6915

Included observations: 4012 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-0.981930	0.078080	-12.57594	0.0000
D(HUNGARY(-1),2)	0.032910	0.076715	0.428988	0.6680
D(HUNGARY(-2),2)	0.050136	0.075393	0.664988	0.5061
D(HUNGARY(-3),2)	0.016592	0.074110	0.223885	0.8229
D(HUNGARY(-4),2)	0.038204	0.072987	0.523431	0.6007
D(HUNGARY(-5),2)	0.091333	0.071891	1.270442	0.2040
D(HUNGARY(-6),2)	0.126180	0.070764	1.783106	0.0746
D(HUNGARY(-7),2)	0.046238	0.069750	0.662902	0.5074
D(HUNGARY(-8),2)	0.025932	0.068718	0.377370	0.7059
D(HUNGARY(-9),2)	0.085758	0.067729	1.266179	0.2055
D(HUNGARY(-10),2)	0.103605	0.066735	1.552476	0.1206
D(HUNGARY(-11),2)	0.074160	0.065684	1.129054	0.2589
D(HUNGARY(-12),2)	0.103640	0.064644	1.603239	0.1090
D(HUNGARY(-13),2)	0.063482	0.063454	1.000441	0.3172
D(HUNGARY(-14),2)	0.066085	0.061956	1.066636	0.2862
D(HUNGARY(-15),2)	0.068794	0.060226	1.142272	0.2534
D(HUNGARY(-16),2)	0.083307	0.058370	1.427221	0.1536
D(HUNGARY(-17),2)	0.144046	0.056353	2.556127	0.0106
D(HUNGARY(-18),2)	0.172565	0.054456	3.168919	0.0015
D(HUNGARY(-19),2)	0.184729	0.052304	3.531805	0.0004
D(HUNGARY(-20),2)	0.171669	0.050188	3.420493	0.0006
D(HUNGARY(-21),2)	0.183523	0.047791	3.840092	0.0001
D(HUNGARY(-22),2)	0.167675	0.044968	3.728759	0.0002
D(HUNGARY(-23),2)	0.165054	0.041996	3.930193	0.0001
D(HUNGARY(-24),2)	0.153957	0.039248	3.922726	0.0001
D(HUNGARY(-25),2)	0.158822	0.036113	4.397945	0.0000
D(HUNGARY(-26),2)	0.129476	0.032349	4.002448	0.0001
D(HUNGARY(-27),2)	0.078584	0.027991	2.807465	0.0050
D(HUNGARY(-28),2)	0.075307	0.023097	3.260483	0.0011
D(HUNGARY(-29),2)	0.043587	0.016682	2.612808	0.0090
C	-11.68640	9.471498	-1.233850	0.2173
@TREND(1)	0.003405	0.001887	1.804725	0.0712
R-squared	0.483766	Mean dependent var		0.254873
Adjusted R-squared	0.479745	S.D. dependent var		190.2741
S.E. of regression	137.2422	Akaike info criterion		12.68931
Sum squared resid	74964926	Schwarz criterion		12.73954
Log likelihood	-25422.77	F-statistic		120.3125
Durbin-Watson stat	1.987009	Prob(F-statistic)		0.000000

### HUNGARY DAILY(LEVEL)

Null Hypothesis: HUNGARY has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 12 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.202787	0.9090
Test critical values:		
1% level	-3.960309	
5% level	-3.410917	
10% level	-3.127264	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	19161.35
HAC corrected variance (Bartlett kernel)	22584.13

Phillips-Perron Test Equation  
Dependent Variable: D(HUNGARY)  
Method: Least Squares  
Sample(adjusted): 2874 6915  
Included observations: 4042 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.000824	0.000814	-1.012156	0.3115
C	-22.95742	14.82963	-1.548078	0.1217
@TREND(1)	0.006841	0.003922	1.744043	0.0812
R-squared	0.001050	Mean dependent var		5.048746
Adjusted R-squared	0.000555	S.D. dependent var		138.5144
S.E. of regression	138.4759	Akaike info criterion		12.70001
Sum squared resid	77450175	Schwarz criterion		12.70469
Log likelihood	-25663.72	F-statistic		2.121776
Durbin-Watson stat	1.873471	Prob(F-statistic)		0.119952

### HUNGARY DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-59.75519	0.0000
Test critical values:		
1% level	-3.960310	
5% level	-3.410917	
10% level	-3.127264	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	19109.56
HAC corrected variance (Bartlett kernel)	20097.73

Phillips-Perron Test Equation  
Dependent Variable: D(HUNGARY,2)  
Method: Least Squares  
Sample(adjusted): 2875 6915

Included observations: 4041 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-0.943038	0.015815	-59.62893	0.0000
C	-10.78865	9.383538	-1.149742	0.2503
@TREND(1)	0.003180	0.001865	1.704922	0.0883
R-squared	0.468240	Mean dependent var		0.251349
Adjusted R-squared	0.467976	S.D. dependent var		189.5925
S.E. of regression	138.2887	Akaike info criterion		12.69731
Sum squared resid	77221732	Schwarz criterion		12.70199
Log likelihood	-25651.91	F-statistic		1777.825
Durbin-Watson stat	1.988309	Prob(F-statistic)		0.000000

## HUNGARY DAILY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=30)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.819887
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 2875 6915

Included observations: 4041 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000565	0.000690	-0.819887	0.4123
D(GLSRESID(-1))	0.058120	0.015819	3.673935	0.0002
R-squared	0.003336	Mean dependent var		1.514981
Adjusted R-squared	0.003090	S.D. dependent var		138.5315
S.E. of regression	138.3173	Akaike info criterion		12.69747
Sum squared resid	77272863	Schwarz criterion		12.70059
Log likelihood	-25653.24	Durbin-Watson stat		1.988193

## HUNGARY DAILY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 30 (Automatic based on AIC, MAXLAG=30)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.718041
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2904 6915  
 Included observations: 4012 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000499	0.000695	-0.718041	0.4728
D(GLSRESID(-1))	0.052051	0.015964	3.260524	0.0011
D(GLSRESID(-2))	0.018205	0.015985	1.138875	0.2548
D(GLSRESID(-3))	-0.032642	0.015998	-2.040469	0.0414
D(GLSRESID(-4))	0.022388	0.016033	1.396391	0.1627
D(GLSRESID(-5))	0.053898	0.016039	3.360347	0.0008
D(GLSRESID(-6))	0.035631	0.016081	2.215719	0.0268
D(GLSRESID(-7))	-0.079305	0.016120	-4.919651	0.0000
D(GLSRESID(-8))	-0.019643	0.016178	-1.214187	0.2247
D(GLSRESID(-9))	0.060469	0.016179	3.737540	0.0002
D(GLSRESID(-10))	0.018417	0.016214	1.135929	0.2561
D(GLSRESID(-11))	-0.028834	0.016230	-1.776612	0.0757
D(GLSRESID(-12))	0.030077	0.016241	1.851901	0.0641
D(GLSRESID(-13))	-0.039499	0.016248	-2.431055	0.0151
D(GLSRESID(-14))	0.003451	0.016258	0.212280	0.8319
D(GLSRESID(-15))	0.003698	0.016287	0.227021	0.8204
D(GLSRESID(-16))	0.015561	0.016295	0.954937	0.3397
D(GLSRESID(-17))	0.061904	0.016344	3.787586	0.0002
D(GLSRESID(-18))	0.029644	0.016379	1.809889	0.0704
D(GLSRESID(-19))	0.013444	0.016423	0.818578	0.4131
D(GLSRESID(-20))	-0.011817	0.016420	-0.719677	0.4718
D(GLSRESID(-21))	0.013098	0.016425	0.797440	0.4252
D(GLSRESID(-22))	-0.014588	0.016413	-0.888803	0.3742
D(GLSRESID(-23))	-0.001288	0.016435	-0.078385	0.9375
D(GLSRESID(-24))	-0.009745	0.016448	-0.592500	0.5535
D(GLSRESID(-25))	0.006197	0.016458	0.376498	0.7066
D(GLSRESID(-26))	-0.028075	0.016497	-1.701842	0.0889
D(GLSRESID(-27))	-0.049649	0.016518	-3.005760	0.0027
D(GLSRESID(-28))	-0.001927	0.016578	-0.116240	0.9075
D(GLSRESID(-29))	-0.030442	0.016609	-1.832851	0.0669
D(GLSRESID(-30))	-0.042075	0.016690	-2.521034	0.0117
R-squared	0.032271	Mean dependent var	1.536889	
Adjusted R-squared	0.024979	S.D. dependent var	139.0281	
S.E. of regression	137.2808	Akaike info criterion	12.68963	
Sum squared resid	75025961	Schwarz criterion	12.73829	
Log likelihood	-25424.40	Durbin-Watson stat	1.986523	

## HUNGARY DAILY

Null Hypothesis: HUNGARY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=30)  
 Sample(adjusted): 2873 6915  
 Included observations: 4043 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.46586	-0.83375	0.33812	27.1585
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	21554.94
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### HUNGARY DAILY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 30 (Spectral GLS-detrended AR based on AIC, MAXLAG=30)

Sample(adjusted): 2873 6915

Included observations: 4043 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.28421	-0.78888	0.34536	28.3353
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	20659.70
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### HUNGARY DAILY

Null Hypothesis: HUNGARY is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 51 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.675637
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	7172772.
HAC corrected variance (Bartlett kernel)	3.59E+08

KPSS Test Equation

Dependent Variable: HUNGARY

Method: Least Squares

Sample(adjusted): 2873 6915

Included observations: 4043 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14110.60	181.5838	-77.70845	0.0000
@TREND(1)	4.241859	0.036098	117.5087	0.0000
R-squared	0.773605	Mean dependent var		6644.815
Adjusted R-squared	0.773549	S.D. dependent var		5629.418
S.E. of regression	2678.866	Akaike info criterion		18.62467
Sum squared resid	2.90E+10	Schwarz criterion		18.62779
Log likelihood	-37647.77	F-statistic		13808.31
Durbin-Watson stat	0.002674	Prob(F-statistic)		0.000000



## HUNGARY WEEKLY (LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.176514	0.9136
Test critical values: 1% level	-3.969449	
5% level	-3.415387	
10% level	-3.129914	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY)

Method: Least Squares

Sample(adjusted): 1360 2167

Included observations: 808 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.005142	0.004370	-1.176514	0.2397
C	-280.1497	161.1586	-1.738348	0.0825
@TREND(1)	0.192638	0.105320	1.829077	0.0678
R-squared	0.005146	Mean dependent var		25.26077
Adjusted R-squared	0.002675	S.D. dependent var		333.3263
S.E. of regression	332.8802	Akaike info criterion		14.45715
Sum squared resid	89201442	Schwarz criterion		14.47458
Log likelihood	-5837.688	F-statistic		2.082153
Durbin-Watson stat	1.873143	Prob(F-statistic)		0.125332

## HUNGARY WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-26.63108	0.0000
Test critical values: 1% level	-3.969463	
5% level	-3.415394	
10% level	-3.129918	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY,2)

Method: Least Squares

Sample(adjusted): 1361 2167

Included observations: 807 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-0.959329	0.036023	-26.63108	0.0000
C	-118.7975	89.57398	-1.326250	0.1851

@TREND(1)	0.081198	0.050390	1.611385	0.1075
R-squared	0.468727	Mean dependent var	2.486667	
Adjusted R-squared	0.467405	S.D. dependent var	456.4443	
S.E. of regression	333.1089	Akaike info criterion	14.45853	
Sum squared resid	89213092	Schwarz criterion	14.47597	
Log likelihood	-5831.016	F-statistic	354.6727	
Durbin-Watson stat	1.958713	Prob(F-statistic)	0.000000	

### HUNGARY WEEKLY (LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 20 (Automatic based on AIC, MAXLAG=20)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.417310	0.9868
Test critical values:	1% level	-3.969740	
	5% level	-3.415529	
	10% level	-3.129998	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY)

Method: Least Squares

Sample(adjusted): 1380 2167

Included observations: 788 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.002069	0.004958	-0.417310	0.6766
D(HUNGARY(-1))	0.052365	0.036920	1.418338	0.1565
D(HUNGARY(-2))	0.018243	0.037061	0.492231	0.6227
D(HUNGARY(-3))	-0.023095	0.037471	-0.616352	0.5378
D(HUNGARY(-4))	0.105720	0.038336	2.757734	0.0060
D(HUNGARY(-5))	-0.067250	0.038502	-1.746637	0.0811
D(HUNGARY(-6))	-0.167233	0.038582	-4.334435	0.0000
D(HUNGARY(-7))	0.000858	0.040423	0.021237	0.9831
D(HUNGARY(-8))	-0.029691	0.040414	-0.734675	0.4628
D(HUNGARY(-9))	-0.031759	0.040429	-0.785551	0.4324
D(HUNGARY(-10))	0.059956	0.040505	1.480221	0.1392
D(HUNGARY(-11))	-0.016990	0.040589	-0.418578	0.6756
D(HUNGARY(-12))	-0.101285	0.040593	-2.495140	0.0128
D(HUNGARY(-13))	0.122312	0.040790	2.998595	0.0028
D(HUNGARY(-14))	-0.038536	0.041029	-0.939232	0.3479
D(HUNGARY(-15))	0.013673	0.041145	0.332320	0.7397
D(HUNGARY(-16))	-0.015502	0.041367	-0.374757	0.7079
D(HUNGARY(-17))	-0.001240	0.041968	-0.029542	0.9764
D(HUNGARY(-18))	-0.132492	0.042041	-3.151490	0.0017
D(HUNGARY(-19))	-0.043657	0.042296	-1.032176	0.3023
D(HUNGARY(-20))	0.074015	0.042535	1.740124	0.0822
C	-234.8653	171.3596	-1.370599	0.1709
@TREND(1)	0.158589	0.111787	1.418668	0.1564
R-squared	0.084075	Mean dependent var	25.71235	
Adjusted R-squared	0.057734	S.D. dependent var	337.4930	
S.E. of regression	327.6057	Akaike info criterion	14.45025	
Sum squared resid	82104008	Schwarz criterion	14.58654	
Log likelihood	-5670.399	F-statistic	3.191866	
Durbin-Watson stat	1.970490	Prob(F-statistic)	0.000001	

## HUNGARY WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 19 (Automatic based on AIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.912427	0.0000
Test critical values:		
1% level	-3.969740	
5% level	-3.415529	
10% level	-3.129998	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY,2)

Method: Least Squares

Sample(adjusted): 1380 2167

Included observations: 788 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-1.262188	0.182597	-6.912427	0.0000
D(HUNGARY(-1),2)	0.312944	0.176903	1.769017	0.0773
D(HUNGARY(-2),2)	0.329881	0.172163	1.916101	0.0557
D(HUNGARY(-3),2)	0.305355	0.167973	1.817877	0.0695
D(HUNGARY(-4),2)	0.409232	0.163056	2.509758	0.0123
D(HUNGARY(-5),2)	0.340016	0.157749	2.155423	0.0314
D(HUNGARY(-6),2)	0.170791	0.151799	1.125118	0.2609
D(HUNGARY(-7),2)	0.169300	0.146055	1.159154	0.2468
D(HUNGARY(-8),2)	0.136923	0.138886	0.985862	0.3245
D(HUNGARY(-9),2)	0.102835	0.132029	0.778880	0.4363
D(HUNGARY(-10),2)	0.160424	0.125507	1.278209	0.2016
D(HUNGARY(-11),2)	0.141229	0.118866	1.188128	0.2352
D(HUNGARY(-12),2)	0.037776	0.111691	0.338215	0.7353
D(HUNGARY(-13),2)	0.158078	0.103993	1.520074	0.1289
D(HUNGARY(-14),2)	0.117610	0.096041	1.224574	0.2211
D(HUNGARY(-15),2)	0.129304	0.088464	1.461660	0.1442
D(HUNGARY(-16),2)	0.112064	0.080198	1.397347	0.1627
D(HUNGARY(-17),2)	0.108624	0.069654	1.559463	0.1193
D(HUNGARY(-18),2)	-0.026123	0.059164	-0.441545	0.6589
D(HUNGARY(-19),2)	-0.072008	0.042239	-1.704782	0.0886
C	-175.7321	96.30653	-1.824716	0.0684
@TREND(1)	0.117954	0.054880	2.149328	0.0319
R-squared	0.510884	Mean dependent var	2.563947	
Adjusted R-squared	0.497475	S.D. dependent var	461.8897	
S.E. of regression	327.4291	Akaike info criterion	14.44794	
Sum squared resid	82122698	Schwarz criterion	14.57831	
Log likelihood	-5670.489	F-statistic	38.09956	
Durbin-Watson stat	1.970856	Prob(F-statistic)	0.000000	

## HUNGARY WEEKLY (LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 14 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.095729	0.9279
Test critical values:		
1% level	-3.969449	
5% level	-3.415387	

10% level -3.129914

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	110397.8
HAC corrected variance (Bartlett kernel)	102996.4

Phillips-Perron Test Equation  
 Dependent Variable: D(HUNGARY)  
 Method: Least Squares  
 Sample(adjusted): 1360 2167  
 Included observations: 808 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.005142	0.004370	-1.176514	0.2397
C	-280.1497	161.1586	-1.738348	0.0825
@TREND(1)	0.192638	0.105320	1.829077	0.0678
R-squared	0.005146	Mean dependent var		25.26077
Adjusted R-squared	0.002675	S.D. dependent var		333.3263
S.E. of regression	332.8802	Akaike info criterion		14.45715
Sum squared resid	89201442	Schwarz criterion		14.47458
Log likelihood	-5837.688	F-statistic		2.082153
Durbin-Watson stat	1.873143	Prob(F-statistic)		0.125332

## HUNGARY WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 17 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-26.53323	0.0000
Test critical values:		
1% level	-3.969463	
5% level	-3.415394	
10% level	-3.129918	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	110549.1
HAC corrected variance (Bartlett kernel)	87636.25

Phillips-Perron Test Equation  
 Dependent Variable: D(HUNGARY,2)  
 Method: Least Squares  
 Sample(adjusted): 1361 2167  
 Included observations: 807 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-0.959329	0.036023	-26.63108	0.0000
C	-118.7975	89.57398	-1.326250	0.1851
@TREND(1)	0.081198	0.050390	1.611385	0.1075
R-squared	0.468727	Mean dependent var		2.486667
Adjusted R-squared	0.467405	S.D. dependent var		456.4443
S.E. of regression	333.1089	Akaike info criterion		14.45853
Sum squared resid	89213092	Schwarz criterion		14.47597

Log likelihood	-5831.016	F-statistic	354.6727
Durbin-Watson stat	1.958713	Prob(F-statistic)	0.000000

### HUNGARY WEEKLY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=20)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.891034
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1360 2167

Included observations: 808 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003354	0.003764	-0.891034	0.3732
R-squared	0.000506	Mean dependent var	7.277567	
Adjusted R-squared	0.000506	S.D. dependent var	333.3263	
S.E. of regression	333.2420	Akaike info criterion	14.45685	
Sum squared resid	89617512	Schwarz criterion	14.46266	
Log likelihood	-5839.568	Durbin-Watson stat	1.867707	

### HUNGARY WEEKLY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 20 (Automatic based on AIC, MAXLAG=20)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.523272
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1380 2167

Included observations: 788 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.002119	0.004050	-0.523272	0.6009
D(GLSRESID(-1))	0.058346	0.036820	1.584648	0.1135
D(GLSRESID(-2))	0.022656	0.037036	0.611714	0.5409
D(GLSRESID(-3))	-0.018501	0.037430	-0.494285	0.6212
D(GLSRESID(-4))	0.111998	0.038206	2.931409	0.0035
D(GLSRESID(-5))	-0.061258	0.038372	-1.596435	0.1108
D(GLSRESID(-6))	-0.160617	0.038428	-4.179690	0.0000
D(GLSRESID(-7))	0.009903	0.040131	0.246778	0.8051
D(GLSRESID(-8))	-0.019309	0.040003	-0.482674	0.6295

D(GLSRESID(-9))	-0.022527	0.040134	-0.561296	0.5748
D(GLSRESID(-10))	0.069498	0.040189	1.729298	0.0842
D(GLSRESID(-11))	-0.008529	0.040349	-0.211383	0.8326
D(GLSRESID(-12))	-0.092894	0.040360	-2.301636	0.0216
D(GLSRESID(-13))	0.130823	0.040573	3.224385	0.0013
D(GLSRESID(-14))	-0.031236	0.040875	-0.764191	0.4450
D(GLSRESID(-15))	0.021370	0.040969	0.521619	0.6021
D(GLSRESID(-16))	-0.008791	0.041257	-0.213089	0.8313
D(GLSRESID(-17))	0.007322	0.041739	0.175419	0.8608
D(GLSRESID(-18))	-0.123868	0.041801	-2.963316	0.0031
D(GLSRESID(-19))	-0.034013	0.042017	-0.809497	0.4185
D(GLSRESID(-20))	0.083204	0.042309	1.966590	0.0496
R-squared	0.077929	Mean dependent var	7.729147	
Adjusted R-squared	0.053885	S.D. dependent var	337.4930	
S.E. of regression	328.2742	Akaike info criterion	14.45186	
Sum squared resid	82654961	Schwarz criterion	14.57630	
Log likelihood	-5673.034	Durbin-Watson stat	1.969153	

## HUNGARY WEEKLY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=20)

Sample(adjusted): 1359 2167

Included observations: 809 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.70302	-0.88929	0.32900	25.7347
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	110912.8
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## HUNGARY WEEKLY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 20 (Spectral GLS-detrended AR based on AIC, MAXLAG=20)

Sample(adjusted): 1359 2167

Included observations: 809 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.92501	-0.69451	0.36078	30.9469
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	92232.39
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## HUNGARY WEEKLY

Null Hypothesis: HUNGARY is stationary  
Exogenous: Constant, Linear Trend  
Bandwidth: 23 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.312923
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	7218728.
HAC corrected variance (Bartlett kernel)	1.56E+08

### KPSS Test Equation

Dependent Variable: HUNGARY

Method: Least Squares

Sample(adjusted): 1359 2167

Included observations: 809 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-30774.15	719.8193	-42.75261	0.0000
@TREND(1)	21.24122	0.404982	52.44975	0.0000
R-squared	0.773186	Mean dependent var		6652.874
Adjusted R-squared	0.772905	S.D. dependent var		5644.996
S.E. of regression	2690.096	Akaike info criterion		18.63501
Sum squared resid	5.84E+09	Schwarz criterion		18.64662
Log likelihood	-7535.862	F-statistic		2750.976
Durbin-Watson stat	0.015356	Prob(F-statistic)		0.000000

## HUNGARY MONTHLY (LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.185201	0.9100
Test critical values:		
1% level	-4.008428	
5% level	-3.434299	
10% level	-3.141079	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY)

Method: Least Squares

Sample(adjusted): 316 500

Included observations: 185 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.022739	0.019186	-1.185201	0.2375
C	-1252.089	714.8540	-1.751531	0.0815
@TREND(1)	3.718362	2.019690	1.841055	0.0672
R-squared	0.022544	Mean dependent var		110.5368

Adjusted R-squared	0.011803	S.D. dependent var	707.1236
S.E. of regression	702.9382	Akaike info criterion	15.96450
Sum squared resid	89930219	Schwarz criterion	16.01672
Log likelihood	-1473.716	F-statistic	2.098839
Durbin-Watson stat	2.091181	Prob(F-statistic)	0.125556

### HUNGARY MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.30930	0.0000
Test critical values:		
1% level	-4.008706	
5% level	-3.434433	
10% level	-3.141157	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(HUNGARY,2)  
 Method: Least Squares  
 Sample(adjusted): 317 500  
 Included observations: 184 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-1.062263	0.074236	-14.30930	0.0000
C	-588.8195	405.0366	-1.453744	0.1477
@TREND(1)	1.734328	0.988071	1.755266	0.0809
R-squared	0.530795	Mean dependent var	-0.685163	
Adjusted R-squared	0.525610	S.D. dependent var	1025.324	
S.E. of regression	706.2020	Akaike info criterion	15.97385	
Sum squared resid	90268536	Schwarz criterion	16.02627	
Log likelihood	-1466.594	F-statistic	102.3794	
Durbin-Watson stat	2.008259	Prob(F-statistic)	0.000000	

### HUNGARY MONTHLY (LEVEL)

Null Hypothesis: HUNGARY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 9 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.566170	0.2964
Test critical values:		
1% level	-4.011044	
5% level	-3.435560	
10% level	-3.141820	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(HUNGARY)  
 Method: Least Squares  
 Sample(adjusted): 325 500



Included observations: 176 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.065016	0.025336	-2.566170	0.0112
D(HUNGARY(-1))	0.003360	0.078434	0.042835	0.9659
D(HUNGARY(-2))	-0.118005	0.080154	-1.472224	0.1429
D(HUNGARY(-3))	0.052269	0.079426	0.658080	0.5114
D(HUNGARY(-4))	-0.057448	0.080784	-0.711133	0.4780
D(HUNGARY(-5))	0.201459	0.080952	2.488635	0.0138
D(HUNGARY(-6))	0.101886	0.080924	1.259034	0.2098
D(HUNGARY(-7))	0.477058	0.082308	5.795980	0.0000
D(HUNGARY(-8))	-0.034670	0.085457	-0.405700	0.6855
D(HUNGARY(-9))	0.225850	0.092580	2.439516	0.0158
C	-2075.098	804.8241	-2.578325	0.0108
@TREND(1)	6.180371	2.276297	2.715099	0.0073
R-squared	0.222113	Mean dependent var	117.5289	
Adjusted R-squared	0.169938	S.D. dependent var	724.2846	
S.E. of regression	659.8792	Akaike info criterion	15.88774	
Sum squared resid	71412258	Schwarz criterion	16.10391	
Log likelihood	-1386.121	F-statistic	4.257061	
Durbin-Watson stat	1.989616	Prob(F-statistic)	0.000014	

### HUNGARY MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 6 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.329468	0.0649
Test critical values:		
1% level	-4.010440	
5% level	-3.435269	
10% level	-3.141649	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY,2)

Method: Least Squares

Sample(adjusted): 323 500

Included observations: 178 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-0.771105	0.231600	-3.329468	0.0011
D(HUNGARY(-1),2)	-0.317580	0.214855	-1.478115	0.1412
D(HUNGARY(-2),2)	-0.459955	0.194879	-2.360206	0.0194
D(HUNGARY(-3),2)	-0.460509	0.169118	-2.722997	0.0071
D(HUNGARY(-4),2)	-0.574890	0.142796	-4.025958	0.0001
D(HUNGARY(-5),2)	-0.450471	0.111329	-4.046295	0.0001
D(HUNGARY(-6),2)	-0.387782	0.077249	-5.019898	0.0000
C	-419.3994	437.7630	-0.958051	0.3394
@TREND(1)	1.248565	1.087131	1.148495	0.2524
R-squared	0.604719	Mean dependent var	-0.263708	
Adjusted R-squared	0.586008	S.D. dependent var	1042.516	
S.E. of regression	670.7778	Akaike info criterion	15.90399	
Sum squared resid	76040335	Schwarz criterion	16.06487	
Log likelihood	-1406.455	F-statistic	32.31804	
Durbin-Watson stat	1.930098	Prob(F-statistic)	0.000000	

## HUNGARY MONTHLY (2<sup>ND</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY,2) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 7 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.921911	0.0000
Test critical values:		
1% level	-4.011044	
5% level	-3.435560	
10% level	-3.141820	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HUNGARY,3)

Method: Least Squares

Sample(adjusted): 325 500

Included observations: 176 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1),2)	-6.968078	0.781007	-8.921911	0.0000
D(HUNGARY(-1),3)	4.988355	0.740192	6.739275	0.0000
D(HUNGARY(-2),3)	3.904415	0.658602	5.928340	0.0000
D(HUNGARY(-3),3)	2.900143	0.550651	5.266752	0.0000
D(HUNGARY(-4),3)	1.860915	0.429692	4.330810	0.0000
D(HUNGARY(-5),3)	1.057918	0.305292	3.465265	0.0007
D(HUNGARY(-6),3)	0.386159	0.184322	2.095023	0.0377
D(HUNGARY(-7),3)	0.213153	0.085867	2.482371	0.0140
C	177.8559	422.2255	0.421234	0.6741
@TREND(1)	-0.430490	1.018459	-0.422688	0.6731
R-squared	0.862445	Mean dependent var		14.79869
Adjusted R-squared	0.854988	S.D. dependent var		1800.892
S.E. of regression	685.7885	Akaike info criterion		15.95416
Sum squared resid	78070773	Schwarz criterion		16.13430
Log likelihood	-1393.966	F-statistic		115.6438
Durbin-Watson stat	1.978090	Prob(F-statistic)		0.000000

## HUNGARY MONTHLY (LEVEL)

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.203149	0.9064
Test critical values:		
1% level	-4.008428	
5% level	-3.434299	
10% level	-3.141079	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	486109.3
HAC corrected variance (Bartlett kernel)	493624.2

### Phillips-Perron Test Equation

Dependent Variable: D(HUNGARY)

Method: Least Squares

Sample(adjusted): 316 500  
 Included observations: 185 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HUNGARY(-1)	-0.022739	0.019186	-1.185201	0.2375
C	-1252.089	714.8540	-1.751531	0.0815
@TREND(1)	3.718362	2.019690	1.841055	0.0672
R-squared	0.022544	Mean dependent var		110.5368
Adjusted R-squared	0.011803	S.D. dependent var		707.1236
S.E. of regression	702.9382	Akaike info criterion		15.96450
Sum squared resid	89930219	Schwarz criterion		16.01672
Log likelihood	-1473.716	F-statistic		2.098839
Durbin-Watson stat	2.091181	Prob(F-statistic)		0.125556

### HUNGARY MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(HUNGARY) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-14.31653	0.0000
Test critical values:		
1% level	-4.008706	
5% level	-3.434433	
10% level	-3.141157	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	490589.9
HAC corrected variance (Bartlett kernel)	482061.7

Phillips-Perron Test Equation  
 Dependent Variable: D(HUNGARY,2)  
 Method: Least Squares  
 Sample(adjusted): 317 500  
 Included observations: 184 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HUNGARY(-1))	-1.062263	0.074236	-14.30930	0.0000
C	-588.8195	405.0366	-1.453744	0.1477
@TREND(1)	1.734328	0.988071	1.755266	0.0809
R-squared	0.530795	Mean dependent var		-0.685163
Adjusted R-squared	0.525610	S.D. dependent var		1025.324
S.E. of regression	706.2020	Akaike info criterion		15.97385
Sum squared resid	90268536	Schwarz criterion		16.02627
Log likelihood	-1466.594	F-statistic		102.3794
Durbin-Watson stat	2.008259	Prob(F-statistic)		0.000000

### HUNGARY MONTHLY

Null Hypothesis: HUNGARY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.996136
Test critical values:	
1% level	-3.478000
5% level	-2.945000

10% level -2.655000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 316 500

Included observations: 185 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.017189	0.017256	-0.996136	0.3205
R-squared	0.003838	Mean dependent var		27.61924
Adjusted R-squared	0.003838	S.D. dependent var		707.1236
S.E. of regression	705.7653	Akaike info criterion		15.96183
Sum squared resid	91651244	Schwarz criterion		15.97924
Log likelihood	-1475.470	Durbin-Watson stat		2.063332

## HUNGARY MONTHLY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 9 (Automatic based on AIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-2.347366
Test critical values: 1% level	-3.488800
5% level	-2.954000
10% level	-2.664000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 325 500

Included observations: 176 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.045747	0.019489	-2.347366	0.0201
D(GLSRESID(-1))	-0.006766	0.076670	-0.088253	0.9298
D(GLSRESID(-2))	-0.128952	0.077812	-1.657212	0.0994
D(GLSRESID(-3))	0.040597	0.076059	0.533754	0.5942
D(GLSRESID(-4))	-0.071928	0.075988	-0.946574	0.3452
D(GLSRESID(-5))	0.188420	0.076133	2.474883	0.0143
D(GLSRESID(-6))	0.090512	0.077564	1.166928	0.2449
D(GLSRESID(-7))	0.463221	0.078071	5.933304	0.0000
D(GLSRESID(-8))	-0.048142	0.083346	-0.577622	0.5643
D(GLSRESID(-9))	0.207183	0.088143	2.350529	0.0199
R-squared	0.211505	Mean dependent var		34.61135
Adjusted R-squared	0.168755	S.D. dependent var		724.2846
S.E. of regression	660.3492	Akaike info criterion		15.87855
Sum squared resid	72386139	Schwarz criterion		16.05870
Log likelihood	-1387.313	Durbin-Watson stat		1.982580

## HUNGARY MONTHLY

Null Hypothesis: HUNGARY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=14)  
 Sample(adjusted): 315 500  
 Included observations: 186 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.11414	-0.97816	0.31410	23.5407
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 495412.1

### HUNGARY MONTHLY

Null Hypothesis: HUNGARY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 9 (Spectral GLS-detrended AR based on AIC, MAXLAG=14)  
 Sample(adjusted): 315 500  
 Included observations: 186 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-57.5731	-5.27653	0.09165	2.00418
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 5819019.

### HUNGARY MONTHLY

Null Hypothesis: HUNGARY is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 10 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.182047
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 7425725.  
 HAC corrected variance (Bartlett kernel) 66476581

KPSS Test Equation  
 Dependent Variable: HUNGARY

Method: Least Squares  
Sample(adjusted): 315 500  
Included observations: 186 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-31292.08	1534.125	-20.39734	0.0000
@TREND(1)	93.48469	3.741489	24.98596	0.0000
R-squared	0.772361	Mean dependent var		6709.447
Adjusted R-squared	0.771124	S.D. dependent var		5726.865
S.E. of regression	2739.788	Akaike info criterion		18.67984
Sum squared resid	1.38E+09	Schwarz criterion		18.71453
Log likelihood	-1735.225	F-statistic		624.2982
Durbin-Watson stat	0.066652	Prob(F-statistic)		0.000000

### POLAND DAILY (LEVEL)

Null Hypothesis: POLAND has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 1 (Automatic based on SIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.136382	0.9214
Test critical values:		
1% level	-3.960352	
5% level	-3.410938	
10% level	-3.127277	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(POLAND)  
Method: Least Squares  
Sample(adjusted): 2949 6915  
Included observations: 3967 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.001063	0.000935	-1.136382	0.2559
D(POLAND(-1))	0.118251	0.015800	7.484134	0.0000
C	-31.44138	25.31600	-1.241957	0.2143
@TREND(1)	0.011325	0.007272	1.557375	0.1195
R-squared	0.014502	Mean dependent var		9.993592
Adjusted R-squared	0.013756	S.D. dependent var		264.7773
S.E. of regression	262.9499	Akaike info criterion		13.98281
Sum squared resid	2.74E+08	Schwarz criterion		13.98915
Log likelihood	-27730.91	F-statistic		19.43840
Durbin-Watson stat	2.005216	Prob(F-statistic)		0.000000

### POLAND DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-55.91143	0.0000
Test critical values:		
1% level	-3.960352	
5% level	-3.410938	
10% level	-3.127277	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(POLAND,2)  
 Method: Least Squares  
 Sample(adjusted): 2949 6915  
 Included observations: 3967 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-0.882555	0.015785	-55.91143	0.0000
C	-11.74952	18.45660	-0.636603	0.5244
@TREND(1)	0.004175	0.003646	1.145068	0.2523
R-squared	0.440910	Mean dependent var		0.165969
Adjusted R-squared	0.440628	S.D. dependent var		351.5917
S.E. of regression	262.9596	Akaike info criterion		13.98263
Sum squared resid	2.74E+08	Schwarz criterion		13.98739
Log likelihood	-27731.55	F-statistic		1563.046
Durbin-Watson stat	2.005030	Prob(F-statistic)		0.000000

## POLAND DAILY (LEVEL)

Null Hypothesis: POLAND has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 10 (Automatic based on AIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.452200	0.8455
Test critical values:		
1% level	-3.960358	
5% level	-3.410941	
10% level	-3.127278	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(POLAND)  
 Method: Least Squares  
 Sample(adjusted): 2958 6915  
 Included observations: 3958 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.001369	0.000943	-1.452200	0.1465
D(POLAND(-1))	0.114547	0.015925	7.192994	0.0000
D(POLAND(-2))	0.028059	0.016032	1.750164	0.0802
D(POLAND(-3))	0.009251	0.016039	0.576768	0.5641
D(POLAND(-4))	-0.012731	0.016090	-0.791234	0.4289
D(POLAND(-5))	0.009048	0.016094	0.562223	0.5740
D(POLAND(-6))	0.020006	0.016094	1.243089	0.2139
D(POLAND(-7))	-0.027188	0.016098	-1.688887	0.0913
D(POLAND(-8))	0.021955	0.016106	1.363177	0.1729
D(POLAND(-9))	0.016343	0.016106	1.014738	0.3103
D(POLAND(-10))	0.044124	0.016031	2.752436	0.0059
C	-36.11446	25.43383	-1.419938	0.1557
@TREND(1)	0.012991	0.007307	1.777887	0.0755
R-squared	0.019391	Mean dependent var		10.03006
Adjusted R-squared	0.016409	S.D. dependent var		265.0766
S.E. of regression	262.8928	Akaike info criterion		13.98465
Sum squared resid	2.73E+08	Schwarz criterion		14.00529
Log likelihood	-27662.62	F-statistic		6.500981

Durbin-Watson stat      1.999846      Prob(F-statistic)      0.000000

### POLAND DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=30)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-40.62718	0.0000
Test critical values:		
1% level	-3.960353	
5% level	-3.410938	
10% level	-3.127277	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND,2)

Method: Least Squares

Sample(adjusted): 2950 6915

Included observations: 3966 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-0.857701	0.021112	-40.62718	0.0000
D(POLAND(-1),2)	-0.028173	0.015894	-1.772579	0.0764
C	-11.43925	18.46328	-0.619568	0.5356
@TREND(1)	0.004063	0.003648	1.113751	0.2655
R-squared	0.441353	Mean dependent var		0.166011
Adjusted R-squared	0.440930	S.D. dependent var		351.6360
S.E. of regression	262.9217	Akaike info criterion		13.98260
Sum squared resid	2.74E+08	Schwarz criterion		13.98894
Log likelihood	-27723.49	F-statistic		1043.378
Durbin-Watson stat	1.998889	Prob(F-statistic)		0.000000

### POLAND DAILY (LEVEL)

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 16 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.347486	0.8756
Test critical values:		
1% level	-3.960352	
5% level	-3.410938	
10% level	-3.127277	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	70031.56
HAC corrected variance (Bartlett kernel)	100875.2

Phillips-Perron Test Equation

Dependent Variable: D(POLAND)

Method: Least Squares

Sample(adjusted): 2948 6915

Included observations: 3968 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.000748	0.000940	-0.795730	0.4262



C	-27.05264	25.47516	-1.061922	0.2883
@TREND(1)	0.009737	0.007318	1.330607	0.1834
R-squared	0.000573	Mean dependent var	9.991074	
Adjusted R-squared	0.000069	S.D. dependent var	264.7440	
S.E. of regression	264.7349	Akaike info criterion	13.99609	
Sum squared resid	2.78E+08	Schwarz criterion	14.00084	
Log likelihood	-27765.24	F-statistic	1.136705	
Durbin-Watson stat	1.762949	Prob(F-statistic)	0.320979	

### POLAND DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 12 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-56.29082	0.0000
Test critical values:		
1% level	-3.960352	
5% level	-3.410938	
10% level	-3.127277	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	69095.46
HAC corrected variance (Bartlett kernel)	75960.67

Phillips-Perron Test Equation

Dependent Variable: D(POLAND,2)

Method: Least Squares

Sample(adjusted): 2949 6915

Included observations: 3967 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-0.882555	0.015785	-55.91143	0.0000
C	-11.74952	18.45660	-0.636603	0.5244
@TREND(1)	0.004175	0.003646	1.145068	0.2523
R-squared	0.440910	Mean dependent var	0.165969	
Adjusted R-squared	0.440628	S.D. dependent var	351.5917	
S.E. of regression	262.9596	Akaike info criterion	13.98263	
Sum squared resid	2.74E+08	Schwarz criterion	13.98739	
Log likelihood	-27731.55	F-statistic	1563.046	
Durbin-Watson stat	2.005030	Prob(F-statistic)	0.000000	

### POLAND DAILY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=30)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.418648
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2949 6915  
 Included observations: 3967 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001266	0.000892	-1.418648	0.1561
D(GLSRESID(-1))	0.118705	0.015789	7.517971	0.0000
R-squared	0.014282	Mean dependent var		2.536004
Adjusted R-squared	0.014033	S.D. dependent var		264.7773
S.E. of regression	262.9129	Akaike info criterion		13.98203
Sum squared resid	2.74E+08	Schwarz criterion		13.98520
Log likelihood	-27731.35	Durbin-Watson stat		2.005297

## POLAND DAILY

Null Hypothesis: POLAND has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 10 (Automatic based on AIC, MAXLAG=30)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.697902
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2958 6915  
 Included observations: 3958 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001524	0.000898	-1.697902	0.0896
D(GLSRESID(-1))	0.114840	0.015916	7.215435	0.0000
D(GLSRESID(-2))	0.028347	0.016023	1.769136	0.0769
D(GLSRESID(-3))	0.009531	0.016030	0.594576	0.5522
D(GLSRESID(-4))	-0.012493	0.016083	-0.776795	0.4373
D(GLSRESID(-5))	0.009283	0.016087	0.577030	0.5640
D(GLSRESID(-6))	0.020240	0.016087	1.258119	0.2084
D(GLSRESID(-7))	-0.026954	0.016091	-1.675039	0.0940
D(GLSRESID(-8))	0.022188	0.016099	1.378243	0.1682
D(GLSRESID(-9))	0.016583	0.016099	1.030065	0.3030
D(GLSRESID(-10))	0.044369	0.016024	2.768966	0.0056
R-squared	0.019251	Mean dependent var		2.572473
Adjusted R-squared	0.016766	S.D. dependent var		265.0766
S.E. of regression	262.8450	Akaike info criterion		13.98378
Sum squared resid	2.73E+08	Schwarz criterion		14.00124
Log likelihood	-27662.90	Durbin-Watson stat		1.999844

## POLAND DAILY

Null Hypothesis: POLAND has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=30)  
 Sample(adjusted): 2947 6915

Included observations: 3969 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.73821	-1.42996	0.24920	15.4828
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	88953.29
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### POLAND DAILY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag length: 10 (Spectral GLS-detrended AR based on AIC, MAXLAG=30)

Sample(adjusted): 2947 6915

Included observations: 3969 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.09424	-1.77414	0.21919	11.9778
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	114983.1
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### POLAND DAILY

Null Hypothesis: POLAND is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 50 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.542100
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	20003514
HAC corrected variance (Bartlett kernel)	9.62E+08

KPSS Test Equation

Dependent Variable: POLAND

Method: Least Squares

Sample(adjusted): 2947 6915

Included observations: 3969 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-18555.04	313.6904	-59.15081	0.0000

@TREND(1)	6.737025	0.061977	108.7018	0.0000
R-squared	0.748655	Mean dependent var	14658.49	
Adjusted R-squared	0.748591	S.D. dependent var	8922.212	
S.E. of regression	4473.656	Akaike info criterion	19.65030	
Sum squared resid	7.94E+10	Schwarz criterion	19.65347	
Log likelihood	-38994.03	F-statistic	11816.07	
Durbin-Watson stat	0.003503	Prob(F-statistic)	0.000000	

### POLAND WEEKLY (LEVEL)

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.157436	0.9172
Test critical values: 1% level	-3.969666	
5% level	-3.415493	
10% level	-3.129976	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND)

Method: Least Squares

Sample(adjusted): 1375 2167

Included observations: 793 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.006142	0.005306	-1.157436	0.2474
C	-433.6539	301.8333	-1.436733	0.1512
@TREND(1)	0.324077	0.206542	1.569060	0.1170
R-squared	0.003305	Mean dependent var	49.99317	
Adjusted R-squared	0.000782	S.D. dependent var	668.7816	
S.E. of regression	668.5200	Akaike info criterion	15.85179	
Sum squared resid	3.53E+08	Schwarz criterion	15.86947	
Log likelihood	-6282.233	F-statistic	1.309917	
Durbin-Watson stat	1.905433	Prob(F-statistic)	0.270428	

### POLAND WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-17.09373	0.0000
Test critical values: 1% level	-3.969695	
5% level	-3.415507	
10% level	-3.129985	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND,2)

Method: Least Squares

Sample(adjusted): 1377 2167

Included observations: 791 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-0.859981	0.050310	-17.09373	0.0000
D(POLAND(-1),2)	-0.112398	0.035979	-3.123997	0.0018
C	-143.1296	185.2374	-0.772682	0.4399
@TREND(1)	0.105604	0.103780	1.017570	0.3092
R-squared	0.484309	Mean dependent var		4.126511
Adjusted R-squared	0.482343	S.D. dependent var		925.5937
S.E. of regression	665.9496	Akaike info criterion		15.84535
Sum squared resid	3.49E+08	Schwarz criterion		15.86898
Log likelihood	-6262.836	F-statistic		246.3691
Durbin-Watson stat	1.970119	Prob(F-statistic)		0.000000

### POLAND WEEKLY (LEVEL)

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 16 (Automatic based on AIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.885844	0.9557
Test critical values:		
1% level	-3.969906	
5% level	-3.415610	
10% level	-3.130046	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND)

Method: Least Squares

Sample(adjusted): 1391 2167

Included observations: 777 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.005324	0.006010	-0.885844	0.3760
D(POLAND(-1))	0.034261	0.036812	0.930713	0.3523
D(POLAND(-2))	0.104289	0.036927	2.824195	0.0049
D(POLAND(-3))	0.023353	0.037536	0.622154	0.5340
D(POLAND(-4))	0.024285	0.037825	0.642023	0.5211
D(POLAND(-5))	-0.042927	0.037893	-1.132853	0.2576
D(POLAND(-6))	-0.074628	0.038169	-1.955219	0.0509
D(POLAND(-7))	0.006155	0.038682	0.159114	0.8736
D(POLAND(-8))	0.032472	0.038662	0.839882	0.4012
D(POLAND(-9))	-0.027335	0.038704	-0.706257	0.4802
D(POLAND(-10))	0.092741	0.038725	2.394872	0.0169
D(POLAND(-11))	-0.035009	0.038904	-0.899878	0.3685
D(POLAND(-12))	0.013356	0.038928	0.343095	0.7316
D(POLAND(-13))	-0.031466	0.038990	-0.807021	0.4199
D(POLAND(-14))	-0.055246	0.039010	-1.416199	0.1571
D(POLAND(-15))	0.025217	0.038803	0.649881	0.5160
D(POLAND(-16))	-0.106739	0.038871	-2.745981	0.0062
C	-398.1231	320.0519	-1.243933	0.2139
@TREND(1)	0.298001	0.220472	1.351650	0.1769
R-squared	0.052700	Mean dependent var		51.28749
Adjusted R-squared	0.030205	S.D. dependent var		675.5657
S.E. of regression	665.2849	Akaike info criterion		15.86246
Sum squared resid	3.35E+08	Schwarz criterion		15.97630
Log likelihood	-6143.564	F-statistic		2.342719
Durbin-Watson stat	1.975524	Prob(F-statistic)		0.001312

## POLAND WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 15 (Automatic based on AIC, MAXLAG=20)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.083921	0.0000
Test critical values: 1% level	-3.969906	
5% level	-3.415610	
10% level	-3.130046	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(POLAND,2)  
 Method: Least Squares  
 Sample(adjusted): 1391 2167  
 Included observations: 777 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-1.080711	0.133686	-8.083921	0.0000
D(POLAND(-1),2)	0.111607	0.128877	0.865997	0.3868
D(POLAND(-2),2)	0.212739	0.123875	1.717371	0.0863
D(POLAND(-3),2)	0.232523	0.119461	1.946439	0.0520
D(POLAND(-4),2)	0.252904	0.115317	2.193129	0.0286
D(POLAND(-5),2)	0.206272	0.110934	1.859421	0.0634
D(POLAND(-6),2)	0.127739	0.106911	1.194817	0.2325
D(POLAND(-7),2)	0.129215	0.102072	1.265916	0.2059
D(POLAND(-8),2)	0.157191	0.097135	1.618272	0.1060
D(POLAND(-9),2)	0.125409	0.091326	1.373201	0.1701
D(POLAND(-10),2)	0.213687	0.085023	2.513287	0.0122
D(POLAND(-11),2)	0.174551	0.078774	2.215848	0.0270
D(POLAND(-12),2)	0.183795	0.071814	2.559311	0.0107
D(POLAND(-13),2)	0.148438	0.063811	2.326194	0.0203
D(POLAND(-14),2)	0.089470	0.054524	1.640937	0.1012
D(POLAND(-15),2)	0.110609	0.038619	2.864095	0.0043
C	-171.4226	192.1730	-0.892023	0.3727
@TREND(1)	0.127640	0.107795	1.184106	0.2367
R-squared	0.503768	Mean dependent var	4.212188	
Adjusted R-squared	0.492653	S.D. dependent var	933.8852	
S.E. of regression	665.1905	Akaike info criterion	15.86092	
Sum squared resid	3.36E+08	Schwarz criterion	15.96877	
Log likelihood	-6143.966	F-statistic	45.32501	
Durbin-Watson stat	1.977249	Prob(F-statistic)	0.000000	

## POLAND WEEKLY (LEVEL)

Null Hypothesis: POLAND has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.458569	0.8428
Test critical values: 1% level	-3.969666	
5% level	-3.415493	

10% level -3.129976

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	445228.3
HAC corrected variance (Bartlett kernel)	540579.4

Phillips-Perron Test Equation  
 Dependent Variable: D(POLAND)  
 Method: Least Squares  
 Sample(adjusted): 1375 2167  
 Included observations: 793 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.006142	0.005306	-1.157436	0.2474
C	-433.6539	301.8333	-1.436733	0.1512
@TREND(1)	0.324077	0.206542	1.569060	0.1170
R-squared	0.003305	Mean dependent var	49.99317	
Adjusted R-squared	0.000782	S.D. dependent var	668.7816	
S.E. of regression	668.5200	Akaike info criterion	15.85179	
Sum squared resid	3.53E+08	Schwarz criterion	15.86947	
Log likelihood	-6282.233	F-statistic	1.309917	
Durbin-Watson stat	1.905433	Prob(F-statistic)	0.270428	

### POLAND WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-27.04347	0.0000
Test critical values:		
1% level	-3.969681	
5% level	-3.415500	
10% level	-3.129981	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	446154.7
HAC corrected variance (Bartlett kernel)	509747.1

Phillips-Perron Test Equation  
 Dependent Variable: D(POLAND,2)  
 Method: Least Squares  
 Sample(adjusted): 1376 2167  
 Included observations: 792 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-0.970021	0.036096	-26.87305	0.0000
C	-153.7874	185.7178	-0.828070	0.4079
@TREND(1)	0.114378	0.104056	1.099194	0.2720
R-squared	0.477913	Mean dependent var	4.134179	
Adjusted R-squared	0.476590	S.D. dependent var	925.0084	
S.E. of regression	669.2168	Akaike info criterion	15.85387	
Sum squared resid	3.53E+08	Schwarz criterion	15.87158	
Log likelihood	-6275.134	F-statistic	361.1213	
Durbin-Watson stat	1.979056	Prob(F-statistic)	0.000000	

## POLAND WEEKLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=20)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.438650
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1375 2167

Included observations: 793 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.007281	0.005061	-1.438650	0.1506
R-squared	0.002255	Mean dependent var	12.54870	
Adjusted R-squared	0.002255	S.D. dependent var	668.7816	
S.E. of regression	668.0271	Akaike info criterion	15.84779	
Sum squared resid	3.53E+08	Schwarz criterion	15.85369	
Log likelihood	-6282.651	Durbin-Watson stat	1.901295	

## POLAND WEEKLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on AIC, MAXLAG=20)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.774763
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1377 2167

Included observations: 791 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.008995	0.005068	-1.774763	0.0763
D(GLSRESID(-1))	0.033923	0.035955	0.943489	0.3457
D(GLSRESID(-2))	0.118578	0.036011	3.292883	0.0010
R-squared	0.017006	Mean dependent var	12.74388	
Adjusted R-squared	0.014511	S.D. dependent var	669.6162	
S.E. of regression	664.7401	Akaike info criterion	15.84045	
Sum squared resid	3.48E+08	Schwarz criterion	15.85818	
Log likelihood	-6261.900	Durbin-Watson stat	1.969490	



### POLAND WEEKLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=20)

Sample(adjusted): 1374 2167

Included observations: 794 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.75293	-1.43428	0.24931	15.4530
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 445697.5

### POLAND WEEKLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag length: 2 (Spectral GLS-detrended AR based on AIC, MAXLAG=20)

Sample(adjusted): 1374 2167

Included observations: 794 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-8.77032	-1.86463	0.21261	11.2377
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 612880.1

### POLAND WEEKLY

Null Hypothesis: POLAND is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 22 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.262413
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	20189244
HAC corrected variance (Bartlett kernel)	4.00E+08

KPSS Test Equation  
Dependent Variable: POLAND

Method: Least Squares  
Sample(adjusted): 1374 2167  
Included observations: 794 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-45094.08	1242.887	-36.28172	0.0000
@TREND(1)	33.78087	0.696575	48.49567	0.0000
R-squared	0.748078	Mean dependent var		14681.17
Adjusted R-squared	0.747760	S.D. dependent var		8957.784
S.E. of regression	4498.914	Akaike info criterion		19.66358
Sum squared resid	1.60E+10	Schwarz criterion		19.67536
Log likelihood	-7804.439	F-statistic		2351.830
Durbin-Watson stat	0.022111	Prob(F-statistic)		0.000000

### POLAND MONTHLY (LEVEL)

Null Hypothesis: POLAND has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.360021	0.8693
Test critical values:		
1% level	-4.009271	
5% level	-3.434706	
10% level	-3.141318	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(POLAND)  
Method: Least Squares  
Sample(adjusted): 319 500  
Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.034003	0.025002	-1.360021	0.1755
C	-2237.845	1426.108	-1.569198	0.1184
@TREND(1)	7.225682	4.225365	1.710073	0.0890
R-squared	0.016408	Mean dependent var		218.7616
Adjusted R-squared	0.005418	S.D. dependent var		1493.570
S.E. of regression	1489.518	Akaike info criterion		17.46664
Sum squared resid	3.97E+08	Schwarz criterion		17.51945
Log likelihood	-1586.464	F-statistic		1.493024
Durbin-Watson stat	2.001665	Prob(F-statistic)		0.227477

### POLAND MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.67747	0.0000
Test critical values:		
1% level	-4.009558	
5% level	-3.434844	

10% level -3.141399

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND,2)

Method: Least Squares

Sample(adjusted): 320 500

Included observations: 181 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-1.025025	0.074943	-13.67747	0.0000
C	-712.8149	881.8364	-0.808330	0.4200
@TREND(1)	2.293693	2.141396	1.071120	0.2856
R-squared	0.512428	Mean dependent var		4.300110
Adjusted R-squared	0.506950	S.D. dependent var		2137.534
S.E. of regression	1500.924	Akaike info criterion		17.48199
Sum squared resid	4.01E+08	Schwarz criterion		17.53500
Log likelihood	-1579.120	F-statistic		93.53710
Durbin-Watson stat	1.999270	Prob(F-statistic)		0.000000

### POLAND MONTHLY (LEVEL)

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.360021	0.8693
Test critical values:		
1% level	-4.009271	
5% level	-3.434706	
10% level	-3.141318	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND)

Method: Least Squares

Sample(adjusted): 319 500

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.034003	0.025002	-1.360021	0.1755
C	-2237.845	1426.108	-1.569198	0.1184
@TREND(1)	7.225682	4.225365	1.710073	0.0890
R-squared	0.016408	Mean dependent var		218.7616
Adjusted R-squared	0.005418	S.D. dependent var		1493.570
S.E. of regression	1489.518	Akaike info criterion		17.46664
Sum squared resid	3.97E+08	Schwarz criterion		17.51945
Log likelihood	-1586.464	F-statistic		1.493024
Durbin-Watson stat	2.001665	Prob(F-statistic)		0.227477

### POLAND MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.67747	0.0000
Test critical values:		
1% level	-4.009558	
5% level	-3.434844	
10% level	-3.141399	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(POLAND,2)

Method: Least Squares

Sample(adjusted): 320 500

Included observations: 181 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-1.025025	0.074943	-13.67747	0.0000
C	-712.8149	881.8364	-0.808330	0.4200
@TREND(1)	2.293693	2.141396	1.071120	0.2856
R-squared	0.512428	Mean dependent var		4.300110
Adjusted R-squared	0.506950	S.D. dependent var		2137.534
S.E. of regression	1500.924	Akaike info criterion		17.48199
Sum squared resid	4.01E+08	Schwarz criterion		17.53500
Log likelihood	-1579.120	F-statistic		93.53710
Durbin-Watson stat	1.999270	Prob(F-statistic)		0.000000

## POLAND MONTHLY (LEVEL)

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.352608	0.8713
Test critical values:		
1% level	-4.009271	
5% level	-3.434706	
10% level	-3.141318	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2182094.
HAC corrected variance (Bartlett kernel)	2171851.

Phillips-Perron Test Equation

Dependent Variable: D(POLAND)

Method: Least Squares

Sample(adjusted): 319 500

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POLAND(-1)	-0.034003	0.025002	-1.360021	0.1755
C	-2237.845	1426.108	-1.569198	0.1184
@TREND(1)	7.225682	4.225365	1.710073	0.0890
R-squared	0.016408	Mean dependent var		218.7616
Adjusted R-squared	0.005418	S.D. dependent var		1493.570
S.E. of regression	1489.518	Akaike info criterion		17.46664
Sum squared resid	3.97E+08	Schwarz criterion		17.51945

Log likelihood	-1586.464	F-statistic	1.493024
Durbin-Watson stat	2.001665	Prob(F-statistic)	0.227477

### POLAND MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(POLAND) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-13.69736	0.0000
Test critical values:		
1% level	-4.009558	
5% level	-3.434844	
10% level	-3.141399	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2215434.
HAC corrected variance (Bartlett kernel)	2045538.

Phillips-Perron Test Equation  
 Dependent Variable: D(POLAND,2)  
 Method: Least Squares  
 Sample(adjusted): 320 500  
 Included observations: 181 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POLAND(-1))	-1.025025	0.074943	-13.67747	0.0000
C	-712.8149	881.8364	-0.808330	0.4200
@TREND(1)	2.293693	2.141396	1.071120	0.2856
R-squared	0.512428	Mean dependent var	4.300110	
Adjusted R-squared	0.506950	S.D. dependent var	2137.534	
S.E. of regression	1500.924	Akaike info criterion	17.48199	
Sum squared resid	4.01E+08	Schwarz criterion	17.53500	
Log likelihood	-1579.120	F-statistic	93.53710	
Durbin-Watson stat	1.999270	Prob(F-statistic)	0.000000	

### POLAND MONTHLY

Null Hypothesis: POLAND has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.633988
Test critical values:	
1% level	-3.481600
5% level	-2.948000
10% level	-2.658000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 319 500

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.038723	0.023698	-1.633988	0.1040
R-squared	0.013266	Mean dependent var	53.48614	
Adjusted R-squared	0.013266	S.D. dependent var	1493.570	
S.E. of regression	1483.630	Akaike info criterion	17.44785	
Sum squared resid	3.98E+08	Schwarz criterion	17.46546	
Log likelihood	-1586.754	Durbin-Watson stat	1.985909	

## POLAND MONTHLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.633988
Test critical values: 1% level	-3.481600
5% level	-2.948000
10% level	-2.658000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 319 500

Included observations: 182 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.038723	0.023698	-1.633988	0.1040
R-squared	0.013266	Mean dependent var	53.48614	
Adjusted R-squared	0.013266	S.D. dependent var	1493.570	
S.E. of regression	1483.630	Akaike info criterion	17.44785	
Sum squared resid	3.98E+08	Schwarz criterion	17.46546	
Log likelihood	-1586.754	Durbin-Watson stat	1.985909	

## POLAND MONTHLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=13)

Sample(adjusted): 318 500

Included observations: 183 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-6.90889	-1.60626	0.23249	13.5012
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	2189065.
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## POLAND MONTHLY

Null Hypothesis: POLAND has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=13)

Sample(adjusted): 318 500

Included observations: 183 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-6.90889	-1.60626	0.23249	13.5012
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
	%			

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 2189065.

## POLAND MONTHLY

Null Hypothesis: POLAND is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 10 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.152422
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 20268698

HAC corrected variance (Bartlett kernel) 1.64E+08

## KPSS Test Equation

Dependent Variable: POLAND

Method: Least Squares

Sample(adjusted): 318 500

Included observations: 183 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-46045.42	2606.093	-17.66837	0.0000
@TREND(1)	148.8932	6.334607	23.50473	0.0000
R-squared	0.753229	Mean dependent var		14703.00
Adjusted R-squared	0.751865	S.D. dependent var		9087.728
S.E. of regression	4526.882	Akaike info criterion		19.68432
Sum squared resid	3.71E+09	Schwarz criterion		19.71940
Log likelihood	-1799.116	F-statistic		552.4721
Durbin-Watson stat	0.109096	Prob(F-statistic)		0.000000

## PORTUGAL DAILY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.022959	0.9596
Test critical values:		
1% level	-3.431524	
5% level	-2.861944	
10% level	-2.567028	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 2094 6915

Included observations: 4822 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	7.10E-06	0.000309	0.022959	0.9817
D(PORTUGAL(-1))	0.135153	0.014265	9.474278	0.0000
C	0.329394	0.527929	0.623936	0.5327
R-squared	0.018299	Mean dependent var		0.394490
Adjusted R-squared	0.017892	S.D. dependent var		16.86055
S.E. of regression	16.70904	Akaike info criterion		8.470399
Sum squared resid	1345426.	Schwarz criterion		8.474431
Log likelihood	-20419.13	F-statistic		44.91372
Durbin-Watson stat	2.006036	Prob(F-statistic)		0.000000

### PORTUGAL DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-60.65037	0.0001
Test critical values:		
1% level	-3.431524	
5% level	-2.861944	
10% level	-2.567028	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 2094 6915

Included observations: 4822 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.864839	0.014259	-60.65037	0.0000
C	0.340182	0.240667	1.413498	0.1576
R-squared	0.432839	Mean dependent var		-0.007314
Adjusted R-squared	0.432721	S.D. dependent var		22.18238
S.E. of regression	16.70731	Akaike info criterion		8.469984
Sum squared resid	1345426.	Schwarz criterion		8.472672
Log likelihood	-20419.13	F-statistic		3678.468
Durbin-Watson stat	2.006038	Prob(F-statistic)		0.000000

### PORTUGAL DAILY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root



Exogenous: Constant

Lag Length: 25 (Automatic based on AIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.628482	0.8619
Test critical values: 1% level	-3.431531	
5% level	-2.861947	
10% level	-2.567029	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 2118 6915

Included observations: 4798 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	-0.000193	0.000308	-0.628482	0.5297
D(PORTUGAL(-1))	0.127334	0.014444	8.815396	0.0000
D(PORTUGAL(-2))	0.017777	0.014558	1.221100	0.2221
D(PORTUGAL(-3))	0.002344	0.014551	0.161114	0.8720
D(PORTUGAL(-4))	0.053467	0.014550	3.674665	0.0002
D(PORTUGAL(-5))	-0.006780	0.014552	-0.465891	0.6413
D(PORTUGAL(-6))	-0.004390	0.014542	-0.301886	0.7628
D(PORTUGAL(-7))	-0.006964	0.014541	-0.478915	0.6320
D(PORTUGAL(-8))	0.075922	0.014536	5.222895	0.0000
D(PORTUGAL(-9))	-0.014543	0.014569	-0.998184	0.3182
D(PORTUGAL(-10))	0.029649	0.014554	2.037204	0.0417
D(PORTUGAL(-11))	0.004680	0.014544	0.321770	0.7476
D(PORTUGAL(-12))	-0.026797	0.014541	-1.842844	0.0654
D(PORTUGAL(-13))	0.028347	0.014542	1.949336	0.0513
D(PORTUGAL(-14))	0.036322	0.014559	2.494713	0.0126
D(PORTUGAL(-15))	0.047729	0.014569	3.276031	0.0011
D(PORTUGAL(-16))	-0.047847	0.014572	-3.283425	0.0010
D(PORTUGAL(-17))	-0.032647	0.014598	-2.236432	0.0254
D(PORTUGAL(-18))	0.029282	0.014566	2.010283	0.0445
D(PORTUGAL(-19))	-0.006103	0.014571	-0.418852	0.6753
D(PORTUGAL(-20))	0.037625	0.014569	2.582475	0.0098
D(PORTUGAL(-21))	0.025709	0.014587	1.762454	0.0781
D(PORTUGAL(-22))	0.006985	0.014571	0.479373	0.6317
D(PORTUGAL(-23))	-0.033430	0.014568	-2.294711	0.0218
D(PORTUGAL(-24))	-0.021278	0.014562	-1.461268	0.1440
D(PORTUGAL(-25))	0.068044	0.014428	4.716124	0.0000
C	0.562914	0.523528	1.075231	0.2823
R-squared	0.043955	Mean dependent var		0.424625
Adjusted R-squared	0.038745	S.D. dependent var		16.81383
S.E. of regression	16.48488	Akaike info criterion		8.448376
Sum squared resid	1296525.	Schwarz criterion		8.484818
Log likelihood	-20240.65	F-statistic		8.436650
Durbin-Watson stat	2.001216	Prob(F-statistic)		0.000000

### PORTUGAL DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Lag Length: 31 (Automatic based on AIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.80155	0.0000
Test critical values: 1% level	-3.431533	

5% level	-2.861948
10% level	-2.567030

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 2125 6915

Included observations: 4791 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.619548	0.057357	-10.80155	0.0000
D(PORTUGAL(-1),2)	-0.254011	0.057052	-4.452243	0.0000
D(PORTUGAL(-2),2)	-0.236006	0.056584	-4.170876	0.0000
D(PORTUGAL(-3),2)	-0.235802	0.056039	-4.207837	0.0000
D(PORTUGAL(-4),2)	-0.180112	0.055513	-3.244482	0.0012
D(PORTUGAL(-5),2)	-0.188675	0.054880	-3.437988	0.0006
D(PORTUGAL(-6),2)	-0.194132	0.054237	-3.579311	0.0003
D(PORTUGAL(-7),2)	-0.197629	0.053581	-3.688389	0.0002
D(PORTUGAL(-8),2)	-0.124014	0.052752	-2.350892	0.0188
D(PORTUGAL(-9),2)	-0.140998	0.051910	-2.716202	0.0066
D(PORTUGAL(-10),2)	-0.112756	0.051160	-2.203992	0.0276
D(PORTUGAL(-11),2)	-0.105986	0.050364	-2.104379	0.0354
D(PORTUGAL(-12),2)	-0.131758	0.049485	-2.662582	0.0078
D(PORTUGAL(-13),2)	-0.105417	0.048502	-2.173483	0.0298
D(PORTUGAL(-14),2)	-0.066964	0.047502	-1.409715	0.1587
D(PORTUGAL(-15),2)	-0.023346	0.046372	-0.503449	0.6147
D(PORTUGAL(-16),2)	-0.074732	0.045311	-1.649327	0.0991
D(PORTUGAL(-17),2)	-0.105372	0.044395	-2.373484	0.0177
D(PORTUGAL(-18),2)	-0.074357	0.043337	-1.715799	0.0863
D(PORTUGAL(-19),2)	-0.079694	0.042106	-1.892692	0.0585
D(PORTUGAL(-20),2)	-0.046614	0.040745	-1.144031	0.2527
D(PORTUGAL(-21),2)	-0.019790	0.039406	-0.502193	0.6156
D(PORTUGAL(-22),2)	-0.013597	0.037988	-0.357935	0.7204
D(PORTUGAL(-23),2)	-0.047978	0.036421	-1.317311	0.1878
D(PORTUGAL(-24),2)	-0.065474	0.034844	-1.879046	0.0603
D(PORTUGAL(-25),2)	0.002722	0.032835	0.082906	0.9339
D(PORTUGAL(-26),2)	0.008339	0.030681	0.271799	0.7858
D(PORTUGAL(-27),2)	0.013156	0.028384	0.463497	0.6430
D(PORTUGAL(-28),2)	0.039541	0.025942	1.524245	0.1275
D(PORTUGAL(-29),2)	0.027197	0.022812	1.192195	0.2332
D(PORTUGAL(-30),2)	0.054022	0.019178	2.816926	0.0049
D(PORTUGAL(-31),2)	0.061636	0.014477	4.257586	0.0000
C	0.283319	0.238921	1.185830	0.2357
R-squared	0.453199	Mean dependent var		0.004600
Adjusted R-squared	0.449521	S.D. dependent var		22.18706
S.E. of regression	16.46153	Akaike info criterion		8.446793
Sum squared resid	1289332.	Schwarz criterion		8.491389
Log likelihood	-20201.29	F-statistic		123.2349
Durbin-Watson stat	1.999007	Prob(F-statistic)		0.000000

### PORTUGAL DAILY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Bandwidth: 26 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.297593	0.9229

Test critical values:	1% level	-3.431524
	5% level	-2.861944
	10% level	-2.567028

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	284.6807
HAC corrected variance (Bartlett kernel)	522.0762

Phillips-Perron Test Equation  
 Dependent Variable: D(PORTUGAL)  
 Method: Least Squares  
 Sample(adjusted): 2093 6915  
 Included observations: 4823 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	7.02E-05	0.000312	0.224751	0.8222
C	0.298262	0.533110	0.559475	0.5759
R-squared	0.000010	Mean dependent var		0.404908
Adjusted R-squared	-0.000197	S.D. dependent var		16.87432
S.E. of regression	16.87598	Akaike info criterion		8.490074
Sum squared resid	1373015.	Schwarz criterion		8.492762
Log likelihood	-20471.81	F-statistic		0.050513
Durbin-Watson stat	1.727861	Prob(F-statistic)		0.822182

### PORTUGAL DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root  
 Exogenous: Constant  
 Bandwidth: 23 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-62.68494	0.0001
Test critical values:	1% level	-3.431524
	5% level	-2.861944
	10% level	-2.567028

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	279.0183
HAC corrected variance (Bartlett kernel)	382.3544

Phillips-Perron Test Equation  
 Dependent Variable: D(PORTUGAL,2)  
 Method: Least Squares  
 Sample(adjusted): 2094 6915  
 Included observations: 4822 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.864839	0.014259	-60.65037	0.0000
C	0.340182	0.240667	1.413498	0.1576
R-squared	0.432839	Mean dependent var		-0.007314
Adjusted R-squared	0.432721	S.D. dependent var		22.18238
S.E. of regression	16.70731	Akaike info criterion		8.469984
Sum squared resid	1345426.	Schwarz criterion		8.472672
Log likelihood	-20419.13	F-statistic		3678.468
Durbin-Watson stat	2.006038	Prob(F-statistic)		0.000000

## PORTUGAL DAILY

Null Hypothesis: PORTUGAL has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=31)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	0.795215
Test critical values: 1% level	-2.565442
5% level	-1.940890
10% level	-1.616655

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2094 6915  
 Included observations: 4822 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.000206	0.000258	0.795215	0.4265
D(GLSRESID(-1))	0.135259	0.014265	9.481584	0.0000
R-squared	0.018021	Mean dependent var		0.394490
Adjusted R-squared	0.017817	S.D. dependent var		16.86055
S.E. of regression	16.70967	Akaike info criterion		8.470267
Sum squared resid	1345807.	Schwarz criterion		8.472955
Log likelihood	-20419.81	Durbin-Watson stat		2.006082

## PORTUGAL DAILY

Null Hypothesis: PORTUGAL has a unit root  
 Exogenous: Constant  
 Lag Length: 25 (Automatic based on AIC, MAXLAG=31)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	0.090725
Test critical values: 1% level	-2.565444
5% level	-1.940890
10% level	-1.616655

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2118 6915  
 Included observations: 4798 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	2.34E-05	0.000258	0.090725	0.9277
D(GLSRESID(-1))	0.127460	0.014445	8.823720	0.0000
D(GLSRESID(-2))	0.017861	0.014559	1.226786	0.2200
D(GLSRESID(-3))	0.002418	0.014552	0.166166	0.8680
D(GLSRESID(-4))	0.053542	0.014551	3.679552	0.0002
D(GLSRESID(-5))	-0.006741	0.014553	-0.463215	0.6432
D(GLSRESID(-6))	-0.004355	0.014543	-0.299483	0.7646
D(GLSRESID(-7))	-0.006924	0.014542	-0.476138	0.6340

D(GLSRESID(-8))	0.075962	0.014537	5.225297	0.0000
D(GLSRESID(-9))	-0.014532	0.014570	-0.997410	0.3186
D(GLSRESID(-10))	0.029663	0.014555	2.038011	0.0416
D(GLSRESID(-11))	0.004676	0.014545	0.321457	0.7479
D(GLSRESID(-12))	-0.026801	0.014542	-1.843018	0.0654
D(GLSRESID(-13))	0.028349	0.014543	1.949328	0.0513
D(GLSRESID(-14))	0.036308	0.014560	2.493610	0.0127
D(GLSRESID(-15))	0.047700	0.014570	3.273808	0.0011
D(GLSRESID(-16))	-0.047879	0.014573	-3.285415	0.0010
D(GLSRESID(-17))	-0.032666	0.014599	-2.237602	0.0253
D(GLSRESID(-18))	0.029273	0.014567	2.009491	0.0445
D(GLSRESID(-19))	-0.006129	0.014572	-0.420622	0.6740
D(GLSRESID(-20))	0.037596	0.014570	2.580307	0.0099
D(GLSRESID(-21))	0.025668	0.014588	1.759544	0.0785
D(GLSRESID(-22))	0.006932	0.014572	0.475710	0.6343
D(GLSRESID(-23))	-0.033478	0.014569	-2.297861	0.0216
D(GLSRESID(-24))	-0.021299	0.014563	-1.462600	0.1436
D(GLSRESID(-25))	0.068041	0.014429	4.715590	0.0000
R-squared	0.043622	Mean dependent var	0.424625	
Adjusted R-squared	0.038611	S.D. dependent var	16.81383	
S.E. of regression	16.48603	Akaike info criterion	8.448308	
Sum squared resid	1296978.	Schwarz criterion	8.483401	
Log likelihood	-20241.49	Durbin-Watson stat	2.001203	

### PORTUGAL DAILY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=31)

Sample(adjusted): 2092 6915

Included observations: 4824 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	1.14249	0.79313	0.69421	38.3198
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	373.2362
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### PORTUGAL DAILY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag length: 25 (Spectral GLS-detrended AR based on AIC, MAXLAG=31)

Sample(adjusted): 2092 6915

Included observations: 4824 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	0.15635	0.07772	0.49707	19.6462
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	727.9947
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## PORTUGAL DAILY

Null Hypothesis: PORTUGAL is stationary  
 Exogenous: Constant  
 Bandwidth: 54 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	6.396077
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000
*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)	
Residual variance (no correction)	606006.1
HAC corrected variance (Bartlett kernel)	32835793

KPSS Test Equation  
 Dependent Variable: PORTUGAL  
 Method: Least Squares  
 Sample(adjusted): 2092 6915  
 Included observations: 4824 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1520.013	11.20934	135.6024	0.0000
R-squared	0.000000	Mean dependent var	1520.013	
Adjusted R-squared	0.000000	S.D. dependent var	778.5446	
S.E. of regression	778.5446	Akaike info criterion	16.15294	
Sum squared resid	2.92E+09	Schwarz criterion	16.15428	
Log likelihood	-38959.88	Durbin-Watson stat	0.000470	

## PORTUGAL WEEKLY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.245021	0.9301
Test critical values:		
1% level	-3.436920	
5% level	-2.864329	
10% level	-2.568308	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(PORTUGAL)  
 Method: Least Squares  
 Sample(adjusted): 1205 2167

Included observations: 963 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	-0.000409	0.001669	-0.245021	0.8065
D(PORTUGAL(-1))	0.205252	0.031611	6.493100	0.0000
C	2.173662	2.847796	0.763279	0.4455
R-squared	0.042084	Mean dependent var		1.933614
Adjusted R-squared	0.040088	S.D. dependent var		41.10625
S.E. of regression	40.27388	Akaike info criterion		10.23239
Sum squared resid	1557106.	Schwarz criterion		10.24757
Log likelihood	-4923.898	F-statistic		21.08778
Durbin-Watson stat	2.022967	Prob(F-statistic)		0.000000

### PORTUGAL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-25.20839	0.0000
Test critical values:		
1% level	-3.436920	
5% level	-2.864329	
10% level	-2.568308	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 1205 2167

Included observations: 963 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.795187	0.031545	-25.20839	0.0000
C	1.552729	1.298499	1.195788	0.2321
R-squared	0.398044	Mean dependent var		0.073946
Adjusted R-squared	0.397418	S.D. dependent var		51.85645
S.E. of regression	40.25418	Akaike info criterion		10.23038
Sum squared resid	1557203.	Schwarz criterion		10.24049
Log likelihood	-4923.928	F-statistic		635.4627
Durbin-Watson stat	2.022728	Prob(F-statistic)		0.000000

### PORTUGAL WEEKLY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 21 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.622648	0.8629
Test critical values:		
1% level	-3.437063	
5% level	-2.864393	
10% level	-2.568342	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 1225 2167

Included observations: 943 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	-0.001065	0.001711	-0.622648	0.5337
D(PORTUGAL(-1))	0.194222	0.032900	5.903374	0.0000
D(PORTUGAL(-2))	0.051532	0.033457	1.540266	0.1238
D(PORTUGAL(-3))	-0.019582	0.033310	-0.587874	0.5568
D(PORTUGAL(-4))	0.104300	0.033262	3.135669	0.0018
D(PORTUGAL(-5))	0.050607	0.033423	1.514137	0.1303
D(PORTUGAL(-6))	0.031758	0.033474	0.948734	0.3430
D(PORTUGAL(-7))	-0.095448	0.033624	-2.838710	0.0046
D(PORTUGAL(-8))	0.026738	0.033751	0.792226	0.4284
D(PORTUGAL(-9))	0.034895	0.033722	1.034797	0.3010
D(PORTUGAL(-10))	-0.033015	0.033753	-0.978157	0.3283
D(PORTUGAL(-11))	0.014135	0.033767	0.418593	0.6756
D(PORTUGAL(-12))	0.033422	0.033728	0.990950	0.3220
D(PORTUGAL(-13))	0.046253	0.033696	1.372633	0.1702
D(PORTUGAL(-14))	-0.042037	0.033664	-1.248740	0.2121
D(PORTUGAL(-15))	0.076041	0.033519	2.268605	0.0235
D(PORTUGAL(-16))	-0.020093	0.033683	-0.596528	0.5510
D(PORTUGAL(-17))	-0.031129	0.033644	-0.925235	0.3551
D(PORTUGAL(-18))	-0.014813	0.033459	-0.442704	0.6581
D(PORTUGAL(-19))	-0.098026	0.033442	-2.931217	0.0035
D(PORTUGAL(-20))	0.085578	0.033548	2.550946	0.0109
D(PORTUGAL(-21))	-0.063208	0.033123	-1.908310	0.0567
C	3.130110	2.878155	1.087541	0.2771
R-squared	0.093741	Mean dependent var	2.303563	
Adjusted R-squared	0.072070	S.D. dependent var	41.05151	
S.E. of regression	39.54456	Akaike info criterion	10.21682	
Sum squared resid	1438670.	Schwarz criterion	10.33509	
Log likelihood	-4794.231	F-statistic	4.325569	
Durbin-Watson stat	1.999706	Prob(F-statistic)	0.000000	

### PORTUGAL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Lag Length: 20 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.855548	0.0000
Test critical values:		
1% level	-3.437063	
5% level	-2.864393	
10% level	-2.568342	

\*Mackinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 1225 2167

Included observations: 943 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.684862	0.099899	-6.855548	0.0000
D(PORTUGAL(-1),2)	-0.121501	0.098360	-1.235266	0.2170
D(PORTUGAL(-2),2)	-0.070663	0.095629	-0.738920	0.4601
D(PORTUGAL(-3),2)	-0.090882	0.093477	-0.972237	0.3312
D(PORTUGAL(-4),2)	0.012778	0.091516	0.139628	0.8890
D(PORTUGAL(-5),2)	0.062733	0.089658	0.699690	0.4843



D(PORTUGAL(-6),2)	0.093888	0.087858	1.068636	0.2855
D(PORTUGAL(-7),2)	-0.002368	0.085765	-0.027613	0.9780
D(PORTUGAL(-8),2)	0.023630	0.083837	0.281859	0.7781
D(PORTUGAL(-9),2)	0.057733	0.081448	0.708835	0.4786
D(PORTUGAL(-10),2)	0.023829	0.078783	0.302462	0.7624
D(PORTUGAL(-11),2)	0.037069	0.075866	0.488613	0.6252
D(PORTUGAL(-12),2)	0.069607	0.073237	0.950439	0.3421
D(PORTUGAL(-13),2)	0.114966	0.069953	1.643469	0.1006
D(PORTUGAL(-14),2)	0.072013	0.066118	1.089156	0.2764
D(PORTUGAL(-15),2)	0.147250	0.063184	2.330501	0.0200
D(PORTUGAL(-16),2)	0.126358	0.059602	2.120024	0.0343
D(PORTUGAL(-17),2)	0.094386	0.055185	1.710348	0.0875
D(PORTUGAL(-18),2)	0.078592	0.049062	1.601880	0.1095
D(PORTUGAL(-19),2)	-0.020368	0.042388	-0.480507	0.6310
D(PORTUGAL(-20),2)	0.064298	0.033065	1.944567	0.0521
C	1.533202	1.305735	1.174206	0.2406
R-squared	0.433166	Mean dependent var	0.038887	
Adjusted R-squared	0.420241	S.D. dependent var	51.91808	
S.E. of regression	39.53141	Akaike info criterion	10.21512	
Sum squared resid	1439277.	Schwarz criterion	10.32825	
Log likelihood	-4794.430	F-statistic	33.51493	
Durbin-Watson stat	1.999813	Prob(F-statistic)	0.000000	

### PORTUGAL WEEKLY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Bandwidth: 15 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.493753	0.8898
Test critical values:		
1% level	-3.436913	
5% level	-2.864326	
10% level	-2.568306	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1689.459
HAC corrected variance (Bartlett kernel)	3432.009

Phillips-Perron Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 1204 2167

Included observations: 964 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	0.000242	0.001703	0.141871	0.8872
C	1.508213	2.906967	0.518827	0.6040
R-squared	0.000021	Mean dependent var	1.875280	
Adjusted R-squared	-0.001019	S.D. dependent var	41.12480	
S.E. of regression	41.14574	Akaike info criterion	10.27419	
Sum squared resid	1628639.	Schwarz criterion	10.28430	
Log likelihood	-4950.160	F-statistic	0.020127	
Durbin-Watson stat	1.588773	Prob(F-statistic)	0.887211	

## PORTUGAL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Bandwidth: 14 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-26.22428	0.0000
Test critical values:		
1% level	-3.436920	
5% level	-2.864329	
10% level	-2.568308	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1617.034
HAC corrected variance (Bartlett kernel)	2162.457

Phillips-Perron Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 1205 2167

Included observations: 963 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.795187	0.031545	-25.20839	0.0000
C	1.552729	1.298499	1.195788	0.2321
R-squared	0.398044	Mean dependent var		0.073946
Adjusted R-squared	0.397418	S.D. dependent var		51.85645
S.E. of regression	40.25418	Akaike info criterion		10.23038
Sum squared resid	1557203.	Schwarz criterion		10.24049
Log likelihood	-4923.928	F-statistic		635.4627
Durbin-Watson stat	2.022728	Prob(F-statistic)		0.000000

## PORTUGAL WEEKLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=21)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	0.256895
Test critical values:	
1% level	-2.567366
5% level	-1.941152
10% level	-1.616478

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1205 2167

Included observations: 963 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.000393	0.001529	0.256895	0.7973
D(GLSRESID(-1))	0.205948	0.031612	6.514793	0.0000
R-squared	0.040665	Mean dependent var		1.933614
Adjusted R-squared	0.039666	S.D. dependent var		41.10625

S.E. of regression	40.28273	Akaike info criterion	10.23180
Sum squared resid	1559413.	Schwarz criterion	10.24191
Log likelihood	-4924.610	Durbin-Watson stat	2.023049

## PORTUGAL WEEKLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 21 (Automatic based on AIC, MAXLAG=21)

		t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic		-0.115764
Test critical values:	1% level	-2.567417
	5% level	-1.941159
	10% level	-1.616473

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1225 2167

Included observations: 943 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000182	0.001576	-0.115764	0.9079
D(GLSRESID(-1))	0.195191	0.032905	5.931889	0.0000
D(GLSRESID(-2))	0.052141	0.033467	1.557980	0.1196
D(GLSRESID(-3))	-0.018963	0.033320	-0.569126	0.5694
D(GLSRESID(-4))	0.104849	0.033273	3.151135	0.0017
D(GLSRESID(-5))	0.050916	0.033436	1.522786	0.1282
D(GLSRESID(-6))	0.031994	0.033487	0.955415	0.3396
D(GLSRESID(-7))	-0.095268	0.033637	-2.832212	0.0047
D(GLSRESID(-8))	0.027113	0.033763	0.803029	0.4222
D(GLSRESID(-9))	0.035182	0.033735	1.042915	0.2973
D(GLSRESID(-10))	-0.032774	0.033766	-0.970626	0.3320
D(GLSRESID(-11))	0.014435	0.033780	0.427324	0.6692
D(GLSRESID(-12))	0.033621	0.033741	0.996445	0.3193
D(GLSRESID(-13))	0.046477	0.033710	1.378750	0.1683
D(GLSRESID(-14))	-0.041784	0.033677	-1.240721	0.2150
D(GLSRESID(-15))	0.076325	0.033532	2.276197	0.0231
D(GLSRESID(-16))	-0.019975	0.033697	-0.592773	0.5535
D(GLSRESID(-17))	-0.031022	0.033658	-0.921686	0.3569
D(GLSRESID(-18))	-0.014770	0.033473	-0.441264	0.6591
D(GLSRESID(-19))	-0.098042	0.033456	-2.930504	0.0035
D(GLSRESID(-20))	0.085818	0.033561	2.557078	0.0107
D(GLSRESID(-21))	-0.063182	0.033136	-1.906729	0.0569
R-squared	0.092015	Mean dependent var	2.303563	
Adjusted R-squared	0.071312	S.D. dependent var	41.05151	
S.E. of regression	39.56070	Akaike info criterion	10.21660	
Sum squared resid	1441410.	Schwarz criterion	10.32973	
Log likelihood	-4795.128	Durbin-Watson stat	1.999606	

## PORTUGAL WEEKLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=21)

Sample(adjusted): 1203 2167

Included observations: 965 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	0.47146	0.25495	0.54078	23.2506
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	2568.249
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### PORTUGAL WEEKLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag length: 21 (Spectral GLS-detrended AR based on AIC, MAXLAG=21)

Sample(adjusted): 1203 2167

Included observations: 965 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.14274	-0.06621	0.46384	17.1057
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	3490.850
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### PORTUGAL WEEKLY

Null Hypothesis: PORTUGAL is stationary

Exogenous: Constant

Bandwidth: 24 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	2.884920
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	607259.8
HAC corrected variance (Bartlett kernel)	14589276

KPSS Test Equation

Dependent Variable: PORTUGAL

Method: Least Squares

Sample(adjusted): 1203 2167

Included observations: 965 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1521.037	25.09856	60.60258	0.0000
R-squared	0.000000	Mean dependent var		1521.037
Adjusted R-squared	0.000000	S.D. dependent var		779.6729
S.E. of regression	779.6729	Akaike info criterion		16.15666

Sum squared resid	5.86E+08	Schwarz criterion	16.16171
Log likelihood	-7794.589	Durbin-Watson stat	0.002785

### PORTUGAL MONTHLY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.275548	0.9250
Test critical values: 1% level	-3.459898	
5% level	-2.874435	
10% level	-2.573719	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 280 500

Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	-0.002570	0.009325	-0.275548	0.7832
C	12.60696	15.87722	0.794028	0.4280
R-squared	0.000347	Mean dependent var		8.711131
Adjusted R-squared	-0.004218	S.D. dependent var		107.1697
S.E. of regression	107.3955	Akaike info criterion		12.19992
Sum squared resid	2525902.	Schwarz criterion		12.23068
Log likelihood	-1346.091	F-statistic		0.075927
Durbin-Watson stat	1.698359	Prob(F-statistic)		0.783155

### PORTUGAL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.93651	0.0000
Test critical values: 1% level	-3.460035	
5% level	-2.874495	
10% level	-2.573751	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 281 500

Included observations: 220 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.859907	0.066471	-12.93651	0.0000
C	8.462960	7.145274	1.184414	0.2375
R-squared	0.434286	Mean dependent var		1.087182
Adjusted R-squared	0.431690	S.D. dependent var		140.1363

S.E. of regression	105.6436	Akaike info criterion	12.16707
Sum squared resid	2433004.	Schwarz criterion	12.19792
Log likelihood	-1336.378	F-statistic	167.3534
Durbin-Watson stat	1.992576	Prob(F-statistic)	0.000000

### PORTUGAL MONTHLY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.530973	0.8813
Test critical values:		
1% level	-3.460596	
5% level	-2.874741	
10% level	-2.573883	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 285 500

Included observations: 216 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	-0.005083	0.009573	-0.530973	0.5960
D(PORTUGAL(-1))	0.143995	0.069006	2.086701	0.0381
D(PORTUGAL(-2))	0.019271	0.069792	0.276125	0.7827
D(PORTUGAL(-3))	0.135755	0.069232	1.960860	0.0512
D(PORTUGAL(-4))	-0.115129	0.070110	-1.642113	0.1021
D(PORTUGAL(-5))	-0.102922	0.069909	-1.472233	0.1425
C	16.80726	16.06193	1.046403	0.2966
R-squared	0.061680	Mean dependent var		10.17162
Adjusted R-squared	0.034743	S.D. dependent var		107.2772
S.E. of regression	105.3972	Akaike info criterion		12.18522
Sum squared resid	2321689.	Schwarz criterion		12.29460
Log likelihood	-1309.004	F-statistic		2.289768
Durbin-Watson stat	1.995733	Prob(F-statistic)		0.036664

### PORTUGAL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Lag Length: 4 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.192637	0.0000
Test critical values:		
1% level	-3.460596	
5% level	-2.874741	
10% level	-2.573883	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 285 500

Included observations: 216 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.938008	0.130412	-7.192637	0.0000
D(PORTUGAL(-1),2)	0.078751	0.117201	0.671930	0.5024
D(PORTUGAL(-2),2)	0.094519	0.107282	0.881030	0.3793
D(PORTUGAL(-3),2)	0.226066	0.091268	2.476954	0.0140
D(PORTUGAL(-4),2)	0.106970	0.069373	1.541953	0.1246
C	9.204556	7.265499	1.266886	0.2066
R-squared	0.450776	Mean dependent var		0.274259
Adjusted R-squared	0.437700	S.D. dependent var		140.3140
S.E. of regression	105.2168	Akaike info criterion		12.17731
Sum squared resid	2324821.	Schwarz criterion		12.27107
Log likelihood	-1309.149	F-statistic		34.47157
Durbin-Watson stat	1.996541	Prob(F-statistic)		0.000000

## PORTUGAL MONTHLY (LEVEL)

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.521533	0.8832
Test critical values:		
1% level	-3.459898	
5% level	-2.874435	
10% level	-2.573719	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	11429.42
HAC corrected variance (Bartlett kernel)	15021.10

Phillips-Perron Test Equation

Dependent Variable: D(PORTUGAL)

Method: Least Squares

Sample(adjusted): 280 500

Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PORTUGAL(-1)	-0.002570	0.009325	-0.275548	0.7832
C	12.60696	15.87722	0.794028	0.4280
R-squared	0.000347	Mean dependent var		8.711131
Adjusted R-squared	-0.004218	S.D. dependent var		107.1697
S.E. of regression	107.3955	Akaike info criterion		12.19992
Sum squared resid	2525902.	Schwarz criterion		12.23068
Log likelihood	-1346.091	F-statistic		0.075927
Durbin-Watson stat	1.698359	Prob(F-statistic)		0.783155

## PORTUGAL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(PORTUGAL) has a unit root

Exogenous: Constant

Bandwidth: 0 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-12.93651	0.0000
Test critical values:		
1% level	-3.460035	
5% level	-2.874495	
10% level	-2.573751	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	11059.11
HAC corrected variance (Bartlett kernel)	11059.11

Phillips-Perron Test Equation

Dependent Variable: D(PORTUGAL,2)

Method: Least Squares

Sample(adjusted): 281 500

Included observations: 220 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PORTUGAL(-1))	-0.859907	0.066471	-12.93651	0.0000
C	8.462960	7.145274	1.184414	0.2375
R-squared	0.434286	Mean dependent var		1.087182
Adjusted R-squared	0.431690	S.D. dependent var		140.1363
S.E. of regression	105.6436	Akaike info criterion		12.16707
Sum squared resid	2433004.	Schwarz criterion		12.19792
Log likelihood	-1336.378	F-statistic		167.3534
Durbin-Watson stat	1.992576	Prob(F-statistic)		0.000000

## PORTUGAL MONTHLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	0.235890
Test critical values:	
1% level	-2.575468
5% level	-1.942269
10% level	-1.615743

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 280 500

Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.002014	0.008536	0.235890	0.8137
R-squared	-0.006382	Mean dependent var		8.711131
Adjusted R-squared	-0.006382	S.D. dependent var		107.1697
S.E. of regression	107.5112	Akaike info criterion		12.19758
Sum squared resid	2542904.	Schwarz criterion		12.21296



Log likelihood                    -1346.833    Durbin-Watson stat            1.694823

### PORTUGAL MONTHLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on AIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	0.004988
Test critical values: 1% level	-2.575712
5% level	-1.942303
10% level	-1.615721

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 285 500

Included observations: 216 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	4.41E-05	0.008832	0.004988	0.9960
D(GLSRESID(-1))	0.147318	0.069108	2.131705	0.0342
D(GLSRESID(-2))	0.021167	0.069924	0.302716	0.7624
D(GLSRESID(-3))	0.137476	0.069366	1.981892	0.0488
D(GLSRESID(-4))	-0.114195	0.070254	-1.625459	0.1056
D(GLSRESID(-5))	-0.102039	0.070052	-1.456607	0.1467
R-squared	0.053234	Mean dependent var	10.17162	
Adjusted R-squared	0.030692	S.D. dependent var	107.2772	
S.E. of regression	105.6181	Akaike info criterion	12.18492	
Sum squared resid	2342589.	Schwarz criterion	12.27868	
Log likelihood	-1309.972	Durbin-Watson stat	1.994777	

### PORTUGAL MONTHLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=14)

Sample(adjusted): 279 500

Included observations: 222 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	0.45835	0.24351	0.53129	22.6027
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)                    11506.35

### PORTUGAL MONTHLY

Null Hypothesis: PORTUGAL has a unit root

Exogenous: Constant

Lag length: 5 (Spectral GLS-detrended AR based on AIC, MAXLAG=14)

Sample(adjusted): 279 500

Included observations: 222 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	0.21473	0.10697	0.49814	19.8700
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	13088.80
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### PORTUGAL MONTHLY

Null Hypothesis: PORTUGAL is stationary

Exogenous: Constant

Bandwidth: 11 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.455282
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	606841.1
HAC corrected variance (Bartlett kernel)	6677841.

KPSS Test Equation

Dependent Variable: PORTUGAL

Method: Least Squares

Sample(adjusted): 279 500

Included observations: 222 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1522.688	52.40122	29.05826	0.0000
R-squared	0.000000	Mean dependent var		1522.688
Adjusted R-squared	0.000000	S.D. dependent var		780.7605
S.E. of regression	780.7605	Akaike info criterion		16.16291
Sum squared resid	1.35E+08	Schwarz criterion		16.17824
Log likelihood	-1793.083	Durbin-Watson stat		0.018880

### SLOVENIA DAILY (LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on SIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.229248	0.9035
Test critical values:		
1% level	-3.960858	
5% level	-3.411185	
10% level	-3.127423	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(SLOVENIA)  
 Method: Least Squares  
 Sample(adjusted): 3658 6915  
 Included observations: 3258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.000840	0.000683	-1.229248	0.2191
D(SLOVENIA(-1))	0.205472	0.017495	11.74439	0.0000
D(SLOVENIA(-2))	-0.065526	0.017497	-3.744946	0.0002
C	-5.649879	3.559571	-1.587236	0.1126
@TREND(1)	0.001656	0.000935	1.771996	0.0765
R-squared	0.042534	Mean dependent var		1.250881
Adjusted R-squared	0.041357	S.D. dependent var		22.68097
S.E. of regression	22.20701	Akaike info criterion		9.040226
Sum squared resid	1604221.	Schwarz criterion		9.049571
Log likelihood	-14721.53	F-statistic		36.12762
Durbin-Watson stat	2.003740	Prob(F-statistic)		0.000000

### SLOVENIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-38.72184	0.0000
Test critical values: 1% level	-3.960858	
5% level	-3.411185	
10% level	-3.127423	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(SLOVENIA,2)  
 Method: Least Squares  
 Sample(adjusted): 3658 6915  
 Included observations: 3258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.860926	0.022234	-38.72184	0.0000
D(SLOVENIA(-1),2)	0.066065	0.017493	3.776596	0.0002
C	-2.230994	2.221664	-1.004200	0.3154
@TREND(1)	0.000626	0.000414	1.512282	0.1306
R-squared	0.406311	Mean dependent var		0.007557
Adjusted R-squared	0.405764	S.D. dependent var		28.81009
S.E. of regression	22.20875	Akaike info criterion		9.040077
Sum squared resid	1604966.	Schwarz criterion		9.047552
Log likelihood	-14722.29	F-statistic		742.3287
Durbin-Watson stat	2.003855	Prob(F-statistic)		0.000000

### SLOVENIA DAILY (LEVEL)

Null Hypothesis: SLOVENIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 9 (Automatic based on AIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.445543	0.8475
Test critical values: 1% level	-3.960864	

5% level	-3.411188
10% level	-3.127425

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 3665 6915

Included observations: 3251 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.000989	0.000684	-1.445543	0.1484
D(SLOVENIA(-1))	0.200437	0.017558	11.41572	0.0000
D(SLOVENIA(-2))	-0.061140	0.017905	-3.414794	0.0006
D(SLOVENIA(-3))	-0.031798	0.017909	-1.775579	0.0759
D(SLOVENIA(-4))	0.006786	0.017917	0.378759	0.7049
D(SLOVENIA(-5))	0.021131	0.017914	1.179570	0.2383
D(SLOVENIA(-6))	0.000443	0.017920	0.024721	0.9803
D(SLOVENIA(-7))	0.055864	0.017912	3.118827	0.0018
D(SLOVENIA(-8))	0.019355	0.017907	1.080847	0.2798
D(SLOVENIA(-9))	0.035628	0.017563	2.028545	0.0426
C	-6.146579	3.570234	-1.721618	0.0852
@TREND(1)	0.001790	0.000936	1.911867	0.0560
R-squared	0.049275	Mean dependent var	1.238810	
Adjusted R-squared	0.046046	S.D. dependent var	22.70023	
S.E. of regression	22.17144	Akaike info criterion	9.039171	
Sum squared resid	1592204.	Schwarz criterion	9.061638	
Log likelihood	-14681.17	F-statistic	15.26119	
Durbin-Watson stat	1.998973	Prob(F-statistic)	0.000000	

## SLOVENIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 8 (Automatic based on AIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-16.76643	0.0000
Test critical values:		
1% level	-3.960864	
5% level	-3.411188	
10% level	-3.127425	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA,2)

Method: Least Squares

Sample(adjusted): 3665 6915

Included observations: 3251 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.757886	0.045203	-16.76643	0.0000
D(SLOVENIA(-1),2)	-0.042041	0.043216	-0.972813	0.3307

D(SLOVENIA(-2),2)	-0.103683	0.040803	-2.541031	0.0111
D(SLOVENIA(-3),2)	-0.135998	0.037902	-3.588156	0.0003
D(SLOVENIA(-4),2)	-0.129707	0.034790	-3.728315	0.0002
D(SLOVENIA(-5),2)	-0.109092	0.031187	-3.497932	0.0005
D(SLOVENIA(-6),2)	-0.109172	0.027023	-4.039969	0.0001
D(SLOVENIA(-7),2)	-0.053816	0.022475	-2.394475	0.0167
D(SLOVENIA(-8),2)	-0.034966	0.017560	-1.991203	0.0465
C	-2.114743	2.229099	-0.948698	0.3428
@TREND(1)	0.000577	0.000416	1.388794	0.1650
R-squared	0.410384	Mean dependent var	0.004519	
Adjusted R-squared	0.408564	S.D. dependent var	28.83454	
S.E. of regression	22.17517	Akaike info criterion	9.039201	
Sum squared resid	1593231.	Schwarz criterion	9.059796	
Log likelihood	-14682.22	F-statistic	225.5100	
Durbin-Watson stat	1.998950	Prob(F-statistic)	0.000000	

### SLOVENIA DAILY (LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 20 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.337765	0.8781
Test critical values:		
1% level	-3.960856	
5% level	-3.411185	
10% level	-3.127423	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	513.4005
HAC corrected variance (Bartlett kernel)	784.0989

Phillips-Perron Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 3656 6915

Included observations: 3260 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.000735	0.000697	-1.054613	0.2917
C	-5.519986	3.628968	-1.521089	0.1283
@TREND(1)	0.001618	0.000953	1.697150	0.0898
R-squared	0.001225	Mean dependent var	1.255488	
Adjusted R-squared	0.000612	S.D. dependent var	22.67571	
S.E. of regression	22.66878	Akaike info criterion	9.080774	
Sum squared resid	1673686.	Schwarz criterion	9.086378	
Log likelihood	-14798.66	F-statistic	1.997159	
Durbin-Watson stat	1.614205	Prob(F-statistic)	0.135886	

### SLOVENIA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 16 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-46.96579	0.0000
Test critical values:		
1% level	-3.960857	
5% level	-3.411185	

10% level -3.127423

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	494.6331
HAC corrected variance (Bartlett kernel)	495.6003

Phillips-Perron Test Equation  
 Dependent Variable: D(SLOVENIA,2)  
 Method: Least Squares  
 Sample(adjusted): 3657 6915  
 Included observations: 3259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.807600	0.017199	-46.95691	0.0000
C	-2.110281	2.224355	-0.948716	0.3428
@TREND(1)	0.000590	0.000414	1.424702	0.1543
R-squared	0.403767	Mean dependent var		0.002436
Adjusted R-squared	0.403401	S.D. dependent var		28.80715
S.E. of regression	22.25059	Akaike info criterion		9.043534
Sum squared resid	1612009.	Schwarz criterion		9.049140
Log likelihood	-14733.44	F-statistic		1102.477
Durbin-Watson stat	1.974221	Prob(F-statistic)		0.000000

### SLOVENIA DAILY

Null Hypothesis: SLOVENIA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 2 (Automatic based on SIC, MAXLAG=28)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.814430
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 3658 6915  
 Included observations: 3258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000489	0.000601	-0.814430	0.4155
D(GLSRESID(-1))	0.206116	0.017494	11.78204	0.0000
D(GLSRESID(-2))	-0.064986	0.017496	-3.714352	0.0002
R-squared	0.041533	Mean dependent var		0.232604
Adjusted R-squared	0.040944	S.D. dependent var		22.68097
S.E. of regression	22.21179	Akaike info criterion		9.040044
Sum squared resid	1605899.	Schwarz criterion		9.045651
Log likelihood	-14723.23	Durbin-Watson stat		2.003599

### SLOVENIA DAILY

Null Hypothesis: SLOVENIA has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 9 (Automatic based on AIC, MAXLAG=28)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.010276
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 3665 6915

Included observations: 3251 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000608	0.000601	-1.010276	0.3124
D(GLSRESID(-1))	0.201030	0.017556	11.45060	0.0000
D(GLSRESID(-2))	-0.060732	0.017904	-3.392003	0.0007
D(GLSRESID(-3))	-0.031321	0.017908	-1.749016	0.0804
D(GLSRESID(-4))	0.007297	0.017916	0.407276	0.6838
D(GLSRESID(-5))	0.021636	0.017913	1.207834	0.2272
D(GLSRESID(-6))	0.000920	0.017919	0.051343	0.9591
D(GLSRESID(-7))	0.056334	0.017911	3.145225	0.0017
D(GLSRESID(-8))	0.019754	0.017907	1.103154	0.2700
D(GLSRESID(-9))	0.036080	0.017561	2.054524	0.0400
R-squared	0.048342	Mean dependent var	0.220533	
Adjusted R-squared	0.045699	S.D. dependent var	22.70023	
S.E. of regression	22.17547	Akaike info criterion	9.038922	
Sum squared resid	1593767.	Schwarz criterion	9.057645	
Log likelihood	-14682.77	Durbin-Watson stat	1.998948	

## SLOVENIA DAILY

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 2 (Spectral GLS-detrended AR based on SIC, MAXLAG=28)

Sample(adjusted): 3655 6915

Included observations: 3261 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.86509	-0.81843	0.43881	39.1774
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	668.2080
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## SLOVENIA DAILY

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 9 (Spectral GLS-detrended AR based on AIC, MAXLAG=28)

Sample(adjusted): 3655 6915

Included observations: 3261 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.66424	-1.02233	0.38372	29.9575
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	873.8590
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### SLOVENIA DAILY

Null Hypothesis: SLOVENIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 44 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.453227
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	324647.1
HAC corrected variance (Bartlett kernel)	14261346

KPSS Test Equation

Dependent Variable: SLOVENIA

Method: Least Squares

Sample(adjusted): 3655 6915

Included observations: 3261 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4069.926	56.90510	-71.52129	0.0000
@TREND(1)	1.226771	0.010602	115.7071	0.0000
R-squared	0.804231	Mean dependent var		2412.330
Adjusted R-squared	0.804170	S.D. dependent var		1287.953
S.E. of regression	569.9529	Akaike info criterion		15.52960
Sum squared resid	1.06E+09	Schwarz criterion		15.53333
Log likelihood	-25319.01	F-statistic		13388.13
Durbin-Watson stat	0.001583	Prob(F-statistic)		0.000000

### SLOVENIA WEEKLY (LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.853086	0.6782
Test critical values:		
1% level	-3.964232	
5% level	-3.412837	



10% level -3.128403

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(SLOVENIA)  
 Method: Least Squares  
 Sample(adjusted): 1517 3002  
 Included observations: 1486 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.004665	0.002517	-1.853086	0.0641
C	-4.516793	11.27886	-0.400466	0.6889
@TREND(1)	0.010476	0.007997	1.310113	0.1904
R-squared	0.002592	Mean dependent var		2.739058
Adjusted R-squared	0.001247	S.D. dependent var		63.85124
S.E. of regression	63.81141	Akaike info criterion		11.15176
Sum squared resid	6038622.	Schwarz criterion		11.16247
Log likelihood	-8282.756	F-statistic		1.927220
Durbin-Watson stat	1.866472	Prob(F-statistic)		0.145917

### SLOVENIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-36.10115	0.0000
Test critical values:		
1% level	-3.964236	
5% level	-3.412839	
10% level	-3.128404	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(SLOVENIA,2)  
 Method: Least Squares  
 Sample(adjusted): 1518 3002  
 Included observations: 1485 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.935681	0.025918	-36.10115	0.0000
C	7.501834	8.877509	0.845038	0.3982
@TREND(1)	-0.002201	0.003860	-0.570250	0.5686
R-squared	0.467920	Mean dependent var		-0.019832
Adjusted R-squared	0.467202	S.D. dependent var		87.35258
S.E. of regression	63.76128	Akaike info criterion		11.15019
Sum squared resid	6025072.	Schwarz criterion		11.16090
Log likelihood	-8276.014	F-statistic		651.6478
Durbin-Watson stat	2.002252	Prob(F-statistic)		0.000000

### SLOVENIA WEEKLY (LEVEL)

Null Hypothesis: SLOVENIA has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 13 (Automatic based on AIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.710358	0.7465
Test critical values:		
1% level	-3.964286	
5% level	-3.412864	
10% level	-3.128419	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 1530 3002

Included observations: 1473 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.004369	0.002554	-1.710358	0.0874
D(SLOVENIA(-1))	0.067292	0.026059	2.582323	0.0099
D(SLOVENIA(-2))	0.021284	0.026095	0.815638	0.4148
D(SLOVENIA(-3))	0.013684	0.026098	0.524332	0.6001
D(SLOVENIA(-4))	0.015738	0.026077	0.603516	0.5463
D(SLOVENIA(-5))	-0.059171	0.026070	-2.269671	0.0234
D(SLOVENIA(-6))	0.022743	0.026106	0.871187	0.3838
D(SLOVENIA(-7))	0.036093	0.026099	1.382915	0.1669
D(SLOVENIA(-8))	-0.026746	0.026111	-1.024325	0.3059
D(SLOVENIA(-9))	-0.018747	0.026062	-0.719323	0.4721
D(SLOVENIA(-10))	-0.038289	0.026052	-1.469740	0.1418
D(SLOVENIA(-11))	0.020027	0.026071	0.768183	0.4425
D(SLOVENIA(-12))	0.033802	0.026067	1.296732	0.1949
D(SLOVENIA(-13))	-0.102354	0.026025	-3.932937	0.0001
C	-5.705659	11.48132	-0.496951	0.6193
@TREND(1)	0.010466	0.008117	1.289390	0.1975
R-squared	0.025435	Mean dependent var		2.489104
Adjusted R-squared	0.015402	S.D. dependent var		64.00868
S.E. of regression	63.51385	Akaike info criterion		11.15120
Sum squared resid	5877551.	Schwarz criterion		11.20871
Log likelihood	-8196.856	F-statistic		2.535055
Durbin-Watson stat	1.994487	Prob(F-statistic)		0.000997

## SLOVENIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 12 (Automatic based on AIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.87710	0.0000
Test critical values:		
1% level	-3.964286	
5% level	-3.412864	
10% level	-3.128419	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA,2)

Method: Least Squares

Sample(adjusted): 1530 3002

Included observations: 1473 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-1.043902	0.087892	-11.87710	0.0000
D(SLOVENIA(-1),2)	0.109048	0.084387	1.292242	0.1965
D(SLOVENIA(-2),2)	0.127999	0.080543	1.589197	0.1122
D(SLOVENIA(-3),2)	0.139278	0.076367	1.823809	0.0684
D(SLOVENIA(-4),2)	0.152678	0.072332	2.110800	0.0350
D(SLOVENIA(-5),2)	0.091191	0.068283	1.335477	0.1819
D(SLOVENIA(-6),2)	0.111788	0.064161	1.742304	0.0817
D(SLOVENIA(-7),2)	0.145624	0.059418	2.450845	0.0144
D(SLOVENIA(-8),2)	0.116510	0.054068	2.154879	0.0313
D(SLOVENIA(-9),2)	0.095598	0.048893	1.955263	0.0507
D(SLOVENIA(-10),2)	0.055169	0.042897	1.286095	0.1986
D(SLOVENIA(-11),2)	0.073098	0.035628	2.051723	0.0404
D(SLOVENIA(-12),2)	0.104725	0.026005	4.027120	0.0001
C	6.504193	8.998081	0.722842	0.4699
@TREND(1)	-0.001713	0.003899	-0.439455	0.6604
R-squared	0.478691	Mean dependent var		0.002281
Adjusted R-squared	0.473685	S.D. dependent var		87.60565
S.E. of regression	63.55577	Akaike info criterion		11.15184
Sum squared resid	5889352.	Schwarz criterion		11.20576
Log likelihood	-8198.333	F-statistic		95.62886
Durbin-Watson stat	1.994878	Prob(F-statistic)		0.000000

### SLOVENIA WEEKLY (LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.010962	0.5943
Test critical values:		
1% level	-3.964232	
5% level	-3.412837	
10% level	-3.128403	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	4063.676
HAC corrected variance (Bartlett kernel)	4773.823

Phillips-Perron Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 1517 3002

Included observations: 1486 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.004665	0.002517	-1.853086	0.0641
C	-4.516793	11.27886	-0.400466	0.6889
@TREND(1)	0.010476	0.007997	1.310113	0.1904
R-squared	0.002592	Mean dependent var		2.739058
Adjusted R-squared	0.001247	S.D. dependent var		63.85124
S.E. of regression	63.81141	Akaike info criterion		11.15176
Sum squared resid	6038622.	Schwarz criterion		11.16247
Log likelihood	-8282.756	F-statistic		1.927220
Durbin-Watson stat	1.866472	Prob(F-statistic)		0.145917

## SLOVENIA WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-36.13433	0.0000
Test critical values:		
1% level	-3.964236	
5% level	-3.412839	
10% level	-3.128404	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	4057.287
HAC corrected variance (Bartlett kernel)	4162.975

Phillips-Perron Test Equation

Dependent Variable: D(SLOVENIA,2)

Method: Least Squares

Sample(adjusted): 1518 3002

Included observations: 1485 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.935681	0.025918	-36.10115	0.0000
C	7.501834	8.877509	0.845038	0.3982
@TREND(1)	-0.002201	0.003860	-0.570250	0.5686
R-squared	0.467920	Mean dependent var		-0.019832
Adjusted R-squared	0.467202	S.D. dependent var		87.35258
S.E. of regression	63.76128	Akaike info criterion		11.15019
Sum squared resid	6025072.	Schwarz criterion		11.16090
Log likelihood	-8276.014	F-statistic		651.6478
Durbin-Watson stat	2.002252	Prob(F-statistic)		0.000000

## SLOVENIA WEEKLY

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.681616
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1517 3002

Included observations: 1486 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.004012	0.002386	-1.681616	0.0929
R-squared	0.001867	Mean dependent var		-0.369158
Adjusted R-squared	0.001867	S.D. dependent var		63.85124

S.E. of regression	63.79160	Akaike info criterion	11.14979
Sum squared resid	6043012.	Schwarz criterion	11.15336
Log likelihood	-8283.296	Durbin-Watson stat	1.866334

### SLOVENIA WEEKLY

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 13 (Automatic based on AIC, MAXLAG=23)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.627407
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1530 3002

Included observations: 1473 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003933	0.002417	-1.627407	0.1039
D(GLSRESID(-1))	0.067275	0.026040	2.583501	0.0099
D(GLSRESID(-2))	0.021274	0.026077	0.815824	0.4147
D(GLSRESID(-3))	0.013663	0.026080	0.523907	0.6004
D(GLSRESID(-4))	0.015709	0.026059	0.602819	0.5467
D(GLSRESID(-5))	-0.059193	0.026053	-2.272042	0.0232
D(GLSRESID(-6))	0.022746	0.026088	0.871881	0.3834
D(GLSRESID(-7))	0.036091	0.026081	1.383787	0.1666
D(GLSRESID(-8))	-0.026774	0.026093	-1.026089	0.3050
D(GLSRESID(-9))	-0.018754	0.026045	-0.720064	0.4716
D(GLSRESID(-10))	-0.038256	0.026035	-1.469403	0.1419
D(GLSRESID(-11))	0.020084	0.026054	0.770866	0.4409
D(GLSRESID(-12))	0.033882	0.026049	1.300682	0.1936
D(GLSRESID(-13))	-0.102263	0.026007	-3.932141	0.0001
R-squared	0.025025	Mean dependent var	-0.619112	
Adjusted R-squared	0.016338	S.D. dependent var	64.00868	
S.E. of regression	63.48365	Akaike info criterion	11.14890	
Sum squared resid	5880024.	Schwarz criterion	11.19923	
Log likelihood	-8197.166	Durbin-Watson stat	1.994490	

### SLOVENIA WEEKLY

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=23)

Sample(adjusted): 1516 3002

Included observations: 1487 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.95001	-1.67873	0.28214	15.2716
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000

10 -14.2000 -2.62000 0.18500 6.67000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 4066.630

### SLOVENIA WEEKLY

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 13 (Spectral GLS-detrended AR based on AIC, MAXLAG=23)

Sample(adjusted): 1516 3002

Included observations: 1487 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.65937	-1.63501	0.28890	16.0125
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 3878.462

### SLOVENIA WEEKLY

Null Hypothesis: SLOVENIA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 31 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.587121
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 432309.1

HAC corrected variance (Bartlett kernel) 13037404

KPSS Test Equation

Dependent Variable: SLOVENIA

Method: Least Squares

Sample(adjusted): 1516 3002

Included observations: 1487 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2761.583	91.35808	-30.22812	0.0000
@TREND(1)	2.781009	0.039748	69.96627	0.0000
R-squared	0.767252	Mean dependent var		3517.936
Adjusted R-squared	0.767095	S.D. dependent var		1363.326
S.E. of regression	657.9448	Akaike info criterion		15.81746
Sum squared resid	6.43E+08	Schwarz criterion		15.82460
Log likelihood	-11758.28	F-statistic		4895.278
Durbin-Watson stat	0.009418	Prob(F-statistic)		0.000000

### SLOVENIA MONTHLY(LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.291422	0.8862
Test critical values: 1% level	-4.020396	
5% level	-3.440059	
10% level	-3.144465	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 351 500

Included observations: 150 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.023189	0.017956	-1.291422	0.1986
C	-323.7649	188.6266	-1.716433	0.0882
@TREND(1)	0.957646	0.532343	1.798927	0.0741
R-squared	0.024939	Mean dependent var		27.13647
Adjusted R-squared	0.011673	S.D. dependent var		125.9402
S.E. of regression	125.2030	Akaike info criterion		12.51755
Sum squared resid	2304340.	Schwarz criterion		12.57776
Log likelihood	-935.8160	F-statistic		1.879876
Durbin-Watson stat	1.794263	Prob(F-statistic)		0.156259

### SLOVENIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.15693	0.0000
Test critical values: 1% level	-4.020822	
5% level	-3.440263	
10% level	-3.144585	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA,2)

Method: Least Squares

Sample(adjusted): 352 500

Included observations: 149 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.914169	0.081937	-11.15693	0.0000
C	-128.1778	102.2394	-1.253704	0.2120
@TREND(1)	0.357706	0.239914	1.490971	0.1381
R-squared	0.460271	Mean dependent var		-0.923154
Adjusted R-squared	0.452878	S.D. dependent var		169.0933

S.E. of regression	125.0744	Akaike info criterion	12.51562
Sum squared resid	2283967.	Schwarz criterion	12.57611
Log likelihood	-929.4140	F-statistic	62.25319
Durbin-Watson stat	2.002089	Prob(F-statistic)	0.000000

### SLOVENIA MONTHLY(LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.291422	0.8862
Test critical values:		
1% level	-4.020396	
5% level	-3.440059	
10% level	-3.144465	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 351 500

Included observations: 150 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.023189	0.017956	-1.291422	0.1986
C	-323.7649	188.6266	-1.716433	0.0882
@TREND(1)	0.957646	0.532343	1.798927	0.0741
R-squared	0.024939	Mean dependent var		27.13647
Adjusted R-squared	0.011673	S.D. dependent var		125.9402
S.E. of regression	125.2030	Akaike info criterion		12.51755
Sum squared resid	2304340.	Schwarz criterion		12.57776
Log likelihood	-935.8160	F-statistic		1.879876
Durbin-Watson stat	1.794263	Prob(F-statistic)		0.156259

### SLOVENIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.15693	0.0000
Test critical values:		
1% level	-4.020822	
5% level	-3.440263	
10% level	-3.144585	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SLOVENIA,2)

Method: Least Squares

Sample(adjusted): 352 500

Included observations: 149 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.914169	0.081937	-11.15693	0.0000



C	-128.1778	102.2394	-1.253704	0.2120
@TREND(1)	0.357706	0.239914	1.490971	0.1381
R-squared	0.460271	Mean dependent var	-0.923154	
Adjusted R-squared	0.452878	S.D. dependent var	169.0933	
S.E. of regression	125.0744	Akaike info criterion	12.51562	
Sum squared resid	2283967.	Schwarz criterion	12.57611	
Log likelihood	-929.4140	F-statistic	62.25319	
Durbin-Watson stat	2.002089	Prob(F-statistic)	0.000000	

### SLOVENIA MONTHLY(LEVEL)

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.402448	0.8566
Test critical values:		
1% level	-4.020396	
5% level	-3.440059	
10% level	-3.144465	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	15362.27
HAC corrected variance (Bartlett kernel)	17949.60

Phillips-Perron Test Equation

Dependent Variable: D(SLOVENIA)

Method: Least Squares

Sample(adjusted): 351 500

Included observations: 150 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SLOVENIA(-1)	-0.023189	0.017956	-1.291422	0.1986
C	-323.7649	188.6266	-1.716433	0.0882
@TREND(1)	0.957646	0.532343	1.798927	0.0741
R-squared	0.024939	Mean dependent var	27.13647	
Adjusted R-squared	0.011673	S.D. dependent var	125.9402	
S.E. of regression	125.2030	Akaike info criterion	12.51755	
Sum squared resid	2304340.	Schwarz criterion	12.57776	
Log likelihood	-935.8160	F-statistic	1.879876	
Durbin-Watson stat	1.794263	Prob(F-statistic)	0.156259	

### SLOVENIA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(SLOVENIA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 0 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-11.15693	0.0000
Test critical values:		
1% level	-4.020822	
5% level	-3.440263	
10% level	-3.144585	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	15328.64
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HAC corrected variance (Bartlett kernel) 15328.64

Phillips-Perron Test Equation

Dependent Variable: D(SLOVENIA,2)

Method: Least Squares

Sample(adjusted): 352 500

Included observations: 149 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SLOVENIA(-1))	-0.914169	0.081937	-11.15693	0.0000
C	-128.1778	102.2394	-1.253704	0.2120
@TREND(1)	0.357706	0.239914	1.490971	0.1381
R-squared	0.460271	Mean dependent var	-0.923154	
Adjusted R-squared	0.452878	S.D. dependent var	169.0933	
S.E. of regression	125.0744	Akaike info criterion	12.51562	
Sum squared resid	2283967.	Schwarz criterion	12.57611	
Log likelihood	-929.4140	F-statistic	62.25319	
Durbin-Watson stat	2.002089	Prob(F-statistic)	0.000000	

**SLOVENIA MONTHLY**

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=13)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.991965
Test critical values: 1% level	-3.520000
5% level	-2.980000
10% level	-2.690000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 351 500

Included observations: 150 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.016544	0.016678	-0.991965	0.3228
R-squared	0.005737	Mean dependent var	3.614464	
Adjusted R-squared	0.005737	S.D. dependent var	125.9402	
S.E. of regression	125.5784	Akaike info criterion	12.51038	
Sum squared resid	2349719.	Schwarz criterion	12.53045	
Log likelihood	-937.2786	Durbin-Watson stat	1.771318	

**SLOVENIA MONTHLY**

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=13)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.991965
Test critical values: 1% level	-3.520000
5% level	-2.980000

10% level

-2.690000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Date: 09/07/06 Time: 12:16

Sample(adjusted): 351 500

Included observations: 150 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.016544	0.016678	-0.991965	0.3228
R-squared	0.005737	Mean dependent var		3.614464
Adjusted R-squared	0.005737	S.D. dependent var		125.9402
S.E. of regression	125.5784	Akaike info criterion		12.51038
Sum squared resid	2349719.	Schwarz criterion		12.53045
Log likelihood	-937.2786	Durbin-Watson stat		1.771318

**SLOVENIA MONTHLY**

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=13)

Sample(adjusted): 350 500

Included observations: 151 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.41816	-0.96982	0.40106	32.5136
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 15664.80

**SLOVENIA MONTHLY**

Null Hypothesis: SLOVENIA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=13)

Sample(adjusted): 350 500

Included observations: 151 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.41816	-0.96982	0.40106	32.5136
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 15664.80

## SLOVENIA MONTHLY

Null Hypothesis: SLOVENIA is stationary  
Exogenous: Constant, Linear Trend  
Bandwidth: 10 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.312505
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000
*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)	
Residual variance (no correction)	324987.3
HAC corrected variance (Bartlett kernel)	3085744.

### KPSS Test Equation

Dependent Variable: SLOVENIA  
Method: Least Squares  
Sample(adjusted): 350 500  
Included observations: 151 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8925.832	456.6800	-19.54504	0.0000
@TREND(1)	26.75041	1.071429	24.96704	0.0000
R-squared	0.807083	Mean dependent var	2416.341	
Adjusted R-squared	0.805788	S.D. dependent var	1302.240	
S.E. of regression	573.8898	Akaike info criterion	15.55591	
Sum squared resid	49073079	Schwarz criterion	15.59587	
Log likelihood	-1172.471	F-statistic	623.3533	
Durbin-Watson stat	0.048159	Prob(F-statistic)	0.000000	

## TURKEY DAILY (LEVEL)

Null Hypothesis: TURKEY has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.906235	0.9538
Test critical values:		
1% level	-3.959940	
5% level	-3.410736	
10% level	-3.127157	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY)  
Method: Least Squares  
Sample(adjusted): 2092 6915  
Included observations: 4824 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.000593	0.000654	-0.906235	0.3649
C	-29.05277	18.26926	-1.590254	0.1118
@TREND(1)	0.009015	0.004759	1.894331	0.0582
R-squared	0.000995	Mean dependent var	7.347931	

Adjusted R-squared	0.000580	S.D. dependent var	266.7210
S.E. of regression	266.6436	Akaike info criterion	14.01032
Sum squared resid	3.43E+08	Schwarz criterion	14.01436
Log likelihood	-33789.90	F-statistic	2.400372
Durbin-Watson stat	1.915522	Prob(F-statistic)	0.090793

### TURKEY DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-66.56434	0.0000
Test critical values:		
1% level	-3.959940	
5% level	-3.410736	
10% level	-3.127157	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares

Sample(adjusted): 2093 6915

Included observations: 4823 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.960805	0.014434	-66.56434	0.0000
C	-16.79165	12.99250	-1.292411	0.1963
@TREND(1)	0.005300	0.002757	1.922199	0.0546
R-squared	0.478966	Mean dependent var	0.294848	
Adjusted R-squared	0.478749	S.D. dependent var	369.1118	
S.E. of regression	266.4902	Akaike info criterion	14.00917	
Sum squared resid	3.42E+08	Schwarz criterion	14.01321	
Log likelihood	-33780.12	F-statistic	2215.414	
Durbin-Watson stat	1.995204	Prob(F-statistic)	0.000000	

### TURKEY DAILY (LEVEL)

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 29 (Automatic based on AIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.302227	0.8871
Test critical values:		
1% level	-3.959952	
5% level	-3.410742	
10% level	-3.127160	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 2121 6915

Included observations: 4795 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.000866	0.000665	-1.302227	0.1929
D(TURKEY(-1))	0.038975	0.014509	2.686264	0.0073
D(TURKEY(-2))	0.008146	0.014529	0.560705	0.5750

D(TURKEY(-3))	0.005199	0.014545	0.357446	0.7208
D(TURKEY(-4))	-0.012803	0.014541	-0.880476	0.3786
D(TURKEY(-5))	0.008958	0.014563	0.615129	0.5385
D(TURKEY(-6))	-0.018690	0.014559	-1.283703	0.1993
D(TURKEY(-7))	-0.041407	0.014560	-2.843799	0.0045
D(TURKEY(-8))	0.036271	0.014577	2.488239	0.0129
D(TURKEY(-9))	0.002400	0.014587	0.164541	0.8693
D(TURKEY(-10))	0.049052	0.014597	3.360503	0.0008
D(TURKEY(-11))	-0.013744	0.014612	-0.940592	0.3470
D(TURKEY(-12))	0.020063	0.014618	1.372475	0.1700
D(TURKEY(-13))	-0.001248	0.014624	-0.085334	0.9320
D(TURKEY(-14))	0.015659	0.014701	1.065188	0.2868
D(TURKEY(-15))	0.052753	0.014680	3.593543	0.0003
D(TURKEY(-16))	0.037191	0.014706	2.528916	0.0115
D(TURKEY(-17))	-0.002706	0.014770	-0.183191	0.8547
D(TURKEY(-18))	-0.027408	0.014778	-1.854682	0.0637
D(TURKEY(-19))	-0.007547	0.014785	-0.510448	0.6098
D(TURKEY(-20))	-0.008600	0.014809	-0.580760	0.5614
D(TURKEY(-21))	-0.010466	0.014826	-0.705879	0.4803
D(TURKEY(-22))	0.041024	0.014824	2.767407	0.0057
D(TURKEY(-23))	-0.026190	0.014834	-1.765592	0.0775
D(TURKEY(-24))	0.063195	0.014862	4.252076	0.0000
D(TURKEY(-25))	0.047317	0.014889	3.178024	0.0015
D(TURKEY(-26))	-0.040558	0.014966	-2.709916	0.0068
D(TURKEY(-27))	0.001003	0.014985	0.066946	0.9466
D(TURKEY(-28))	0.005728	0.015020	0.381388	0.7029
D(TURKEY(-29))	-0.050782	0.015041	-3.376266	0.0007
C	-31.82700	18.46205	-1.723915	0.0848
@TREND(1)	0.009764	0.004797	2.035588	0.0418
R-squared	0.027044	Mean dependent var	7.392250	
Adjusted R-squared	0.020711	S.D. dependent var	267.5259	
S.E. of regression	264.7410	Akaike info criterion	14.00203	
Sum squared resid	3.34E+08	Schwarz criterion	14.04525	
Log likelihood	-33537.87	F-statistic	4.270608	
Durbin-Watson stat	1.995859	Prob(F-statistic)	0.000000	

### TURKEY DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 28 (Automatic based on AIC, MAXLAG=31)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.03546	0.0000
Test critical values:		
1% level	-3.959952	
5% level	-3.410742	
10% level	-3.127160	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares

Sample(adjusted): 2121 6915

Included observations: 4795 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.846804	0.070359	-12.03546	0.0000
D(TURKEY(-1),2)	-0.114644	0.069465	-1.650394	0.0989
D(TURKEY(-2),2)	-0.106910	0.068559	-1.559385	0.1190

D(TURKEY(-3),2)	-0.102093	0.067663	-1.508849	0.1314
D(TURKEY(-4),2)	-0.115222	0.066886	-1.722662	0.0850
D(TURKEY(-5),2)	-0.106659	0.065962	-1.616981	0.1059
D(TURKEY(-6),2)	-0.125829	0.064831	-1.940873	0.0523
D(TURKEY(-7),2)	-0.167667	0.063783	-2.628706	0.0086
D(TURKEY(-8),2)	-0.131865	0.062628	-2.105543	0.0353
D(TURKEY(-9),2)	-0.129955	0.061425	-2.115661	0.0344
D(TURKEY(-10),2)	-0.081361	0.060240	-1.350621	0.1769
D(TURKEY(-11),2)	-0.095566	0.059058	-1.618153	0.1057
D(TURKEY(-12),2)	-0.075917	0.057945	-1.310159	0.1902
D(TURKEY(-13),2)	-0.077575	0.056807	-1.365580	0.1721
D(TURKEY(-14),2)	-0.062437	0.055433	-1.126361	0.2601
D(TURKEY(-15),2)	-0.010274	0.053790	-0.191003	0.8485
D(TURKEY(-16),2)	0.026282	0.052052	0.504924	0.6136
D(TURKEY(-17),2)	0.022858	0.050202	0.455324	0.6489
D(TURKEY(-18),2)	-0.005320	0.048160	-0.110460	0.9120
D(TURKEY(-19),2)	-0.013631	0.046115	-0.295590	0.7676
D(TURKEY(-20),2)	-0.023078	0.043803	-0.526868	0.5983
D(TURKEY(-21),2)	-0.034349	0.041340	-0.830875	0.4061
D(TURKEY(-22),2)	0.005867	0.038553	0.152192	0.8790
D(TURKEY(-23),2)	-0.021122	0.035656	-0.592396	0.5536
D(TURKEY(-24),2)	0.041254	0.032675	1.262558	0.2068
D(TURKEY(-25),2)	0.087723	0.029261	2.998003	0.0027
D(TURKEY(-26),2)	0.046376	0.025421	1.824303	0.0682
D(TURKEY(-27),2)	0.046637	0.020939	2.227333	0.0260
D(TURKEY(-28),2)	0.051563	0.015030	3.430674	0.0006
C	-14.90140	13.11257	-1.136421	0.2558
@TREND(1)	0.004684	0.002791	1.678175	0.0934
R-squared	0.491683	Mean dependent var	0.296565	
Adjusted R-squared	0.488482	S.D. dependent var	370.1882	
S.E. of regression	264.7604	Akaike info criterion	14.00197	
Sum squared resid	3.34E+08	Schwarz criterion	14.04383	
Log likelihood	-33538.73	F-statistic	153.6035	
Durbin-Watson stat	1.996033	Prob(F-statistic)	0.000000	

## TURKEY DAILY (LEVEL)

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.971605	0.9461
Test critical values:		
1% level	-3.959940	
5% level	-3.410736	
10% level	-3.127157	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	71054.59
HAC corrected variance (Bartlett kernel)	75280.17

Phillips-Perron Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 2092 6915

Included observations: 4824 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.000593	0.000654	-0.906235	0.3649
C	-29.05277	18.26926	-1.590254	0.1118
@TREND(1)	0.009015	0.004759	1.894331	0.0582
R-squared	0.000995	Mean dependent var		7.347931
Adjusted R-squared	0.000580	S.D. dependent var		266.7210
S.E. of regression	266.6436	Akaike info criterion		14.01032
Sum squared resid	3.43E+08	Schwarz criterion		14.01436
Log likelihood	-33789.90	F-statistic		2.400372
Durbin-Watson stat	1.915522	Prob(F-statistic)		0.090793

### TURKEY DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-66.56536	0.0000
Test critical values:		
1% level	-3.959940	
5% level	-3.410736	
10% level	-3.127157	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	70972.85
HAC corrected variance (Bartlett kernel)	71020.32

Phillips-Perron Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares

Sample(adjusted): 2093 6915

Included observations: 4823 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.960805	0.014434	-66.56434	0.0000
C	-16.79165	12.99250	-1.292411	0.1963
@TREND(1)	0.005300	0.002757	1.922199	0.0546
R-squared	0.478966	Mean dependent var		0.294848
Adjusted R-squared	0.478749	S.D. dependent var		369.1118
S.E. of regression	266.4902	Akaike info criterion		14.00917
Sum squared resid	3.42E+08	Schwarz criterion		14.01321
Log likelihood	-33780.12	F-statistic		2215.414
Durbin-Watson stat	1.995204	Prob(F-statistic)		0.000000

### TURKEY DAILY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=31)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.527821
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)



DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2092 6915  
 Included observations: 4824 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000284	0.000538	-0.527821	0.5976
R-squared	-0.000064	Mean dependent var		2.937597
Adjusted R-squared	-0.000064	S.D. dependent var		266.7210
S.E. of regression	266.7295	Akaike info criterion		14.01055
Sum squared resid	3.43E+08	Schwarz criterion		14.01190
Log likelihood	-33792.46	Durbin-Watson stat		1.914085

## TURKEY DAILY

Null Hypothesis: TURKEY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 29 (Automatic based on AIC, MAXLAG=31)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.913721
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 2121 6915  
 Included observations: 4795 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000495	0.000542	-0.913721	0.3609
D(GLSRESID(-1))	0.039405	0.014508	2.716140	0.0066
D(GLSRESID(-2))	0.008526	0.014528	0.586886	0.5573
D(GLSRESID(-3))	0.005550	0.014545	0.381594	0.7028
D(GLSRESID(-4))	-0.012494	0.014542	-0.859138	0.3903
D(GLSRESID(-5))	0.009327	0.014563	0.640488	0.5219
D(GLSRESID(-6))	-0.018275	0.014558	-1.255369	0.2094
D(GLSRESID(-7))	-0.041003	0.014559	-2.816217	0.0049
D(GLSRESID(-8))	0.036744	0.014575	2.521037	0.0117
D(GLSRESID(-9))	0.002848	0.014585	0.195246	0.8452
D(GLSRESID(-10))	0.049476	0.014595	3.389848	0.0007
D(GLSRESID(-11))	-0.013372	0.014612	-0.915151	0.3602
D(GLSRESID(-12))	0.020421	0.014618	1.396993	0.1625
D(GLSRESID(-13))	-0.000915	0.014624	-0.062598	0.9501
D(GLSRESID(-14))	0.016067	0.014699	1.093067	0.2744
D(GLSRESID(-15))	0.053187	0.014677	3.623833	0.0003
D(GLSRESID(-16))	0.037598	0.014703	2.557102	0.0106
D(GLSRESID(-17))	-0.002283	0.014766	-0.154650	0.8771
D(GLSRESID(-18))	-0.026949	0.014772	-1.824333	0.0682
D(GLSRESID(-19))	-0.007060	0.014779	-0.477735	0.6329
D(GLSRESID(-20))	-0.008052	0.014801	-0.544024	0.5865
D(GLSRESID(-21))	-0.009935	0.014819	-0.670427	0.5026
D(GLSRESID(-22))	0.041568	0.014816	2.805520	0.0050
D(GLSRESID(-23))	-0.025696	0.014827	-1.733075	0.0831
D(GLSRESID(-24))	0.063732	0.014854	4.290431	0.0000

D(GLSRESID(-25))	0.047804	0.014881	3.212317	0.0013
D(GLSRESID(-26))	-0.040162	0.014961	-2.684347	0.0073
D(GLSRESID(-27))	0.001413	0.014981	0.094347	0.9248
D(GLSRESID(-28))	0.006178	0.015014	0.411488	0.6807
D(GLSRESID(-29))	-0.050354	0.015036	-3.348963	0.0008
R-squared	0.026207	Mean dependent var	2.981916	
Adjusted R-squared	0.020281	S.D. dependent var	267.5259	
S.E. of regression	264.7992	Akaike info criterion	14.00206	
Sum squared resid	3.34E+08	Schwarz criterion	14.04257	
Log likelihood	-33539.93	Durbin-Watson stat	1.995741	

### TURKEY DAILY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=31)

Sample(adjusted): 2091 6915

Included observations: 4825 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.36834	-0.52777	0.38570	35.7072
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	71129.87
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### TURKEY DAILY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 29 (Spectral GLS-detrended AR based on AIC, MAXLAG=31)

Sample(adjusted): 2091 6915

Included observations: 4825 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.94355	-0.93683	0.31826	24.3126
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	104466.3
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### TURKEY DAILY

Null Hypothesis: TURKEY is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 54 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.325481
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000

	10% level	0.119000
*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)		
Residual variance (no correction)		34446605
HAC corrected variance (Bartlett kernel)		1.83E+09

KPSS Test Equation

Dependent Variable: TURKEY

Method: Least Squares

Sample(adjusted): 2091 6915

Included observations: 4825 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-19632.60	285.9323	-68.66171	0.0000
@TREND(1)	5.930696	0.060675	97.74572	0.0000
R-squared	0.664539	Mean dependent var	7067.393	
Adjusted R-squared	0.664469	S.D. dependent var	10134.38	
S.E. of regression	5870.340	Akaike info criterion	20.19363	
Sum squared resid	1.66E+11	Schwarz criterion	20.19631	
Log likelihood	-48715.13	F-statistic	9554.225	
Durbin-Watson stat	0.002064	Prob(F-statistic)	0.000000	

**TURKEY WEEKLY (LEVEL)**

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 10 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.583216	0.7992
Test critical values:		
1% level	-3.967697	
5% level	-3.414531	
10% level	-3.129407	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 1214 2167

Included observations: 954 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.005359	0.003385	-1.583216	0.1137
D(TURKEY(-1))	0.004227	0.032596	0.129683	0.8968
D(TURKEY(-2))	0.138725	0.032558	4.260832	0.0000
D(TURKEY(-3))	0.029335	0.032799	0.894393	0.3713
D(TURKEY(-4))	0.037743	0.033767	1.117742	0.2640
D(TURKEY(-5))	0.077397	0.033509	2.309771	0.0211
D(TURKEY(-6))	-0.117085	0.033558	-3.489093	0.0005
D(TURKEY(-7))	-0.113138	0.034082	-3.319605	0.0009
D(TURKEY(-8))	0.131791	0.034570	3.812287	0.0001
D(TURKEY(-9))	-0.046726	0.034673	-1.347616	0.1781
D(TURKEY(-10))	0.123773	0.034872	3.549340	0.0004
C	-370.2249	183.7219	-2.015138	0.0442

@TREND(1)	0.257406	0.119164	2.160108	0.0310
R-squared	0.088253	Mean dependent var	37.15581	
Adjusted R-squared	0.076626	S.D. dependent var	601.7437	
S.E. of regression	578.2297	Akaike info criterion	15.57135	
Sum squared resid	3.15E+08	Schwarz criterion	15.63759	
Log likelihood	-7414.535	F-statistic	7.590355	
Durbin-Watson stat	1.997734	Prob(F-statistic)	0.000000	

### TURKEY WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 9 (Automatic based on SIC, MAXLAG=21)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.207807	0.0000
Test critical values:	1% level	-3.967697	
	5% level	-3.414531	
	10% level	-3.129407	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares

Sample(adjusted): 1214 2167

Included observations: 954 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.784777	0.095613	-8.207807	0.0000
D(TURKEY(-1),2)	-0.213733	0.091854	-2.326878	0.0202
D(TURKEY(-2),2)	-0.077484	0.088405	-0.876467	0.3810
D(TURKEY(-3),2)	-0.052353	0.082543	-0.634253	0.5261
D(TURKEY(-4),2)	-0.020001	0.076280	-0.262209	0.7932
D(TURKEY(-5),2)	0.053368	0.071578	0.745585	0.4561
D(TURKEY(-6),2)	-0.068769	0.065208	-1.054610	0.2919
D(TURKEY(-7),2)	-0.187430	0.057966	-3.233447	0.0013
D(TURKEY(-8),2)	-0.061906	0.049248	-1.257029	0.2091
D(TURKEY(-9),2)	-0.115998	0.034552	-3.357198	0.0008
C	-148.3784	118.9183	-1.247734	0.2124
@TREND(1)	0.104699	0.070032	1.495019	0.1352
R-squared	0.547022	Mean dependent var	2.433040	
Adjusted R-squared	0.541733	S.D. dependent var	854.8460	
S.E. of regression	578.6919	Akaike info criterion	15.57192	
Sum squared resid	3.15E+08	Schwarz criterion	15.63306	
Log likelihood	-7415.804	F-statistic	103.4156	
Durbin-Watson stat	1.996933	Prob(F-statistic)	0.000000	

### TURKEY WEEKLY (LEVEL)

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 16 (Automatic based on AIC, MAXLAG=21)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.781758	0.7131
Test critical values:	1% level	-3.967759	
	5% level	-3.414561	

10% level

-3.129425

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 1220 2167

Included observations: 948 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.006426	0.003606	-1.781758	0.0751
D(TURKEY(-1))	0.016656	0.032828	0.507382	0.6120
D(TURKEY(-2))	0.129425	0.032803	3.945555	0.0001
D(TURKEY(-3))	0.023823	0.033253	0.716408	0.4739
D(TURKEY(-4))	0.051415	0.034025	1.511105	0.1311
D(TURKEY(-5))	0.060547	0.034127	1.774192	0.0764
D(TURKEY(-6))	-0.103956	0.034265	-3.033871	0.0025
D(TURKEY(-7))	-0.104248	0.034548	-3.017517	0.0026
D(TURKEY(-8))	0.127779	0.035096	3.640821	0.0003
D(TURKEY(-9))	-0.038699	0.035240	-1.098143	0.2724
D(TURKEY(-10))	0.113801	0.035213	3.231824	0.0013
D(TURKEY(-11))	0.021709	0.035372	0.613747	0.5395
D(TURKEY(-12))	-0.027130	0.035575	-0.762614	0.4459
D(TURKEY(-13))	0.100760	0.035604	2.829999	0.0048
D(TURKEY(-14))	-0.042718	0.035813	-1.192799	0.2333
D(TURKEY(-15))	0.076965	0.035950	2.140901	0.0325
D(TURKEY(-16))	-0.060364	0.036200	-1.667525	0.0957
C	-398.4223	187.9495	-2.119837	0.0343
@TREND(1)	0.276222	0.121888	2.266196	0.0237
R-squared	0.107165	Mean dependent var	37.39216	
Adjusted R-squared	0.089865	S.D. dependent var	603.6395	
S.E. of regression	575.8780	Akaike info criterion	15.56951	
Sum squared resid	3.08E+08	Schwarz criterion	15.66680	
Log likelihood	-7360.946	F-statistic	6.194753	
Durbin-Watson stat	1.994797	Prob(F-statistic)	0.000000	

**TURKEY WEEKLY (1<sup>ST</sup> DIFFERENCE)**

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 15 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.425360	0.0000
Test critical values:		
1% level	-3.967759	
5% level	-3.414561	
10% level	-3.129425	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares

Sample(adjusted): 1220 2167

Included observations: 948 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.760402	0.118344	-6.425360	0.0000
D(TURKEY(-1),2)	-0.224718	0.116827	-1.923511	0.0547

D(TURKEY(-2),2)	-0.097397	0.114960	-0.847222	0.3971
D(TURKEY(-3),2)	-0.076657	0.112685	-0.680276	0.4965
D(TURKEY(-4),2)	-0.031045	0.108822	-0.285282	0.7755
D(TURKEY(-5),2)	0.024293	0.105103	0.231134	0.8173
D(TURKEY(-6),2)	-0.085457	0.101219	-0.844280	0.3987
D(TURKEY(-7),2)	-0.196814	0.095989	-2.050383	0.0406
D(TURKEY(-8),2)	-0.076693	0.090954	-0.843207	0.3993
D(TURKEY(-9),2)	-0.124275	0.084069	-1.478257	0.1397
D(TURKEY(-10),2)	-0.019033	0.077768	-0.244738	0.8067
D(TURKEY(-11),2)	-0.004143	0.072344	-0.057263	0.9543
D(TURKEY(-12),2)	-0.039223	0.065972	-0.594547	0.5523
D(TURKEY(-13),2)	0.053968	0.058590	0.921113	0.3572
D(TURKEY(-14),2)	0.002807	0.049647	0.056535	0.9549
D(TURKEY(-15),2)	0.069835	0.035850	1.947993	0.0517
C	-142.9913	121.6872	-1.175073	0.2403
@TREND(1)	0.100779	0.071925	1.401175	0.1615
R-squared	0.556095	Mean dependent var	2.447764	
Adjusted R-squared	0.547981	S.D. dependent var	857.5498	
S.E. of regression	576.5509	Akaike info criterion	15.57081	
Sum squared resid	3.09E+08	Schwarz criterion	15.66298	
Log likelihood	-7362.563	F-statistic	68.53206	
Durbin-Watson stat	1.997457	Prob(F-statistic)	0.000000	

### TURKEY WEEKLY (LEVEL)

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.148012	0.9190
Test critical values: 1% level	-3.967597	
5% level	-3.414482	
10% level	-3.129378	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	356203.8
HAC corrected variance (Bartlett kernel)	434913.5

Phillips-Perron Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 1204 2167

Included observations: 964 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.003018	0.003282	-0.919490	0.3581
C	-324.2210	183.9403	-1.762643	0.0783
@TREND(1)	0.226980	0.119547	1.898662	0.0579
R-squared	0.004956	Mean dependent var	36.77007	
Adjusted R-squared	0.002885	S.D. dependent var	598.6231	
S.E. of regression	597.7590	Akaike info criterion	15.62736	
Sum squared resid	3.43E+08	Schwarz criterion	15.64252	
Log likelihood	-7529.387	F-statistic	2.393001	
Durbin-Watson stat	2.022066	Prob(F-statistic)	0.091899	

### TURKEY WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend  
 Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-31.58673	0.0000
Test critical values:		
1% level	-3.967607	
5% level	-3.414487	
10% level	-3.129381	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	356736.8
HAC corrected variance (Bartlett kernel)	447590.2

Phillips-Perron Test Equation  
 Dependent Variable: D(TURKEY,2)  
 Method: Least Squares  
 Sample(adjusted): 1205 2167  
 Included observations: 963 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-1.020630	0.032503	-31.40157	0.0000
C	-198.4942	118.5556	-1.674270	0.0944
@TREND(1)	0.140066	0.069458	2.016554	0.0440
R-squared	0.506706	Mean dependent var		2.409429
Adjusted R-squared	0.505679	S.D. dependent var		850.8379
S.E. of regression	598.2070	Akaike info criterion		15.62886
Sum squared resid	3.44E+08	Schwarz criterion		15.64403
Log likelihood	-7522.297	F-statistic		493.0513
Durbin-Watson stat	1.980294	Prob(F-statistic)		0.000000

## TURKEY WEEKLY

Null Hypothesis: TURKEY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 10 (Automatic based on SIC, MAXLAG=21)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.227708
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1214 2167  
 Included observations: 954 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003384	0.002756	-1.227708	0.2199
D(GLSRESID(-1))	0.005957	0.032568	0.182896	0.8549
D(GLSRESID(-2))	0.140362	0.032538	4.313770	0.0000
D(GLSRESID(-3))	0.030915	0.032737	0.944350	0.3452
D(GLSRESID(-4))	0.039663	0.033652	1.178628	0.2388
D(GLSRESID(-5))	0.078709	0.033461	2.352256	0.0189

D(GLSRESID(-6))	-0.115782	0.033479	-3.458356	0.0006
D(GLSRESID(-7))	-0.111091	0.033957	-3.271544	0.0011
D(GLSRESID(-8))	0.134648	0.034373	3.917247	0.0001
D(GLSRESID(-9))	-0.044115	0.034438	-1.280972	0.2005
D(GLSRESID(-10))	0.126777	0.034592	3.664925	0.0003
R-squared	0.084839	Mean dependent var	14.53198	
Adjusted R-squared	0.075134	S.D. dependent var	601.7437	
S.E. of regression	578.6965	Akaike info criterion	15.57090	
Sum squared resid	3.16E+08	Schwarz criterion	15.62694	
Log likelihood	-7416.318	Durbin-Watson stat	1.997895	

### TURKEY WEEKLY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 16 (Automatic based on AIC, MAXLAG=21)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-1.434542
Test critical values:	1% level	-3.480000
	5% level	-2.890000
	10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1220 2167

Included observations: 948 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.004095	0.002855	-1.434542	0.1518
D(GLSRESID(-1))	0.017710	0.032826	0.539526	0.5897
D(GLSRESID(-2))	0.130449	0.032796	3.977535	0.0001
D(GLSRESID(-3))	0.024497	0.033237	0.737029	0.4613
D(GLSRESID(-4))	0.052406	0.033915	1.545244	0.1226
D(GLSRESID(-5))	0.061253	0.034052	1.798787	0.0724
D(GLSRESID(-6))	-0.103381	0.034175	-3.025034	0.0026
D(GLSRESID(-7))	-0.103051	0.034373	-2.997980	0.0028
D(GLSRESID(-8))	0.129530	0.034862	3.715565	0.0002
D(GLSRESID(-9))	-0.037293	0.034964	-1.066619	0.2864
D(GLSRESID(-10))	0.115371	0.034942	3.301784	0.0010
D(GLSRESID(-11))	0.022598	0.035232	0.641406	0.5214
D(GLSRESID(-12))	-0.026138	0.035377	-0.738829	0.4602
D(GLSRESID(-13))	0.101819	0.035424	2.874312	0.0041
D(GLSRESID(-14))	-0.041918	0.035605	-1.177318	0.2394
D(GLSRESID(-15))	0.078169	0.035632	2.193757	0.0285
D(GLSRESID(-16))	-0.059540	0.035942	-1.656554	0.0979
R-squared	0.103970	Mean dependent var	14.76833	
Adjusted R-squared	0.088571	S.D. dependent var	603.6395	
S.E. of regression	576.2873	Akaike info criterion	15.56886	
Sum squared resid	3.09E+08	Schwarz criterion	15.65591	
Log likelihood	-7362.639	Durbin-Watson stat	1.994404	

### TURKEY WEEKLY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 10 (Spectral GLS-detrended AR based on SIC, MAXLAG=21)



Sample(adjusted): 1203 2167  
 Included observations: 965 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.30310	-1.21239	0.28175	19.0565
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	649415.3
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### TURKEY WEEKLY

Null Hypothesis: TURKEY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 16 (Spectral GLS-detrended AR based on AIC, MAXLAG=21)  
 Sample(adjusted): 1203 2167  
 Included observations: 965 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.78770	-1.46693	0.25346	15.4216
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	802482.1
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### TURKEY WEEKLY

Null Hypothesis: TURKEY is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 24 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.624727
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	34574465
HAC corrected variance (Bartlett kernel)	7.79E+08

KPSS Test Equation  
 Dependent Variable: TURKEY  
 Method: Least Squares  
 Sample(adjusted): 1203 2167  
 Included observations: 965 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-43067.80	1161.001	-37.09541	0.0000

@TREND(1)	29.79431	0.680187	43.80313	0.0000
R-squared	0.665824	Mean dependent var	7105.809	
Adjusted R-squared	0.665477	S.D. dependent var	10176.89	
S.E. of regression	5886.108	Akaike info criterion	20.20065	
Sum squared resid	3.34E+10	Schwarz criterion	20.21075	
Log likelihood	-9744.813	F-statistic	1918.714	
Durbin-Watson stat	0.010344	Prob(F-statistic)	0.000000	

### TURKEY MONTHLY (LEVEL)

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.181008	0.9112
Test critical values: 1% level	-4.000122	
5% level	-3.430289	
10% level	-3.138717	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 280 500

Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.018606	0.015754	-1.181008	0.2389
C	-1659.314	899.3040	-1.845109	0.0664
@TREND(1)	5.016009	2.524826	1.986675	0.0482
R-squared	0.020140	Mean dependent var	160.3978	
Adjusted R-squared	0.011151	S.D. dependent var	1411.805	
S.E. of regression	1403.912	Akaike info criterion	17.34539	
Sum squared resid	4.30E+08	Schwarz criterion	17.39152	
Log likelihood	-1913.666	F-statistic	2.240389	
Durbin-Watson stat	1.919866	Prob(F-statistic)	0.108862	

### TURKEY MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.30591	0.0000
Test critical values: 1% level	-4.000316	
5% level	-3.430383	
10% level	-3.138772	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares

Sample(adjusted): 281 500

Included observations: 220 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.984389	0.068810	-14.30591	0.0000
C	-842.1045	595.3404	-1.414492	0.1587
@TREND(1)	2.568714	1.512750	1.698043	0.0909
R-squared	0.485456	Mean dependent var	-13.35141	
Adjusted R-squared	0.480714	S.D. dependent var	1958.665	
S.E. of regression	1411.444	Akaike info criterion	17.35616	
Sum squared resid	4.32E+08	Schwarz criterion	17.40243	
Log likelihood	-1906.177	F-statistic	102.3663	
Durbin-Watson stat	1.977912	Prob(F-statistic)	0.000000	

### TURKEY MONTHLY (LEVEL)

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.181008	0.9112
Test critical values:		
1% level	-4.000122	
5% level	-3.430289	
10% level	-3.138717	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY)

Method: Least Squares

Sample(adjusted): 280 500

Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.018606	0.015754	-1.181008	0.2389
C	-1659.314	899.3040	-1.845109	0.0664
@TREND(1)	5.016009	2.524826	1.986675	0.0482
R-squared	0.020140	Mean dependent var	160.3978	
Adjusted R-squared	0.011151	S.D. dependent var	1411.805	
S.E. of regression	1403.912	Akaike info criterion	17.34539	
Sum squared resid	4.30E+08	Schwarz criterion	17.39152	
Log likelihood	-1913.666	F-statistic	2.240389	
Durbin-Watson stat	1.919866	Prob(F-statistic)	0.108862	

### TURKEY MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.614789	0.0000
Test critical values:		
1% level	-4.000511	
5% level	-3.430477	
10% level	-3.138828	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TURKEY,2)

Method: Least Squares  
Sample(adjusted): 282 500  
Included observations: 219 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.874874	0.101555	-8.614789	0.0000
D(TURKEY(-1),2)	-0.105884	0.072204	-1.466458	0.1440
C	-709.5996	607.3382	-1.168376	0.2439
@TREND(1)	2.171322	1.548370	1.402328	0.1623
R-squared	0.490569	Mean dependent var	-13.41543	
Adjusted R-squared	0.483461	S.D. dependent var	1963.152	
S.E. of regression	1410.930	Akaike info criterion	17.35998	
Sum squared resid	4.28E+08	Schwarz criterion	17.42188	
Log likelihood	-1896.918	F-statistic	69.01325	
Durbin-Watson stat	1.975613	Prob(F-statistic)	0.000000	

### TURKEY MONTHLY (LEVEL)

Null Hypothesis: TURKEY has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.213715	0.9047
Test critical values:		
1% level	-4.000122	
5% level	-3.430289	
10% level	-3.138717	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1944213.
HAC corrected variance (Bartlett kernel)	2000664.

Phillips-Perron Test Equation  
Dependent Variable: D(TURKEY)  
Method: Least Squares  
Sample(adjusted): 280 500  
Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TURKEY(-1)	-0.018606	0.015754	-1.181008	0.2389
C	-1659.314	899.3040	-1.845109	0.0664
@TREND(1)	5.016009	2.524826	1.986675	0.0482
R-squared	0.020140	Mean dependent var	160.3978	
Adjusted R-squared	0.011151	S.D. dependent var	1411.805	
S.E. of regression	1403.912	Akaike info criterion	17.34539	
Sum squared resid	4.30E+08	Schwarz criterion	17.39152	
Log likelihood	-1913.666	F-statistic	2.240389	
Durbin-Watson stat	1.919866	Prob(F-statistic)	0.108862	

### TURKEY MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(TURKEY) has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-14.33344	0.0000
Test critical values:		
1% level	-4.000316	

5% level	-3.430383
10% level	-3.138772

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1965009.
HAC corrected variance (Bartlett kernel)	2083722.

Phillips-Perron Test Equation  
 Dependent Variable: D(TURKEY,2)  
 Method: Least Squares  
 Sample(adjusted): 281 500  
 Included observations: 220 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TURKEY(-1))	-0.984389	0.068810	-14.30591	0.0000
C	-842.1045	595.3404	-1.414492	0.1587
@TREND(1)	2.568714	1.512750	1.698043	0.0909
R-squared	0.485456	Mean dependent var	-13.35141	
Adjusted R-squared	0.480714	S.D. dependent var	1958.665	
S.E. of regression	1411.444	Akaike info criterion	17.35616	
Sum squared resid	4.32E+08	Schwarz criterion	17.40243	
Log likelihood	-1906.177	F-statistic	102.3663	
Durbin-Watson stat	1.977912	Prob(F-statistic)	0.000000	

## TURKEY MONTHLY

Null Hypothesis: TURKEY has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.902352
Test critical values:	
1% level	-3.462100
5% level	-2.925800
10% level	-2.632650

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 280 500  
 Included observations: 221 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.012489	0.013840	-0.902352	0.3679
R-squared	0.002257	Mean dependent var	53.37129	
Adjusted R-squared	0.002257	S.D. dependent var	1411.805	
S.E. of regression	1410.211	Akaike info criterion	17.34538	
Sum squared resid	4.38E+08	Schwarz criterion	17.36076	
Log likelihood	-1915.665	Durbin-Watson stat	1.896845	

## TURKEY MONTHLY

Null Hypothesis: TURKEY has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on AIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.430948
Test critical values: 1% level	-3.461900
5% level	-2.926200
10% level	-2.633350

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 282 500

Included observations: 219 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.020573	0.014377	-1.430948	0.1539
D(GLSRESID(-1))	0.051311	0.068941	0.744269	0.4575
D(GLSRESID(-2))	0.149508	0.072496	2.062302	0.0404
R-squared	0.023321	Mean dependent var	54.84639	
Adjusted R-squared	0.014277	S.D. dependent var	1418.181	
S.E. of regression	1408.021	Akaike info criterion	17.35136	
Sum squared resid	4.28E+08	Schwarz criterion	17.39779	
Log likelihood	-1896.974	Durbin-Watson stat	1.997845	

## TURKEY MONTHLY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=14)

Sample(adjusted): 279 500

Included observations: 222 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.71107	-0.88838	0.32769	25.6001
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1979696.
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## TURKEY MONTHLY

Null Hypothesis: TURKEY has a unit root

Exogenous: Constant, Linear Trend

Lag length: 2 (Spectral GLS-detrended AR based on AIC, MAXLAG=14)

Sample(adjusted): 279 500

Included observations: 222 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.25566	-1.38489	0.26350	16.5540
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

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HAC corrected variance (Spectral GLS-detrended AR) 3061524.

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### TURKEY MONTHLY

Null Hypothesis: TURKEY is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 11 (Newey-West using Bartlett kernel)

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	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.341975
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

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\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

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Residual variance (no correction)	36636010
HAC corrected variance (Bartlett kernel)	3.45E+08

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### KPSS Test Equation

Dependent Variable: TURKEY  
 Method: Least Squares  
 Sample(adjusted): 279 500  
 Included observations: 222 after adjusting endpoints

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-43900.76	2507.295	-17.50921	0.0000
@TREND(1)	131.5244	6.367732	20.65482	0.0000
R-squared	0.659770	Mean dependent var		7196.461
Adjusted R-squared	0.658224	S.D. dependent var		10400.36
S.E. of regression	6080.219	Akaike info criterion		20.27244
Sum squared resid	8.13E+09	Schwarz criterion		20.30309
Log likelihood	-2248.241	F-statistic		426.6217
Durbin-Watson stat	0.053938	Prob(F-statistic)		0.000000

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### AFRICA DAILY (LEVEL)

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

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	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.326239	0.9988
Test critical values:		
1% level	-3.961240	
5% level	-3.411373	
10% level	-3.127534	

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\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(AFRICA)  
 Method: Least Squares

Sample(adjusted): 133 3002  
 Included observations: 2870 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.000370	0.001133	0.326239	0.7443
C	-4.714751	5.794067	-0.813720	0.4159
@TREND(1)	0.004530	0.004974	0.910696	0.3625
R-squared	0.001851	Mean dependent var		5.704519
Adjusted R-squared	0.001155	S.D. dependent var		115.0813
S.E. of regression	115.0148	Akaike info criterion		12.32904
Sum squared resid	37925839	Schwarz criterion		12.33528
Log likelihood	-17689.18	F-statistic		2.658798
Durbin-Watson stat	1.908598	Prob(F-statistic)		0.070205

### AFRICA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-51.11228	0.0000
Test critical values: 1% level	-3.961241	
5% level	-3.411373	
10% level	-3.127535	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(AFRICA,2)  
 Method: Least Squares  
 Sample(adjusted): 134 3002  
 Included observations: 2869 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-0.956488	0.018713	-51.11228	0.0000
C	-3.349555	4.592078	-0.729420	0.4658
@TREND(1)	0.005637	0.002593	2.174093	0.0298
R-squared	0.476862	Mean dependent var		0.183273
Adjusted R-squared	0.476497	S.D. dependent var		158.8382
S.E. of regression	114.9250	Akaike info criterion		12.32748
Sum squared resid	37853432	Schwarz criterion		12.33372
Log likelihood	-17680.77	F-statistic		1306.240
Durbin-Watson stat	1.995230	Prob(F-statistic)		0.000000

### AFRICA DAILY (LEVEL)

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 19 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.305286	0.9987
Test critical values: 1% level	-3.961261	
5% level	-3.411383	
10% level	-3.127541	

\*MacKinnon (1996) one-sided p-values.



Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(AFRICA)  
 Method: Least Squares  
 Sample(adjusted): 152 3002  
 Included observations: 2851 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.000355	0.001163	0.305286	0.7602
D(AFRICA(-1))	0.049368	0.018867	2.616612	0.0089
D(AFRICA(-2))	0.000532	0.018968	0.028025	0.9776
D(AFRICA(-3))	0.028639	0.018952	1.511125	0.1309
D(AFRICA(-4))	0.000720	0.018959	0.037987	0.9697
D(AFRICA(-5))	-0.019767	0.018964	-1.042317	0.2974
D(AFRICA(-6))	-0.016783	0.018968	-0.884787	0.3763
D(AFRICA(-7))	-0.067595	0.018946	-3.567695	0.0004
D(AFRICA(-8))	0.049017	0.018975	2.583245	0.0098
D(AFRICA(-9))	-0.038111	0.019033	-2.002313	0.0453
D(AFRICA(-10))	-0.016907	0.019042	-0.887874	0.3747
D(AFRICA(-11))	0.039385	0.019038	2.068816	0.0387
D(AFRICA(-12))	-0.060414	0.019221	-3.143064	0.0017
D(AFRICA(-13))	0.050184	0.019248	2.607264	0.0092
D(AFRICA(-14))	0.016930	0.019445	0.870661	0.3840
D(AFRICA(-15))	0.037842	0.019463	1.944325	0.0520
D(AFRICA(-16))	-0.032668	0.019746	-1.654433	0.0982
D(AFRICA(-17))	0.031243	0.020264	1.541824	0.1232
D(AFRICA(-18))	0.027763	0.020292	1.368155	0.1714
D(AFRICA(-19))	-0.051944	0.020469	-2.537724	0.0112
C	-4.766603	5.892955	-0.808865	0.4187
@TREND(1)	0.004550	0.005023	0.905783	0.3651
R-squared	0.025121	Mean dependent var	5.731859	
Adjusted R-squared	0.017885	S.D. dependent var	115.4374	
S.E. of regression	114.4004	Akaike info criterion	12.32497	
Sum squared resid	37024419	Schwarz criterion	12.37093	
Log likelihood	-17547.25	F-statistic	3.471399	
Durbin-Watson stat	1.994925	Prob(F-statistic)	0.000000	

### AFRICA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 18 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.78262	0.0000
Test critical values: 1% level	-3.961261	
5% level	-3.411383	
10% level	-3.127541	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(AFRICA,2)  
 Method: Least Squares  
 Sample(adjusted): 152 3002  
 Included observations: 2851 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-0.966429	0.082022	-11.78262	0.0000
D(AFRICA(-1),2)	0.016137	0.080188	0.201238	0.8405
D(AFRICA(-2),2)	0.016980	0.078203	0.217130	0.8281

D(AFRICA(-3),2)	0.045950	0.075957	0.604944	0.5453
D(AFRICA(-4),2)	0.046994	0.073683	0.637789	0.5237
D(AFRICA(-5),2)	0.027589	0.071068	0.388205	0.6979
D(AFRICA(-6),2)	0.011169	0.068376	0.163341	0.8703
D(AFRICA(-7),2)	-0.056038	0.065240	-0.858955	0.3904
D(AFRICA(-8),2)	-0.006674	0.062342	-0.107054	0.9148
D(AFRICA(-9),2)	-0.044455	0.059171	-0.751300	0.4525
D(AFRICA(-10),2)	-0.061041	0.055968	-1.090652	0.2755
D(AFRICA(-11),2)	-0.021343	0.052736	-0.404708	0.6857
D(AFRICA(-12),2)	-0.081482	0.049211	-1.655774	0.0979
D(AFRICA(-13),2)	-0.031066	0.046062	-0.674437	0.5001
D(AFRICA(-14),2)	-0.013852	0.042227	-0.328026	0.7429
D(AFRICA(-15),2)	0.024295	0.037804	0.642661	0.5205
D(AFRICA(-16),2)	-0.008150	0.033703	-0.241808	0.8089
D(AFRICA(-17),2)	0.023415	0.027982	0.836772	0.4028
D(AFRICA(-18),2)	0.051521	0.020419	2.523259	0.0117
C	-3.655219	4.633251	-0.788910	0.4302
@TREND(1)	0.005855	0.002636	2.221506	0.0264
R-squared	0.488043	Mean dependent var	0.163718	
Adjusted R-squared	0.484425	S.D. dependent var	159.2986	
S.E. of regression	114.3821	Akaike info criterion	12.32430	
Sum squared resid	37025638	Schwarz criterion	12.36817	
Log likelihood	-17547.30	F-statistic	134.8902	
Durbin-Watson stat	1.994839	Prob(F-statistic)	0.000000	

### AFRICA DAILY (LEVEL)

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.271555	0.9985
Test critical values: 1% level	-3.961240	
5% level	-3.411373	
10% level	-3.127534	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	13214.58
HAC corrected variance (Bartlett kernel)	13625.19

Phillips-Perron Test Equation

Dependent Variable: D(AFRICA)

Method: Least Squares

Sample(adjusted): 133 3002

Included observations: 2870 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.000370	0.001133	0.326239	0.7443
C	-4.714751	5.794067	-0.813720	0.4159
@TREND(1)	0.004530	0.004974	0.910696	0.3625
R-squared	0.001851	Mean dependent var	5.704519	
Adjusted R-squared	0.001155	S.D. dependent var	115.0813	
S.E. of regression	115.0148	Akaike info criterion	12.32904	
Sum squared resid	37925839	Schwarz criterion	12.33528	
Log likelihood	-17689.18	F-statistic	2.658798	
Durbin-Watson stat	1.908598	Prob(F-statistic)	0.070205	

### AFRICA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-51.06883	0.0000
Test critical values:		
1% level	-3.961241	
5% level	-3.411373	
10% level	-3.127535	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	13193.95
HAC corrected variance (Bartlett kernel)	12630.33

Phillips-Perron Test Equation

Dependent Variable: D(AFRICA,2)

Method: Least Squares

Sample(adjusted): 134 3002

Included observations: 2869 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-0.956488	0.018713	-51.11228	0.0000
C	-3.349555	4.592078	-0.729420	0.4658
@TREND(1)	0.005637	0.002593	2.174093	0.0298
R-squared	0.476862	Mean dependent var		0.183273
Adjusted R-squared	0.476497	S.D. dependent var		158.8382
S.E. of regression	114.9250	Akaike info criterion		12.32748
Sum squared resid	37853432	Schwarz criterion		12.33372
Log likelihood	-17680.77	F-statistic		1306.240
Durbin-Watson stat	1.995230	Prob(F-statistic)		0.000000

### AFRICA DAILY

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.058794
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 133 3002

Included observations: 2870 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-5.86E-05	0.000996	-0.058794	0.9531
R-squared	-0.000329	Mean dependent var		2.090686
Adjusted R-squared	-0.000329	S.D. dependent var		115.0813
S.E. of regression	115.1002	Akaike info criterion		12.32983
Sum squared resid	38008682	Schwarz criterion		12.33191

Log likelihood            -17692.31    Durbin-Watson stat        1.903625

### AFRICA DAILY

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 19 (Automatic based on AIC, MAXLAG=27)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.153763
Test critical values:    1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 152 3002

Included observations: 2851 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000155	0.001009	-0.153763	0.8778
D(GLSRESID(-1))	0.051678	0.018850	2.741487	0.0062
D(GLSRESID(-2))	0.002613	0.018957	0.137838	0.8904
D(GLSRESID(-3))	0.030837	0.018938	1.628309	0.1036
D(GLSRESID(-4))	0.002825	0.018947	0.149106	0.8815
D(GLSRESID(-5))	-0.017444	0.018947	-0.920691	0.3573
D(GLSRESID(-6))	-0.014413	0.018950	-0.760593	0.4470
D(GLSRESID(-7))	-0.065024	0.018923	-3.436328	0.0006
D(GLSRESID(-8))	0.051455	0.018956	2.714510	0.0067
D(GLSRESID(-9))	-0.035855	0.019019	-1.885255	0.0595
D(GLSRESID(-10))	-0.014636	0.019027	-0.769199	0.4418
D(GLSRESID(-11))	0.041632	0.019024	2.188390	0.0287
D(GLSRESID(-12))	-0.058442	0.019214	-3.041609	0.0024
D(GLSRESID(-13))	0.052024	0.019244	2.703365	0.0069
D(GLSRESID(-14))	0.018964	0.019437	0.975668	0.3293
D(GLSRESID(-15))	0.039941	0.019453	2.053209	0.0401
D(GLSRESID(-16))	-0.031095	0.019747	-1.574708	0.1154
D(GLSRESID(-17))	0.033422	0.020253	1.650213	0.0990
D(GLSRESID(-18))	0.029992	0.020280	1.478892	0.1393
D(GLSRESID(-19))	-0.049303	0.020446	-2.411432	0.0160
R-squared	0.023088	Mean dependent var	2.118026	
Adjusted R-squared	0.016532	S.D. dependent var	115.4374	
S.E. of regression	114.4792	Akaike info criterion	12.32565	
Sum squared resid	37101631	Schwarz criterion	12.36743	
Log likelihood	-17550.22	Durbin-Watson stat	1.994416	

### AFRICA DAILY

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=27)

Sample(adjusted): 132 3002

Included observations: 2871 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.16794	-0.05875	0.34984	36.2049
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000

10 -14.2000 -2.62000 0.18500 6.67000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 13243.44

### AFRICA DAILY

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 19 (Spectral GLS-detrended AR based on AIC, MAXLAG=27)

Sample(adjusted): 132 3002

Included observations: 2871 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.71580	-0.23515	0.32851	31.9237
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 15019.48

### AFRICA DAILY

Null Hypothesis: AFRICA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 42 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.802776
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction) 3605176.  
HAC corrected variance (Bartlett kernel) 1.47E+08

KPSS Test Equation

Dependent Variable: AFRICA

Method: Least Squares

Sample(adjusted): 132 3002

Included observations: 2871 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3116.574	75.78232	41.12535	0.0000
@TREND(1)	3.752427	0.042772	87.73175	0.0000
R-squared	0.728465	Mean dependent var		8992.875
Adjusted R-squared	0.728370	S.D. dependent var		3644.400
S.E. of regression	1899.392	Akaike info criterion		17.93715
Sum squared resid	1.04E+10	Schwarz criterion		17.94131
Log likelihood	-25746.78	F-statistic		7696.860
Durbin-Watson stat	0.003672	Prob(F-statistic)		0.000000

### AFRICA WEEKLY (LEVEL)

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.319908	0.9987
Test critical values:		
1% level	-3.974123	
5% level	-3.417668	
10% level	-3.131264	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(AFRICA)

Method: Least Squares

Sample(adjusted): 1594 2167

Included observations: 574 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.001815	0.005673	0.319908	0.7492
C	-201.8399	192.5403	-1.048299	0.2949
@TREND(1)	0.113896	0.124426	0.915373	0.3604
R-squared	0.009190	Mean dependent var		28.52260
Adjusted R-squared	0.005719	S.D. dependent var		258.3072
S.E. of regression	257.5674	Akaike info criterion		13.94565
Sum squared resid	37880698	Schwarz criterion		13.96840
Log likelihood	-3999.402	F-statistic		2.648042
Durbin-Watson stat	1.939373	Prob(F-statistic)		0.071659

### AFRICA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-23.10904	0.0000
Test critical values:		
1% level	-3.974152	
5% level	-3.417681	
10% level	-3.131272	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(AFRICA,2)

Method: Least Squares

Sample(adjusted): 1595 2167

Included observations: 573 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-0.973345	0.042120	-23.10904	0.0000
C	-244.7769	123.2140	-1.986599	0.0474
@TREND(1)	0.144987	0.065339	2.218985	0.0269
R-squared	0.483727	Mean dependent var		1.241501
Adjusted R-squared	0.481916	S.D. dependent var		358.0538
S.E. of regression	257.7202	Akaike info criterion		13.94685
Sum squared resid	37859235	Schwarz criterion		13.96963
Log likelihood	-3992.772	F-statistic		267.0336

Durbin-Watson stat      1.986607      Prob(F-statistic)      0.000000

### AFRICA WEEKLY (LEVEL)

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 16 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.159737	0.9977
Test critical values:		
1% level	-3.974587	
5% level	-3.417893	
10% level	-3.131398	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(AFRICA)

Method: Least Squares

Sample(adjusted): 1610 2167

Included observations: 558 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.001124	0.007037	0.159737	0.8731
D(AFRICA(-1))	0.035849	0.043356	0.826853	0.4087
D(AFRICA(-2))	-0.033062	0.043454	-0.760854	0.4471
D(AFRICA(-3))	0.047889	0.043471	1.101630	0.2711
D(AFRICA(-4))	-0.027810	0.045182	-0.615522	0.5385
D(AFRICA(-5))	0.043565	0.045016	0.967767	0.3336
D(AFRICA(-6))	-0.091481	0.045093	-2.028706	0.0430
D(AFRICA(-7))	0.079454	0.047331	1.678705	0.0938
D(AFRICA(-8))	-0.030801	0.047519	-0.648187	0.5171
D(AFRICA(-9))	-0.038594	0.047756	-0.808139	0.4194
D(AFRICA(-10))	0.047269	0.047820	0.988485	0.3234
D(AFRICA(-11))	0.040443	0.047693	0.847973	0.3968
D(AFRICA(-12))	-0.122170	0.047598	-2.566717	0.0105
D(AFRICA(-13))	0.120418	0.047821	2.518119	0.0121
D(AFRICA(-14))	0.093828	0.048063	1.952167	0.0514
D(AFRICA(-15))	-0.013861	0.048264	-0.287203	0.7741
D(AFRICA(-16))	-0.143273	0.048537	-2.951853	0.0033
C	-231.3562	208.4510	-1.109882	0.2675
@TREND(1)	0.131971	0.136872	0.964196	0.3354
R-squared	0.071892	Mean dependent var	28.63753	
Adjusted R-squared	0.040897	S.D. dependent var	261.9056	
S.E. of regression	256.4940	Akaike info criterion	13.96554	
Sum squared resid	35460374	Schwarz criterion	14.11279	
Log likelihood	-3877.387	F-statistic	2.319506	
Durbin-Watson stat	1.992096	Prob(F-statistic)	0.001620	

### AFRICA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 15 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.907039	0.0000
Test critical values:		
1% level	-3.974587	
5% level	-3.417893	
10% level	-3.131398	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(AFRICA,2)

Method: Least Squares

Sample(adjusted): 1610 2167

Included observations: 558 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-0.973326	0.164774	-5.907039	0.0000
D(AFRICA(-1),2)	0.010110	0.160572	0.062961	0.9498
D(AFRICA(-2),2)	-0.022140	0.156503	-0.141467	0.8876
D(AFRICA(-3),2)	0.026567	0.151803	0.175007	0.8611
D(AFRICA(-4),2)	-4.21E-05	0.145950	-0.000289	0.9998
D(AFRICA(-5),2)	0.044637	0.140674	0.317306	0.7511
D(AFRICA(-6),2)	-0.045758	0.134449	-0.340334	0.7337
D(AFRICA(-7),2)	0.035102	0.128890	0.272338	0.7855
D(AFRICA(-8),2)	0.005749	0.122975	0.046752	0.9627
D(AFRICA(-9),2)	-0.031548	0.116039	-0.271873	0.7858
D(AFRICA(-10),2)	0.017082	0.107998	0.158170	0.8744
D(AFRICA(-11),2)	0.058771	0.100312	0.585879	0.5582
D(AFRICA(-12),2)	-0.062059	0.089716	-0.691722	0.4894
D(AFRICA(-13),2)	0.059656	0.078387	0.761051	0.4470
D(AFRICA(-14),2)	0.154751	0.065847	2.350145	0.0191
D(AFRICA(-15),2)	0.142130	0.047963	2.963346	0.0032
C	-256.7947	134.3801	-1.910958	0.0565
@TREND(1)	0.150583	0.071761	2.098389	0.0363
R-squared	0.516103	Mean dependent var	1.303889	
Adjusted R-squared	0.500869	S.D. dependent var	362.7253	
S.E. of regression	256.2625	Akaike info criterion	13.96201	
Sum squared resid	35462053	Schwarz criterion	14.10150	
Log likelihood	-3877.400	F-statistic	33.87882	
Durbin-Watson stat	1.991662	Prob(F-statistic)	0.000000	

**AFRICA WEEKLY (LEVEL)**

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.315371	0.9987
Test critical values:		
1% level	-3.974123	
5% level	-3.417668	
10% level	-3.131264	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	65994.25
HAC corrected variance (Bartlett kernel)	66162.33

Phillips-Perron Test Equation

Dependent Variable: D(AFRICA)

Method: Least Squares

Sample(adjusted): 1594 2167

Included observations: 574 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.001815	0.005673	0.319908	0.7492
C	-201.8399	192.5403	-1.048299	0.2949



@TREND(1)	0.113896	0.124426	0.915373	0.3604
R-squared	0.009190	Mean dependent var	28.52260	
Adjusted R-squared	0.005719	S.D. dependent var	258.3072	
S.E. of regression	257.5674	Akaike info criterion	13.94565	
Sum squared resid	37880698	Schwarz criterion	13.96840	
Log likelihood	-3999.402	F-statistic	2.648042	
Durbin-Watson stat	1.939373	Prob(F-statistic)	0.071659	

### AFRICA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-23.09933	0.0000
Test critical values:		
1% level	-3.974152	
5% level	-3.417681	
10% level	-3.131272	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	66071.96
HAC corrected variance (Bartlett kernel)	64537.50

Phillips-Perron Test Equation  
 Dependent Variable: D(AFRICA,2)  
 Method: Least Squares  
 Sample(adjusted): 1595 2167  
 Included observations: 573 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-0.973345	0.042120	-23.10904	0.0000
C	-244.7769	123.2140	-1.986599	0.0474
@TREND(1)	0.144987	0.065339	2.218985	0.0269
R-squared	0.483727	Mean dependent var	1.241501	
Adjusted R-squared	0.481916	S.D. dependent var	358.0538	
S.E. of regression	257.7202	Akaike info criterion	13.94685	
Sum squared resid	37859235	Schwarz criterion	13.96963	
Log likelihood	-3992.772	F-statistic	267.0336	
Durbin-Watson stat	1.986607	Prob(F-statistic)	0.000000	

### AFRICA WEEKLY

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.093179
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)

Method: Least Squares  
Sample(adjusted): 1594 2167  
Included observations: 574 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000471	0.005052	-0.093179	0.9258
R-squared	-0.001525	Mean dependent var		10.12781
Adjusted R-squared	-0.001525	S.D. dependent var		258.3072
S.E. of regression	258.5040	Akaike info criterion		13.94944
Sum squared resid	38290342	Schwarz criterion		13.95702
Log likelihood	-4002.489	Durbin-Watson stat		1.914280

## AFRICA WEEKLY

Null Hypothesis: AFRICA has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 16 (Automatic based on AIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.625682
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
Dependent Variable: D(GLSRESID)  
Method: Least Squares  
Sample(adjusted): 1610 2167  
Included observations: 558 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003499	0.005593	-0.625682	0.5318
D(GLSRESID(-1))	0.046641	0.043069	1.082938	0.2793
D(GLSRESID(-2))	-0.023816	0.043272	-0.550372	0.5823
D(GLSRESID(-3))	0.057420	0.043276	1.326831	0.1851
D(GLSRESID(-4))	-0.015008	0.044730	-0.335530	0.7374
D(GLSRESID(-5))	0.055677	0.044629	1.247562	0.2127
D(GLSRESID(-6))	-0.080031	0.044754	-1.788259	0.0743
D(GLSRESID(-7))	0.094515	0.046696	2.024066	0.0435
D(GLSRESID(-8))	-0.015961	0.046889	-0.340406	0.7337
D(GLSRESID(-9))	-0.024930	0.047264	-0.527469	0.5981
D(GLSRESID(-10))	0.061838	0.047252	1.308673	0.1912
D(GLSRESID(-11))	0.053407	0.047258	1.130118	0.2589
D(GLSRESID(-12))	-0.108701	0.047102	-2.307786	0.0214
D(GLSRESID(-13))	0.134436	0.047310	2.841590	0.0047
D(GLSRESID(-14))	0.106523	0.047645	2.235769	0.0258
D(GLSRESID(-15))	-0.002147	0.047913	-0.044819	0.9643
D(GLSRESID(-16))	-0.132323	0.048259	-2.741954	0.0063
R-squared	0.063944	Mean dependent var		10.24274
Adjusted R-squared	0.036260	S.D. dependent var		261.9056
S.E. of regression	257.1133	Akaike info criterion		13.96690
Sum squared resid	35764027	Schwarz criterion		14.09865
Log likelihood	-3879.766	Durbin-Watson stat		1.987802

**AFRICA WEEKLY**

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=18)

Sample(adjusted): 1593 2167

Included observations: 575 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.26682	-0.09208	0.34512	35.2622
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	66707.91
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**AFRICA WEEKLY**

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 16 (Spectral GLS-detrended AR based on AIC, MAXLAG=18)

Sample(adjusted): 1593 2167

Included observations: 575 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.49151	-0.69517	0.27902	23.0478
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	102060.3
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**AFRICA WEEKLY**

Null Hypothesis: AFRICA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 18 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.395703
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	3666264.
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HAC corrected variance (Bartlett kernel)	61039120
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KPSS Test Equation

Dependent Variable: AFRICA

Method: Least Squares

Sample(adjusted): 1593 2167

Included observations: 575 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-26398.49	909.0186	-29.04065	0.0000
@TREND(1)	18.83860	0.481901	39.09224	0.0000
R-squared	0.727299	Mean dependent var		8999.228
Adjusted R-squared	0.726823	S.D. dependent var		3669.835
S.E. of regression	1918.088	Akaike info criterion		17.95952
Sum squared resid	2.11E+09	Schwarz criterion		17.97466
Log likelihood	-5161.361	F-statistic		1528.203
Durbin-Watson stat	0.018161	Prob(F-statistic)		0.000000

## AFRICA MONTHLY (LEVEL)

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.297489	0.9985
Test critical values: 1% level	-4.029041	
5% level	-3.444222	
10% level	-3.146908	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(AFRICA)

Method: Least Squares

Sample(adjusted): 369 500

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.007659	0.025745	0.297489	0.7666
C	-902.5493	870.6795	-1.036603	0.3019
@TREND(1)	2.214081	2.438923	0.907811	0.3657
R-squared	0.037733	Mean dependent var		125.6542
Adjusted R-squared	0.022814	S.D. dependent var		562.8502
S.E. of regression	556.3927	Akaike info criterion		15.50329
Sum squared resid	39934898	Schwarz criterion		15.56881
Log likelihood	-1020.217	F-statistic		2.529203
Durbin-Watson stat	2.091711	Prob(F-statistic)		0.083670

## AFRICA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.75415	0.0000
Test critical values: 1% level	-4.029595	
5% level	-3.444487	
10% level	-3.147063	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(AFRICA,2)  
 Method: Least Squares  
 Sample(adjusted): 370 500  
 Included observations: 131 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-1.044806	0.088888	-11.75415	0.0000
C	-1172.157	568.6537	-2.061284	0.0413
@TREND(1)	3.003147	1.309467	2.293411	0.0235
R-squared	0.519192	Mean dependent var		7.234351
Adjusted R-squared	0.511679	S.D. dependent var		798.5526
S.E. of regression	558.0280	Akaike info criterion		15.50933
Sum squared resid	39858594	Schwarz criterion		15.57517
Log likelihood	-1012.861	F-statistic		69.10929
Durbin-Watson stat	1.992968	Prob(F-statistic)		0.000000

### AFRICA MONTHLY (LEVEL)

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.297489	0.9985
Test critical values:		
1% level	-4.029041	
5% level	-3.444222	
10% level	-3.146908	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(AFRICA)  
 Method: Least Squares  
 Sample(adjusted): 369 500  
 Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.007659	0.025745	0.297489	0.7666
C	-902.5493	870.6795	-1.036603	0.3019
@TREND(1)	2.214081	2.438923	0.907811	0.3657
R-squared	0.037733	Mean dependent var		125.6542
Adjusted R-squared	0.022814	S.D. dependent var		562.8502
S.E. of regression	556.3927	Akaike info criterion		15.50329
Sum squared resid	39934898	Schwarz criterion		15.56881
Log likelihood	-1020.217	F-statistic		2.529203
Durbin-Watson stat	2.091711	Prob(F-statistic)		0.083670

### AFRICA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.411550	0.0030
Test critical values:		
1% level	-4.032498	
5% level	-3.445877	
10% level	-3.147878	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(AFRICA,2)

Method: Least Squares

Sample(adjusted): 375 500

Included observations: 126 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-1.022756	0.231836	-4.411550	0.0000
D(AFRICA(-1),2)	0.004491	0.205031	0.021903	0.9826
D(AFRICA(-2),2)	-0.015761	0.183207	-0.086028	0.9316
D(AFRICA(-3),2)	0.130586	0.163550	0.798444	0.4262
D(AFRICA(-4),2)	-0.006300	0.133634	-0.047144	0.9625
D(AFRICA(-5),2)	-0.151032	0.100759	-1.498933	0.1366
C	-1335.245	649.1654	-2.056864	0.0419
@TREND(1)	3.354409	1.508747	2.223307	0.0281
R-squared	0.560901	Mean dependent var		6.457460
Adjusted R-squared	0.534853	S.D. dependent var		814.3178
S.E. of regression	555.3786	Akaike info criterion		15.53856
Sum squared resid	36396553	Schwarz criterion		15.71865
Log likelihood	-970.9295	F-statistic		21.53317
Durbin-Watson stat	1.988521	Prob(F-statistic)		0.000000

## AFRICA MONTHLY (LEVEL)

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.451181	0.9991
Test critical values:		
1% level	-4.029041	
5% level	-3.444222	
10% level	-3.146908	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	302537.1
HAC corrected variance (Bartlett kernel)	278193.9

Phillips-Perron Test Equation

Dependent Variable: D(AFRICA)

Method: Least Squares

Sample(adjusted): 369 500

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AFRICA(-1)	0.007659	0.025745	0.297489	0.7666

C	-902.5493	870.6795	-1.036603	0.3019
@TREND(1)	2.214081	2.438923	0.907811	0.3657
R-squared	0.037733	Mean dependent var	125.6542	
Adjusted R-squared	0.022814	S.D. dependent var	562.8502	
S.E. of regression	556.3927	Akaike info criterion	15.50329	
Sum squared resid	39934898	Schwarz criterion	15.56881	
Log likelihood	-1020.217	F-statistic	2.529203	
Durbin-Watson stat	2.091711	Prob(F-statistic)	0.083670	

### AFRICA MONTHLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(AFRICA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-11.75167	0.0000
Test critical values:		
1% level	-4.029595	
5% level	-3.444487	
10% level	-3.147063	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	304264.1
HAC corrected variance (Bartlett kernel)	315219.7

Phillips-Perron Test Equation  
 Dependent Variable: D(AFRICA,2)  
 Method: Least Squares  
 Sample(adjusted): 370 500  
 Included observations: 131 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AFRICA(-1))	-1.044806	0.088888	-11.75415	0.0000
C	-1172.157	568.6537	-2.061284	0.0413
@TREND(1)	3.003147	1.309467	2.293411	0.0235
R-squared	0.519192	Mean dependent var	7.234351	
Adjusted R-squared	0.511679	S.D. dependent var	798.5526	
S.E. of regression	558.0280	Akaike info criterion	15.50933	
Sum squared resid	39858594	Schwarz criterion	15.57517	
Log likelihood	-1012.861	F-statistic	69.10929	
Durbin-Watson stat	1.992968	Prob(F-statistic)	0.000000	

### AFRICA MONTHLY

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.249529
Test critical values:	
1% level	-3.541600
5% level	-2.998000
10% level	-2.708000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 369 500  
 Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005915	0.023706	-0.249529	0.8033
R-squared	-0.004715	Mean dependent var		40.40277
Adjusted R-squared	-0.004715	S.D. dependent var		562.8502
S.E. of regression	564.1754	Akaike info criterion		15.51615
Sum squared resid	41696499	Schwarz criterion		15.53799
Log likelihood	-1023.066	Durbin-Watson stat		1.976724

### AFRICA MONTHLY

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.249529
Test critical values: 1% level	-3.541600
5% level	-2.998000
10% level	-2.708000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 369 500  
 Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005915	0.023706	-0.249529	0.8033
R-squared	-0.004715	Mean dependent var		40.40277
Adjusted R-squared	-0.004715	S.D. dependent var		562.8502
S.E. of regression	564.1754	Akaike info criterion		15.51615
Sum squared resid	41696499	Schwarz criterion		15.53799
Log likelihood	-1023.066	Durbin-Watson stat		1.976724

### AFRICA MONTHLY

Null Hypothesis: AFRICA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)  
 Sample(adjusted): 368 500  
 Included observations: 133 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.73426	-0.23554	0.32079	30.9708
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	315882.6
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## AFRICA MONTHLY

Null Hypothesis: AFRICA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)

Sample(adjusted): 368 500

Included observations: 133 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.73426	-0.23554	0.32079	30.9708
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	315882.6
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## AFRICA MONTHLY

Null Hypothesis: AFRICA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 9 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.215082
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	3878699.
HAC corrected variance (Bartlett kernel)	28260804

## KPSS Test Equation

Dependent Variable: AFRICA

Method: Least Squares

Sample(adjusted): 368 500

Included observations: 133 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-27019.14	1948.260	-13.86834	0.0000
@TREND(1)	83.24147	4.481864	18.57296	0.0000
R-squared	0.724764	Mean dependent var		9024.416
Adjusted R-squared	0.722663	S.D. dependent var		3768.158
S.E. of regression	1984.418	Akaike info criterion		18.03896
Sum squared resid	5.16E+08	Schwarz criterion		18.08243
Log likelihood	-1197.591	F-statistic		344.9548
Durbin-Watson stat	0.080909	Prob(F-statistic)		0.000000

## EGYPT DAILY(LEVEL)

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 4 (Automatic based on SIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.399147	0.5843
Test critical values:		
1% level	-3.432344	
5% level	-2.862307	
10% level	-2.567222	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 9 3002

Included observations: 2994 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.000934	0.000668	-1.399147	0.1619
D(EGYPT(-1))	0.172606	0.018256	9.454838	0.0000
D(EGYPT(-2))	-0.034102	0.018392	-1.854133	0.0638
D(EGYPT(-3))	0.120710	0.018447	6.543779	0.0000
D(EGYPT(-4))	-0.075785	0.018343	-4.131541	0.0000
C	0.823792	0.607573	1.355874	0.1752
R-squared	0.043100	Mean dependent var		0.225872
Adjusted R-squared	0.041498	S.D. dependent var		22.67195
S.E. of regression	22.19654	Akaike info criterion		9.039752
Sum squared resid	1472147.	Schwarz criterion		9.051785
Log likelihood	-13526.51	F-statistic		26.91649
Durbin-Watson stat	2.001664	Prob(F-statistic)		0.000000

## EGYPT DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root

Exogenous: Constant

Lag Length: 3 (Automatic based on SIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-25.97792	0.0000
Test critical values:		
1% level	-3.432344	
5% level	-2.862307	
10% level	-2.567222	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT,2)

Method: Least Squares

Sample(adjusted): 9 3002

Included observations: 2994 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-0.818124	0.031493	-25.97792	0.0000
D(EGYPT(-1),2)	-0.009510	0.028588	-0.332649	0.7394
D(EGYPT(-2),2)	-0.044023	0.023780	-1.851304	0.0642
D(EGYPT(-3),2)	0.076319	0.018342	4.160884	0.0000

C	0.190996	0.405767	0.470704	0.6379
R-squared	0.429762	Mean dependent var	0.017809	
Adjusted R-squared	0.428998	S.D. dependent var	29.37895	
S.E. of regression	22.20010	Akaike info criterion	9.039739	
Sum squared resid	1473112.	Schwarz criterion	9.049767	
Log likelihood	-13527.49	F-statistic	563.1667	
Durbin-Watson stat	2.001764	Prob(F-statistic)	0.000000	

## EGYPT DAILY(LEVEL)

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 26 (Automatic based on AIC, MAXLAG=28)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.556696	0.5047
Test critical values: 1% level	-3.432360	
5% level	-2.862314	
10% level	-2.567226	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 31 3002

Included observations: 2972 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.001027	0.000660	-1.556696	0.1197
D(EGYPT(-1))	0.154397	0.018347	8.415426	0.0000
D(EGYPT(-2))	-0.042748	0.018515	-2.308753	0.0210
D(EGYPT(-3))	0.115117	0.018582	6.195086	0.0000
D(EGYPT(-4))	-0.061847	0.018736	-3.301010	0.0010
D(EGYPT(-5))	-0.013554	0.018807	-0.720672	0.4712
D(EGYPT(-6))	-0.042647	0.018807	-2.267681	0.0234
D(EGYPT(-7))	-0.034333	0.018794	-1.826858	0.0678
D(EGYPT(-8))	-0.069485	0.018786	-3.698824	0.0002
D(EGYPT(-9))	-0.009034	0.018821	-0.480010	0.6313
D(EGYPT(-10))	-0.023908	0.018811	-1.270921	0.2039
D(EGYPT(-11))	0.044082	0.018791	2.345879	0.0190
D(EGYPT(-12))	-0.066384	0.018795	-3.532005	0.0004
D(EGYPT(-13))	0.036405	0.018898	1.926350	0.0542
D(EGYPT(-14))	-0.005920	0.018884	-0.313472	0.7539
D(EGYPT(-15))	-0.052263	0.018861	-2.770949	0.0056
D(EGYPT(-16))	0.059484	0.018971	3.135547	0.0017
D(EGYPT(-17))	0.031312	0.019040	1.644543	0.1002
D(EGYPT(-18))	0.047941	0.019106	2.509236	0.0122
D(EGYPT(-19))	0.060188	0.019078	3.154785	0.0016
D(EGYPT(-20))	-0.056448	0.019143	-2.948710	0.0032
D(EGYPT(-21))	-0.012313	0.019177	-0.642067	0.5209
D(EGYPT(-22))	0.011643	0.019241	0.605107	0.5452
D(EGYPT(-23))	0.020917	0.019202	1.089304	0.2761
D(EGYPT(-24))	0.035660	0.019111	1.865950	0.0621
D(EGYPT(-25))	0.083118	0.019114	4.348480	0.0000
D(EGYPT(-26))	0.102042	0.019024	5.363761	0.0000
C	0.840676	0.601164	1.398413	0.1621
R-squared	0.090350	Mean dependent var	0.227544	

Adjusted R-squared	0.082007	S.D. dependent var	22.75573
S.E. of regression	21.80271	Akaike info criterion	9.011322
Sum squared resid	1399454.	Schwarz criterion	9.067821
Log likelihood	-13362.82	F-statistic	10.82996
Durbin-Watson stat	2.002104	Prob(F-statistic)	0.000000

### EGYPT DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root

Exogenous: Constant

Lag Length: 25 (Automatic based on AIC, MAXLAG=28)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.095609	0.0000
Test critical values:	1% level	-3.432360	
	5% level	-2.862314	
	10% level	-2.567226	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT,2)

Method: Least Squares

Sample(adjusted): 31 3002

Included observations: 2972 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-0.699742	0.086435	-8.095609	0.0000
D(EGYPT(-1),2)	-0.146127	0.085369	-1.711697	0.0871
D(EGYPT(-2),2)	-0.189315	0.083901	-2.256414	0.0241
D(EGYPT(-3),2)	-0.074616	0.082377	-0.905781	0.3651
D(EGYPT(-4),2)	-0.136992	0.080653	-1.698532	0.0895
D(EGYPT(-5),2)	-0.151037	0.078838	-1.915785	0.0555
D(EGYPT(-6),2)	-0.194155	0.077050	-2.519865	0.0118
D(EGYPT(-7),2)	-0.228886	0.075481	-3.032359	0.0024
D(EGYPT(-8),2)	-0.298784	0.073654	-4.056562	0.0001
D(EGYPT(-9),2)	-0.308212	0.071626	-4.303053	0.0000
D(EGYPT(-10),2)	-0.332532	0.069346	-4.795246	0.0000
D(EGYPT(-11),2)	-0.288877	0.066724	-4.329459	0.0000
D(EGYPT(-12),2)	-0.355682	0.064264	-5.534695	0.0000
D(EGYPT(-13),2)	-0.319658	0.061742	-5.177357	0.0000
D(EGYPT(-14),2)	-0.326028	0.058692	-5.554950	0.0000
D(EGYPT(-15),2)	-0.378697	0.055929	-6.771007	0.0000
D(EGYPT(-16),2)	-0.319609	0.052961	-6.034792	0.0000
D(EGYPT(-17),2)	-0.288738	0.049883	-5.788282	0.0000
D(EGYPT(-18),2)	-0.241249	0.046501	-5.188083	0.0000
D(EGYPT(-19),2)	-0.181504	0.043327	-4.189209	0.0000
D(EGYPT(-20),2)	-0.238431	0.040149	-5.938652	0.0000
D(EGYPT(-21),2)	-0.251155	0.036968	-6.793924	0.0000
D(EGYPT(-22),2)	-0.239905	0.033404	-7.181978	0.0000
D(EGYPT(-23),2)	-0.219340	0.030067	-7.294983	0.0000
D(EGYPT(-24),2)	-0.184116	0.024986	-7.368796	0.0000
D(EGYPT(-25),2)	-0.101443	0.019025	-5.332087	0.0000
C	0.142914	0.400704	0.356658	0.7214
R-squared	0.457828	Mean dependent var	0.017884	
Adjusted R-squared	0.453042	S.D. dependent var	29.48752	
S.E. of regression	21.80798	Akaike info criterion	9.011472	
Sum squared resid	1400606.	Schwarz criterion	9.065953	
Log likelihood	-13364.05	F-statistic	95.64842	
Durbin-Watson stat	2.001959	Prob(F-statistic)	0.000000	

## EGYPT DAILY(LEVEL)

Null Hypothesis: EGYPT has a unit root  
Exogenous: Constant  
Bandwidth: 27 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.304718	0.6296
Test critical values:		
1% level	-3.432341	
5% level	-2.862305	
10% level	-2.567222	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	512.8985
HAC corrected variance (Bartlett kernel)	601.4741

Phillips-Perron Test Equation  
Dependent Variable: D(EGYPT)  
Method: Least Squares  
Sample(adjusted): 5 3002  
Included observations: 2998 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.000842	0.000680	-1.236799	0.2163
C	0.795382	0.619235	1.284458	0.1991
R-squared	0.000510	Mean dependent var		0.225570
Adjusted R-squared	0.000177	S.D. dependent var		22.65682
S.E. of regression	22.65482	Akaike info criterion		9.079289
Sum squared resid	1537670.	Schwarz criterion		9.083296
Log likelihood	-13607.85	F-statistic		1.529672
Durbin-Watson stat	1.678616	Prob(F-statistic)		0.216259

## EGYPT DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root  
Exogenous: Constant  
Bandwidth: 32 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-46.28109	0.0001
Test critical values:		
1% level	-3.432342	
5% level	-2.862306	
10% level	-2.567222	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	500.2477
HAC corrected variance (Bartlett kernel)	463.3395

Phillips-Perron Test Equation  
Dependent Variable: D(EGYPT,2)  
Method: Least Squares  
Sample(adjusted): 6 3002

Included observations: 2997 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-0.840204	0.018055	-46.53653	0.0000
C	0.192422	0.408707	0.470807	0.6378
R-squared	0.419647	Mean dependent var		0.017734
Adjusted R-squared	0.419453	S.D. dependent var		29.36424
S.E. of regression	22.37368	Akaike info criterion		9.054315
Sum squared resid	1499242.	Schwarz criterion		9.058323
Log likelihood	-13565.89	F-statistic		2165.648
Durbin-Watson stat	1.993813	Prob(F-statistic)		0.000000

### EGYPT DAILY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 4 (Automatic based on SIC, MAXLAG=28)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.698896
Test critical values: 1% level	-2.565735
5% level	-1.940930
10% level	-1.616628

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 9 3002

Included observations: 2994 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000340	0.000487	-0.698896	0.4847
D(GLSRESID(-1))	0.172579	0.018258	9.452268	0.0000
D(GLSRESID(-2))	-0.034251	0.018394	-1.862086	0.0627
D(GLSRESID(-3))	0.120565	0.018448	6.535284	0.0000
D(GLSRESID(-4))	-0.076012	0.018344	-4.143620	0.0000
R-squared	0.042558	Mean dependent var		0.225872
Adjusted R-squared	0.041277	S.D. dependent var		22.67195
S.E. of regression	22.19911	Akaike info criterion		9.039650
Sum squared resid	1472980.	Schwarz criterion		9.049677
Log likelihood	-13527.36	Durbin-Watson stat		2.001674

### EGYPT DAILY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 26 (Automatic based on AIC, MAXLAG=28)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-0.889045
Test critical values: 1% level	-2.565740
5% level	-1.940930
10% level	-1.616628

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares  
Sample(adjusted): 31 3002  
Included observations: 2972 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000427	0.000481	-0.889045	0.3741
D(GLSRESID(-1))	0.154362	0.018349	8.412468	0.0000
D(GLSRESID(-2))	-0.042895	0.018517	-2.316463	0.0206
D(GLSRESID(-3))	0.114966	0.018584	6.186230	0.0000
D(GLSRESID(-4))	-0.062054	0.018738	-3.311702	0.0009
D(GLSRESID(-5))	-0.013707	0.018809	-0.728742	0.4662
D(GLSRESID(-6))	-0.042788	0.018809	-2.274908	0.0230
D(GLSRESID(-7))	-0.034436	0.018796	-1.832089	0.0670
D(GLSRESID(-8))	-0.069569	0.018788	-3.702858	0.0002
D(GLSRESID(-9))	-0.009077	0.018824	-0.482200	0.6297
D(GLSRESID(-10))	-0.023962	0.018814	-1.273617	0.2029
D(GLSRESID(-11))	0.044023	0.018794	2.342438	0.0192
D(GLSRESID(-12))	-0.066468	0.018797	-3.536065	0.0004
D(GLSRESID(-13))	0.036382	0.018901	1.924894	0.0543
D(GLSRESID(-14))	-0.005972	0.018887	-0.316198	0.7519
D(GLSRESID(-15))	-0.052283	0.018863	-2.771674	0.0056
D(GLSRESID(-16))	0.059517	0.018973	3.136844	0.0017
D(GLSRESID(-17))	0.031332	0.019042	1.645369	0.1000
D(GLSRESID(-18))	0.047922	0.019108	2.507880	0.0122
D(GLSRESID(-19))	0.060157	0.019081	3.152734	0.0016
D(GLSRESID(-20))	-0.056489	0.019146	-2.950447	0.0032
D(GLSRESID(-21))	-0.012324	0.019179	-0.642558	0.5206
D(GLSRESID(-22))	0.011615	0.019243	0.603594	0.5462
D(GLSRESID(-23))	0.020891	0.019205	1.087813	0.2768
D(GLSRESID(-24))	0.035591	0.019113	1.862088	0.0627
D(GLSRESID(-25))	0.083040	0.019117	4.343886	0.0000
D(GLSRESID(-26))	0.101872	0.019026	5.354237	0.0000
R-squared	0.089806	Mean dependent var	0.227544	
Adjusted R-squared	0.081770	S.D. dependent var	22.75573	
S.E. of regression	21.80552	Akaike info criterion	9.011247	
Sum squared resid	1400291.	Schwarz criterion	9.065728	
Log likelihood	-13363.71	Durbin-Watson stat	2.002033	

### EGYPT DAILY

Null Hypothesis: EGYPT has a unit root  
Exogenous: Constant  
Lag length: 4 (Spectral GLS-detrended AR based on SIC, MAXLAG=28)  
Sample(adjusted): 4 3002  
Included observations: 2999 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.27329	-0.71348	0.56034	16.7876
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	736.8430
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### EGYPT DAILY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant  
 Lag length: 26 (Spectral GLS-detrended AR based on AIC, MAXLAG=28)  
 Sample(adjusted): 4 3002  
 Included observations: 2999 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.81740	-0.87918	0.48376	12.5123
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	988.6113
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## EGYPT DAILY

Null Hypothesis: EGYPT is stationary  
 Exogenous: Constant  
 Bandwidth: 43 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	4.292111
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	369604.5
HAC corrected variance (Bartlett kernel)	16027940

KPSS Test Equation  
 Dependent Variable: EGYPT  
 Method: Least Squares  
 Sample(adjusted): 4 3002  
 Included observations: 2999 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	677.0913	11.10332	60.98098	0.0000
R-squared	0.000000	Mean dependent var	677.0913	
Adjusted R-squared	0.000000	S.D. dependent var	608.0525	
S.E. of regression	608.0525	Akaike info criterion	15.65873	
Sum squared resid	1.11E+09	Schwarz criterion	15.66074	
Log likelihood	-23479.27	Durbin-Watson stat	0.001388	

## EGYPT WEEKLY(LEVEL)

Null Hypothesis: EGYPT has a unit root  
 Exogenous: Constant



Lag Length: 16 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.457577	0.1266
Test critical values:		
1% level	-3.441337	
5% level	-2.866279	
10% level	-2.569353	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 1585 2167

Included observations: 583 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.008931	0.003634	-2.457577	0.0143
D(EGYPT(-1))	-0.033696	0.041410	-0.813723	0.4161
D(EGYPT(-2))	-0.080923	0.041134	-1.967301	0.0496
D(EGYPT(-3))	0.021893	0.040973	0.534327	0.5933
D(EGYPT(-4))	0.123978	0.041325	3.000048	0.0028
D(EGYPT(-5))	0.077059	0.042311	1.821250	0.0691
D(EGYPT(-6))	0.091173	0.042625	2.138969	0.0329
D(EGYPT(-7))	-0.159021	0.042680	-3.725903	0.0002
D(EGYPT(-8))	0.144716	0.042941	3.370106	0.0008
D(EGYPT(-9))	0.121565	0.043400	2.801018	0.0053
D(EGYPT(-10))	0.097579	0.043493	2.243527	0.0252
D(EGYPT(-11))	0.051732	0.043704	1.183673	0.2370
D(EGYPT(-12))	-0.012297	0.044347	-0.277292	0.7817
D(EGYPT(-13))	0.005760	0.044232	0.130221	0.8964
D(EGYPT(-14))	0.177966	0.044296	4.017615	0.0001
D(EGYPT(-15))	-0.130302	0.044989	-2.896282	0.0039
D(EGYPT(-16))	0.175779	0.045355	3.875645	0.0001
C	5.843476	3.266130	1.789113	0.0741
R-squared	0.191802	Mean dependent var		1.159948
Adjusted R-squared	0.167485	S.D. dependent var		56.75015
S.E. of regression	51.78012	Akaike info criterion		10.76228
Sum squared resid	1514867.	Schwarz criterion		10.89714
Log likelihood	-3119.204	F-statistic		7.887430
Durbin-Watson stat	2.025312	Prob(F-statistic)		0.000000

### EGYPT WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root

Exogenous: Constant

Lag Length: 7 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.371022	0.0000
Test critical values:		
1% level	-3.441185	
5% level	-2.866212	
10% level	-2.569317	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT,2)

Method: Least Squares

Sample(adjusted): 1577 2167

Included observations: 591 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-0.702614	0.110283	-6.371022	0.0000
D(EGYPT(-1),2)	-0.341526	0.104958	-3.253935	0.0012
D(EGYPT(-2),2)	-0.400418	0.101843	-3.931703	0.0001
D(EGYPT(-3),2)	-0.370778	0.096898	-3.826480	0.0001
D(EGYPT(-4),2)	-0.228179	0.089210	-2.557774	0.0108
D(EGYPT(-5),2)	-0.114182	0.077639	-1.470675	0.1419
D(EGYPT(-6),2)	0.014889	0.062124	0.239660	0.8107
D(EGYPT(-7),2)	-0.170703	0.043485	-3.925542	0.0001
C	0.598458	2.207426	0.271111	0.7864
R-squared	0.579923	Mean dependent var		0.082538
Adjusted R-squared	0.574149	S.D. dependent var		81.97902
S.E. of regression	53.49726	Akaike info criterion		10.81225
Sum squared resid	1665659.	Schwarz criterion		10.87898
Log likelihood	-3186.020	F-statistic		100.4326
Durbin-Watson stat	2.030553	Prob(F-statistic)		0.000000

## EGYPT WEEKLY (LEVEL)

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 18 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.415270	0.1379
Test critical values: 1% level	-3.441376	
5% level	-2.866296	
10% level	-2.569362	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 1587 2167

Included observations: 581 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.008890	0.003681	-2.415270	0.0160
D(EGYPT(-1))	-0.040774	0.041947	-0.972037	0.3315
D(EGYPT(-2))	-0.055202	0.041817	-1.320088	0.1873
D(EGYPT(-3))	-0.002357	0.041539	-0.056754	0.9548
D(EGYPT(-4))	0.136833	0.041456	3.300722	0.0010
D(EGYPT(-5))	0.077112	0.042117	1.830897	0.0676
D(EGYPT(-6))	0.087052	0.042448	2.050766	0.0408
D(EGYPT(-7))	-0.166237	0.042602	-3.902064	0.0001
D(EGYPT(-8))	0.142249	0.043179	3.294398	0.0010
D(EGYPT(-9))	0.124972	0.043412	2.878741	0.0041
D(EGYPT(-10))	0.111117	0.043575	2.550002	0.0110
D(EGYPT(-11))	0.039340	0.043804	0.898090	0.3695
D(EGYPT(-12))	-0.014473	0.044142	-0.327867	0.7431
D(EGYPT(-13))	-0.001539	0.044237	-0.034791	0.9723
D(EGYPT(-14))	0.189299	0.044281	4.275003	0.0000
D(EGYPT(-15))	-0.124154	0.045203	-2.746558	0.0062
D(EGYPT(-16))	0.165666	0.045441	3.645763	0.0003
D(EGYPT(-17))	0.100757	0.046344	2.174114	0.0301
D(EGYPT(-18))	-0.096925	0.046927	-2.065464	0.0393

C	5.856291	3.270427	1.790681	0.0739
R-squared	0.205132	Mean dependent var	1.163562	
Adjusted R-squared	0.178212	S.D. dependent var	56.84787	
S.E. of regression	51.53404	Akaike info criterion	10.75618	
Sum squared resid	1489880.	Schwarz criterion	10.90643	
Log likelihood	-3104.670	F-statistic	7.619893	
Durbin-Watson stat	2.007623	Prob(F-statistic)	0.000000	

### EGYPT WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root

Exogenous: Constant

Lag Length: 18 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.428138	0.0104
Test critical values:		
1% level	-3.441395	
5% level	-2.866304	
10% level	-2.569367	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT,2)

Method: Least Squares

Sample(adjusted): 1588 2167

Included observations: 580 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-0.506166	0.147650	-3.428138	0.0007
D(EGYPT(-1),2)	-0.540228	0.149287	-3.618710	0.0003
D(EGYPT(-2),2)	-0.585147	0.151964	-3.850554	0.0001
D(EGYPT(-3),2)	-0.573497	0.153380	-3.739050	0.0002
D(EGYPT(-4),2)	-0.447482	0.152242	-2.939279	0.0034
D(EGYPT(-5),2)	-0.358508	0.153079	-2.341980	0.0195
D(EGYPT(-6),2)	-0.274229	0.151078	-1.815146	0.0700
D(EGYPT(-7),2)	-0.445378	0.148566	-2.997847	0.0028
D(EGYPT(-8),2)	-0.305001	0.147346	-2.069968	0.0389
D(EGYPT(-9),2)	-0.174247	0.145087	-1.200978	0.2303
D(EGYPT(-10),2)	-0.060436	0.140508	-0.430130	0.6673
D(EGYPT(-11),2)	-0.025210	0.134054	-0.188061	0.8509
D(EGYPT(-12),2)	-0.058712	0.125023	-0.469607	0.6388
D(EGYPT(-13),2)	-0.068124	0.117954	-0.577549	0.5638
D(EGYPT(-14),2)	0.115438	0.110016	1.049287	0.2945
D(EGYPT(-15),2)	-0.011338	0.099413	-0.114048	0.9092
D(EGYPT(-16),2)	0.136505	0.084277	1.619721	0.1059
D(EGYPT(-17),2)	0.215024	0.066753	3.221214	0.0014
D(EGYPT(-18),2)	0.100757	0.046838	2.151183	0.0319
C	0.266971	2.178715	0.122536	0.9025
R-squared	0.623458	Mean dependent var	0.084483	
Adjusted R-squared	0.610683	S.D. dependent var	82.75399	
S.E. of regression	51.63461	Akaike info criterion	10.76014	
Sum squared resid	1493034.	Schwarz criterion	10.91058	
Log likelihood	-3100.439	F-statistic	48.80096	
Durbin-Watson stat	1.972961	Prob(F-statistic)	0.000000	

### EGYPT WEEKLY (LEVEL)

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant  
 Bandwidth: 12 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.470387	0.5482
Test critical values:		
1% level	-3.441038	
5% level	-2.866147	
10% level	-2.569282	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3120.130
HAC corrected variance (Bartlett kernel)	4198.220

Phillips-Perron Test Equation  
 Dependent Variable: D(EGYPT)  
 Method: Least Squares  
 Sample(adjusted): 1569 2167  
 Included observations: 599 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.004939	0.003746	-1.318601	0.1878
C	4.479929	3.418421	1.310526	0.1905
R-squared	0.002904	Mean dependent var		1.128697
Adjusted R-squared	0.001234	S.D. dependent var		55.98616
S.E. of regression	55.95161	Akaike info criterion		10.89018
Sum squared resid	1868958.	Schwarz criterion		10.90486
Log likelihood	-3259.610	F-statistic		1.738707
Durbin-Watson stat	2.111126	Prob(F-statistic)		0.187808

### EGYPT WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root  
 Exogenous: Constant  
 Bandwidth: 12 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-26.07907	0.0000
Test critical values:		
1% level	-3.441056	
5% level	-2.866155	
10% level	-2.569286	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3123.776
HAC corrected variance (Bartlett kernel)	4617.311

Phillips-Perron Test Equation  
 Dependent Variable: D(EGYPT,2)  
 Method: Least Squares  
 Sample(adjusted): 1570 2167  
 Included observations: 598 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-1.058384	0.040917	-25.86684	0.0000
C	1.192115	2.289777	0.520625	0.6028
R-squared	0.528889	Mean dependent var		0.081856
Adjusted R-squared	0.528098	S.D. dependent var		81.49699
S.E. of regression	55.98445	Akaike info criterion		10.89136

Sum squared resid	1868018.	Schwarz criterion	10.90606
Log likelihood	-3254.518	F-statistic	669.0936
Durbin-Watson stat	2.004944	Prob(F-statistic)	0.000000

### EGYPT WEEKLY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 16 (Automatic based on SIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.892836
Test critical values: 1% level	-2.568935
5% level	-1.941367
10% level	-1.616334

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1585 2167

Included observations: 583 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005169	0.002731	-1.892836	0.0589
D(GLSRESID(-1))	-0.033546	0.041463	-0.809069	0.4188
D(GLSRESID(-2))	-0.080338	0.041185	-1.950642	0.0516
D(GLSRESID(-3))	0.022575	0.041023	0.550290	0.5823
D(GLSRESID(-4))	0.124702	0.041376	3.013907	0.0027
D(GLSRESID(-5))	0.077156	0.042365	1.821211	0.0691
D(GLSRESID(-6))	0.090971	0.042679	2.131520	0.0335
D(GLSRESID(-7))	-0.159769	0.042732	-3.738859	0.0002
D(GLSRESID(-8))	0.144417	0.042996	3.358864	0.0008
D(GLSRESID(-9))	0.120579	0.043451	2.775028	0.0057
D(GLSRESID(-10))	0.096354	0.043542	2.212892	0.0273
D(GLSRESID(-11))	0.050026	0.043747	1.143527	0.2533
D(GLSRESID(-12))	-0.014141	0.044388	-0.318571	0.7502
D(GLSRESID(-13))	0.003719	0.044270	0.084004	0.9331
D(GLSRESID(-14))	0.176025	0.044336	3.970265	0.0001
D(GLSRESID(-15))	-0.132635	0.045022	-2.945978	0.0034
D(GLSRESID(-16))	0.174060	0.045400	3.833950	0.0001
R-squared	0.188293	Mean dependent var	1.159948	
Adjusted R-squared	0.165347	S.D. dependent var	56.75015	
S.E. of regression	51.84657	Akaike info criterion	10.76318	
Sum squared resid	1521446.	Schwarz criterion	10.89055	
Log likelihood	-3120.467	Durbin-Watson stat	2.024100	

### EGYPT WEEKLY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 18 (Automatic based on AIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.830482
Test critical values: 1% level	-2.568948
5% level	-1.941369

10% level

-1.616333

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1587 2167

Included observations: 581 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005069	0.002769	-1.830482	0.0677
D(GLSRESID(-1))	-0.040044	0.042000	-0.953438	0.3408
D(GLSRESID(-2))	-0.054480	0.041869	-1.301189	0.1937
D(GLSRESID(-3))	-0.001693	0.041591	-0.040698	0.9676
D(GLSRESID(-4))	0.137809	0.041505	3.320269	0.0010
D(GLSRESID(-5))	0.077145	0.042172	1.829294	0.0679
D(GLSRESID(-6))	0.086795	0.042504	2.042055	0.0416
D(GLSRESID(-7))	-0.166816	0.042657	-3.910664	0.0001
D(GLSRESID(-8))	0.142425	0.043235	3.294169	0.0010
D(GLSRESID(-9))	0.124314	0.043467	2.859970	0.0044
D(GLSRESID(-10))	0.109715	0.043623	2.515059	0.0122
D(GLSRESID(-11))	0.037367	0.043843	0.852290	0.3944
D(GLSRESID(-12))	-0.016309	0.044185	-0.369121	0.7122
D(GLSRESID(-13))	-0.003306	0.044281	-0.074669	0.9405
D(GLSRESID(-14))	0.187510	0.044324	4.230438	0.0000
D(GLSRESID(-15))	-0.126948	0.045228	-2.806872	0.0052
D(GLSRESID(-16))	0.163618	0.045482	3.597449	0.0003
D(GLSRESID(-17))	0.098275	0.046378	2.118999	0.0345
D(GLSRESID(-18))	-0.099714	0.046955	-2.123640	0.0341
R-squared	0.201626	Mean dependent var	1.163562	
Adjusted R-squared	0.176055	S.D. dependent var	56.84787	
S.E. of regression	51.60161	Akaike info criterion	10.75714	
Sum squared resid	1496452.	Schwarz criterion	10.89988	
Log likelihood	-3105.949	Durbin-Watson stat	2.008250	

**EGYPT WEEKLY**

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag length: 16 (Spectral GLS-detrended AR based on SIC, MAXLAG=18)

Sample(adjusted): 1568 2167

Included observations: 600 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-10.0572	-2.20986	0.21973	2.56743
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 22595.83

**EGYPT WEEKLY**

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag length: 18 (Spectral GLS-detrended AR based on AIC, MAXLAG=18)  
 Sample(adjusted): 1568 2167  
 Included observations: 600 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-9.65711	-2.16416	0.22410	2.67061
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000
%				
*Ng-Perron (2001, Table 1)				
HAC corrected variance (Spectral GLS-detrended AR)	21722.83			

## EGYPT WEEKLY

Null Hypothesis: EGYPT is stationary  
 Exogenous: Constant  
 Bandwidth: 18 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	2.034830
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	371851.7
HAC corrected variance (Bartlett kernel)	6808384.

KPSS Test Equation  
 Dependent Variable: EGYPT  
 Method: Least Squares  
 Sample(adjusted): 1568 2167  
 Included observations: 600 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	678.6276	24.91561	27.23705	0.0000
R-squared	0.000000	Mean dependent var		678.6276
Adjusted R-squared	0.000000	S.D. dependent var		610.3053
S.E. of regression	610.3053	Akaike info criterion		15.66746
Sum squared resid	2.23E+08	Schwarz criterion		15.67479
Log likelihood	-4699.238	Durbin-Watson stat		0.008405

## EGYPT MONTHLY (LEVEL)

Null Hypothesis: EGYPT has a unit root  
 Exogenous: Constant  
 Lag Length: 5 (Automatic based on SIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.347172	0.0147
Test critical values:		
1% level	-3.480425	

5% level	-2.883408
10% level	-2.578510

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 369 500

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.046169	0.013793	-3.347172	0.0011
D(EGYPT(-1))	0.274257	0.084577	3.242692	0.0015
D(EGYPT(-2))	0.133820	0.087803	1.524084	0.1300
D(EGYPT(-3))	0.241194	0.088603	2.722195	0.0074
D(EGYPT(-4))	0.007963	0.106251	0.074949	0.9404
D(EGYPT(-5))	0.346167	0.105695	3.275162	0.0014
C	26.01780	11.84198	2.197083	0.0299
R-squared	0.309474	Mean dependent var	5.114317	
Adjusted R-squared	0.276328	S.D. dependent var	103.7549	
S.E. of regression	88.26312	Akaike info criterion	11.85009	
Sum squared resid	973797.4	Schwarz criterion	12.00297	
Log likelihood	-775.1062	F-statistic	9.336891	
Durbin-Watson stat	1.979738	Prob(F-statistic)	0.000000	

### EGYPT MONTHLY (LEVEL)

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on AIC, MAXLAG=13)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.347172	0.0147
Test critical values:		
1% level	-3.480425	
5% level	-2.883408	
10% level	-2.578510	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 369 500

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.046169	0.013793	-3.347172	0.0011
D(EGYPT(-1))	0.274257	0.084577	3.242692	0.0015
D(EGYPT(-2))	0.133820	0.087803	1.524084	0.1300
D(EGYPT(-3))	0.241194	0.088603	2.722195	0.0074
D(EGYPT(-4))	0.007963	0.106251	0.074949	0.9404
D(EGYPT(-5))	0.346167	0.105695	3.275162	0.0014
C	26.01780	11.84198	2.197083	0.0299
R-squared	0.309474	Mean dependent var	5.114317	
Adjusted R-squared	0.276328	S.D. dependent var	103.7549	
S.E. of regression	88.26312	Akaike info criterion	11.85009	
Sum squared resid	973797.4	Schwarz criterion	12.00297	
Log likelihood	-775.1062	F-statistic	9.336891	



Durbin-Watson stat      1.979738      Prob(F-statistic)      0.000000

### EGYPT MONTHLY (LEVEL)

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Bandwidth: 7 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.737185	0.4103
Test critical values:		
1% level	-3.478547	
5% level	-2.882590	
10% level	-2.578074	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	10186.21
HAC corrected variance (Bartlett kernel)	27884.12

Phillips-Perron Test Equation

Dependent Variable: D(EGYPT)

Method: Least Squares

Sample(adjusted): 364 500

Included observations: 137 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EGYPT(-1)	-0.016996	0.014190	-1.197737	0.2331
C	16.49689	12.98524	1.270433	0.2061
R-squared	0.010515	Mean dependent var		4.936203
Adjusted R-squared	0.003185	S.D. dependent var		101.8339
S.E. of regression	101.6716	Akaike info criterion		12.09586
Sum squared resid	1395511.	Schwarz criterion		12.13849
Log likelihood	-826.5667	F-statistic		1.434574
Durbin-Watson stat	1.198452	Prob(F-statistic)		0.233118

### EGYPT MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(EGYPT) has a unit root

Exogenous: Constant

Bandwidth: 5 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.849849	0.0000
Test critical values:		
1% level	-3.478911	
5% level	-2.882748	
10% level	-2.578158	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	8937.463
HAC corrected variance (Bartlett kernel)	11449.28

Phillips-Perron Test Equation

Dependent Variable: D(EGYPT,2)

Method: Least Squares

Sample(adjusted): 365 500

Included observations: 136 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EGYPT(-1))	-0.611496	0.083830	-7.294456	0.0000
C	2.070475	8.190823	0.252780	0.8008
R-squared	0.284223	Mean dependent var	-2.497133	
Adjusted R-squared	0.278881	S.D. dependent var	112.1555	
S.E. of regression	95.24105	Akaike info criterion	11.96530	
Sum squared resid	1215495.	Schwarz criterion	12.00813	
Log likelihood	-811.6401	F-statistic	53.20909	
Durbin-Watson stat	2.088866	Prob(F-statistic)	0.000000	

## EGYPT MONTHLY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on SIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-3.047758
Test critical values: 1% level	-2.582599
5% level	-1.943266
10% level	-1.615111

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 369 500

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.035685	0.011709	-3.047758	0.0028
D(GLSRESID(-1))	0.278129	0.084876	3.276876	0.0014
D(GLSRESID(-2))	0.133751	0.088160	1.517145	0.1317
D(GLSRESID(-3))	0.238900	0.088948	2.685847	0.0082
D(GLSRESID(-4))	0.005491	0.106668	0.051478	0.9590
D(GLSRESID(-5))	0.342505	0.106092	3.228368	0.0016
R-squared	0.298286	Mean dependent var	5.114317	
Adjusted R-squared	0.270441	S.D. dependent var	103.7549	
S.E. of regression	88.62145	Akaike info criterion	11.85101	
Sum squared resid	989574.0	Schwarz criterion	11.98205	
Log likelihood	-776.1669	Durbin-Watson stat	1.976301	

## EGYPT MONTHLY

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic based on AIC, MAXLAG=13)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-3.047758
Test critical values: 1% level	-2.582599
5% level	-1.943266
10% level	-1.615111

\*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 369 500

Included observations: 132 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.035685	0.011709	-3.047758	0.0028
D(GLSRESID(-1))	0.278129	0.084876	3.276876	0.0014
D(GLSRESID(-2))	0.133751	0.088160	1.517145	0.1317
D(GLSRESID(-3))	0.238900	0.088948	2.685847	0.0082
D(GLSRESID(-4))	0.005491	0.106668	0.051478	0.9590
D(GLSRESID(-5))	0.342505	0.106092	3.228368	0.0016
R-squared	0.298286	Mean dependent var		5.114317
Adjusted R-squared	0.270441	S.D. dependent var		103.7549
S.E. of regression	88.62145	Akaike info criterion		11.85101
Sum squared resid	989574.0	Schwarz criterion		11.98205
Log likelihood	-776.1669	Durbin-Watson stat		1.976301

**EGYPT MONTHLY**

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag length: 5 (Spectral GLS-detrended AR based on SIC, MAXLAG=13)

Sample(adjusted): 363 500

Included observations: 138 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-635188.	-563.555	0.00089	4.1E-05
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)

5.00E+09

**EGYPT MONTHLY**

Null Hypothesis: EGYPT has a unit root

Exogenous: Constant

Lag length: 5 (Spectral GLS-detrended AR based on AIC, MAXLAG=13)

Sample(adjusted): 363 500

Included observations: 138 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-635188.	-563.555	0.00089	4.1E-05
Asymptotic critical values*:				
1%	-13.8000	-2.58000	0.17400	1.78000
5%	-8.10000	-1.98000	0.23300	3.17000
10%	-5.70000	-1.62000	0.27500	4.45000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)

5.00E+09

## EGYPT MONTHLY

Null Hypothesis: EGYPT is stationary

Exogenous: Constant

Bandwidth: 9 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.959994
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	372060.5
HAC corrected variance (Bartlett kernel)	3307173.

KPSS Test Equation

Dependent Variable: EGYPT

Method: Least Squares

Sample(adjusted): 363 500

Included observations: 138 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	680.8679	52.11305	13.06521	0.0000
R-squared	0.000000	Mean dependent var	680.8679	
Adjusted R-squared	0.000000	S.D. dependent var	612.1898	
S.E. of regression	612.1898	Akaike info criterion	15.67918	
Sum squared resid	51344354	Schwarz criterion	15.70039	
Log likelihood	-1080.864	Durbin-Watson stat	0.027533	

## ISRAEL DAILY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.184981	0.9125
Test critical values:		
1% level	-3.959601	
5% level	-3.410570	
10% level	-3.127058	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 1048 6915

Included observations: 5868 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.000683	0.000576	-1.184981	0.2361
D(ISRAEL(-1))	0.073496	0.013038	5.636960	0.0000
C	-0.196826	0.159227	-1.236134	0.2165
@TREND(1)	0.000118	6.74E-05	1.750204	0.0801
R-squared	0.006157	Mean dependent var	0.124475	
Adjusted R-squared	0.005648	S.D. dependent var	3.276639	
S.E. of regression	3.267372	Akaike info criterion	5.206531	

Sum squared resid	62602.44	Schwarz criterion	5.211082
Log likelihood	-15271.96	F-statistic	12.10921
Durbin-Watson stat	1.998289	Prob(F-statistic)	0.000000

### ISRAEL DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-71.12459	0.0000
Test critical values: 1% level	-3.959601	
5% level	-3.410570	
10% level	-3.127058	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 1048 6915

Included observations: 5868 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.926963	0.013033	-71.12459	0.0000
C	-0.059207	0.108933	-0.543517	0.5868
@TREND(1)	4.39E-05	2.52E-05	1.742644	0.0814
R-squared	0.463095	Mean dependent var		0.001730
Adjusted R-squared	0.462912	S.D. dependent var		4.458520
S.E. of regression	3.267485	Akaike info criterion		5.206429
Sum squared resid	62617.43	Schwarz criterion		5.209843
Log likelihood	-15272.66	F-statistic		2529.356
Durbin-Watson stat	1.998257	Prob(F-statistic)		0.000000

### ISRAEL DAILY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 28 (Automatic based on AIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.719847	0.7426
Test critical values: 1% level	-3.959608	
5% level	-3.410573	
10% level	-3.127060	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 1075 6915

Included observations: 5841 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.001012	0.000588	-1.719847	0.0855
D(ISRAEL(-1))	0.070356	0.013119	5.363097	0.0000
D(ISRAEL(-2))	-0.000787	0.013151	-0.059816	0.9523
D(ISRAEL(-3))	-0.005189	0.013155	-0.394422	0.6933

D(ISRAEL(-4))	0.008034	0.013154	0.610738	0.5414
D(ISRAEL(-5))	-0.044762	0.013152	-3.403307	0.0007
D(ISRAEL(-6))	-0.020390	0.013165	-1.548788	0.1215
D(ISRAEL(-7))	0.000476	0.013186	0.036101	0.9712
D(ISRAEL(-8))	0.052496	0.013183	3.982215	0.0001
D(ISRAEL(-9))	0.018629	0.013203	1.410941	0.1583
D(ISRAEL(-10))	0.051499	0.013204	3.900124	0.0001
D(ISRAEL(-11))	0.005000	0.013220	0.378257	0.7053
D(ISRAEL(-12))	-0.008082	0.013223	-0.611215	0.5411
D(ISRAEL(-13))	0.033933	0.013225	2.565775	0.0103
D(ISRAEL(-14))	-0.001561	0.013236	-0.117964	0.9061
D(ISRAEL(-15))	0.045203	0.013238	3.414708	0.0006
D(ISRAEL(-16))	0.012862	0.013269	0.969305	0.3324
D(ISRAEL(-17))	0.004134	0.013272	0.311495	0.7554
D(ISRAEL(-18))	-0.028241	0.013278	-2.126881	0.0335
D(ISRAEL(-19))	0.010541	0.013303	0.792397	0.4282
D(ISRAEL(-20))	0.011635	0.013303	0.874635	0.3818
D(ISRAEL(-21))	0.029499	0.013292	2.219320	0.0265
D(ISRAEL(-22))	-0.003988	0.013298	-0.299940	0.7642
D(ISRAEL(-23))	-0.014084	0.013300	-1.058907	0.2897
D(ISRAEL(-24))	0.020981	0.013289	1.578820	0.1144
D(ISRAEL(-25))	-0.008339	0.013297	-0.627108	0.5306
D(ISRAEL(-26))	-0.021870	0.013315	-1.642540	0.1005
D(ISRAEL(-27))	-0.020153	0.013319	-1.513112	0.1303
D(ISRAEL(-28))	0.043817	0.013309	3.292379	0.0010
C	-0.250305	0.161570	-1.549208	0.1214
@TREND(1)	0.000145	6.83E-05	2.118058	0.0342
R-squared	0.022963	Mean dependent var	0.124982	
Adjusted R-squared	0.017918	S.D. dependent var	3.284196	
S.E. of regression	3.254641	Akaike info criterion	5.203334	
Sum squared resid	61543.51	Schwarz criterion	5.238748	
Log likelihood	-15165.34	F-statistic	4.551591	
Durbin-Watson stat	1.998193	Prob(F-statistic)	0.000000	

## ISRAEL DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 27 (Automatic based on AIC, MAXLAG=33)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.83736	0.0000
Test critical values:		
1% level	-3.959608	
5% level	-3.410573	
10% level	-3.127060	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 1075 6915

Included observations: 5841 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.780019	0.060762	-12.83736	0.0000
D(ISRAEL(-1),2)	-0.150132	0.059893	-2.506670	0.0122
D(ISRAEL(-2),2)	-0.151458	0.059006	-2.566829	0.0103
D(ISRAEL(-3),2)	-0.157196	0.058136	-2.703927	0.0069

D(ISRAEL(-4),2)	-0.149699	0.057285	-2.613211	0.0090
D(ISRAEL(-5),2)	-0.195020	0.056374	-3.459387	0.0005
D(ISRAEL(-6),2)	-0.215941	0.055495	-3.891166	0.0001
D(ISRAEL(-7),2)	-0.216034	0.054591	-3.957305	0.0001
D(ISRAEL(-8),2)	-0.164133	0.053608	-3.061697	0.0022
D(ISRAEL(-9),2)	-0.146153	0.052542	-2.781640	0.0054
D(ISRAEL(-10),2)	-0.095323	0.051411	-1.854142	0.0638
D(ISRAEL(-11),2)	-0.091009	0.050294	-1.809546	0.0704
D(ISRAEL(-12),2)	-0.099754	0.049166	-2.028923	0.0425
D(ISRAEL(-13),2)	-0.066473	0.047995	-1.385007	0.1661
D(ISRAEL(-14),2)	-0.068803	0.046603	-1.476374	0.1399
D(ISRAEL(-15),2)	-0.024339	0.045202	-0.538455	0.5903
D(ISRAEL(-16),2)	-0.012330	0.043615	-0.282691	0.7774
D(ISRAEL(-17),2)	-0.009060	0.042010	-0.215668	0.8293
D(ISRAEL(-18),2)	-0.038139	0.040344	-0.945351	0.3445
D(ISRAEL(-19),2)	-0.028545	0.038376	-0.743828	0.4570
D(ISRAEL(-20),2)	-0.017886	0.036229	-0.493689	0.6215
D(ISRAEL(-21),2)	0.010596	0.033712	0.314325	0.7533
D(ISRAEL(-22),2)	0.005574	0.030990	0.179877	0.8573
D(ISRAEL(-23),2)	-0.009548	0.028094	-0.339868	0.7340
D(ISRAEL(-24),2)	0.010427	0.025213	0.413540	0.6792
D(ISRAEL(-25),2)	0.001096	0.021921	0.049994	0.9601
D(ISRAEL(-26),2)	-0.021696	0.018153	-1.195204	0.2321
D(ISRAEL(-27),2)	-0.042776	0.013297	-3.216968	0.0013
C	-0.046173	0.109641	-0.421131	0.6737
@TREND(1)	3.57E-05	2.55E-05	1.400643	0.1614
R-squared	0.472034	Mean dependent var		0.001727
Adjusted R-squared	0.469399	S.D. dependent var		4.468814
S.E. of regression	3.255189	Akaike info criterion		5.203501
Sum squared resid	61574.84	Schwarz criterion		5.237772
Log likelihood	-15166.82	F-statistic		179.1514
Durbin-Watson stat	1.998185	Prob(F-statistic)		0.000000

### ISRAEL DAILY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 16 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.245111	0.9002
Test critical values:		
1% level	-3.959600	
5% level	-3.410570	
10% level	-3.127058	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	10.72443
HAC corrected variance (Bartlett kernel)	12.96512

Phillips-Perron Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 1047 6915

Included observations: 5869 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.000586	0.000577	-1.015213	0.3100
C	-0.181587	0.159540	-1.138193	0.2551

@TREND(1)	0.000111	6.76E-05	1.640578	0.1009
R-squared	0.000772	Mean dependent var	0.124451	
Adjusted R-squared	0.000431	S.D. dependent var	3.276361	
S.E. of regression	3.275654	Akaike info criterion	5.211423	
Sum squared resid	62941.66	Schwarz criterion	5.214837	
Log likelihood	-15289.92	F-statistic	2.265530	
Durbin-Watson stat	1.851847	Prob(F-statistic)	0.103866	

### ISRAEL DAILY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 13 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-71.14860	0.0000
Test critical values:		
1% level	-3.959601	
5% level	-3.410570	
10% level	-3.127058	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	10.67100
HAC corrected variance (Bartlett kernel)	10.76478

Phillips-Perron Test Equation  
 Dependent Variable: D(ISRAEL,2)  
 Method: Least Squares  
 Sample(adjusted): 1048 6915  
 Included observations: 5868 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.926963	0.013033	-71.12459	0.0000
C	-0.059207	0.108933	-0.543517	0.5868
@TREND(1)	4.39E-05	2.52E-05	1.742644	0.0814
R-squared	0.463095	Mean dependent var	0.001730	
Adjusted R-squared	0.462912	S.D. dependent var	4.458520	
S.E. of regression	3.267485	Akaike info criterion	5.206429	
Sum squared resid	62617.43	Schwarz criterion	5.209843	
Log likelihood	-15272.66	F-statistic	2529.356	
Durbin-Watson stat	1.998257	Prob(F-statistic)	0.000000	

### ISRAEL DAILY

Null Hypothesis: ISRAEL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=33)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.812148
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)



DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1048 6915  
 Included observations: 5868 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000386	0.000475	-0.812148	0.4167
D(GLSRESID(-1))	0.073935	0.013036	5.671765	0.0000
R-squared	0.005439	Mean dependent var		0.030971
Adjusted R-squared	0.005269	S.D. dependent var		3.276639
S.E. of regression	3.267996	Akaike info criterion		5.206572
Sum squared resid	62647.68	Schwarz criterion		5.208847
Log likelihood	-15274.08	Durbin-Watson stat		1.998312

### ISRAEL DAILY

Null Hypothesis: ISRAEL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 28 (Automatic based on AIC, MAXLAG=33)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.301403
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1075 6915  
 Included observations: 5841 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000626	0.000481	-1.301403	0.1932
D(GLSRESID(-1))	0.070572	0.013117	5.380204	0.0000
D(GLSRESID(-2))	-0.000611	0.013149	-0.046496	0.9629
D(GLSRESID(-3))	-0.005008	0.013153	-0.380699	0.7034
D(GLSRESID(-4))	0.008217	0.013153	0.624735	0.5322
D(GLSRESID(-5))	-0.044580	0.013151	-3.389914	0.0007
D(GLSRESID(-6))	-0.020181	0.013163	-1.533096	0.1253
D(GLSRESID(-7))	0.000712	0.013184	0.053975	0.9570
D(GLSRESID(-8))	0.052735	0.013180	4.001217	0.0001
D(GLSRESID(-9))	0.018844	0.013200	1.427545	0.1535
D(GLSRESID(-10))	0.051705	0.013201	3.916593	0.0001
D(GLSRESID(-11))	0.005176	0.013217	0.391597	0.6954
D(GLSRESID(-12))	-0.007917	0.013221	-0.598804	0.5493
D(GLSRESID(-13))	0.034101	0.013223	2.578917	0.0099
D(GLSRESID(-14))	-0.001391	0.013232	-0.105106	0.9163
D(GLSRESID(-15))	0.045368	0.013235	3.427985	0.0006
D(GLSRESID(-16))	0.013021	0.013265	0.981669	0.3263
D(GLSRESID(-17))	0.004290	0.013268	0.323353	0.7464
D(GLSRESID(-18))	-0.028096	0.013274	-2.116559	0.0343
D(GLSRESID(-19))	0.010734	0.013297	0.807229	0.4196
D(GLSRESID(-20))	0.011827	0.013297	0.889452	0.3738
D(GLSRESID(-21))	0.029689	0.013285	2.234781	0.0255
D(GLSRESID(-22))	-0.003815	0.013291	-0.287069	0.7741
D(GLSRESID(-23))	-0.013904	0.013293	-1.045944	0.2956
D(GLSRESID(-24))	0.021169	0.013282	1.593769	0.1110

D(GLSRESID(-25))	-0.008171	0.013291	-0.614760	0.5387
D(GLSRESID(-26))	-0.021713	0.013309	-1.631399	0.1029
D(GLSRESID(-27))	-0.019978	0.013313	-1.500624	0.1335
D(GLSRESID(-28))	0.044031	0.013301	3.310416	0.0009
R-squared	0.022371	Mean dependent var	0.031478	
Adjusted R-squared	0.017661	S.D. dependent var	3.284196	
S.E. of regression	3.255065	Akaike info criterion	5.203254	
Sum squared resid	61580.76	Schwarz criterion	5.236383	
Log likelihood	-15167.10	Durbin-Watson stat	1.998185	

## ISRAEL DAILY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=33)

Sample(adjusted): 1046 6915

Included observations: 5870 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.46542	-0.81876	0.33210	26.7137
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	12.44892
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## ISRAEL DAILY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 28 (Spectral GLS-detrended AR based on AIC, MAXLAG=33)

Sample(adjusted): 1046 6915

Included observations: 5870 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.70008	-1.27748	0.27180	17.8936
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	18.58517
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## ISRAEL DAILY

Null Hypothesis: ISRAEL is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 58 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.926270
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	5492.099
HAC corrected variance (Bartlett kernel)	310575.1

KPSS Test Equation

Dependent Variable: ISRAEL

Method: Least Squares

Sample(adjusted): 1046 6915

Included observations: 5870 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-201.5470	2.469382	-81.61837	0.0000
@TREND(1)	0.108613	0.000571	190.2417	0.0000
R-squared	0.860485	Mean dependent var	230.6790	
Adjusted R-squared	0.860461	S.D. dependent var	198.4245	
S.E. of regression	74.12133	Akaike info criterion	11.44962	
Sum squared resid	32238622	Schwarz criterion	11.45190	
Log likelihood	-33602.65	F-statistic	36191.90	
Durbin-Watson stat	0.001954	Prob(F-statistic)	0.000000	

### ISRAEL WEEKLY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on SIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.599994	0.7928
Test critical values:		
1% level	-3.965909	
5% level	-3.413657	
10% level	-3.128889	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 998 2167

Included observations: 1170 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.005153	0.003221	-1.599994	0.1099
D(ISRAEL(-1))	-0.062599	0.029250	-2.140153	0.0325
D(ISRAEL(-2))	0.090479	0.029368	3.080851	0.0021
D(ISRAEL(-3))	0.091912	0.029408	3.125403	0.0018
C	-4.303277	2.312352	-1.860996	0.0630
@TREND(1)	0.003819	0.001879	2.032620	0.0423
R-squared	0.022707	Mean dependent var	0.624231	

Adjusted R-squared	0.018509	S.D. dependent var	8.143541
S.E. of regression	8.067826	Akaike info criterion	7.018760
Sum squared resid	75764.54	Schwarz criterion	7.044733
Log likelihood	-4099.975	F-statistic	5.408939
Durbin-Watson stat	2.008445	Prob(F-statistic)	0.000063

### ISRAEL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on SIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-17.34251	0.0000
Test critical values:		
1% level	-3.965909	
5% level	-3.413657	
10% level	-3.128889	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 998 2167

Included observations: 1170 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.891519	0.051407	-17.34251	0.0000
D(ISRAEL(-1),2)	-0.174480	0.042710	-4.085255	0.0000
D(ISRAEL(-2),2)	-0.087975	0.029325	-3.000056	0.0028
C	-1.076802	1.132340	-0.950953	0.3418
@TREND(1)	0.001030	0.000702	1.467668	0.1425
R-squared	0.538692	Mean dependent var	-0.002752	
Adjusted R-squared	0.537108	S.D. dependent var	11.86608	
S.E. of regression	8.073226	Akaike info criterion	7.019248	
Sum squared resid	75931.17	Schwarz criterion	7.040892	
Log likelihood	-4101.260	F-statistic	340.1073	
Durbin-Watson stat	2.007189	Prob(F-statistic)	0.000000	

### ISRAEL WEEKLY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 4 (Automatic based on AIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.752859	0.7269
Test critical values:		
1% level	-3.965916	
5% level	-3.413661	
10% level	-3.128891	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 999 2167

Included observations: 1169 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.005675	0.003238	-1.752859	0.0799
D(ISRAEL(-1))	-0.066282	0.029333	-2.259603	0.0240
D(ISRAEL(-2))	0.087398	0.029424	2.970277	0.0030
D(ISRAEL(-3))	0.095693	0.029496	3.244304	0.0012
D(ISRAEL(-4))	0.047653	0.029796	1.599287	0.1100
C	-4.561496	2.320781	-1.965500	0.0496
@TREND(1)	0.004039	0.001885	2.142062	0.0324
R-squared	0.024857	Mean dependent var		0.624602
Adjusted R-squared	0.019822	S.D. dependent var		8.147016
S.E. of regression	8.065868	Akaike info criterion		7.019130
Sum squared resid	75597.66	Schwarz criterion		7.049453
Log likelihood	-4095.681	F-statistic		4.936675
Durbin-Watson stat	1.998205	Prob(F-statistic)		0.000053

### ISRAEL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on AIC, MAXLAG=22)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.67296	0.0000
Test critical values: 1% level	-3.965916	
5% level	-3.413661	
10% level	-3.128891	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 999 2167

Included observations: 1169 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.852715	0.058115	-14.67296	0.0000
D(ISRAEL(-1),2)	-0.216873	0.051972	-4.172904	0.0000
D(ISRAEL(-2),2)	-0.133473	0.043244	-3.086510	0.0021
D(ISRAEL(-3),2)	-0.042482	0.029676	-1.431533	0.1525
C	-1.012204	1.135016	-0.891797	0.3727
@TREND(1)	0.000972	0.000704	1.381267	0.1675
R-squared	0.539504	Mean dependent var		-0.002874
Adjusted R-squared	0.537524	S.D. dependent var		11.87116
S.E. of regression	8.073052	Akaike info criterion		7.020060
Sum squared resid	75797.55	Schwarz criterion		7.046051
Log likelihood	-4097.225	F-statistic		272.5075
Durbin-Watson stat	1.997887	Prob(F-statistic)		0.000000

### ISRAEL WEEKLY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.444334	0.8475
Test critical values: 1% level	-3.965889	

5% level	-3.413647
10% level	-3.128883

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	65.84195
HAC corrected variance (Bartlett kernel)	75.69739

Phillips-Perron Test Equation  
 Dependent Variable: D(ISRAEL)  
 Method: Least Squares  
 Sample(adjusted): 995 2167  
 Included observations: 1173 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.004065	0.003207	-1.267475	0.2052
C	-3.791021	2.307933	-1.642604	0.1007
@TREND(1)	0.003387	0.001877	1.804682	0.0714
R-squared	0.003784	Mean dependent var		0.622694
Adjusted R-squared	0.002081	S.D. dependent var		8.133168
S.E. of regression	8.124702	Akaike info criterion		7.030249
Sum squared resid	77232.61	Schwarz criterion		7.043209
Log likelihood	-4120.241	F-statistic		2.221949
Durbin-Watson stat	2.122576	Prob(F-statistic)		0.108855

### ISRAEL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 10 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-36.43815	0.0000
Test critical values:		
1% level	-3.965896	
5% level	-3.413651	
10% level	-3.128885	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	65.71588
HAC corrected variance (Bartlett kernel)	82.81733

Phillips-Perron Test Equation  
 Dependent Variable: D(ISRAEL,2)  
 Method: Least Squares  
 Sample(adjusted): 996 2167  
 Included observations: 1172 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-1.064297	0.029191	-36.45966	0.0000
C	-1.324191	1.133306	-1.168432	0.2429
@TREND(1)	0.001258	0.000702	1.792304	0.0733
R-squared	0.532083	Mean dependent var		-0.002722
Adjusted R-squared	0.531283	S.D. dependent var		11.85595
S.E. of regression	8.116928	Akaike info criterion		7.028337
Sum squared resid	77019.01	Schwarz criterion		7.041306
Log likelihood	-4115.606	F-statistic		664.6538
Durbin-Watson stat	1.989183	Prob(F-statistic)		0.000000

## ISRAEL WEEKLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on SIC, MAXLAG=22)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.213126
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 998 2167

Included observations: 1170 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003250	0.002679	-1.213126	0.2253
D(GLSRESID(-1))	-0.061332	0.029212	-2.099511	0.0360
D(GLSRESID(-2))	0.092188	0.029301	3.146256	0.0017
D(GLSRESID(-3))	0.093302	0.029353	3.178623	0.0015
R-squared	0.019728	Mean dependent var	0.151954	
Adjusted R-squared	0.017206	S.D. dependent var	8.143541	
S.E. of regression	8.073178	Akaike info criterion	7.018384	
Sum squared resid	75995.45	Schwarz criterion	7.035700	
Log likelihood	-4101.755	Durbin-Watson stat	2.008803	

## ISRAEL WEEKLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 4 (Automatic based on AIC, MAXLAG=22)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.349278
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 999 2167

Included observations: 1169 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003627	0.002688	-1.349278	0.1775
D(GLSRESID(-1))	-0.065340	0.029306	-2.229567	0.0260
D(GLSRESID(-2))	0.088738	0.029368	3.021617	0.0026
D(GLSRESID(-3))	0.096882	0.029426	3.292402	0.0010
D(GLSRESID(-4))	0.048679	0.029718	1.638037	0.1017
R-squared	0.021981	Mean dependent var	0.152325	
Adjusted R-squared	0.018620	S.D. dependent var	8.147016	
S.E. of regression	8.070811	Akaike info criterion	7.018653	

Sum squared resid	75820.63	Schwarz criterion	7.040312
Log likelihood	-4097.403	Durbin-Watson stat	1.998263

### ISRAEL WEEKLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 3 (Spectral GLS-detrended AR based on SIC, MAXLAG=22)

Sample(adjusted): 994 2167

Included observations: 1174 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.23603	-1.19134	0.28124	19.1946
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	84.67412
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### ISRAEL WEEKLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 4 (Spectral GLS-detrended AR based on AIC, MAXLAG=22)

Sample(adjusted): 994 2167

Included observations: 1174 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.92581	-1.31542	0.26705	17.3062
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	93.91346
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### ISRAEL WEEKLY

Null Hypothesis: ISRAEL is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 26 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.433746
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	5494.883
HAC corrected variance (Bartlett kernel)	132722.1

KPSS Test Equation



Dependent Variable: ISRAEL  
 Method: Least Squares  
 Sample(adjusted): 994 2167  
 Included observations: 1174 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-627.6751	10.32123	-60.81399	0.0000
@TREND(1)	0.543629	0.006389	85.08721	0.0000
R-squared	0.860672	Mean dependent var		230.9864
Adjusted R-squared	0.860554	S.D. dependent var		198.6762
S.E. of regression	74.19070	Akaike info criterion		11.45286
Sum squared resid	6450992.	Schwarz criterion		11.46149
Log likelihood	-6720.827	F-statistic		7239.833
Durbin-Watson stat	0.012019	Prob(F-statistic)		0.000000

### ISRAEL MONTHLY (LEVEL)

Null Hypothesis: ISRAEL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.328769	0.8785
Test critical values:		
1% level	-3.992411	
5% level	-3.426557	
10% level	-3.136516	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ISRAEL)  
 Method: Least Squares  
 Sample(adjusted): 231 500  
 Included observations: 270 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.019581	0.014736	-1.328769	0.1851
C	-17.94173	10.61566	-1.690119	0.0922
@TREND(1)	0.069057	0.037360	1.848428	0.0656
R-squared	0.016484	Mean dependent var		2.738074
Adjusted R-squared	0.009117	S.D. dependent var		17.99818
S.E. of regression	17.91595	Akaike info criterion		8.620309
Sum squared resid	85702.02	Schwarz criterion		8.660292
Log likelihood	-1160.742	F-statistic		2.237460
Durbin-Watson stat	1.802158	Prob(F-statistic)		0.108727

### ISRAEL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.88782	0.0000
Test critical values:		
1% level	-3.992540	
5% level	-3.426619	

10% level -3.136553

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 232 500

Included observations: 269 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.929207	0.062414	-14.88782	0.0000
C	-5.161793	5.283182	-0.977024	0.3294
@TREND(1)	0.021099	0.014213	1.484510	0.1389
R-squared	0.454652	Mean dependent var	-0.194610	
Adjusted R-squared	0.450552	S.D. dependent var	24.23674	
S.E. of regression	17.96542	Akaike info criterion	8.625865	
Sum squared resid	85853.22	Schwarz criterion	8.665955	
Log likelihood	-1157.179	F-statistic	110.8811	
Durbin-Watson stat	1.948466	Prob(F-statistic)	0.000000	

## ISRAEL MONTHLY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 14 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.670895	0.7614
Test critical values: 1% level	-3.994310	
5% level	-3.427476	
10% level	-3.137059	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 245 500

Included observations: 256 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.036107	0.021610	-1.670895	0.0961
D(ISRAEL(-1))	0.109470	0.066595	1.643822	0.1015
D(ISRAEL(-2))	-0.067181	0.066866	-1.004707	0.3161
D(ISRAEL(-3))	0.183505	0.066990	2.739308	0.0066
D(ISRAEL(-4))	-0.023473	0.068302	-0.343667	0.7314
D(ISRAEL(-5))	-0.024860	0.068538	-0.362713	0.7171
D(ISRAEL(-6))	0.066464	0.067395	0.986176	0.3250
D(ISRAEL(-7))	0.058921	0.067896	0.867801	0.3864
D(ISRAEL(-8))	0.134928	0.068000	1.984249	0.0484
D(ISRAEL(-9))	-0.139914	0.068463	-2.043629	0.0421
D(ISRAEL(-10))	0.041627	0.068806	0.604993	0.5458
D(ISRAEL(-11))	0.099070	0.068322	1.450043	0.1484
D(ISRAEL(-12))	0.148773	0.068619	2.168106	0.0311
D(ISRAEL(-13))	-0.103534	0.069852	-1.482190	0.1396
D(ISRAEL(-14))	-0.115943	0.070224	-1.651054	0.1000
C	-27.71729	14.19481	-1.952635	0.0520

@TREND(1)	0.102924	0.049801	2.066701	0.0398
R-squared	0.132457	Mean dependent var	2.856094	
Adjusted R-squared	0.074379	S.D. dependent var	18.47809	
S.E. of regression	17.77763	Akaike info criterion	8.657857	
Sum squared resid	75534.51	Schwarz criterion	8.893279	
Log likelihood	-1091.206	F-statistic	2.280664	
Durbin-Watson stat	1.988767	Prob(F-statistic)	0.004055	

### ISRAEL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 13 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.536669	0.0016
Test critical values:		
1% level	-3.994310	
5% level	-3.427476	
10% level	-3.137059	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 245 500

Included observations: 256 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-1.003432	0.221183	-4.536669	0.0000
D(ISRAEL(-1),2)	0.087366	0.214633	0.407048	0.6843
D(ISRAEL(-2),2)	-0.006084	0.210639	-0.028882	0.9770
D(ISRAEL(-3),2)	0.151940	0.204349	0.743529	0.4579
D(ISRAEL(-4),2)	0.098407	0.196968	0.499609	0.6178
D(ISRAEL(-5),2)	0.042074	0.188157	0.223611	0.8233
D(ISRAEL(-6),2)	0.080389	0.182508	0.440468	0.6600
D(ISRAEL(-7),2)	0.111998	0.173084	0.647071	0.5182
D(ISRAEL(-8),2)	0.220024	0.161900	1.359007	0.1754
D(ISRAEL(-9),2)	0.050879	0.146964	0.346200	0.7295
D(ISRAEL(-10),2)	0.067954	0.130925	0.519028	0.6042
D(ISRAEL(-11),2)	0.145115	0.115778	1.253396	0.2113
D(ISRAEL(-12),2)	0.270921	0.093071	2.910896	0.0039
D(ISRAEL(-13),2)	0.141693	0.068767	2.060482	0.0404
C	-6.145298	5.922269	-1.037659	0.3005
@TREND(1)	0.024191	0.016179	1.495211	0.1362
R-squared	0.514585	Mean dependent var	-0.209102	
Adjusted R-squared	0.484246	S.D. dependent var	24.84665	
S.E. of regression	17.84387	Akaike info criterion	8.661658	
Sum squared resid	76416.87	Schwarz criterion	8.883232	
Log likelihood	-1092.692	F-statistic	16.96148	
Durbin-Watson stat	1.990122	Prob(F-statistic)	0.000000	

### ISRAEL MONTHLY (LEVEL)

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.487142	0.8319
Test critical values:		
1% level	-3.992411	
5% level	-3.426557	
10% level	-3.136516	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	317.4149
HAC corrected variance (Bartlett kernel)	357.4134

Phillips-Perron Test Equation

Dependent Variable: D(ISRAEL)

Method: Least Squares

Sample(adjusted): 231 500

Included observations: 270 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISRAEL(-1)	-0.019581	0.014736	-1.328769	0.1851
C	-17.94173	10.61566	-1.690119	0.0922
@TREND(1)	0.069057	0.037360	1.848428	0.0656
R-squared	0.016484	Mean dependent var		2.738074
Adjusted R-squared	0.009117	S.D. dependent var		17.99818
S.E. of regression	17.91595	Akaike info criterion		8.620309
Sum squared resid	85702.02	Schwarz criterion		8.660292
Log likelihood	-1160.742	F-statistic		2.237460
Durbin-Watson stat	1.802158	Prob(F-statistic)		0.108727

## ISRAEL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ISRAEL) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-14.83215	0.0000
Test critical values:		
1% level	-3.992540	
5% level	-3.426619	
10% level	-3.136553	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	319.1570
HAC corrected variance (Bartlett kernel)	296.8776

Phillips-Perron Test Equation

Dependent Variable: D(ISRAEL,2)

Method: Least Squares

Sample(adjusted): 232 500

Included observations: 269 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISRAEL(-1))	-0.929207	0.062414	-14.88782	0.0000
C	-5.161793	5.283182	-0.977024	0.3294

@TREND(1)	0.021099	0.014213	1.484510	0.1389
R-squared	0.454652	Mean dependent var	-0.194610	
Adjusted R-squared	0.450552	S.D. dependent var	24.23674	
S.E. of regression	17.96542	Akaike info criterion	8.625865	
Sum squared resid	85853.22	Schwarz criterion	8.665955	
Log likelihood	-1157.179	F-statistic	110.8811	
Durbin-Watson stat	1.948466	Prob(F-statistic)	0.000000	

### ISRAEL MONTHLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.065193
Test critical values: 1% level	-3.467000
5% level	-2.916000
10% level	-2.615500

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 231 500

Included observations: 270 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.013606	0.012773	-1.065193	0.2877
R-squared	0.003041	Mean dependent var	0.612879	
Adjusted R-squared	0.003041	S.D. dependent var	17.99818	
S.E. of regression	17.97079	Akaike info criterion	8.619069	
Sum squared resid	86873.38	Schwarz criterion	8.632397	
Log likelihood	-1162.574	Durbin-Watson stat	1.788260	

### ISRAEL MONTHLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 14 (Automatic based on AIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.507791
Test critical values: 1% level	-3.465600
5% level	-2.918800
10% level	-2.620400

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 245 500

Included observations: 256 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.023640	0.015678	-1.507791	0.1329
D(GLSRESID(-1))	0.109696	0.065267	1.680729	0.0941
D(GLSRESID(-2))	-0.068030	0.065528	-1.038179	0.3002

D(GLSRESID(-3))	0.183792	0.065682	2.798207	0.0056
D(GLSRESID(-4))	-0.025224	0.066716	-0.378085	0.7057
D(GLSRESID(-5))	-0.025983	0.066728	-0.389393	0.6973
D(GLSRESID(-6))	0.066015	0.065860	1.002345	0.3172
D(GLSRESID(-7))	0.057911	0.066610	0.869400	0.3855
D(GLSRESID(-8))	0.133510	0.066837	1.997534	0.0469
D(GLSRESID(-9))	-0.142717	0.067231	-2.122792	0.0348
D(GLSRESID(-10))	0.040960	0.067898	0.603264	0.5469
D(GLSRESID(-11))	0.098186	0.067662	1.451117	0.1480
D(GLSRESID(-12))	0.146919	0.067997	2.160675	0.0317
D(GLSRESID(-13))	-0.106932	0.069086	-1.547821	0.1230
D(GLSRESID(-14))	-0.117683	0.069364	-1.696603	0.0911
R-squared	0.121315	Mean dependent var	0.730899	
Adjusted R-squared	0.070271	S.D. dependent var	18.47809	
S.E. of regression	17.81703	Akaike info criterion	8.654993	
Sum squared resid	76504.58	Schwarz criterion	8.862718	
Log likelihood	-1092.839	Durbin-Watson stat	1.988306	

### ISRAEL MONTHLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=15)

Sample(adjusted): 230 500

Included observations: 271 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.62628	-1.05341	0.29049	20.9844
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	321.7532
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### ISRAEL MONTHLY

Null Hypothesis: ISRAEL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 14 (Spectral GLS-detrended AR based on AIC, MAXLAG=15)

Sample(adjusted): 230 500

Included observations: 271 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-10.7435	-2.10355	0.19580	9.53319
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	708.2421
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### ISRAEL MONTHLY

Null Hypothesis: ISRAEL is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 12 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.244974
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	5588.790
HAC corrected variance (Bartlett kernel)	56278.67

KPSS Test Equation

Dependent Variable: ISRAEL

Method: Least Squares

Sample(adjusted): 230 500

Included observations: 271 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-630.1258	21.69271	-29.04782	0.0000
@TREND(1)	2.366461	0.058265	40.61555	0.0000
R-squared	0.859795	Mean dependent var	231.2660	
Adjusted R-squared	0.859274	S.D. dependent var	200.0232	
S.E. of regression	75.03560	Akaike info criterion	11.48116	
Sum squared resid	1514562.	Schwarz criterion	11.50774	
Log likelihood	-1553.697	F-statistic	1649.623	
Durbin-Watson stat	0.057558	Prob(F-statistic)	0.000000	

## ARGENTINA DAILY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.591703	0.2842
Test critical values:		
1% level	-3.963922	
5% level	-3.412685	
10% level	-3.128313	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ARGENTINA)

Method: Least Squares

Sample(adjusted): 1439 3002

Included observations: 1564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.006242	0.002409	-2.591703	0.0096
D(ARGENTINA(-1))	0.075352	0.025224	2.987370	0.0029
C	-483.7807	173.3603	-2.790608	0.0053
@TREND(1)	0.341951	0.115615	2.957661	0.0031
R-squared	0.011348	Mean dependent var	39.61542	
Adjusted R-squared	0.009447	S.D. dependent var	686.4872	
S.E. of regression	683.2368	Akaike info criterion	15.89411	

Sum squared resid	7.28E+08	Schwarz criterion	15.90781
Log likelihood	-12425.20	F-statistic	5.968934
Durbin-Watson stat	1.999692	Prob(F-statistic)	0.000481

### ARGENTINA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-36.69625	0.0000
Test critical values:		
1% level	-3.963922	
5% level	-3.412685	
10% level	-3.128313	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ARGENTINA,2)  
 Method: Least Squares  
 Sample(adjusted): 1439 3002  
 Included observations: 1564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-0.926802	0.025256	-36.69625	0.0000
C	-94.70769	86.85939	-1.090356	0.2757
@TREND(1)	0.059225	0.038365	1.543726	0.1229
R-squared	0.463136	Mean dependent var		0.349501
Adjusted R-squared	0.462448	S.D. dependent var		933.5873
S.E. of regression	684.4867	Akaike info criterion		15.89713
Sum squared resid	7.31E+08	Schwarz criterion		15.90740
Log likelihood	-12428.56	F-statistic		673.3138
Durbin-Watson stat	1.999245	Prob(F-statistic)		0.000000

### ARGENTINA DAILY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 5 (Automatic based on AIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.745478	0.2183
Test critical values:		
1% level	-3.963937	
5% level	-3.412693	
10% level	-3.128317	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ARGENTINA)  
 Method: Least Squares  
 Sample(adjusted): 1443 3002  
 Included observations: 1560 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.006677	0.002432	-2.745478	0.0061
D(ARGENTINA(-1))	0.077439	0.025303	3.060510	0.0022
D(ARGENTINA(-2))	-0.000287	0.025457	-0.011272	0.9910
D(ARGENTINA(-3))	0.028917	0.025474	1.135146	0.2565
D(ARGENTINA(-4))	-0.029528	0.025516	-1.157246	0.2474



D(ARGENTINA(-5))	0.063295	0.025499	2.482258	0.0132
C	-512.6415	175.5511	-2.920184	0.0035
@TREND(1)	0.361100	0.116937	3.087980	0.0021
R-squared	0.016878	Mean dependent var	39.33089	
Adjusted R-squared	0.012444	S.D. dependent var	687.3233	
S.E. of regression	683.0335	Akaike info criterion	15.89608	
Sum squared resid	7.24E+08	Schwarz criterion	15.92353	
Log likelihood	-12390.94	F-statistic	3.806308	
Durbin-Watson stat	1.998925	Prob(F-statistic)	0.000417	

### ARGENTINA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=23)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-36.69625	0.0000
Test critical values:		
1% level	-3.963922	
5% level	-3.412685	
10% level	-3.128313	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ARGENTINA,2)

Method: Least Squares

Sample(adjusted): 1439 3002

Included observations: 1564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-0.926802	0.025256	-36.69625	0.0000
C	-94.70769	86.85939	-1.090356	0.2757
@TREND(1)	0.059225	0.038365	1.543726	0.1229
R-squared	0.463136	Mean dependent var	0.349501	
Adjusted R-squared	0.462448	S.D. dependent var	933.5873	
S.E. of regression	684.4867	Akaike info criterion	15.89713	
Sum squared resid	7.31E+08	Schwarz criterion	15.90740	
Log likelihood	-12428.56	F-statistic	673.3138	
Durbin-Watson stat	1.999245	Prob(F-statistic)	0.000000	

### ARGENTINA DAILY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 12 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.602625	0.2792
Test critical values:		
1% level	-3.963918	
5% level	-3.412684	
10% level	-3.128312	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	468339.3
HAC corrected variance (Bartlett kernel)	592531.8

Phillips-Perron Test Equation

Dependent Variable: D(ARGENTINA)  
 Method: Least Squares  
 Sample(adjusted): 1438 3002  
 Included observations: 1565 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.005850	0.002409	-2.427988	0.0153
C	-461.7257	173.2999	-2.664316	0.0078
@TREND(1)	0.326804	0.115610	2.826767	0.0048
R-squared	0.005419	Mean dependent var		39.99770
Adjusted R-squared	0.004145	S.D. dependent var		686.4343
S.E. of regression	685.0101	Akaike info criterion		15.89866
Sum squared resid	7.33E+08	Schwarz criterion		15.90893
Log likelihood	-12437.70	F-statistic		4.254970
Durbin-Watson stat	1.847804	Prob(F-statistic)		0.014358

### ARGENTINA DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 11 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-36.84787	0.0000
Test critical values:		
1% level	-3.963922	
5% level	-3.412685	
10% level	-3.128313	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	467623.4
HAC corrected variance (Bartlett kernel)	509312.7

Phillips-Perron Test Equation  
 Dependent Variable: D(ARGENTINA,2)  
 Method: Least Squares  
 Sample(adjusted): 1439 3002  
 Included observations: 1564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-0.926802	0.025256	-36.69625	0.0000
C	-94.70769	86.85939	-1.090356	0.2757
@TREND(1)	0.059225	0.038365	1.543726	0.1229
R-squared	0.463136	Mean dependent var		0.349501
Adjusted R-squared	0.462448	S.D. dependent var		933.5873
S.E. of regression	684.4867	Akaike info criterion		15.89713
Sum squared resid	7.31E+08	Schwarz criterion		15.90740
Log likelihood	-12428.56	F-statistic		673.3138
Durbin-Watson stat	1.999245	Prob(F-statistic)		0.000000

### ARGENTINA DAILY

Null Hypothesis: ARGENTINA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=23)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.047771
Test critical values:	
1% level	-3.480000

5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1439 3002

Included observations: 1564 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001650	0.001575	-1.047771	0.2949
D(GLSRESID(-1))	0.075830	0.025257	3.002343	0.0027
R-squared	0.006161	Mean dependent var		7.855452
Adjusted R-squared	0.005525	S.D. dependent var		686.4872
S.E. of regression	684.5881	Akaike info criterion		15.89679
Sum squared resid	7.32E+08	Schwarz criterion		15.90364
Log likelihood	-12429.29	Durbin-Watson stat		1.999361

### ARGENTINA DAILY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on AIC, MAXLAG=23)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.140024
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1443 3002

Included observations: 1560 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001800	0.001579	-1.140024	0.2545
D(GLSRESID(-1))	0.078021	0.025342	3.078691	0.0021
D(GLSRESID(-2))	-0.000215	0.025501	-0.008421	0.9933
D(GLSRESID(-3))	0.028973	0.025520	1.135328	0.2564
D(GLSRESID(-4))	-0.029625	0.025560	-1.159071	0.2466
D(GLSRESID(-5))	0.063166	0.025543	2.472945	0.0135
R-squared	0.011397	Mean dependent var		7.570921
Adjusted R-squared	0.008217	S.D. dependent var		687.3233
S.E. of regression	684.4938	Akaike info criterion		15.89907
Sum squared resid	7.28E+08	Schwarz criterion		15.91966
Log likelihood	-12395.28	Durbin-Watson stat		1.998718

### ARGENTINA DAILY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=23)  
 Sample(adjusted): 1437 3002  
 Included observations: 1566 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-2.79860	-1.05101	0.37555	28.7555
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	548023.2
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### ARGENTINA DAILY

Null Hypothesis: ARGENTINA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 5 (Spectral GLS-detrended AR based on AIC, MAXLAG=23)  
 Sample(adjusted): 1437 3002  
 Included observations: 1566 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.33879	-1.16804	0.34984	24.9533
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	631526.2
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### ARGENTINA DAILY

Null Hypothesis: ARGENTINA is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 31 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.806007
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	51667732
HAC corrected variance (Bartlett kernel)	1.52E+09

KPSS Test Equation  
 Dependent Variable: ARGENTINA

Method: Least Squares  
Sample(adjusted): 1437 3002  
Included observations: 1566 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-62254.35	910.2989	-68.38891	0.0000
@TREND(1)	45.29268	0.402059	112.6517	0.0000
R-squared	0.890280	Mean dependent var		38227.45
Adjusted R-squared	0.890209	S.D. dependent var		21707.24
S.E. of regression	7192.621	Akaike info criterion		20.60078
Sum squared resid	8.09E+10	Schwarz criterion		20.60762
Log likelihood	-16128.41	F-statistic		12690.40
Durbin-Watson stat	0.009109	Prob(F-statistic)		0.000000

### ARGENTINA WEEKLY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.491480	0.3322
Test critical values: 1% level	-3.987649	
5% level	-3.424247	
10% level	-3.135153	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(ARGENTINA)  
Method: Least Squares  
Sample(adjusted): 1855 2167  
Included observations: 313 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.030915	0.012408	-2.491480	0.0132
C	-15780.57	5539.308	-2.848833	0.0047
@TREND(1)	8.537703	2.976697	2.868180	0.0044
R-squared	0.027118	Mean dependent var		199.9885
Adjusted R-squared	0.020841	S.D. dependent var		1597.323
S.E. of regression	1580.591	Akaike info criterion		17.57852
Sum squared resid	7.74E+08	Schwarz criterion		17.61443
Log likelihood	-2748.039	F-statistic		4.320453
Durbin-Watson stat	1.784861	Prob(F-statistic)		0.014103

### ARGENTINA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.90438	0.0000
Test critical values: 1% level	-3.987745	
5% level	-3.424294	
10% level	-3.135181	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ARGENTINA,2)  
 Method: Least Squares  
 Sample(adjusted): 1856 2167  
 Included observations: 312 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-0.917641	0.057697	-15.90438	0.0000
C	-2877.690	2018.129	-1.425920	0.1549
@TREND(1)	1.521681	1.003144	1.516912	0.1303
R-squared	0.450291	Mean dependent var		14.48151
Adjusted R-squared	0.446733	S.D. dependent var		2140.299
S.E. of regression	1591.995	Akaike info criterion		17.59293
Sum squared resid	7.83E+08	Schwarz criterion		17.62892
Log likelihood	-2741.498	F-statistic		126.5578
Durbin-Watson stat	1.970637	Prob(F-statistic)		0.000000

### ARGENTINA WEEKLY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.738075	0.2220
Test critical values: 1% level	-3.987745	
5% level	-3.424294	
10% level	-3.135181	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ARGENTINA)  
 Method: Least Squares  
 Sample(adjusted): 1856 2167  
 Included observations: 312 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.034248	0.012508	-2.738075	0.0065
D(ARGENTINA(-1))	0.093330	0.057241	1.630485	0.1040
C	-17194.84	5597.365	-3.071953	0.0023
@TREND(1)	9.293220	3.006934	3.090597	0.0022
R-squared	0.038277	Mean dependent var		196.6545
Adjusted R-squared	0.028910	S.D. dependent var		1598.798
S.E. of regression	1575.518	Akaike info criterion		17.57529
Sum squared resid	7.65E+08	Schwarz criterion		17.62328
Log likelihood	-2737.746	F-statistic		4.086222
Durbin-Watson stat	1.974167	Prob(F-statistic)		0.007246

### ARGENTINA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on AIC, MAXLAG=15)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.90438	0.0000
Test critical values: 1% level	-3.987745	
5% level	-3.424294	

10% level -3.135181

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ARGENTINA,2)

Method: Least Squares

Sample(adjusted): 1856 2167

Included observations: 312 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-0.917641	0.057697	-15.90438	0.0000
C	-2877.690	2018.129	-1.425920	0.1549
@TREND(1)	1.521681	1.003144	1.516912	0.1303
R-squared	0.450291	Mean dependent var		14.48151
Adjusted R-squared	0.446733	S.D. dependent var		2140.299
S.E. of regression	1591.995	Akaike info criterion		17.59293
Sum squared resid	7.83E+08	Schwarz criterion		17.62892
Log likelihood	-2741.498	F-statistic		126.5578
Durbin-Watson stat	1.970637	Prob(F-statistic)		0.000000

### ARGENTINA WEEKLY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.550687	0.3036
Test critical values:		
1% level	-3.987649	
5% level	-3.424247	
10% level	-3.135153	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2474322.
HAC corrected variance (Bartlett kernel)	2688596.

Phillips-Perron Test Equation

Dependent Variable: D(ARGENTINA)

Method: Least Squares

Sample(adjusted): 1855 2167

Included observations: 313 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.030915	0.012408	-2.491480	0.0132
C	-15780.57	5539.308	-2.848833	0.0047
@TREND(1)	8.537703	2.976697	2.868180	0.0044
R-squared	0.027118	Mean dependent var		199.9885
Adjusted R-squared	0.020841	S.D. dependent var		1597.323
S.E. of regression	1580.591	Akaike info criterion		17.57852
Sum squared resid	7.74E+08	Schwarz criterion		17.61443
Log likelihood	-2748.039	F-statistic		4.320453
Durbin-Watson stat	1.784861	Prob(F-statistic)		0.014103

### ARGENTINA WEEKLY(1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-15.93585	0.0000
Test critical values:		
1% level	-3.987745	
5% level	-3.424294	
10% level	-3.135181	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2510080.
HAC corrected variance (Bartlett kernel)	2585419.

Phillips-Perron Test Equation

Dependent Variable: D(ARGENTINA,2)

Method: Least Squares

Sample(adjusted): 1856 2167

Included observations: 312 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-0.917641	0.057697	-15.90438	0.0000
C	-2877.690	2018.129	-1.425920	0.1549
@TREND(1)	1.521681	1.003144	1.516912	0.1303
R-squared	0.450291	Mean dependent var	14.48151	
Adjusted R-squared	0.446733	S.D. dependent var	2140.299	
S.E. of regression	1591.995	Akaike info criterion	17.59293	
Sum squared resid	7.83E+08	Schwarz criterion	17.62892	
Log likelihood	-2741.498	F-statistic	126.5578	
Durbin-Watson stat	1.970637	Prob(F-statistic)	0.000000	

## ARGENTINA WEEKLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.110516
Test critical values:	
1% level	-3.471300
5% level	-2.907400
10% level	-2.600450

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1855 2167

Included observations: 313 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.009746	0.008776	-1.110516	0.2676
R-squared	0.003527	Mean dependent var	32.34439	
Adjusted R-squared	0.003527	S.D. dependent var	1597.323	
S.E. of regression	1594.504	Akaike info criterion	17.58970	
Sum squared resid	7.93E+08	Schwarz criterion	17.60167	
Log likelihood	-2751.788	Durbin-Watson stat	1.779029	



## ARGENTINA WEEKLY

Null Hypothesis: ARGENTINA has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on AIC, MAXLAG=15)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.249824
Test critical values: 1% level	-3.471200
5% level	-2.907600
10% level	-2.600800

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1856 2167

Included observations: 312 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.010984	0.008789	-1.249824	0.2123
D(GLSRESID(-1))	0.094434	0.057726	1.635904	0.1029
R-squared	0.012208	Mean dependent var		29.01035
Adjusted R-squared	0.009021	S.D. dependent var		1598.798
S.E. of regression	1591.570	Akaike info criterion		17.58922
Sum squared resid	7.85E+08	Schwarz criterion		17.61321
Log likelihood	-2741.918	Durbin-Watson stat		1.968456

## ARGENTINA WEEKLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=15)

Sample(adjusted): 1854 2167

Included observations: 314 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.00609	-1.09615	0.36464	27.1322
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	2534319.
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## ARGENTINA WEEKLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=15)

Sample(adjusted): 1854 2167

Included observations: 314 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.79966	-1.25903	0.33135	22.4041
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000

10 -14.2000 -2.62000 0.18500 6.67000  
%

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR) 3069151.

### ARGENTINA WEEKLY

Null Hypothesis: ARGENTINA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 14 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.392463
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	51901458
HAC corrected variance (Bartlett kernel)	6.39E+08

### KPSS Test Equation

Dependent Variable: ARGENTINA

Method: Least Squares

Sample(adjusted): 1854 2167

Included observations: 314 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-417415.8	9051.177	-46.11730	0.0000
@TREND(1)	226.7891	4.499618	50.40186	0.0000
R-squared	0.890616	Mean dependent var	38316.88	
Adjusted R-squared	0.890266	S.D. dependent var	21817.57	
S.E. of regression	7227.320	Akaike info criterion	20.61547	
Sum squared resid	1.63E+10	Schwarz criterion	20.63935	
Log likelihood	-3234.629	F-statistic	2540.347	
Durbin-Watson stat	0.048860	Prob(F-statistic)	0.000000	

### ARGENTINA MONTHLY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.721708	0.2313
Test critical values:		
1% level	-4.090602	
5% level	-3.473447	
10% level	-3.163967	

\*MacKinnon (1996) one-sided p-values.

### Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ARGENTINA)

Method: Least Squares  
Sample(adjusted): 429 500  
Included observations: 72 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.153648	0.056453	-2.721708	0.0082
C	-77564.72	25485.66	-3.043465	0.0033
@TREND(1)	181.8556	59.32349	3.065491	0.0031
R-squared	0.122445	Mean dependent var	868.7207	
Adjusted R-squared	0.097009	S.D. dependent var	3729.047	
S.E. of regression	3543.559	Akaike info criterion	19.22442	
Sum squared resid	8.66E+08	Schwarz criterion	19.31929	
Log likelihood	-689.0793	F-statistic	4.813790	
Durbin-Watson stat	2.111400	Prob(F-statistic)	0.011040	

### ARGENTINA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Automatic based on SIC, MAXLAG=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.237584	0.0000
Test critical values:		
1% level	-4.092547	
5% level	-3.474363	
10% level	-3.164499	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(ARGENTINA,2)  
Method: Least Squares  
Sample(adjusted): 430 500  
Included observations: 71 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-1.113440	0.120534	-9.237584	0.0000
C	-13906.87	10143.54	-1.371007	0.1749
@TREND(1)	32.10738	21.87327	1.467882	0.1467
R-squared	0.556522	Mean dependent var	59.53000	
Adjusted R-squared	0.543478	S.D. dependent var	5521.129	
S.E. of regression	3730.428	Akaike info criterion	19.32777	
Sum squared resid	9.46E+08	Schwarz criterion	19.42337	
Log likelihood	-683.1358	F-statistic	42.66666	
Durbin-Watson stat	2.017125	Prob(F-statistic)	0.000000	

### ARGENTINA MONTHLY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 11 (Automatic based on AIC, MAXLAG=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.751745	0.2205
Test critical values:		
1% level	-4.115684	
5% level	-3.485218	
10% level	-3.170793	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ARGENTINA)  
 Method: Least Squares  
 Sample(adjusted): 440 500  
 Included observations: 61 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.287830	0.104599	-2.751745	0.0084
D(ARGENTINA(-1))	0.007084	0.132071	0.053641	0.9574
D(ARGENTINA(-2))	0.024522	0.136070	0.180213	0.8578
D(ARGENTINA(-3))	-0.011286	0.131291	-0.085960	0.9319
D(ARGENTINA(-4))	-0.354654	0.127847	-2.774048	0.0079
D(ARGENTINA(-5))	-0.005953	0.138577	-0.042960	0.9659
D(ARGENTINA(-6))	-0.363786	0.131609	-2.764142	0.0081
D(ARGENTINA(-7))	0.196821	0.142257	1.383555	0.1730
D(ARGENTINA(-8))	-0.151305	0.131286	-1.152479	0.2550
D(ARGENTINA(-9))	-0.296741	0.134556	-2.205329	0.0324
D(ARGENTINA(-10))	-0.383216	0.145059	-2.641794	0.0112
D(ARGENTINA(-11))	0.409516	0.155067	2.640893	0.0112
C	-177025.4	55282.15	-3.202217	0.0024
@TREND(1)	407.2727	126.8179	3.211477	0.0024
R-squared	0.548626	Mean dependent var	1080.644	
Adjusted R-squared	0.423778	S.D. dependent var	3972.878	
S.E. of regression	3015.782	Akaike info criterion	19.05940	
Sum squared resid	4.27E+08	Schwarz criterion	19.54386	
Log likelihood	-567.3116	F-statistic	4.394352	
Durbin-Watson stat	1.915511	Prob(F-statistic)	0.000083	

## ARGENTINA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 10 (Automatic based on AIC, MAXLAG=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.666002	0.2540
Test critical values:		
1% level	-4.115684	
5% level	-3.485218	
10% level	-3.170793	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ARGENTINA,2)  
 Method: Least Squares  
 Sample(adjusted): 440 500  
 Included observations: 61 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-2.290383	0.859107	-2.666002	0.0104
D(ARGENTINA(-1),2)	1.166791	0.787713	1.481239	0.1451
D(ARGENTINA(-2),2)	1.052333	0.721897	1.457733	0.1514
D(ARGENTINA(-3),2)	0.923603	0.662640	1.393823	0.1698
D(ARGENTINA(-4),2)	0.484062	0.602433	0.803512	0.4256
D(ARGENTINA(-5),2)	0.434763	0.514040	0.845776	0.4019
D(ARGENTINA(-6),2)	0.043902	0.443432	0.099006	0.9215

D(ARGENTINA(-7),2)	0.285378	0.353679	0.806885	0.4237
D(ARGENTINA(-8),2)	0.121026	0.297749	0.406470	0.6862
D(ARGENTINA(-9),2)	-0.183075	0.240855	-0.760106	0.4509
D(ARGENTINA(-10),2)	-0.513171	0.160390	-3.199518	0.0024
C	-31162.22	16734.54	-1.862150	0.0687
@TREND(1)	71.59527	36.96601	1.936787	0.0587
R-squared	0.761089	Mean dependent var	56.60787	
Adjusted R-squared	0.701362	S.D. dependent var	5884.263	
S.E. of regression	3215.620	Akaike info criterion	19.17598	
Sum squared resid	4.96E+08	Schwarz criterion	19.62584	
Log likelihood	-571.8675	F-statistic	12.74267	
Durbin-Watson stat	1.919940	Prob(F-statistic)	0.000000	

### ARGENTINA MONTHLY (2<sup>ND</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA,2) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 9 (Automatic based on AIC, MAXLAG=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.789938	0.0000
Test critical values:		
1% level	-4.115684	
5% level	-3.485218	
10% level	-3.170793	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ARGENTINA,3)

Method: Least Squares

Sample(adjusted): 440 500

Included observations: 61 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1),2)	-8.882148	1.308134	-6.789938	0.0000
D(ARGENTINA(-1),3)	6.967777	1.261373	5.523961	0.0000
D(ARGENTINA(-2),3)	6.134212	1.175594	5.217970	0.0000
D(ARGENTINA(-3),3)	5.349006	1.054154	5.074216	0.0000
D(ARGENTINA(-4),3)	4.301493	0.907281	4.741083	0.0000
D(ARGENTINA(-5),3)	3.464163	0.751291	4.610945	0.0000
D(ARGENTINA(-6),3)	2.446011	0.584409	4.185443	0.0001
D(ARGENTINA(-7),3)	1.937190	0.428837	4.517309	0.0000
D(ARGENTINA(-8),3)	1.422035	0.280297	5.073310	0.0000
D(ARGENTINA(-9),3)	0.769543	0.136130	5.652991	0.0000
C	2337.700	11720.74	0.199450	0.8427
@TREND(1)	-4.363560	24.97704	-0.174703	0.8620
R-squared	0.906474	Mean dependent var	225.5205	
Adjusted R-squared	0.885479	S.D. dependent var	10076.95	
S.E. of regression	3410.141	Akaike info criterion	19.28128	
Sum squared resid	5.70E+08	Schwarz criterion	19.69654	
Log likelihood	-576.0792	F-statistic	43.17455	
Durbin-Watson stat	2.056000	Prob(F-statistic)	0.000000	

### ARGENTINA MONTHLY (LEVEL)

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.661872	0.2553
Test critical values:		
1% level	-4.090602	
5% level	-3.473447	
10% level	-3.163967	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	12033607
HAC corrected variance (Bartlett kernel)	10881725

Phillips-Perron Test Equation

Dependent Variable: D(ARGENTINA)

Method: Least Squares

Sample(adjusted): 429 500

Included observations: 72 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ARGENTINA(-1)	-0.153648	0.056453	-2.721708	0.0082
C	-77564.72	25485.66	-3.043465	0.0033
@TREND(1)	181.8556	59.32349	3.065491	0.0031
R-squared	0.122445	Mean dependent var	868.7207	
Adjusted R-squared	0.097009	S.D. dependent var	3729.047	
S.E. of regression	3543.559	Akaike info criterion	19.22442	
Sum squared resid	8.66E+08	Schwarz criterion	19.31929	
Log likelihood	-689.0793	F-statistic	4.813790	
Durbin-Watson stat	2.111400	Prob(F-statistic)	0.011040	

### ARGENTINA MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(ARGENTINA) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 6 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-10.17903	0.0000
Test critical values:		
1% level	-4.092547	
5% level	-3.474363	
10% level	-3.164499	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	13328087
HAC corrected variance (Bartlett kernel)	6430540.

Phillips-Perron Test Equation

Dependent Variable: D(ARGENTINA,2)

Method: Least Squares

Sample(adjusted): 430 500

Included observations: 71 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ARGENTINA(-1))	-1.113440	0.120534	-9.237584	0.0000
C	-13906.87	10143.54	-1.371007	0.1749

@TREND(1)	32.10738	21.87327	1.467882	0.1467
R-squared	0.556522	Mean dependent var	59.53000	
Adjusted R-squared	0.543478	S.D. dependent var	5521.129	
S.E. of regression	3730.428	Akaike info criterion	19.32777	
Sum squared resid	9.46E+08	Schwarz criterion	19.42337	
Log likelihood	-683.1358	F-statistic	42.66666	
Durbin-Watson stat	2.017125	Prob(F-statistic)	0.000000	

### ARGENTINA MONTHLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=11)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.726674
Test critical values: 1% level	-3.686400
5% level	-3.119600
10% level	-2.824000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 429 500

Included observations: 72 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.084540	0.048961	-1.726674	0.0886
R-squared	0.040219	Mean dependent var	33.89516	
Adjusted R-squared	0.040219	S.D. dependent var	3729.047	
S.E. of regression	3653.289	Akaike info criterion	19.25843	
Sum squared resid	9.48E+08	Schwarz criterion	19.29005	
Log likelihood	-692.3036	Durbin-Watson stat	2.069227	

### ARGENTINA MONTHLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 11 (Automatic based on AIC, MAXLAG=11)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.951918
Test critical values: 1% level	-3.728200
5% level	-3.154800
10% level	-2.857000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 440 500

Included observations: 61 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.053241	0.055930	-0.951918	0.3458

D(GLSRESID(-1))	0.040480	0.129947	0.311511	0.7567
D(GLSRESID(-2))	0.056375	0.132359	0.425927	0.6720
D(GLSRESID(-3))	0.019570	0.131429	0.148904	0.8822
D(GLSRESID(-4))	-0.297413	0.130455	-2.279813	0.0270
D(GLSRESID(-5))	0.143966	0.134248	1.072385	0.2888
D(GLSRESID(-6))	-0.246774	0.134346	-1.836856	0.0723
D(GLSRESID(-7))	0.410955	0.137438	2.990108	0.0044
D(GLSRESID(-8))	-0.046894	0.137341	-0.341444	0.7342
D(GLSRESID(-9))	-0.172680	0.138836	-1.243774	0.2195
D(GLSRESID(-10))	-0.191127	0.145490	-1.313682	0.1951
D(GLSRESID(-11))	0.672148	0.147152	4.567695	0.0000
R-squared	0.436208	Mean dependent var	245.8181	
Adjusted R-squared	0.309642	S.D. dependent var	3972.878	
S.E. of regression	3300.976	Akaike info criterion	19.21621	
Sum squared resid	5.34E+08	Schwarz criterion	19.63147	
Log likelihood	-574.0945	Durbin-Watson stat	1.987852	

### ARGENTINA MONTHLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=11)

Sample(adjusted): 428 500

Included observations: 73 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.39370	-1.54078	0.28566	16.5843
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)

13161149

### ARGENTINA MONTHLY

Null Hypothesis: ARGENTINA has a unit root

Exogenous: Constant, Linear Trend

Lag length: 11 (Spectral GLS-detrended AR based on AIC, MAXLAG=11)

Sample(adjusted): 428 500

Included observations: 73 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-10.1678	-2.17757	0.21416	9.32141
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)

23415762

### ARGENTINA MONTHLY

Null Hypothesis: ARGENTINA is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 6 (Newey-West using Bartlett kernel)



	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.245992
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	54921797
HAC corrected variance (Bartlett kernel)	2.58E+08

KPSS Test Equation

Dependent Variable: ARGENTINA

Method: Least Squares

Sample(adjusted): 428 500

Included observations: 73 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-423450.3	19345.59	-21.88873	0.0000
@TREND(1)	998.2269	41.73993	23.91540	0.0000
R-squared	0.889571	Mean dependent var	38728.75	
Adjusted R-squared	0.888016	S.D. dependent var	22455.65	
S.E. of regression	7514.579	Akaike info criterion	20.71409	
Sum squared resid	4.01E+09	Schwarz criterion	20.77684	
Log likelihood	-754.0644	F-statistic	571.9462	
Durbin-Watson stat	0.246557	Prob(F-statistic)	0.000000	

### BRAZIL DAILY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 7 (Automatic based on SIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.263678	0.9916
Test critical values:		
1% level	-3.961399	
5% level	-3.411451	
10% level	-3.127581	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 269 3002

Included observations: 2734 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.000251	0.000951	-0.263678	0.7920
D(BRAZIL(-1))	0.132661	0.019075	6.954657	0.0000
D(BRAZIL(-2))	-0.042090	0.019402	-2.169372	0.0301
D(BRAZIL(-3))	-0.004475	0.019377	-0.230961	0.8174
D(BRAZIL(-4))	-0.047540	0.019359	-2.455675	0.0141
D(BRAZIL(-5))	0.067058	0.019380	3.460123	0.0005
D(BRAZIL(-6))	0.006240	0.019421	0.321317	0.7480

D(BRAZIL(-7))	-0.103323	0.019275	-5.360565	0.0000
C	-2.728514	3.328231	-0.819809	0.4124
@TREND(1)	0.004651	0.003373	1.378819	0.1681
R-squared	0.036186	Mean dependent var	3.933065	
Adjusted R-squared	0.033001	S.D. dependent var	73.81788	
S.E. of regression	72.58961	Akaike info criterion	11.41117	
Sum squared resid	14353441	Schwarz criterion	11.43280	
Log likelihood	-15589.07	F-statistic	11.36345	
Durbin-Watson stat	2.000617	Prob(F-statistic)	0.000000	

### BRAZIL DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 6 (Automatic based on SIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-21.15931	0.0000
Test critical values: 1% level	-3.961399	
5% level	-3.411451	
10% level	-3.127581	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL,2)

Method: Least Squares

Sample(adjusted): 269 3002

Included observations: 2734 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-0.992791	0.046920	-21.15931	0.0000
D(BRAZIL(-1),2)	0.125249	0.043709	2.865479	0.0042
D(BRAZIL(-2),2)	0.082978	0.040197	2.064298	0.0391
D(BRAZIL(-3),2)	0.078313	0.035639	2.197401	0.0281
D(BRAZIL(-4),2)	0.030586	0.030981	0.987254	0.3236
D(BRAZIL(-5),2)	0.097459	0.025521	3.818783	0.0001
D(BRAZIL(-6),2)	0.103528	0.019256	5.376451	0.0000
C	-2.481877	3.193543	-0.777155	0.4371
@TREND(1)	0.003893	0.001766	2.203982	0.0276
R-squared	0.448272	Mean dependent var	0.037674	
Adjusted R-squared	0.446652	S.D. dependent var	97.56660	
S.E. of regression	72.57721	Akaike info criterion	11.41047	
Sum squared resid	14353807	Schwarz criterion	11.42993	
Log likelihood	-15589.11	F-statistic	276.7533	
Durbin-Watson stat	2.000662	Prob(F-statistic)	0.000000	

### BRAZIL DAILY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 15 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.547749	0.9813
Test critical values: 1% level	-3.961409	
5% level	-3.411456	
10% level	-3.127584	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(BRAZIL)  
 Method: Least Squares  
 Sample(adjusted): 277 3002  
 Included observations: 2726 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.000523	0.000956	-0.547749	0.5839
D(BRAZIL(-1))	0.130585	0.019195	6.803040	0.0000
D(BRAZIL(-2))	-0.040082	0.019518	-2.053563	0.0401
D(BRAZIL(-3))	0.002804	0.019533	0.143564	0.8859
D(BRAZIL(-4))	-0.047675	0.019534	-2.440624	0.0147
D(BRAZIL(-5))	0.058358	0.019554	2.984463	0.0029
D(BRAZIL(-6))	0.008621	0.019562	0.440721	0.6595
D(BRAZIL(-7))	-0.099950	0.019582	-5.104281	0.0000
D(BRAZIL(-8))	0.002327	0.019729	0.117927	0.9061
D(BRAZIL(-9))	0.002401	0.019646	0.122218	0.9027
D(BRAZIL(-10))	0.061497	0.019674	3.125763	0.0018
D(BRAZIL(-11))	0.016859	0.019851	0.849289	0.3958
D(BRAZIL(-12))	-0.009743	0.019851	-0.490824	0.6236
D(BRAZIL(-13))	-0.004286	0.019861	-0.215798	0.8292
D(BRAZIL(-14))	-0.003520	0.019912	-0.176770	0.8597
D(BRAZIL(-15))	0.065185	0.019842	3.285240	0.0010
C	-2.810462	3.345933	-0.839964	0.4010
@TREND(1)	0.005052	0.003383	1.493143	0.1355
R-squared	0.044653	Mean dependent var	3.936170	
Adjusted R-squared	0.038655	S.D. dependent var	73.92305	
S.E. of regression	72.48021	Akaike info criterion	11.41109	
Sum squared resid	14226154	Schwarz criterion	11.45011	
Log likelihood	-15535.31	F-statistic	7.445394	
Durbin-Watson stat	1.997636	Prob(F-statistic)	0.000000	

### BRAZIL DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 14 (Automatic based on AIC, MAXLAG=27)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.21037	0.0000
Test critical values:		
1% level	-3.961409	
5% level	-3.411456	
10% level	-3.127584	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(BRAZIL,2)  
 Method: Least Squares  
 Sample(adjusted): 277 3002  
 Included observations: 2726 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-0.862299	0.070620	-12.21037	0.0000
D(BRAZIL(-1),2)	-0.007551	0.068391	-0.110414	0.9121
D(BRAZIL(-2),2)	-0.048023	0.066018	-0.727430	0.4670
D(BRAZIL(-3),2)	-0.045605	0.063513	-0.718052	0.4728
D(BRAZIL(-4),2)	-0.093672	0.060888	-1.538448	0.1241
D(BRAZIL(-5),2)	-0.035706	0.058082	-0.614751	0.5388
D(BRAZIL(-6),2)	-0.027496	0.054720	-0.502475	0.6154

D(BRAZIL(-7),2)	-0.127872	0.051202	-2.497412	0.0126
D(BRAZIL(-8),2)	-0.125927	0.047476	-2.652450	0.0080
D(BRAZIL(-9),2)	-0.123862	0.044200	-2.802313	0.0051
D(BRAZIL(-10),2)	-0.062727	0.040565	-1.546326	0.1221
D(BRAZIL(-11),2)	-0.046198	0.036218	-1.275524	0.2022
D(BRAZIL(-12),2)	-0.056276	0.031573	-1.782401	0.0748
D(BRAZIL(-13),2)	-0.060882	0.026188	-2.324789	0.0202
D(BRAZIL(-14),2)	-0.064741	0.019823	-3.266018	0.0011
C	-2.291905	3.208793	-0.714258	0.4751
@TREND(1)	0.003476	0.001780	1.953026	0.0509
R-squared	0.453079	Mean dependent var		0.039618
Adjusted R-squared	0.449849	S.D. dependent var		97.70627
S.E. of regression	72.47084	Akaike info criterion		11.41046
Sum squared resid	14227730	Schwarz criterion		11.44732
Log likelihood	-15535.46	F-statistic		140.2617
Durbin-Watson stat	1.997605	Prob(F-statistic)		0.000000

### BRAZIL DAILY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 21 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.407908	0.9873
Test critical values:		
1% level	-3.961391	
5% level	-3.411447	
10% level	-3.127578	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	5424.742
HAC corrected variance (Bartlett kernel)	6302.004

Phillips-Perron Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 262 3002

Included observations: 2741 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.000218	0.000959	-0.227160	0.8203
C	-2.636514	3.358947	-0.784923	0.4326
@TREND(1)	0.004569	0.003410	1.339947	0.1804
R-squared	0.001778	Mean dependent var		3.951113
Adjusted R-squared	0.001049	S.D. dependent var		73.73188
S.E. of regression	73.69319	Akaike info criterion		11.43879
Sum squared resid	14869218	Schwarz criterion		11.44527
Log likelihood	-15673.86	F-statistic		2.439031
Durbin-Watson stat	1.749709	Prob(F-statistic)		0.087435

### BRAZIL DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 25 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-45.92721	0.0000
Test critical values:		
1% level	-3.961392	

5% level	-3.411447
10% level	-3.127579

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	5342.473
HAC corrected variance (Bartlett kernel)	4899.160

Phillips-Perron Test Equation  
 Dependent Variable: D(BRAZIL,2)  
 Method: Least Squares  
 Sample(adjusted): 263 3002  
 Included observations: 2740 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-0.875285	0.018972	-46.13602	0.0000
C	-2.134506	3.202899	-0.666429	0.5052
@TREND(1)	0.003432	0.001768	1.941299	0.0523
R-squared	0.437472	Mean dependent var	0.040146	
Adjusted R-squared	0.437061	S.D. dependent var	97.47164	
S.E. of regression	73.13227	Akaike info criterion	11.42351	
Sum squared resid	14638375	Schwarz criterion	11.42999	
Log likelihood	-15647.21	F-statistic	1064.267	
Durbin-Watson stat	1.987905	Prob(F-statistic)	0.000000	

### BRAZIL DAILY

Null Hypothesis: BRAZIL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 7 (Automatic based on SIC, MAXLAG=27)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.266381
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 269 3002  
 Included observations: 2734 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000225	0.000846	-0.266381	0.7900
D(GLSRESID(-1))	0.134488	0.019068	7.053106	0.0000
D(GLSRESID(-2))	-0.040709	0.019403	-2.098076	0.0360
D(GLSRESID(-3))	-0.002904	0.019375	-0.149871	0.8809
D(GLSRESID(-4))	-0.046025	0.019358	-2.377568	0.0175
D(GLSRESID(-5))	0.068661	0.019378	3.543251	0.0004
D(GLSRESID(-6))	0.007585	0.019423	0.390504	0.6962
D(GLSRESID(-7))	-0.101713	0.019271	-5.277895	0.0000
R-squared	0.034208	Mean dependent var	1.233427	
Adjusted R-squared	0.031728	S.D. dependent var	73.81788	
S.E. of regression	72.63739	Akaike info criterion	11.41176	
Sum squared resid	14382894	Schwarz criterion	11.42906	
Log likelihood	-15591.87	Durbin-Watson stat	2.000216	

## BRAZIL DAILY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 17 (Automatic based on AIC, MAXLAG=27)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.565341
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 279 3002

Included observations: 2724 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000480	0.000849	-0.565341	0.5719
D(GLSRESID(-1))	0.133859	0.019224	6.963245	0.0000
D(GLSRESID(-2))	-0.041176	0.019557	-2.105377	0.0354
D(GLSRESID(-3))	0.004297	0.019529	0.220054	0.8258
D(GLSRESID(-4))	-0.046635	0.019529	-2.387962	0.0170
D(GLSRESID(-5))	0.059918	0.019549	3.065016	0.0022
D(GLSRESID(-6))	0.010403	0.019594	0.530939	0.5955
D(GLSRESID(-7))	-0.100846	0.019611	-5.142421	0.0000
D(GLSRESID(-8))	0.004337	0.019724	0.219893	0.8260
D(GLSRESID(-9))	0.001945	0.019724	0.098591	0.9215
D(GLSRESID(-10))	0.066238	0.019751	3.353582	0.0008
D(GLSRESID(-11))	0.018573	0.019874	0.934525	0.3501
D(GLSRESID(-12))	-0.010956	0.019887	-0.550911	0.5817
D(GLSRESID(-13))	-0.001989	0.019873	-0.100077	0.9203
D(GLSRESID(-14))	-0.003017	0.019926	-0.151409	0.8797
D(GLSRESID(-15))	0.070342	0.020015	3.514545	0.0004
D(GLSRESID(-16))	-0.021563	0.020045	-1.075730	0.2821
D(GLSRESID(-17))	0.035988	0.019885	1.809781	0.0704
R-squared	0.044509	Mean dependent var	1.231346	
Adjusted R-squared	0.038506	S.D. dependent var	73.94982	
S.E. of regression	72.51208	Akaike info criterion	11.41197	
Sum squared resid	14228154	Schwarz criterion	11.45102	
Log likelihood	-15525.10	Durbin-Watson stat	1.999292	

## BRAZIL DAILY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 7 (Spectral GLS-detrended AR based on SIC, MAXLAG=27)

Sample(adjusted): 261 3002

Included observations: 2742 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.55660	-0.23687	0.42557	44.5794
Asymptotic critical values*: 1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

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HAC corrected variance (Spectral GLS-detrended AR) 5470.770

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**BRAZIL DAILY**

Null Hypothesis: BRAZIL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 17 (Spectral GLS-detrended AR based on AIC, MAXLAG=27)  
 Sample(adjusted): 261 3002  
 Included observations: 2742 after adjusting endpoints

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	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-1.71323	-0.61207	0.35726	31.4171
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

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\*Ng-Perron (2001, Table 1)

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HAC corrected variance (Spectral GLS-detrended AR) 7762.751

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**BRAZIL DAILY**

Null Hypothesis: BRAZIL is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 41 (Newey-West using Bartlett kernel)

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	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	1.137454
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

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\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

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Residual variance (no correction)	2157142.
HAC corrected variance (Bartlett kernel)	87489471

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**KPSS Test Equation**

Dependent Variable: BRAZIL  
 Method: Least Squares  
 Sample(adjusted): 261 3002  
 Included observations: 2742 after adjusting endpoints

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-980.0286	64.24806	-15.25382	0.0000
@TREND(1)	3.035315	0.035448	85.62813	0.0000
R-squared	0.727963	Mean dependent var		3969.052
Adjusted R-squared	0.727864	S.D. dependent var		2816.469
S.E. of regression	1469.257	Akaike info criterion		17.42363
Sum squared resid	5.91E+09	Schwarz criterion		17.42795
Log likelihood	-23885.80	F-statistic		7332.177
Durbin-Watson stat	0.002519	Prob(F-statistic)		0.000000

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## BRAZIL WEEKLY (LEVEL)

Null Hypothesis: BRAZIL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.346125	0.9892
Test critical values:		
1% level	-3.974890	
5% level	-3.418041	
10% level	-3.131485	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(BRAZIL)  
 Method: Least Squares  
 Sample(adjusted): 1620 2167  
 Included observations: 548 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.001740	0.005029	-0.346125	0.7294
C	-207.9010	152.7228	-1.361296	0.1740
@TREND(1)	0.123943	0.089396	1.386444	0.1662
R-squared	0.008158	Mean dependent var		19.76277
Adjusted R-squared	0.004519	S.D. dependent var		173.3562
S.E. of regression	172.9641	Akaike info criterion		13.14950
Sum squared resid	16304534	Schwarz criterion		13.17308
Log likelihood	-3599.964	F-statistic		2.241422
Durbin-Watson stat	2.046560	Prob(F-statistic)		0.107286

## BRAZIL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-23.93135	0.0000
Test critical values:		
1% level	-3.974921	
5% level	-3.418056	
10% level	-3.131494	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(BRAZIL,2)  
 Method: Least Squares  
 Sample(adjusted): 1621 2167  
 Included observations: 547 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-1.035650	0.043276	-23.93135	0.0000
C	-173.0811	89.20446	-1.940274	0.0529
@TREND(1)	0.102175	0.046993	2.174267	0.0301
R-squared	0.512888	Mean dependent var		0.998172
Adjusted R-squared	0.511097	S.D. dependent var		247.4236
S.E. of regression	173.0025	Akaike info criterion		13.14996
Sum squared resid	16281847	Schwarz criterion		13.17357
Log likelihood	-3593.514	F-statistic		286.3932



Durbin-Watson stat 1.975218 Prob(F-statistic) 0.000000

### BRAZIL WEEKLY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 17 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.667455	0.9741
Test critical values: 1% level	-3.975433	
5% level	-3.418306	
10% level	-3.131641	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 1637 2167

Included observations: 531 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.004089	0.006126	-0.667455	0.5048
D(BRAZIL(-1))	-0.020277	0.044489	-0.455769	0.6487
D(BRAZIL(-2))	0.064781	0.044310	1.461990	0.1444
D(BRAZIL(-3))	0.046754	0.044612	1.048020	0.2951
D(BRAZIL(-4))	0.010495	0.047041	0.223110	0.8235
D(BRAZIL(-5))	-0.010665	0.047074	-0.226546	0.8209
D(BRAZIL(-6))	-0.101263	0.047089	-2.150459	0.0320
D(BRAZIL(-7))	-0.049814	0.048933	-1.018019	0.3092
D(BRAZIL(-8))	-0.010488	0.049417	-0.212227	0.8320
D(BRAZIL(-9))	0.017367	0.049662	0.349700	0.7267
D(BRAZIL(-10))	0.107366	0.049634	2.163141	0.0310
D(BRAZIL(-11))	-0.051430	0.049745	-1.033867	0.3017
D(BRAZIL(-12))	0.024354	0.050195	0.485183	0.6278
D(BRAZIL(-13))	0.077957	0.050120	1.555424	0.1205
D(BRAZIL(-14))	0.032529	0.050282	0.646918	0.5180
D(BRAZIL(-15))	0.052603	0.050470	1.042268	0.2978
D(BRAZIL(-16))	-0.141882	0.050604	-2.803765	0.0052
D(BRAZIL(-17))	0.106209	0.052499	2.023069	0.0436
C	-247.2666	164.5924	-1.502296	0.1336
@TREND(1)	0.147628	0.096423	1.531038	0.1264
R-squared	0.074575	Mean dependent var	20.09040	
Adjusted R-squared	0.040166	S.D. dependent var	175.9687	
S.E. of regression	172.3985	Akaike info criterion	13.17443	
Sum squared resid	15187563	Schwarz criterion	13.33544	
Log likelihood	-3477.812	F-statistic	2.167296	
Durbin-Watson stat	1.997440	Prob(F-statistic)	0.003028	

### BRAZIL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 18 (Automatic based on AIC, MAXLAG=18)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.450715	0.0000
Test critical values:		
1% level	-3.975499	
5% level	-3.418338	
10% level	-3.131661	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL,2)

Method: Least Squares

Sample(adjusted): 1639 2167

Included observations: 529 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-1.083820	0.198840	-5.450715	0.0000
D(BRAZIL(-1),2)	0.060810	0.195180	0.311561	0.7555
D(BRAZIL(-2),2)	0.138095	0.191908	0.719586	0.4721
D(BRAZIL(-3),2)	0.164007	0.187226	0.875982	0.3815
D(BRAZIL(-4),2)	0.180756	0.182364	0.991181	0.3221
D(BRAZIL(-5),2)	0.165027	0.176625	0.934334	0.3506
D(BRAZIL(-6),2)	0.061845	0.170837	0.362013	0.7175
D(BRAZIL(-7),2)	0.015329	0.164287	0.093305	0.9257
D(BRAZIL(-8),2)	-0.007042	0.156928	-0.044876	0.9642
D(BRAZIL(-9),2)	0.005262	0.149612	0.035169	0.9720
D(BRAZIL(-10),2)	0.111053	0.141799	0.783170	0.4339
D(BRAZIL(-11),2)	0.052081	0.133103	0.391287	0.6957
D(BRAZIL(-12),2)	0.061136	0.124098	0.492641	0.6225
D(BRAZIL(-13),2)	0.137062	0.115470	1.186996	0.2358
D(BRAZIL(-14),2)	0.158255	0.105712	1.497034	0.1350
D(BRAZIL(-15),2)	0.205090	0.095638	2.144438	0.0325
D(BRAZIL(-16),2)	0.056139	0.084684	0.662918	0.5077
D(BRAZIL(-17),2)	0.176254	0.071951	2.449643	0.0146
D(BRAZIL(-18),2)	0.194089	0.051170	3.793026	0.0002
C	-197.5103	102.0682	-1.935080	0.0535
@TREND(1)	0.115353	0.054489	2.117001	0.0347
R-squared	0.557307	Mean dependent var		1.085066
Adjusted R-squared	0.539878	S.D. dependent var		251.4307
S.E. of regression	170.5511	Akaike info criterion		13.15484
Sum squared resid	14776544	Schwarz criterion		13.32438
Log likelihood	-3458.454	F-statistic		31.97613
Durbin-Watson stat	2.008911	Prob(F-statistic)		0.000000

### BRAZIL WEEKLY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.393340	0.9876
Test critical values:		
1% level	-3.974890	
5% level	-3.418041	
10% level	-3.131485	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction) 29752.80

HAC corrected variance (Bartlett kernel) 30943.99

Phillips-Perron Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 1620 2167

Included observations: 548 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.001740	0.005029	-0.346125	0.7294
C	-207.9010	152.7228	-1.361296	0.1740
@TREND(1)	0.123943	0.089396	1.386444	0.1662
R-squared	0.008158	Mean dependent var		19.76277
Adjusted R-squared	0.004519	S.D. dependent var		173.3562
S.E. of regression	172.9641	Akaike info criterion		13.14950
Sum squared resid	16304534	Schwarz criterion		13.17308
Log likelihood	-3599.964	F-statistic		2.241422
Durbin-Watson stat	2.046560	Prob(F-statistic)		0.107286

### BRAZIL WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-23.94163	0.0000
Test critical values:		
1% level	-3.974921	
5% level	-3.418056	
10% level	-3.131494	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	29765.72
HAC corrected variance (Bartlett kernel)	32624.42

Phillips-Perron Test Equation

Dependent Variable: D(BRAZIL,2)

Method: Least Squares

Sample(adjusted): 1621 2167

Included observations: 547 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-1.035650	0.043276	-23.93135	0.0000
C	-173.0811	89.20446	-1.940274	0.0529
@TREND(1)	0.102175	0.046993	2.174267	0.0301
R-squared	0.512888	Mean dependent var		0.998172
Adjusted R-squared	0.511097	S.D. dependent var		247.4236
S.E. of regression	173.0025	Akaike info criterion		13.14996
Sum squared resid	16281847	Schwarz criterion		13.17357
Log likelihood	-3593.514	F-statistic		286.3932
Durbin-Watson stat	1.975218	Prob(F-statistic)		0.000000

## BRAZIL WEEKLY

Null Hypothesis: BRAZIL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.365383
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1620 2167  
 Included observations: 548 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001662	0.004550	-0.365383	0.7150
R-squared	-0.000944	Mean dependent var		5.970698
Adjusted R-squared	-0.000944	S.D. dependent var		173.3562
S.E. of regression	173.4380	Akaike info criterion		13.15134
Sum squared resid	16454165	Schwarz criterion		13.15920
Log likelihood	-3602.467	Durbin-Watson stat		2.028112

## BRAZIL WEEKLY

Null Hypothesis: BRAZIL has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 17 (Automatic based on AIC, MAXLAG=18)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.022435
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
 Dependent Variable: D(GLSRESID)  
 Method: Least Squares  
 Sample(adjusted): 1637 2167  
 Included observations: 531 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005174	0.005060	-1.022435	0.3071
D(GLSRESID(-1))	-0.013737	0.044229	-0.310580	0.7562
D(GLSRESID(-2))	0.069352	0.044216	1.568502	0.1174
D(GLSRESID(-3))	0.052388	0.044428	1.179156	0.2389
D(GLSRESID(-4))	0.018998	0.046554	0.408095	0.6834
D(GLSRESID(-5))	-0.001872	0.046552	-0.040208	0.9679
D(GLSRESID(-6))	-0.092687	0.046595	-1.989205	0.0472
D(GLSRESID(-7))	-0.038514	0.048093	-0.800819	0.4236
D(GLSRESID(-8))	0.002464	0.048345	0.050961	0.9594
D(GLSRESID(-9))	0.029124	0.048825	0.596503	0.5511

D(GLSRESID(-10))	0.118798	0.048838	2.432481	0.0153
D(GLSRESID(-11))	-0.042172	0.049234	-0.856562	0.3921
D(GLSRESID(-12))	0.035213	0.049492	0.711483	0.4771
D(GLSRESID(-13))	0.087445	0.049582	1.763634	0.0784
D(GLSRESID(-14))	0.041793	0.049746	0.840143	0.4012
D(GLSRESID(-15))	0.062369	0.049855	1.251006	0.2115
D(GLSRESID(-16))	-0.132648	0.050052	-2.650220	0.0083
D(GLSRESID(-17))	0.118685	0.051523	2.303544	0.0216
R-squared	0.069457	Mean dependent var	6.298320	
Adjusted R-squared	0.038621	S.D. dependent var	175.9687	
S.E. of regression	172.5372	Akaike info criterion	13.17241	
Sum squared resid	15271550	Schwarz criterion	13.31732	
Log likelihood	-3479.276	Durbin-Watson stat	1.998363	

### BRAZIL WEEKLY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=18)

Sample(adjusted): 1619 2167

Included observations: 549 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.90654	-0.36391	0.40143	39.6138
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	30025.85
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### BRAZIL WEEKLY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 17 (Spectral GLS-detrended AR based on AIC, MAXLAG=18)

Sample(adjusted): 1619 2167

Included observations: 549 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.13752	-1.16251	0.28097	19.4059
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
%				

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	61292.44
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### BRAZIL WEEKLY

Null Hypothesis: BRAZIL is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 18 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.533576
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000

10% level 0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	2179892.
HAC corrected variance (Bartlett kernel)	37732570

KPSS Test Equation

Dependent Variable: BRAZIL

Method: Least Squares

Sample(adjusted): 1619 2167

Included observations: 549 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-24841.28	756.2793	-32.84670	0.0000
@TREND(1)	15.23217	0.398330	38.24010	0.0000
R-squared	0.727767	Mean dependent var		3977.987
Adjusted R-squared	0.727269	S.D. dependent var		2832.322
S.E. of regression	1479.142	Akaike info criterion		17.43995
Sum squared resid	1.20E+09	Schwarz criterion		17.45564
Log likelihood	-4785.266	F-statistic		1462.305
Durbin-Watson stat	0.013745	Prob(F-statistic)		0.000000

### BRAZIL MONTHLY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.079514	0.9947
Test critical values:		
1% level	-4.032498	
5% level	-3.445877	
10% level	-3.147878	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 375 500

Included observations: 126 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.001637	0.020590	-0.079514	0.9368
C	-799.2446	632.4935	-1.263641	0.2087
@TREND(1)	2.048090	1.602489	1.278068	0.2036
R-squared	0.041311	Mean dependent var		88.27778
Adjusted R-squared	0.025722	S.D. dependent var		348.7112
S.E. of regression	344.1972	Akaike info criterion		14.54383
Sum squared resid	14572021	Schwarz criterion		14.61136
Log likelihood	-913.2612	F-statistic		2.650078
Durbin-Watson stat	2.044538	Prob(F-statistic)		0.074678

### BRAZIL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.35732	0.0000
Test critical values:		
1% level	-4.033108	
5% level	-3.446168	
10% level	-3.148049	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL,2)

Method: Least Squares

Sample(adjusted): 376 500

Included observations: 125 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-1.028540	0.090562	-11.35732	0.0000
C	-822.8155	381.7842	-2.155184	0.0331
@TREND(1)	2.088662	0.874532	2.388320	0.0185
R-squared	0.513923	Mean dependent var		-2.112000
Adjusted R-squared	0.505955	S.D. dependent var		490.5546
S.E. of regression	344.8028	Akaike info criterion		14.54753
Sum squared resid	14504454	Schwarz criterion		14.61541
Log likelihood	-906.2206	F-statistic		64.49456
Durbin-Watson stat	1.993848	Prob(F-statistic)		0.000000

### BRAZIL MONTHLY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.079514	0.9947
Test critical values:		
1% level	-4.032498	
5% level	-3.445877	
10% level	-3.147878	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 375 500

Included observations: 126 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.001637	0.020590	-0.079514	0.9368
C	-799.2446	632.4935	-1.263641	0.2087
@TREND(1)	2.048090	1.602489	1.278068	0.2036
R-squared	0.041311	Mean dependent var		88.27778
Adjusted R-squared	0.025722	S.D. dependent var		348.7112
S.E. of regression	344.1972	Akaike info criterion		14.54383
Sum squared resid	14572021	Schwarz criterion		14.61136
Log likelihood	-913.2612	F-statistic		2.650078
Durbin-Watson stat	2.044538	Prob(F-statistic)		0.074678

### BRAZIL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.35732	0.0000
Test critical values:		
1% level	-4.033108	
5% level	-3.446168	
10% level	-3.148049	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(BRAZIL,2)

Method: Least Squares

Sample(adjusted): 376 500

Included observations: 125 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-1.028540	0.090562	-11.35732	0.0000
C	-822.8155	381.7842	-2.155184	0.0331
@TREND(1)	2.088662	0.874532	2.388320	0.0185
R-squared	0.513923	Mean dependent var	-2.112000	
Adjusted R-squared	0.505955	S.D. dependent var	490.5546	
S.E. of regression	344.8028	Akaike info criterion	14.54753	
Sum squared resid	14504454	Schwarz criterion	14.61541	
Log likelihood	-906.2206	F-statistic	64.49456	
Durbin-Watson stat	1.993848	Prob(F-statistic)	0.000000	

### BRAZIL MONTHLY (LEVEL)

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.046035	0.9953
Test critical values:		
1% level	-4.032498	
5% level	-3.445877	
10% level	-3.147878	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	115651.0
HAC corrected variance (Bartlett kernel)	112574.3

Phillips-Perron Test Equation

Dependent Variable: D(BRAZIL)

Method: Least Squares

Sample(adjusted): 375 500

Included observations: 126 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRAZIL(-1)	-0.001637	0.020590	-0.079514	0.9368
C	-799.2446	632.4935	-1.263641	0.2087
@TREND(1)	2.048090	1.602489	1.278068	0.2036
R-squared	0.041311	Mean dependent var	88.27778	



Adjusted R-squared	0.025722	S.D. dependent var	348.7112
S.E. of regression	344.1972	Akaike info criterion	14.54383
Sum squared resid	14572021	Schwarz criterion	14.61136
Log likelihood	-913.2612	F-statistic	2.650078
Durbin-Watson stat	2.044538	Prob(F-statistic)	0.074678

### BRAZIL MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(BRAZIL) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 1 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-11.35733	0.0000
Test critical values:		
1% level	-4.033108	
5% level	-3.446168	
10% level	-3.148049	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	116035.6
HAC corrected variance (Bartlett kernel)	116029.9

Phillips-Perron Test Equation

Dependent Variable: D(BRAZIL,2)

Method: Least Squares

Sample(adjusted): 376 500

Included observations: 125 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRAZIL(-1))	-1.028540	0.090562	-11.35732	0.0000
C	-822.8155	381.7842	-2.155184	0.0331
@TREND(1)	2.088662	0.874532	2.388320	0.0185
R-squared	0.513923	Mean dependent var	-2.112000	
Adjusted R-squared	0.505955	S.D. dependent var	490.5546	
S.E. of regression	344.8028	Akaike info criterion	14.54753	
Sum squared resid	14504454	Schwarz criterion	14.61541	
Log likelihood	-906.2206	F-statistic	64.49456	
Durbin-Watson stat	1.993848	Prob(F-statistic)	0.000000	

### BRAZIL MONTHLY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.275301
Test critical values:	
1% level	-3.548800
5% level	-3.004000
10% level	-2.714000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 375 500

Included observations: 126 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005356	0.019455	-0.275301	0.7835
R-squared	-0.003968	Mean dependent var		23.49774
Adjusted R-squared	-0.003968	S.D. dependent var		348.7112
S.E. of regression	349.4024	Akaike info criterion		14.55823
Sum squared resid	15260257	Schwarz criterion		14.58074
Log likelihood	-916.1685	Durbin-Watson stat		1.944987

### BRAZIL MONTHLY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=12)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-0.275301
Test critical values:	
1% level	-3.548800
5% level	-3.004000
10% level	-2.714000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 375 500

Included observations: 126 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005356	0.019455	-0.275301	0.7835
R-squared	-0.003968	Mean dependent var		23.49774
Adjusted R-squared	-0.003968	S.D. dependent var		348.7112
S.E. of regression	349.4024	Akaike info criterion		14.55823
Sum squared resid	15260257	Schwarz criterion		14.58074
Log likelihood	-916.1685	Durbin-Watson stat		1.944987

### BRAZIL MONTHLY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on SIC, MAXLAG=12)

Sample(adjusted): 374 500

Included observations: 127 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.62127	-0.25446	0.40958	41.9601
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	121113.1
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### BRAZIL MONTHLY

Null Hypothesis: BRAZIL has a unit root

Exogenous: Constant, Linear Trend

Lag length: 0 (Spectral GLS-detrended AR based on AIC, MAXLAG=12)  
 Sample(adjusted): 374 500  
 Included observations: 127 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-0.62127	-0.25446	0.40958	41.9601
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000
*Ng-Perron (2001, Table 1)				
HAC corrected variance (Spectral GLS-detrended AR)				121113.1

### BRAZIL MONTHLY

Null Hypothesis: BRAZIL is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 9 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.272651
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	2320539.
HAC corrected variance (Bartlett kernel)	18475112

### KPSS Test Equation

Dependent Variable: BRAZIL  
 Method: Least Squares  
 Sample(adjusted): 374 500  
 Included observations: 127 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-25480.77	1626.133	-15.66955	0.0000
@TREND(1)	67.65224	3.716548	18.20298	0.0000
R-squared	0.726086	Mean dependent var		4015.606
Adjusted R-squared	0.723895	S.D. dependent var		2922.162
S.E. of regression	1535.470	Akaike info criterion		17.52668
Sum squared resid	2.95E+08	Schwarz criterion		17.57147
Log likelihood	-1110.944	F-statistic		331.3484
Durbin-Watson stat	0.051758	Prob(F-statistic)		0.000000

### CHILE DAILY (LEVEL)

Null Hypothesis: CHILE has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 1 (Automatic based on SIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.078720	0.9310
Test critical values:		
1% level	-3.959843	
5% level	-3.410688	

10% level -3.127129

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(CHILE)  
 Method: Least Squares  
 Sample(adjusted): 1832 6915  
 Included observations: 5084 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.000447	0.000414	-1.078720	0.2808
D(CHILE(-1))	0.263591	0.013540	19.46761	0.0000
C	-1.054191	1.814348	-0.581030	0.5612
@TREND(1)	0.000998	0.000735	1.358074	0.1745
R-squared	0.069755	Mean dependent var		1.894481
Adjusted R-squared	0.069205	S.D. dependent var		32.91129
S.E. of regression	31.75206	Akaike info criterion		9.754579
Sum squared resid	5121621.	Schwarz criterion		9.759719
Log likelihood	-24792.14	F-statistic		126.9752
Durbin-Watson stat	2.013026	Prob(F-statistic)		0.000000

### CHILE DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic based on SIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-54.42197	0.0000
Test critical values:		
1% level	-3.959843	
5% level	-3.410688	
10% level	-3.127129	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(CHILE,2)  
 Method: Least Squares  
 Sample(adjusted): 1832 6915  
 Included observations: 5084 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.736718	0.013537	-54.42197	0.0000
C	0.191397	1.399504	0.136761	0.8912
@TREND(1)	0.000276	0.000303	0.909624	0.3631
R-squared	0.368251	Mean dependent var		0.010268
Adjusted R-squared	0.368002	S.D. dependent var		39.94120
S.E. of regression	31.75257	Akaike info criterion		9.754414
Sum squared resid	5122794.	Schwarz criterion		9.758270
Log likelihood	-24792.72	F-statistic		1480.876
Durbin-Watson stat	2.012824	Prob(F-statistic)		0.000000

### CHILE DAILY (LEVEL)

Null Hypothesis: CHILE has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 17 (Automatic based on AIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.531177	0.8190
Test critical values:		
1% level	-3.959848	
5% level	-3.410691	
10% level	-3.127130	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 1848 6915

Included observations: 5068 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.000636	0.000415	-1.531177	0.1258
D(CHILE(-1))	0.254378	0.014065	18.08551	0.0000
D(CHILE(-2))	0.016242	0.014542	1.116937	0.2641
D(CHILE(-3))	0.009678	0.014545	0.665384	0.5058
D(CHILE(-4))	0.010175	0.014538	0.699928	0.4840
D(CHILE(-5))	0.052389	0.014538	3.603658	0.0003
D(CHILE(-6))	0.001361	0.014547	0.093587	0.9254
D(CHILE(-7))	-0.019449	0.014548	-1.336875	0.1813
D(CHILE(-8))	0.005685	0.014540	0.390959	0.6958
D(CHILE(-9))	-0.002912	0.014544	-0.200206	0.8413
D(CHILE(-10))	0.057316	0.014563	3.935744	0.0001
D(CHILE(-11))	0.002567	0.014583	0.176002	0.8603
D(CHILE(-12))	0.028261	0.014619	1.933167	0.0533
D(CHILE(-13))	-0.004850	0.014604	-0.332125	0.7398
D(CHILE(-14))	0.032943	0.014740	2.234885	0.0255
D(CHILE(-15))	-0.016266	0.014760	-1.102040	0.2705
D(CHILE(-16))	0.037236	0.014768	2.521476	0.0117
D(CHILE(-17))	-0.030306	0.014312	-2.117574	0.0343
C	-1.678961	1.820938	-0.922031	0.3566
@TREND(1)	0.001253	0.000736	1.703505	0.0885
R-squared	0.081297	Mean dependent var	1.893051	
Adjusted R-squared	0.077839	S.D. dependent var	32.96085	
S.E. of regression	31.65203	Akaike info criterion	9.751420	
Sum squared resid	5057345.	Schwarz criterion	9.777193	
Log likelihood	-24690.10	F-statistic	23.51077	
Durbin-Watson stat	2.000418	Prob(F-statistic)	0.000000	

### CHILE DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 16 (Automatic based on AIC, MAXLAG=32)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.86350	0.0000
Test critical values:		
1% level	-3.959848	
5% level	-3.410691	
10% level	-3.127130	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares  
Sample(adjusted): 1848 6915  
Included observations: 5068 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.571732	0.038466	-14.86350	0.0000
D(CHILE(-1),2)	-0.174040	0.038182	-4.558141	0.0000
D(CHILE(-2),2)	-0.158058	0.037398	-4.226350	0.0000
D(CHILE(-3),2)	-0.148647	0.036627	-4.058417	0.0001
D(CHILE(-4),2)	-0.138763	0.035719	-3.884801	0.0001
D(CHILE(-5),2)	-0.086664	0.034808	-2.489775	0.0128
D(CHILE(-6),2)	-0.085644	0.033701	-2.541264	0.0111
D(CHILE(-7),2)	-0.105439	0.032552	-3.239118	0.0012
D(CHILE(-8),2)	-0.100110	0.031170	-3.211702	0.0013
D(CHILE(-9),2)	-0.103367	0.029750	-3.474532	0.0005
D(CHILE(-10),2)	-0.046424	0.028188	-1.646928	0.0996
D(CHILE(-11),2)	-0.044236	0.026623	-1.661585	0.0967
D(CHILE(-12),2)	-0.016322	0.025009	-0.652666	0.5140
D(CHILE(-13),2)	-0.021562	0.022948	-0.939602	0.3475
D(CHILE(-14),2)	0.010928	0.020559	0.531546	0.5951
D(CHILE(-15),2)	-0.005790	0.017819	-0.324918	0.7453
D(CHILE(-16),2)	0.030970	0.014307	2.164637	0.0305
C	0.097214	1.403826	0.069250	0.9448
@TREND(1)	0.000228	0.000304	0.748065	0.4545
R-squared	0.375953	Mean dependent var	0.009850	
Adjusted R-squared	0.373728	S.D. dependent var	40.00165	
S.E. of regression	31.65625	Akaike info criterion	9.751490	
Sum squared resid	5059694.	Schwarz criterion	9.775974	
Log likelihood	-24691.28	F-statistic	168.9852	
Durbin-Watson stat	2.000468	Prob(F-statistic)	0.000000	

### CHILE DAILY (LEVEL)

Null Hypothesis: CHILE has a unit root  
Exogenous: Constant, Linear Trend  
Bandwidth: 25 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.368444	0.8700
Test critical values:		
1% level	-3.959842	
5% level	-3.410688	
10% level	-3.127128	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1082.343
HAC corrected variance (Bartlett kernel)	2512.796

Phillips-Perron Test Equation  
Dependent Variable: D(CHILE)  
Method: Least Squares  
Sample(adjusted): 1831 6915  
Included observations: 5085 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.000276	0.000429	-0.643454	0.5200
C	-0.498318	1.879751	-0.265098	0.7909
@TREND(1)	0.000817	0.000762	1.073371	0.2832
R-squared	0.000356	Mean dependent var	1.894000	

Adjusted R-squared	-0.000038	S.D. dependent var	32.90807
S.E. of regression	32.90870	Akaike info criterion	9.825941
Sum squared resid	5503716.	Schwarz criterion	9.829796
Log likelihood	-24979.45	F-statistic	0.903745
Durbin-Watson stat	1.472945	Prob(F-statistic)	0.405115

### CHILE DAILY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 17 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-56.65051	0.0000
Test critical values:		
1% level	-3.959843	
5% level	-3.410688	
10% level	-3.127129	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1007.631
HAC corrected variance (Bartlett kernel)	1293.891

Phillips-Perron Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares

Sample(adjusted): 1832 6915

Included observations: 5084 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.736718	0.013537	-54.42197	0.0000
C	0.191397	1.399504	0.136761	0.8912
@TREND(1)	0.000276	0.000303	0.909624	0.3631
R-squared	0.368251	Mean dependent var	0.010268	
Adjusted R-squared	0.368002	S.D. dependent var	39.94120	
S.E. of regression	31.75257	Akaike info criterion	9.754414	
Sum squared resid	5122794.	Schwarz criterion	9.758270	
Log likelihood	-24792.72	F-statistic	1480.876	
Durbin-Watson stat	2.012824	Prob(F-statistic)	0.000000	

### CHILE DAILY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=32)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.169015
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1832 6915

Included observations: 5084 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000478	0.000409	-1.169015	0.2425
D(GLSRESID(-1))	0.263821	0.013536	19.49075	0.0000
R-squared	0.069609	Mean dependent var		0.246197
Adjusted R-squared	0.069426	S.D. dependent var		32.91129
S.E. of regression	31.74829	Akaike info criterion		9.753948
Sum squared resid	5122423.	Schwarz criterion		9.756519
Log likelihood	-24792.54	Durbin-Watson stat		2.013120

### CHILE DAILY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 17 (Automatic based on AIC, MAXLAG=32)

	t-Statistic
Elliott-Rootenber-Stock DF-GLS test statistic	-1.599460
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rootenber-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1848 6915

Included observations: 5068 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.000655	0.000409	-1.599460	0.1098
D(GLSRESID(-1))	0.254485	0.014062	18.09712	0.0000
D(GLSRESID(-2))	0.016311	0.014539	1.121864	0.2620
D(GLSRESID(-3))	0.009749	0.014542	0.670378	0.5026
D(GLSRESID(-4))	0.010248	0.014535	0.705092	0.4808
D(GLSRESID(-5))	0.052460	0.014535	3.609194	0.0003
D(GLSRESID(-6))	0.001433	0.014544	0.098524	0.9215
D(GLSRESID(-7))	-0.019374	0.014545	-1.331978	0.1829
D(GLSRESID(-8))	0.005759	0.014537	0.396176	0.6920
D(GLSRESID(-9))	-0.002844	0.014542	-0.195566	0.8450
D(GLSRESID(-10))	0.057399	0.014560	3.942211	0.0001
D(GLSRESID(-11))	0.002639	0.014580	0.181001	0.8564
D(GLSRESID(-12))	0.028313	0.014617	1.937031	0.0528
D(GLSRESID(-13))	-0.004799	0.014601	-0.328673	0.7424
D(GLSRESID(-14))	0.033032	0.014737	2.241351	0.0250
D(GLSRESID(-15))	-0.016192	0.014757	-1.097271	0.2726
D(GLSRESID(-16))	0.037324	0.014765	2.527928	0.0115
D(GLSRESID(-17))	-0.030190	0.014308	-2.109947	0.0349
R-squared	0.081213	Mean dependent var		0.244767
Adjusted R-squared	0.078120	S.D. dependent var		32.96085
S.E. of regression	31.64722	Akaike info criterion		9.750723
Sum squared resid	5057809.	Schwarz criterion		9.773918
Log likelihood	-24690.33	Durbin-Watson stat		2.000408

### CHILE DAILY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=32)



Sample(adjusted): 1830 6915  
 Included observations: 5086 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-3.31800	-1.17634	0.35453	25.3127
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	1859.101
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### CHILE DAILY

Null Hypothesis: CHILE has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 17 (Spectral GLS-detrended AR based on AIC, MAXLAG=32)  
 Sample(adjusted): 1830 6915  
 Included observations: 5086 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-6.04727	-1.65110	0.27303	15.0125
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	3134.639
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### CHILE DAILY

Null Hypothesis: CHILE is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 55 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.771290
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	1156614.
HAC corrected variance (Bartlett kernel)	63297547

KPSS Test Equation  
 Dependent Variable: CHILE  
 Method: Least Squares  
 Sample(adjusted): 1830 6915  
 Included observations: 5086 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2787.299	47.37452	-58.83540	0.0000

@TREND(1)	1.616690	0.010273	157.3696	0.0000
R-squared	0.829677	Mean dependent var	4280.060	
Adjusted R-squared	0.829644	S.D. dependent var	2606.157	
S.E. of regression	1075.671	Akaike info criterion	16.79967	
Sum squared resid	5.88E+09	Schwarz criterion	16.80224	
Log likelihood	-42719.56	F-statistic	24765.20	
Durbin-Watson stat	0.000936	Prob(F-statistic)	0.000000	

### CHILE WEEKLY (LEVEL)

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.302226	0.8866
Test critical values: 1% level	-3.967106	
5% level	-3.414242	
10% level	-3.129236	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 1152 2167

Included observations: 1016 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.003316	0.002547	-1.302226	0.1931
D(CHILE(-1))	0.204944	0.030872	6.638420	0.0000
C	-35.61195	28.05269	-1.269466	0.2046
@TREND(1)	0.034586	0.022598	1.530499	0.1262
R-squared	0.043509	Mean dependent var	9.441280	
Adjusted R-squared	0.040673	S.D. dependent var	89.07648	
S.E. of regression	87.24616	Akaike info criterion	11.77927	
Sum squared resid	7703235.	Schwarz criterion	11.79866	
Log likelihood	-5979.871	F-statistic	15.34454	
Durbin-Watson stat	2.022322	Prob(F-statistic)	0.000000	

### CHILE WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-25.84106	0.0000
Test critical values: 1% level	-3.967106	
5% level	-3.414242	
10% level	-3.129236	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares

Sample(adjusted): 1152 2167

Included observations: 1016 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.797059	0.030845	-25.84106	0.0000
C	-5.354313	15.72396	-0.340519	0.7335
@TREND(1)	0.007787	0.009339	0.833830	0.4046
R-squared	0.397304	Mean dependent var		0.174222
Adjusted R-squared	0.396114	S.D. dependent var		112.3099
S.E. of regression	87.27612	Akaike info criterion		11.77898
Sum squared resid	7716143.	Schwarz criterion		11.79352
Log likelihood	-5980.721	F-statistic		333.8909
Durbin-Watson stat	2.021279	Prob(F-statistic)		0.000000

### CHILE WEEKLY (LEVEL)

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.396520	0.8617
Test critical values:		
1% level	-3.967142	
5% level	-3.414260	
10% level	-3.129246	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 1156 2167

Included observations: 1012 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.003572	0.002557	-1.396520	0.1629
D(CHILE(-1))	0.186078	0.031540	5.899714	0.0000
D(CHILE(-2))	0.059896	0.032081	1.867038	0.0622
D(CHILE(-3))	0.077443	0.032036	2.417371	0.0158
D(CHILE(-4))	0.016517	0.032332	0.510874	0.6096
D(CHILE(-5))	-0.078833	0.031831	-2.476621	0.0134
C	-37.50241	28.14045	-1.332687	0.1829
@TREND(1)	0.036102	0.022643	1.594375	0.1112
R-squared	0.058739	Mean dependent var		9.490949
Adjusted R-squared	0.052177	S.D. dependent var		89.24840
S.E. of regression	86.88887	Akaike info criterion		11.77501
Sum squared resid	7579875.	Schwarz criterion		11.81390
Log likelihood	-5950.155	F-statistic		8.950616
Durbin-Watson stat	1.994043	Prob(F-statistic)		0.000000

### CHILE WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 4 (Automatic based on AIC, MAXLAG=21)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.52645	0.0000
Test critical values:		
1% level	-3.967142	
5% level	-3.414260	

10% level

-3.129246

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares

Sample(adjusted): 1156 2167

Included observations: 1012 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.749313	0.055396	-13.52645	0.0000
D(CHILE(-1),2)	-0.065843	0.051911	-1.268389	0.2050
D(CHILE(-2),2)	-0.007555	0.047425	-0.159308	0.8735
D(CHILE(-3),2)	0.067913	0.040961	1.657978	0.0976
D(CHILE(-4),2)	0.081874	0.031771	2.576964	0.0101
C	-4.950896	15.77370	-0.313870	0.7537
@TREND(1)	0.007310	0.009367	0.780383	0.4353
R-squared	0.406705	Mean dependent var		0.211650
Adjusted R-squared	0.403163	S.D. dependent var		112.5231
S.E. of regression	86.92994	Akaike info criterion		11.77498
Sum squared resid	7594598.	Schwarz criterion		11.80900
Log likelihood	-5951.137	F-statistic		114.8217
Durbin-Watson stat	1.994852	Prob(F-statistic)		0.000000

**CHILE WEEKLY (LEVEL)**

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 8 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.406385	0.8589
Test critical values:		
1% level	-3.967097	
5% level	-3.414238	
10% level	-3.129233	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	7905.455
HAC corrected variance (Bartlett kernel)	13022.16

Phillips-Perron Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 1151 2167

Included observations: 1017 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.002471	0.002596	-0.951920	0.3414
C	-28.37306	28.59362	-0.992286	0.3213
@TREND(1)	0.029203	0.023043	1.267359	0.2053
R-squared	0.001818	Mean dependent var		9.470000
Adjusted R-squared	-0.000151	S.D. dependent var		89.03734
S.E. of regression	89.04406	Akaike info criterion		11.81909
Sum squared resid	8039848.	Schwarz criterion		11.83361
Log likelihood	-6007.005	F-statistic		0.923390
Durbin-Watson stat	1.588495	Prob(F-statistic)		0.397504

### CHILE WEEKLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 2 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-25.88134	0.0000
Test critical values:		
1% level	-3.967106	
5% level	-3.414242	
10% level	-3.129236	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	7594.629
HAC corrected variance (Bartlett kernel)	7705.792

Phillips-Perron Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares

Sample(adjusted): 1152 2167

Included observations: 1016 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.797059	0.030845	-25.84106	0.0000
C	-5.354313	15.72396	-0.340519	0.7335
@TREND(1)	0.007787	0.009339	0.833830	0.4046
R-squared	0.397304	Mean dependent var		0.174222
Adjusted R-squared	0.396114	S.D. dependent var		112.3099
S.E. of regression	87.27612	Akaike info criterion		11.77898
Sum squared resid	7716143.	Schwarz criterion		11.79352
Log likelihood	-5980.721	F-statistic		333.8909
Durbin-Watson stat	2.021279	Prob(F-statistic)		0.000000

### CHILE WEEKLY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=21)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.381698
Test critical values:	
1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1152 2167

Included observations: 1016 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003470	0.002511	-1.381698	0.1674
D(GLSRESID(-1))	0.205716	0.030833	6.671929	0.0000
R-squared	0.042930	Mean dependent var		1.179198
Adjusted R-squared	0.041987	S.D. dependent var		89.07648
S.E. of regression	87.18642	Akaike info criterion		11.77594

Sum squared resid	7707892.	Schwarz criterion	11.78563
Log likelihood	-5980.178	Durbin-Watson stat	2.022434

### CHILE WEEKLY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 5 (Automatic based on AIC, MAXLAG=21)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.477733
Test critical values: 1% level	-3.480000
5% level	-2.890000
10% level	-2.570000

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Sample(adjusted): 1156 2167

Included observations: 1012 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.003723	0.002519	-1.477733	0.1398
D(GLSRESID(-1))	0.186564	0.031508	5.921091	0.0000
D(GLSRESID(-2))	0.060294	0.032051	1.881172	0.0602
D(GLSRESID(-3))	0.077884	0.032005	2.433470	0.0151
D(GLSRESID(-4))	0.017146	0.032293	0.530955	0.5956
D(GLSRESID(-5))	-0.078145	0.031789	-2.458232	0.0141
R-squared	0.058259	Mean dependent var	1.228867	
Adjusted R-squared	0.053579	S.D. dependent var	89.24840	
S.E. of regression	86.82457	Akaike info criterion	11.77157	
Sum squared resid	7583737.	Schwarz criterion	11.80074	
Log likelihood	-5950.413	Durbin-Watson stat	1.993690	

### CHILE WEEKLY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=21)

Sample(adjusted): 1150 2167

Included observations: 1018 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-4.49860	-1.40197	0.31165	19.5283
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	12025.13
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### CHILE WEEKLY

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag length: 5 (Spectral GLS-detrended AR based on AIC, MAXLAG=21)  
 Sample(adjusted): 1150 2167  
 Included observations: 1018 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.26886	-1.53144	0.29066	16.9867
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	13824.33
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## CHILE WEEKLY

Null Hypothesis: CHILE is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 25 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.344433
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	1158012.
HAC corrected variance (Bartlett kernel)	28408349

KPSS Test Equation  
 Dependent Variable: CHILE  
 Method: Least Squares  
 Sample(adjusted): 1150 2167  
 Included observations: 1018 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9130.165	193.3869	-47.21191	0.0000
@TREND(1)	8.093810	0.114882	70.45313	0.0000
R-squared	0.830090	Mean dependent var		4285.325
Adjusted R-squared	0.829923	S.D. dependent var		2611.925
S.E. of regression	1077.168	Akaike info criterion		16.80402
Sum squared resid	1.18E+09	Schwarz criterion		16.81370
Log likelihood	-8551.247	F-statistic		4963.644
Durbin-Watson stat	0.006834	Prob(F-statistic)		0.000000

## CHILE MONTHLY (LEVEL)

Null Hypothesis: CHILE has a unit root  
 Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.222762	0.9029
Test critical values:		
1% level	-3.997930	
5% level	-3.429229	
10% level	-3.138092	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 268 500

Included observations: 233 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.016406	0.013417	-1.222762	0.2227
C	-179.3454	149.1090	-1.202780	0.2303
@TREND(1)	0.760072	0.518918	1.464724	0.1444
R-squared	0.009542	Mean dependent var		41.52378
Adjusted R-squared	0.000929	S.D. dependent var		221.1106
S.E. of regression	221.0079	Akaike info criterion		13.64707
Sum squared resid	11234232	Schwarz criterion		13.69150
Log likelihood	-1586.883	F-statistic		1.107859
Durbin-Watson stat	1.695513	Prob(F-statistic)		0.332021

## CHILE MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.09208	0.0000
Test critical values:		
1% level	-3.998104	
5% level	-3.429313	
10% level	-3.138142	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares

Sample(adjusted): 269 500

Included observations: 232 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.856309	0.065407	-13.09208	0.0000
C	-23.56801	83.94757	-0.280747	0.7792
@TREND(1)	0.154454	0.215928	0.715302	0.4752
R-squared	0.428077	Mean dependent var		-0.035345
Adjusted R-squared	0.423083	S.D. dependent var		289.5166
S.E. of regression	219.9026	Akaike info criterion		13.63709
Sum squared resid	11073786	Schwarz criterion		13.68166
Log likelihood	-1578.903	F-statistic		85.70194
Durbin-Watson stat	1.977456	Prob(F-statistic)		0.000000



## CHILE MONTHLY (LEVEL)

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.520722	0.8200
Test critical values:		
1% level	-3.998104	
5% level	-3.429313	
10% level	-3.138142	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 269 500

Included observations: 232 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.020406	0.013419	-1.520722	0.1297
D(CHILE(-1))	0.156237	0.065740	2.376602	0.0183
C	-210.9348	148.9547	-1.416100	0.1581
@TREND(1)	0.870376	0.517678	1.681307	0.0941
R-squared	0.033410	Mean dependent var		41.65569
Adjusted R-squared	0.020692	S.D. dependent var		221.5795
S.E. of regression	219.2750	Akaike info criterion		13.63562
Sum squared resid	10962593	Schwarz criterion		13.69505
Log likelihood	-1577.732	F-statistic		2.626957
Durbin-Watson stat	1.979931	Prob(F-statistic)		0.051135

## CHILE MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on AIC, MAXLAG=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.09208	0.0000
Test critical values:		
1% level	-3.998104	
5% level	-3.429313	
10% level	-3.138142	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares

Sample(adjusted): 269 500

Included observations: 232 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.856309	0.065407	-13.09208	0.0000
C	-23.56801	83.94757	-0.280747	0.7792
@TREND(1)	0.154454	0.215928	0.715302	0.4752
R-squared	0.428077	Mean dependent var		-0.035345
Adjusted R-squared	0.423083	S.D. dependent var		289.5166

S.E. of regression	219.9026	Akaike info criterion	13.63709
Sum squared resid	11073786	Schwarz criterion	13.68166
Log likelihood	-1578.903	F-statistic	85.70194
Durbin-Watson stat	1.977456	Prob(F-statistic)	0.000000

### CHILE MONTHLY (LEVEL)

Null Hypothesis: CHILE has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 4 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.400304	0.8587
Test critical values:		
1% level	-3.997930	
5% level	-3.429229	
10% level	-3.138092	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	48215.59
HAC corrected variance (Bartlett kernel)	57889.64

Phillips-Perron Test Equation

Dependent Variable: D(CHILE)

Method: Least Squares

Sample(adjusted): 268 500

Included observations: 233 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CHILE(-1)	-0.016406	0.013417	-1.222762	0.2227
C	-179.3454	149.1090	-1.202780	0.2303
@TREND(1)	0.760072	0.518918	1.464724	0.1444
R-squared	0.009542	Mean dependent var		41.52378
Adjusted R-squared	0.000929	S.D. dependent var		221.1106
S.E. of regression	221.0079	Akaike info criterion		13.64707
Sum squared resid	11234232	Schwarz criterion		13.69150
Log likelihood	-1586.883	F-statistic		1.107859
Durbin-Watson stat	1.695513	Prob(F-statistic)		0.332021

### CHILE MONTHLY (1<sup>ST</sup> DIFFERENCE)

Null Hypothesis: D(CHILE) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-13.01592	0.0000
Test critical values:		
1% level	-3.998104	
5% level	-3.429313	
10% level	-3.138142	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	47731.84
HAC corrected variance (Bartlett kernel)	43616.33

Phillips-Perron Test Equation

Dependent Variable: D(CHILE,2)

Method: Least Squares  
Sample(adjusted): 269 500  
Included observations: 232 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CHILE(-1))	-0.856309	0.065407	-13.09208	0.0000
C	-23.56801	83.94757	-0.280747	0.7792
@TREND(1)	0.154454	0.215928	0.715302	0.4752
R-squared	0.428077	Mean dependent var	-0.035345	
Adjusted R-squared	0.423083	S.D. dependent var	289.5166	
S.E. of regression	219.9026	Akaike info criterion	13.63709	
Sum squared resid	11073786	Schwarz criterion	13.68166	
Log likelihood	-1578.903	F-statistic	85.70194	
Durbin-Watson stat	1.977456	Prob(F-statistic)	0.000000	

### CHILE MONTHLY

Null Hypothesis: CHILE has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 1 (Automatic based on SIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.605384
Test critical values: 1% level	-3.463200
5% level	-2.923600
10% level	-2.628800

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
Dependent Variable: D(GLSRESID)  
Method: Least Squares  
Sample(adjusted): 269 500  
Included observations: 232 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.021157	0.013179	-1.605384	0.1098
D(GLSRESID(-1))	0.159068	0.065304	2.435793	0.0156
R-squared	0.031842	Mean dependent var	5.387769	
Adjusted R-squared	0.027633	S.D. dependent var	221.5795	
S.E. of regression	218.4967	Akaike info criterion	13.62000	
Sum squared resid	10980381	Schwarz criterion	13.64972	
Log likelihood	-1577.920	Durbin-Watson stat	1.980527	

### CHILE MONTHLY

Null Hypothesis: CHILE has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 1 (Automatic based on AIC, MAXLAG=14)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-1.605384
Test critical values: 1% level	-3.463200
5% level	-2.923600
10% level	-2.628800

\*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals  
Dependent Variable: D(GLSRESID)

Method: Least Squares  
 Sample(adjusted): 269 500  
 Included observations: 232 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.021157	0.013179	-1.605384	0.1098
D(GLSRESID(-1))	0.159068	0.065304	2.435793	0.0156
R-squared	0.031842	Mean dependent var		5.387769
Adjusted R-squared	0.027633	S.D. dependent var		221.5795
S.E. of regression	218.4967	Akaike info criterion		13.62000
Sum squared resid	10980381	Schwarz criterion		13.64972
Log likelihood	-1577.920	Durbin-Watson stat		1.980527

### CHILE MONTHLY

Null Hypothesis: CHILE has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 1 (Spectral GLS-detrended AR based on SIC, MAXLAG=14)  
 Sample(adjusted): 267 500  
 Included observations: 234 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.83507	-1.61592	0.27693	15.4930
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	66927.94
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### CHILE MONTHLY

Null Hypothesis: CHILE has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag length: 1 (Spectral GLS-detrended AR based on AIC, MAXLAG=14)  
 Sample(adjusted): 267 500  
 Included observations: 234 after adjusting endpoints

	MZa	MZt	MSB	MPT
Ng-Perron test statistics	-5.83507	-1.61592	0.27693	15.4930
Asymptotic critical values*:				
1%	-23.8000	-3.42000	0.14300	4.03000
5%	-17.3000	-2.91000	0.16800	5.48000
10%	-14.2000	-2.62000	0.18500	6.67000

\*Ng-Perron (2001, Table 1)

HAC corrected variance (Spectral GLS-detrended AR)	66927.94
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### CHILE MONTHLY

Null Hypothesis: CHILE is stationary  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 11 (Newey-West using Bartlett kernel)

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.183274

Asymptotic critical values*:	1% level	0.216000
	5% level	0.146000
	10% level	0.119000

\*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Residual variance (no correction)	1169793.
HAC corrected variance (Bartlett kernel)	12428492

KPSS Test Equation

Dependent Variable: CHILE

Method: Least Squares

Sample(adjusted): 267 500

Included observations: 234 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9220.218	408.3095	-22.58144	0.0000
@TREND(1)	35.36127	1.051209	33.63865	0.0000
R-squared	0.829857	Mean dependent var	4305.468	
Adjusted R-squared	0.829124	S.D. dependent var	2627.710	
S.E. of regression	1086.222	Akaike info criterion	16.82731	
Sum squared resid	2.74E+08	Schwarz criterion	16.85684	
Log likelihood	-1966.795	F-statistic	1131.559	
Durbin-Watson stat	0.041469	Prob(F-statistic)	0.000000	