CURRENCY SUBSTITUTION IN HIGH INFLATION COUNTRIES: AN EMPIRICAL ANALYSIS

The Institute of Economics and Social Sciences
of
Bilkent University

by

ÇİĞDEM GÜNEY YILMAZ

In Partial Fulfilment of the Requirements for the Degree of
MASTER OF ARTS

in

THE DEPARTMENT OF ECONOMICS
BİLKENT UNIVERSITY
ANKARA

September 2001

CURRENCY SUBSTITUTION IN HIGH INFLATION COUNTRIES: AN EMPIRICAL ANALYSIS

The Institute of Economics and Social Sciences
of
Bilkent University

by

ÇİĞDEM GÜNEY YILMAZ

In Partial Fulfilment of the Requirements for the Degree of
MASTER OF ARTS

in

THE DEPARTMENT OF ECONOMICS
BİLKENT UNIVERSITY
ANKARA

September 2001

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts

---
Assistant Professor Faruk Selçuk
Supervisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts

---
Assistant Professor Nedim Alemdar
Examining Committee Member

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts

---
Assistant Professor Levent Akdeniz
Examining Committee Member

Approval of the Institute of Economics and Social Sciences

Professor Kürşat Aydoğan
Director

ABSTRACT

CURRENCY SUBSTITUTION IN HIGH INFLATION COUNTRIES:

AN EMPIRICAL ANALYSIS

Yılmaz, Çiğdem Güney

M.A., Department of Economics

Supervisor: Faruk Selçuk

September 2001

This study explores the importance of currency substitution phenomena, encountered mostly in high inflation countries rather than other countries. First, it investigates the causes and consequences of currency substitution. It then employs a measure of the currency substitution to estimate the elasticity of substitution between two currencies; national and foreign currencies in a money-in-the-utility framework. The utility function of representative agents includes consumption and money services separately and is linear in consumption. Money services are produced by combining domestic and foreign real balances in Constant Elasticity of Substitution production

function. The presence of money services in the utility function is to indicate the transaction costs reducing properties of the two currencies.

Ten high inflation countries are analyzed for the empirical measurements. Assumed as small, open economies each of these countries is compared to the rest of the world represented by the United States. The shares of domestic and foreign real balances, the discount factors, the shares of money services in the utility functions and the elasticities of substitution are directly estimated by Hansen's Generalized Method of Moments procedure. The fact that inflation reduces the credibility of domestic currency leads to high elasticity of substitution between two currencies in the market of high inflation countries. In other words, the public is vulnerable to the changes in the relative prices while deciding their money allocations and currency substitution is of first-order importance in these countries.

Keywords: Elasticity of Substitution, Generalized Method of Moments, High Inflation Countries

ÖZET

YÜKSEK ENFLASYON ÜLKELERİNDE PARA İKAMESİ: AMPİRİK BİR ANALİZ

Yılmaz, Çiğdem Güney

Yüksek Lisans, İktisat Bölümü

Tez yöneticisi: Faruk Selçuk

Eylül 2001

Bu çalışma, özellikle yüksek enflasyon ülkelerinde gelişmiş ülkelere oranla daha çok görülen Para İkamesi olayının önemini araştırmaktadır. Öncelikle, para ikamesenin sebebleri ve sonuçları inceler. Daha sonra fayda-içinde-para sistemi çerçevesinde iki tür paranın; ulusal ve yabancı paranın arasındaki ikame esnekliğini tahmin etmeye yönelik para ikamesi ölçümü yapar. Temsilci ajanın fayda fonksiyonunda tüketim ve para hizmetleri ayrıktır ve tüketim denkleme doğrusal olarak girer. Para hizmetleri, Sabit İkame Esneklikliği üretim fonksiyonunda yerli ve yabancı reel dengelerin birleşmesiyle oluşturulmuştur. Para hizmetlerinin direkt olarak fayda fonksiyonunda yer alması her iki para biriminin ticari işlemler bedelini düşürme özelliğini göstermek içindir.

Empirik ölçümler için on yüksek enflasyon ülkesi incelenmiştir. Bu ülkelerin herbiri küçük ve açık ekonomiler olarak, kendileri dışında kalan dünyayı temsil eden Amerika Birleşik Devletleri ile karşılaştırılmıştır. Yabancı ve yerli reel dengelerin payları, iskonto faktörleri, para hizmetlerinin fayda fonksiyonundaki payları ile ikame esneklikleri direkt olarak Hansen'in Genelleştirilmiş Momentler Metodu prosedürü ile tahmin edilmiştir. Enflasyonun ulusal paraya olan güveni azaltması yüksek enflasyon ülkelerinde piyasadaki para birimleri arasında yüksek ikame esnekliğine neden olmaktadır. Diğer bir deyişle , halk para dağılımlarını belirlerken relatif fiyatlarda oluşan değişimlere karşı duyarlıdır ve bu ülkelerde para ikamesi esnekliği birinci derece önemlidir.

Anahtar Kelimeler: Para İkamesi, Hansen'in Genelleştirilmiş Momentler Metodu, Yüksek Enflasyon Ülkeleri

ACKNOWLEDGMENTS

I am deeply grateful to my supervisor, Assistant Professor Faruk Selçuk, whose knowledge and efforts throughout my studies have been a major source of support. I feel very lucky to have had the privilege to work with such a supportive supervisor. I am also indebted to Assistant Professor Nedim Alemdar and Assistant Professor Levent Akdeniz for accepting to review this material and for their valuable suggestions.

I would like to thank also to Suzy Uslanmaz and Micheal Shields for their insightful comments and suggestions, from which I benefited a great deal.

My thanks also go to a number of friends: Pelin Pasin, Özgü Serttaş, Bedriye Çubuk, Burak Varlı, Secer Keskin, Eray Yücel, Gonca Tokdemir, Hüseyin Yapıcı and Nilda Sütay who provided help whenever it was needed.

Last, but certainly not least, I wish to express my sincere thanks to my parents. Their support, patience and sense of humour made these challenging years much easier. Also, thank God for having the best brother: Murat Kuzey Yılmaz. My thesis is stronger because of his comments, suggestions and inspiration.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

National currencies can be viewed as tradable goods since they can be easily carried and exchanged. If one unit of currency encounters a problem such as losing its credibility to function as a store of value, unit of account or medium of exchange, the solution can be the substitution with a currency unit that does not have these respective problems. In general, the U.S. dollar is favorited to replace the problematic currency in high inflation countries (Giovannini and Turtelboom, 1994; Agénor and Khan, 1996). The phenomenon of currency substitution is sometimes referred to as dollarization because of the frequent use of the U.S. dollar, although some other hard currencies such as the Euro and German Mark are also used by residents of high inflation countries.

In fact, it is hard to uniquely define currency substitution since currency substitution has been defined in different ways in the literature. Section 2 investigates the source of this controversy and the common features of the definitions. By examining the explanations of Giovannini and Turtelboom (1994), this section identifies a definition that will be used in the entire study.

Currency substitution is widespread in high inflation, developing and transition countries, although there are developed countries with zero or low inflation which have experienced currency substitution. Section 3 discusses the currency substitution phenomenon in high inflation countries. The section contains some examples of high inflation countries experiencing currency substitution. These countries have some common features; for example, their policymakers try to find solutions to the problems of choosing a nominal anchor in the stabilization programs because of the effect of currency substitution.

Currency substitution is also assumed to be an obstacle for seigniorage revenue by policymakers. Since currency substitution reduces the tax base as the Laffer Curve suggests, policymakers' attempts to increase inflation in order to benefit more from inflation tax will be fruitless. The Laffer Tax Curve explains the relationship between seigniorage and the inflation rate, which is not linear. This non-linearity shows that there is a certain value of inflation rate, which maximizes the seigniorage revenue. An inflation rate value below or above this value reduces the seigniorage.

One may think that currency substitution should be removed from the economy. In other words, to reverse the process, foreign currency should be removed. However, it is not an easy process and sometimes it would not be democratic because foreign currency use must be banned, notwithstanding the existence of some foreign currency in the country which is a result of trade liberalization and economic globalization. To remove the currency substitution, de-dollarization, may have

higher costs than dollarization does. Section 3.3 discusses this debate and provides examples of two extreme cases: full dollarization, the situation in which a whole economy is shifted to adopt a strong currency and the situation of no use of foreign currency. There are a few recent examples of the former situation, of which results are not yet available, whereas several attempts of the latter are more fully documented.

One of the reasons for failing to de-dollarize the economy is that the public may not find the reversal credible. Also, there are transition costs of switching from one currency to another. Moreover, there may exist illegal trade, which supplies dollars into the market. These all can be summed up into one concept, *hysteresis*. Section 3.4 discusses the reasons and the consequences of irreversibility or hysteresis.

The literature contains many examples of theoretical work on currency substitution while empirical research on this subject is relatively small. This study measures currency substitution as the ratio of foreign currency deposits to the total money supply in the economy as many other empirical searches do.

Section 4.1 gives insights about the model that is used in this work. This study measures the economic and empirical significance of currency substitution between high inflation countries and the United States. The study updates Selçuk's (1997) paper for Turkey and replicates the result for nine other developing and transition countries: Albania, the Czech Republic, Hungary, Israel, Jordan, Korea, Mexico,

Poland, and the Slovak Republic. Each individual country is represented as a small, open economy in a money-in-the-utility function model. This dynamic, equilibrium model of monetary economy uses both currencies, the national currency and the U.S. dollar, in order to indicate the usefulness of currencies in reducing transaction costs. Hansen's (1982) Generalized Method of Moments procedure is used to estimate the elasticity of substitution, the shares of individual currencies in producing money services, the subjective discount factors and the share of money services in the utility function. The estimates are also found to be precise and directly related to average inflation rates.

Overidentifying restrictions are rejected by J-statistics. Although all the results are significant, the results of Albania, Israel, Jordan, Korea, the Slovak Republic and Turkey are economically meaningful. Overall, the results suggest that foreign currency deposits are strong substitutes for domestic currencies. Hence, the fact that, currency substitution is a first-order importance in high inflation countries, is in line with Selçuk's (1997) findings.

The rest of the study is organized as follows: Section 4.2 presents the model used, estimation procedure and tests. Section 5 describes the data and Section 6 analyzes the results in detail and discusses the economical implications. Section 7 summarizes the thesis' main conclusions.

CHAPTER 2

DEFINITION OF CURRENCY SUBSTITUTION

National currencies can be viewed as tradable goods since they can be easily carried and exchanged. Therefore, if one unit of currency encounters a problem such as losing its credibility to function as a store of value, unit of account or medium of exchange, the solution can be the substitution of a currency unit that does not have these respective problems. In general the U.S. dollar is favored to replace the problematic currency in high inflation countries (Giovannini and Turtelboom, 1994; Agénor and Khan, 1996).

Currency substitution has been defined in many different ways, which causes confusion. Moreover, the many definitions of currency substitution have affected pre-study research and the study itself. The interpretations also differ according to the definitions as seen in the literature. For example, currency substitution is sometimes attributed only to the domestic currency's loss of store-of-value function. Sibert and Liu (1993) define currency substitution as the use of multiple currencies within a single country as a store of value. Currency substitution is sometimes defined as the ability of residents to substitute domestic for foreign primary securities. Yet, all of the authors share the common understanding that the presence of foreign money affects domestic money demand. In this study, currency

substitution is defined as the case in which foreign currency takes over the role of domestic currency in terms of at least one of the three functions mentioned above.

The controversy has arisen from the definition of substitution. Giovannini and Turtelboom (1994) focus on the ambiguity in the use of the term "substitution", the noun form of the verb "substitute". The official meaning of substitute (Giovannini and Turtelboom (1994) refer to dictionaries) is "to replace and/or exchange"; however, currency substitution sometimes refers to substitutability. According to Giovannini and Turtelboom (1994), the literature has two separate concepts: *substitutability* and *substitution.* In the study of currency substitution, the causes of the phenomenon are explored, whereas in the study of currency substitutability, the effects are explored.

When we consider *currency substitutability*, three traditional functions of domestic currency are affected as a result of the phenomenon. As the ability to be stored and later exchanged and as the retaining of purchasing power of domestic currency get weaker with inflation, *store-of-value* function of domestic money is replaced by a stronger currency. Hence, *store-of-value* is the most vulnerable function of money. After this function is replaced, the prices of goods and services begin to be measured in terms of a foreign currency, meaning the *unit-of-account* function is substituted. Finally, the foreign currency becomes a commodity that facilitates trade, exchange or transaction as a *medium-of-exchange.*

When the origins of this phenomenon, *currency substitution*, are considered it is accepted among economists that currency substitution is a result of high inflation, but not vice-versa. High inflation is largely a consequence of fiscal imbalances. It first results in dollarization that is followed by currency substitution as suggested by Calvo and Végh (1992).

Also, differences in returns between alternative monies and domestic currency determine the allocation of a nation's money balances between domestic currency and U.S. dollars or some other foreign currency (Melvin and Peiers, 1996). Agénor and Khan (1996) show that the interest rate differential and the expected rate of the depreciation of the exchange rate are important factors that affect the degree of substitution. They show that the domestic currency to foreign currency ratio is inversely related to the ratio of their opportunity costs. They also claim that expected future depreciation of the domestic currency in a parallel market would cause residents to shift from domestic currency to foreign currency and vice-versa. Sahay and Végh (1995) observe that only currency use is affected by nominal terms, i.e. inflation rate. However, the public allocate their asset portfolio inclusive of foreign currency denominated assets according to the real return differential[1] between foreign currency and domestic currency denominated assets.

[1] Sahay and Végh (1995) define real return differential between foreign currency and domestic currency denominated assets as $\left(i^* - \pi^*\right) - \left(i - \pi\right)$, where π, π^* are domestic and foreign inflation rates; i, i^* are domestic and foreign nominal interest rates, respectively.

However, according to Uribe (1997) domestic currency does not need to dominate the foreign currency in a rate of return in order to induce the public to cease from using foreign currency. He claims that dollarization can be reversed even though domestic rates of inflation exceed the inflation rate associated with the foreign currency, in the presence of network effects of his model. These network effects accumulate experience on using foreign currency and financial innovations[2]. If domestic inflation rates can be set below the bottom level of a moderate inflation rate[3] until foreign currency stocks fall, the economy will converge into a permanent de-dollarization stage whether domestic inflation rate exceeds the foreign inflation rate or not.

Institutional factors also affect dollarization. The volume of international transactions, underdeveloped domestic capital market and transaction costs due to exchange of currencies can be classified as factors affecting currency substitution resulting from institutional structures (Ramirez-Rojez, 1985).

The situation of currency substitution in Latin American countries has usually been referred to as dollarization (Melvin and Peiers, 1996), since the U.S. dollar is preferred by residents instead of the domestic currency as a *unit-of-account*, *store of value* or *medium of exchange*. The definitions of dollarization in Giovannini and Turtelboom (1994: 3) are official replacement of domestic currency with reserve

[2] When domestic and foreign currency are both circulating in the economy.

[3] Uribe (1997) described the limits of various inflation types.

currency (usually the dollar), or a demand shift from domestic currency to foreign currency. Also, Calvo and Végh (1992) distinguish currency substitution from dollarization in that dollarization means a foreign currency's replacement of unit of account and store-of-value function of domestic money, whereas in currency substitution foreign currency also replaces the *medium of exchange* function of domestic money in addition to the dollarization functions. Therefore, "currency substitution is normally the late stage of the dollarization process" (Calvo and Végh, 1992). In contrast to Calvo and Végh (1992), Sahay and Végh (1995) attribute dollarization to exchange use and store-of-value function but currency substitution they limit to only exchange use. Hence, they claim that dollarization is a broader concept than currency substitution.

Silva et al. (2000) indicate that dollarization is a component of the exchange rate based on stabilization programs in Latin America, Asia and the Middle East. Under some of these programs, the amount of liquidity and domestic credits of the market have been conditioned to the foreign exchange reserves. Consequently, the independent authority in these countries has vanished.

CHAPTER 3

CURRENCY SUBSTITUTION IN HIGH INFLATION COUNTRIES

Although there are developed countries with zero or low inflation which experience currency substitution, currency substitution is pervasive in high inflation countries. That high inflation weakens the ability of domestic money to perform its major functions is the main reason for currency substitution (Calvo and Végh, 1993). Other reasons for currency substitution are also related to high inflation. The following are some examples of high inflation countries and their policies to offset currency substitution.

Israel experienced a very accelerating inflation rate (seven times fold) between 1978 and 1984. At the same time, the number of dollar denominated deposits, called *Patam*, increased four times. After this phenomenon, in order to decrease the rate of dollarization ratio (Patam to M2 money supply ratio), the minimum holding periods on Patam accounts were extended and more attractive domestic currency investment alternatives were introduced (Melvin and Peiers, 1996).

Although having been a strong economy, Lebanon lost its prosperous in economy after 15 years of war. During the war, the government created money to meet the

fiscal deficits. Consequently, inflation increased, resulting in a depreciation of the domestic currency, therefore demand for foreign money increased (Mueller, 1994).

Mueller (1994) also presents examples of the de-dollarization process in Bolivia, Peru and Mexico in which the authorities forced the public to freeze their foreign currency deposits. Also, in Argentina, Peru and Bolivia there were varying hyperinflation rates. Although stabilization programs were successful, the degree of dollarization remained the same or increased. However, in Poland and Eastern European countries significant de-dollarization was experienced (Mueller, 1994). In the early 1980's, Poland initiated financial liberalization. The liberalization process included relaxation of restrictions on foreign currency and an exchange rate stabilization program in the 90's. As a result, inflation decreased with a fall in the dollarization ratio. In 1989, Estonia, in 1992, Latvia and Lithuania started reform programs. All three countries introduced a new currency. The common point in Poland and the Baltic Republics is that the dollarization took place very rapidly and at high levels; however, it was easily overcome (Sahay and Végh, 1995).

Nevertheless, in some countries, such as Brazil, there is no evidence of currency substitution, in spite of high inflation, because, in Brazil, a widespread indexation system has been prevalent since the financial crisis in 1964. According to Faria (2000), in the presence of indexed money (highly liquid bonds paying positive real interest rates, in which the debts are regulated according to an index every year), currency substitution is not recurrent. Brazil has experienced currency substitution, in fact, domestic money was substituted with indexed money as a store of value

during 80's and at the beginning of the 90's. However, Brazil has not faced dollarization. This indexed money, concludes Faria (2000), motivates people to keep domestic money in high inflation countries.

3.1. CHOOSING THE NOMINAL ANCHOR

Calvo and Végh (1993) suggest the presence of foreign money implies that the domestic money supply has a component which cannot be controlled. Understanding how currency substitution affects the choice of the nominal anchor is important for combating inflation. Currency substitution is a result of high inflation. To return to the domestic currency, stabilization of inflation is an important condition. Inflation stabilization programs in open economies are implemented in two ways: an exchange rate based stabilization program (ERB) and a money based stabilization program (MB)[4]. Uribe (1999) investigates a third stabilization program: money based stabilization with initial reliquefaction (MBR). These three programs are usually chosen according to their effects on the monetary base. Exchange rate based programs induce initial expansion, whereas money based programs are initially contractionary (known as recession later and recession-now respectively). The money based stabilization with initial reliquefaction program combines money based and exchange rate based program and includes initially freezing the exchange rate in addition to a money based program.

[4] See Calvo and Végh (1993).

If there is a substantial amount of foreign currency on the market, a fixed exchange rate is appropriate because under a floating exchange rate, monetary authority cannot control the money supply. Under the exchange rate based stabilization programs a nominal exhange rate is fixed and money supply is allowed to be endogenous. The higher the degree of substitution, the better the use of a fixed exchange rate is. The problem with the fixed exchange rate, however, is that if there is no credibility, the boom-recession cycle cannot be avoided, which means there will be no nominal recession as the program suggested previously (Calvo and Végh, 1993). Under money based stabilization programs, the money supply is fixed and the exchange rate is not controlled. If there is an imperfect currency substitution, a floating exchange rate is used, since a given domestic money supply determines a unique price level. As expected inflation is reduced, the domestic interest rate decreases and the public switch from foreign to domestic currency leading to an appreciation of the domestic currency. However, the real money supply is not sufficient to avoid recession (Calvo and Végh, 1993). Uribe (1999) supports the idea as follows:

> Particularly in high inflation economies as elasticity of currency substitution increases, the welfare cost of a permanent money based program increases, due to the fact that, an increase in the degree of currency substitution exacerbates the liquidity crunch associated with a given decline in the nominal interest rate.

Two other authors analyzing how dollarization affects the choice of the most appropriate exchange rate policy, in particular choosing between fixed and flexible exchange rate policies, are Berg and Borensztein (2000). According to them, after

devaluation, foreign currency assets in terms of domestic currency and the total money supply increase. As a result, the elasticity of substitution between domestic and foreign currency gets higher, meaning that currency substitution increases exchange rate volatility. Although this situation advocates a fixed exchange rate under currency substitution, Berg and Borensztein (2000) argue that it not necessarily needs to be the case. They claim that if the shock results from a money market factor, i.e. nominal shock, a fixed exchange rate is suitable. Besides, if the exchange rate was flexible, the substitutability between foreign and domestic currency would lead to an unexpected shift that would amplify the degree of monetary shocks. Therefore, a flexible exchange rate is recommended. However, they claim, if the shock is real, a floating exchange rate policy is appropriate because the floating exchange rate reduces volatility arising from real shocks (Berg and Borensztein, 2000).

Recent crises in the world, particularly after the Asian crisis, resulted in favoring floating exchange rates in emerging markets because many countries had previously applied fixed exchange rates to their monetary policies (Calvo, 1999a).

3.2. INFLATION TAX BASE

Currency substitution affects monetary policy in that residents may anticipate (or expect) future inflation and may reduce their domestic money balances. This results in changes in the bank reserves. Later, both a balance of

payment deficit will occur and the exchange rate will depreciate so that revenue from money creation (seigniorage) will fall. Thus, the inflation tax base is reduced (Ramirez-Rojas, 1985).

According to Easterly et al. (1995), seigniorage is defined as the inflation tax and the growth in real balances. They also mention that governments always tend to create more money than usual in order to finance their budget deficits, although the seigniorage and inflation rate are not directly related. According to type of money function, seigniorage may follow a Laffer curve in which seigniorage first rises then falls with an increase in inflation. This situation suggests that a certain value of inflation maximizes the seigniorage revenue.

Uribe (1997) argues that "financial adaptation causes Inflation Tax Laffer Curve to shift down and flatten". In particular, money velocity is more sensitive and larger in response to inflation changes (changes in the expected inflation) in dollarized economies than in non-dollarized economies. When the degree of currency substitution with foreign currency rises, velocity increases which leads to a decrease in the real balances; thus the inflation tax decreases.

Inflation tax differs from conventional tax in that it is costless, non-problematic, and affects low-income people in a less political way. Existence of the foreign currency decreases the effects of the inflation tax on the public. The higher the possibility of switching from domestic to foreign currency, the higher the inflation rates are to finance a budget deficit. Therefore, an increase in the inflation rate

decreases the demand for the domestic currency. As a consequence, the less the domestic money demand, the more the inflation tax, which means that there occurs a spiral effect due to currency substitution (Calvo and Végh, 1993).

3.3. SHOULD CURRENCY SUBSTITUTION BE ENCOURAGED OR DISCOURAGED?

Opponents of currency substitution insist on a decrease in high inflation rate under any circumstances, while advocates of currency substitution claim that the cost of reducing inflation can be so high that it should be sustained. Therefore, whether to discourage or to encourage currency substitution has become one of the main policy questions among economists. Although the main concern is the optimality of the degree of currency substitution, there are two extreme views, such as full dollarization and no use of foreign currency under any circumstances as mentioned above.

Calvo (1999a) argues that one should primarily define the characteristics of emerging markets (EM) to avoid ambiguity in a debate about currency substitution. Emerging markets have characteristics that distinguish them from developed countries. First, there is currency substitution in almost all of them. In a country where the dollar is free to circulate, de-dollarization means not only preventing the economy from adapting to the dollar, but also changing its whole financial

structure. And in emerging markets, foreign currency, e.g. the U.S. dollar, German Mark, already exist in large amounts[5]. Secondly, emerging markets are more vulnerable to external shocks than developed countries, as many studies on this explain. Calvo (1999a) gives examples of these studies to explain how Latin American economies have been exposed to the behaviour of the U.S. dollar in the world market, in other words, to U.S. monetary policy. Also, "contagion[6] " factors due to trade and debt markets affect the emerging markets more[7].

3.3.1. FULL DOLLARIZATION

After failed attempts to stabilize the economy, some countries chose to shift their whole economy to adopt a strong currency. This situation is usually called *full-dollarization* in the literature, since the U.S. dollar is accepted as the strongest currency in the world and therefore is the one most preferred to be adopted.

Because of the foreign country's low inflation, adopting the dollar should provide the financial system with more discipline. Although the government's inflationary tax base shrinks, this results in a government which "puts its house in order" (Calvo

---

[5] This is partial dollarization, i.e. the definition of currency substitution for Calvo and Végh (1992). Full dollarization is a further step in which all the economy is adapted to foreign currency. By full dollarization emerging markets are exposed to the monetary policy of the country whose currency they adopt (Calvo, 1999a).

[6] For further discussion refer to section 3.4.

[7] Argentina was severely hit by the 1994 Mexico BOP crisis, which is referred as the "Tequila effect".

and Végh, 1992). Moreover, as commitment to dollarization increases the higher degree of commitment increases the cost of reneging. In summary, dollarization reverses capital flight, expands international reserves of the central bank and diversifies financial resources (Sahay and Végh, 1995).

On the other hand, full dollarization has negative impacts, as reneging costs could be high if there was an external shock in the international finance system. In addition, the domestic system may not quickly reach equilibrium with the world in terms of prices, interest rates, etc. (Calvo and Végh, 1992). Moreover, if the fully dollarized country is exposed to a shock which causes depreciation in the real exchange rate, this would result in lower price levels or in higher unemployment due to sticky prices. According to general critics of full dollarization, the problem can only be solved if the government has its own policy and devalues in nominal terms. Calvo (1999a) replies to this critique by bringing attention to the fact that the emerging market devaluations (nominal) have all been contradictionary - independent of the degree devaluation - accompanied by high interest rates. Furthermore, exports after devaluations remained the same or even fell. Firms in emerging markets usually have liabilities in dollars and, therefore, experience bankruptcies after devaluations are provoked. He suggests that instead of devaluation, "uniform tariff/subsidy policy should be temporary and be phased out in the course of few quarters" because this policy does not affect the real (international) value of assets and liabilities. Also, this policy may result in a surplus in the trade-balance (Calvo, 1999a).

A third critique is the absence of "Lender of Last Resort", although some proponents of full dollarization argue it is better to be disciplined (Calvo and Végh, 1992). That is, if a country fully dollarizes, it loses its ability to provide liquidity to the banking system for provision of extra credit in case of bank runs. However, the Treasury and Central Bank can create stabilization funds, e.g. privatization, and extra credit lines that are cheaper under dollarization, since no inflation or devaluation risk exists (Calvo, 1999a).

The last negative impact is that the government loses one of its fundamental revenues by giving up inflation tax since it cannot create money. Also, it will lose other kinds of seigniorage such as returns from foreign assets. Moreover, foreign countries will benefit from this seigniorage indirectly. Schmitt-Grohé and Uribe (1999) give an example of a government which has foreign reserves as U.S. T-bills to explain how the seigniorage is ceded to the foreign country whose currency is adopted. When a government dollarizes, it will sell its reserves (T-Bills) to meet the entire domestic money demand[8]. Thus, the government cedes interest income on the amount of foreign reserves. This income is redirected to the U.S. Central Bank as seigniorage revenue. Schmitt-Grohé and Uribe (1999) claim that the former studies have underestimated the amount of redirected seigniorage revenue. They notice that the monetary base does not remain constant because there will be a rise in inflation and domestic real growth rate will increase the domestic demand for the monetary assets and thus the monetary base. As a result, the amount of

[8] In the example the monetary base is assumed to be competeley in T-Bills.

seigniorage should be assessed more broadly when full dollarization is implemented. Besides, some governments may try to negotiate on the seigniorage before implementing their plan [9]. For example, Argentina introduced a full dollarization plan under the condition that it should share the seigniorage revenue with the U.S. government, in order to better help assessments of assets and investments and to reduce country risk in financial instruments[10].

3.3.2. SITUATIONS WHERE THERE IS NO USE OF FOREIGN CURRENCY

Generally, currency substitution is undesirable because monetary authorities lose their power to control the economic instruments in terms of domestic currency and their ability to implement stabilization programs. The main reason for this unwillingness is the seigniorage (revenue from creating money) that most developing countries depend on (Calvo and Végh, 1992). The other reasons can be classified into two: to compensate the impact of failed stabilization programs which can cause economic and political crises and to regain the capability of managing independent and effective macroeconomic policies (Mueller, 1994).

---

[9] If redirected seigniorage is shared between U.S. and the fully dollarized country, e.g. Argentina's full dollarization plan, the share devoted to the dollarized country will be a kind of stabilization fund (Calvo, 1999ab).

[10] Similar ideas can be found in optimum currency area literature; e.g. De Grauwe (1994). For

Some countries encourage the public to use domestic money by paying high interest rates on bank deposits. This results in more imbalances in the long run, and usually is referred to as “retarder of the truth” by Calvo and Végh (1992).

Another method for increasing demand for domestic currency is to force the public to convert all foreign financial instruments into domestic currency. But capital flight is stimulated in such instances and dollars are driven underground. During the 80's, Mexico, Peru, Bolivia and Uruguay experienced high rates of currency substitution. All of these countries except Uruguay tried to overcome currency substitution by restrictions. They forced their public to convert foreign money balances into domestic money balances. For example, in Mexico, dollar denominated deposits were frozen in 1982; then the public was forced to convert the balances of their foreign currency accounts into Mexican pesos under a controlled exchange rate. However, these attempts ended with a higher currency substitution ratio (Melvin and Peiers, 1996).

However, banning foreign currency deposits in domestic banks or limiting the use of foreign currency results in liquidity reduction and in a negative impact on domestic trade, domestic output and increases fiscal imbalances due to inflation. Increase in the demand for domestic money creates no problem if fundamental imbalances are solved. "Thus, the greater the use of domestic money would in this case be a consequence of good policies, and not an indication that encouraging the

---

further discussion see Calvo (1999a).

use of domestic money is a good policy in and of itself" as Calvo and Végh (1992) suggest.

3.4. IRREVERSIBILITY

Since currency substitution with foreign currencies is a result of high inflation, in order to reverse or to stop the phenomenon a stable fiscal (monetary) policy that does not rely on money creation must be introduced. In addition, not all successful policy reforms lead to reversal of the currency substitution (or de-dollarization) process (Melvin and Peiers, 1996).

For example, it is expected, as Calvo and Végh (1992) suggest, that "the fall in the domestic nominal interest rate should induce public to hold the same level of domestic currency as before"[11]. However, the dollarization ratios do not fall, although inflation and nominal interest rates have been reduced [12] ; this is known as “hysteresis” in the literature. Besides, not having been reduced, the dollarization ratios (rates) tend to increase (Figures 1-6).

Hysteresis or irreversibility of the currency substitution process in short means that the currency substitution ratio increases with a higher inflation rate, but it does not

[11] Another example, according to Silva et al. (2000), is that the export sales loss due to money appreciation can only be reversed by the currency's return to its original level.

[12] See Calvo and Végh (1992).

decrease with a lower inflation rate. The relationship between the currency substitution rate and the inflation rate is asymmetrical for several reasons. First, the public may not find the reversal of currency use credible. Secondly, transaction costs, that is the costs of switching from one currency to another, may not compensate the opportunity cost of holding domestic currency. Thirdly , there may exist illegal trade (e.g. the coca trade), which circulates dollars on the market (Melvin and Peiers, 1996).

Transaction costs have a broad effect on irreversibility. Some transaction costs further affect the currency substitution process in that they have become fixed costs that have resulted from financial adaptations and imperfect information. The latter is the main reason for "contagion factors".

Financial adaptation is the main reason for fixed costs and hence for hysteresis. Once an institutional change has occurred, it is not easy to return to the previous situation as Silva et al. (2000) suggest. During a high inflation period, the economy has gradually adapted to new financial innovations that are functioning according to foreign currency, because currency substitution in the economy has been asymmetrical[13]. Sahay and Végh (1995) contribute to the argument by adding that if dollarization had not existed in a country before and then started at high levels, as

[13] C.L. Ramirez-Rojas classified currency substitution as "symmetrical" and "asymmetrical" currency substitution .*Symmetrical* currency substitution is the one when residents and nonresidents simultaneously hold domestic and the foreign money and *asymmetrical* currency substitution is the one when there is no demand for domestic money by non-residents.The author claims that in Argentina, Mexico and Uruguay currency substitution is asymmetrical, in which residents substitute foreign money for domestic money.

opposed to gradual development, the dollarization process can be reversed in that country easily. They give Poland and the Baltic Republics as examples of this de-dollarization process. Since financial adaptation needs investment and learning costs, a high credible stabilization program is needed to withstand these costs.

The other reason for fixed costs in the economy is the asymmetry in the information, which has two determinant factors: institutional and informational. Foreign banks, i.e., lenders, prefer lending in foreign exchange. This factor, i.e., the institutional factor, forces domestic borrowers to match their liabilities and assets correctly without country risks and exchange rate risks. Also, the informational factor causes difficulty in predicting the exchange rate, because of volatility in emerging markets and the tendency of their governments to devaluate in order to relieve the private sectors by means of debt. These factors increase the cost of lending in domestic currency. Also, due to asymmetry in information of the condition in which debt is used, the uninformed international lenders do not want to rely on domestic currency (Calvo, 1999a).

Contagion factors depend on imperfect information which results from "short track records", "high government interventions" and "size" of the economy. Since monetary reforms are easily abandoned because policies depend on inconstant and changeable capital flows, emerging markets require more frequent control, which means costs. Thus less information is gathered. Also, when the government intervenes in the economy, although it gives signals that it is abandoning its policy, markets will not be stable enough to respond to this lack of credibility. The size of

the economy is negatively related to volatility, which means monitoring costs are higher in a small country. However, if a small country fully dollarizes, it resembles the large country, the U.S. for example, in terms of policy since it adopts fully to the monetary policy of the U.S. government (Calvo, 1999a).

When the empirical side of the irreversibility is considered, it is explained in various forms in the models showing time trend, stochastic trend, and ratchet variable etc, as Uribe (1997) summarizes. The most used ratchet[14] effect explains that the dependent variable does not change in the direction of the independent variable. In other words, when the value of the independent variable increases, the value of the dependent variable increases; however, when the former decreases the latter does not decrease (Mueller, 1994).

However, Mourmouras and Russell (2000)[15] notice that most models are too weak to explain hysteresis because the analyses of currency substitution ignore the growth of foreign currency reserves in the developing countries. This may lead to inappropriate policies in stabilization programs that are usually abandoned later.

[14] Ratchet variables consist of past peak levels and currenct level of an independent variable such as largest previously achieved interest rate or inflation rate.

[15] Once dollarization occurs it is progressive, especially under loose controls. The foreign currency deposits in the developing countries grew about 3 times as fast as the domestic deposits during the 1990s (Mourmouras and Russell, 2000; Berg and Borensztein, 2000).

CHAPTER 4

MEASURING CURRENCY SUBSTITUTION

4.1. MODELS

Before introducing examples of currency substitution, it should be mentioned that the fraction of foreign currency deposits to the M2 money supply is usually referred as the dollarization ratio.

Among empirical studies, Easterly et al. (1995: 583) use a cash-in-advance constraint to allocate money and bonds before a consumption period. They test the sensitivity of estimates of seigniorage maximizing inflation rate in the Cagan model function with a constant semi-elasticity. The model incorporates money demand, inflation and seigniorage. It is found that semi-elasticity of the money demand to the opportunity cost of holding money and the seigniorage maximizing inflation rate in the steady state depends on the degree of substitution between money and bonds. They divide assets into three; capital, non-indexed money and indexed money. Indexed money is a bond that pays no interest, but is fully indexed to the price level. An example of these bonds is foreign currency in the developing countries. In the model, either money or bonds can be used at the same time. The

data are of eleven countries (Argentina, Bolivia, Brazil, Chile, Ghana, Israel, Mexico, Nicaragua, Peru, Uruguay and Zaire) in which " the elasticity of substitution between money and non-monetary financial assets is strikingly high." Easterly et al. (1995) argue that if semi-elasticity of money demand with respect to inflation rises, elasticity of substitution between money and bonds rises. They also show that estimation of seigniorage maximizing inflation rate depends on linearity or non-linearity of money demand function.

Sibert and Liu (1993) also model currency substitution in a cash-in-advance constraint. They constructed a framework of overlapping generation model in which there is a cost occurring due to exchange of currency before trading. They attribute this cost to “substitutability of currencies”. In fact, this model is a transaction cost model, but it becomes a cash-in-advance model when the cost is infinite.

Carniero and Faria (1996) used Ramsey's model for open economies including both domestic and foreign currencies in the utility function. The model is transaction cost framework including indexed money. The hypothesis is that as the return of the domestic indexed currency equals the return of the foreign currency, there is no currency substitution in high inflation economies. Carneiro and Faria (1996) investigate long run properties by the cointegration technique. They suggest that the effect of inflation increases the demand for indexed money and decreases the demand for narrow money. They call this the "substitution effect". According to

them, if the demand for currency is greater than the substitution effect , inflation positively affects the demand of narrow money.

Melvin and Peiers (1996) relate the dollarization ratio positively to the depreciation rate of the Sheqel (Israeli currency) and the inflation rate of Israel. Currency substitution is a result of real wealth, institutional structure and the difference between the expected real rate of return of domestic and foreign money[16].

Agénor and Khan (1996) model currency substitution in a dynamic and forward-looking model in which a two-step developing rational expectations assumption is made. First, allocation of currencies is pre-determined in a model of household behavior, and then actual currency holding is determined in a multi-period cost-of-adjustment model. The multi-period model consists of backward and forward looking components. It does not require information on the domestic interest rate. According to the authors, this model is better than a conventional partial adjustment model, in which the currency ratio is related to only lagged and current values. When the results of both models are compared, they claim that the forward-looking model represents data more appropriately. In the model, the portfolio decisions depend upon forward-looking variables.

For the Dominican Republic, Carruth and Sanchez-Fung (2000) investigate money demand relationship. The financial system of the Dominican Republic is

[16] Demand for domestic bearing assets is not a currency substitution and demand for foreign bearing assets will be capital outflow rather than currency substitution(Ramirez-Rojas, 1985).

underdeveloped. The literature on developed countries is usually based on interest bearing and non-interest bearing money. However, in the Dominican Republic there are no free varying interest rates. As no suitable data on the opportunity cost of holding money exists, economic links with the USA suggest a possible role for foreign interest rate effect and currency substitution

In the Mueller's paper (1994), there are two econometric models because he defines the dollarization ratio in two ways: in the first definition, as the ratio of foreign currency deposits to total domestic bank deposits, in the second definition as the ratio of foreign currency deposits plus cross border deposits[17] to total domestic bank deposits considered as the degree of dollarization ratio[18].

Uribe (1997) employs a cash-in advance model in which a domestic currency does not vanish but is always in circulation. According to the cash-in-advance constraint, consumers must hold some amount of domestic currency to purchase goods. However, this cash-in-advance model differs from other conventional cash-in-advance models: the economy accumulates experience in using foreign currencies and the accumulated experience reduces the cost of using foreign currencies. This accumulation is assumed to be a "network effect" that captures the

[17] For further definition of foreign currency deposits and cross border deposits refer to Section 5.

[18] Mueller (1994) concluded that the implications of interest rate differentials came out significantly when cross border deposits are included. Both models incorporate expected depreciation, interest rate differential, stock adjustment variable and ratchet variable. As a ratchet variable, Mueller (1994) used past peak dollarization ratio and past peak depreciation ratio in order to compare them. Past-peak dollarization ratio gives more significant results than past-peak depreciation rate. It is also shown that without a ratchet variable the results are biased and ambiguous, particularly in interest rate differential analysis.

phenomenon of hysteresis in the model. Specifically, a temporary increase in the expected inflation results in an increase in the interest rates, which causes a permanent increase in the dollarization demand and a decrease in real balances. Particularly, small deviations in expected inflation may have a more persistent effect in dollarized economies than in non-dollarized economies.

Berg and Borensztein (2000) analyze how dollarization affects the choice of the most appropriate exchange rate regime, i.e., a fixed or a flexible exchange rate policy[19]. In particular, they analyzed the fixed exchange rate under currency substitution [20] in a simple static stochastic model [21] that shows a pattern of shocks facing the economy and variance output. Significantly, in the model, they used VAR to analyze the relationship between inflation and lagged changes of money in five partially dollarized countries, Argentina, Bolivia, Peru, the Philippines and Turkey. Also, they used determinants of inflation instead of classical money demand equations because when money demand is used, currency substitution and asset substitution implications are so correlated that they cannot be distinguished from one another.

---

[19] They also analysed if flexible exchange rate policy is applied in the economy how dollarization affects the monetary aggregate behaviour and whether the dollar-denominated assets will be information about the future. They concluded that inclusion of foreign currency deposits held in domestic banks in monetary aggregate gives more reliable results.

[20] They distinguished currency substitution and asset substitution. They used currency substitution because this is what has usually been done.

[21] They extended the model of Obstfeld and Rogoff .

Mourmouras and Russell (2000) give examples of the misuse of tariffs and quotas, tax evasion and narcotics trafficking in order to explain the factors behind the progressive and increasing degree of currency substitution. These are independent factors of black market demand for foreign currency. The smuggling factors have usually been included in models as risk aversion[22]. This crime theoretics approach and growing stocks of foreign currencies are included in an overlapping generation model of "currency substitution-cum dollarization" by Mourmouras and Russels (2000). The model laws prohibit possession of foreign currency. However, consumers may break the law, which is modeled by a penalty reduction of revenues of the consumers.

4.2. THE MODEL

This study adopts Imrohoroglu (1994) and Selçuk (1997) and applies it to developing countries with high inflation. The parameters of the money-in-the-utility model are estimated by Hansen's (1982) Generalized Method of Moments procedure. In this model, money enters the agent's utility function providing a cost reducing service.

Suppose that infinitely lived identical individuals are in the economy. At the beginning of each period, an individual decides how much to consume, c_t, how

[22] Refer to Mourmouras and Russell (2000: 5).

much to save in the form of real bonds, b_t, and how much to hold in the form of domestic real balances, $\frac{m_t}{p_t}$, and foreign real balances, $\frac{m_t^*}{p_t^*}$[23].

$$U(t) = c_t + x_t \qquad (4.1)$$

where utility function is assumed to be separable in consumption and money services and linear in consumption.

Money services, x_t, are given by Constant Elasticity of Substitution production function in which domestic and foreign real balances exist,

$$x_t = \gamma\left[\alpha\left(\frac{m_t}{p_t}\right)^{-\rho} + (1-\alpha)\left(\frac{m_t^*}{p_t^*}\right)^{-\rho}\right]^{-\frac{1}{\rho}} \qquad (4.2)$$

The representative agent maximizes

$$E\sum_{t=0}^{\infty}\beta^t U\left(c_t, \frac{m_t}{p_t}, \frac{m_t^*}{p_t^*}\right) \qquad (4.3)$$

[23] Selçuk (1997) uses domestic real bonds differently from Imrohoroglu (1994) who uses internationally traded bonds. The reason is that small economy individuals cannot invest on internationally traded bonds due to lack of developed financial markets.

where β is the subjective discount factor, subject to the budget constraint

$$c_t + \frac{m_t}{p_t} + \frac{m_t^*}{p_t^*} + b_t^* \leq y_t - \tau_t + \frac{m_{t-1}}{p_t} + \frac{m_{t-1}^*}{p_t^*} + (1 + r_{t-1})b_{t-1}^* \qquad (4.4)$$

where y_t is exogenous endowment and τ_t is lump-sum tax.

The Euler equations are,

$$\beta(1 + r_t)E_t U_c(t+1) = U_c(t) \qquad (4.5)$$

$$U_h(t) + \beta E_t\left[U_c(t+1)\frac{p_t}{p_{t+1}}\right] = U_c(t) \qquad (4.6)$$

$$U_{h^*}(t) + \beta E_t\left[U_c(t+1)\frac{p_t^*}{p_{t+1}^*}\right] = U_c(t) \qquad (4.7)$$

where $h = \frac{m}{p}$ is domestic real balances and $U_h(t)$ is the marginal utility of time t domestic real balances and $U_{h^*}(t)$ is the marginal utility of time t foreign real balances.

The estimation equations are derived,

$$\beta(1+r_t)-1=d_{1,t+1} \qquad (4.8)$$

$$\alpha\gamma\left[\alpha\left(\frac{h_t}{h_t^*}\right)^{-\rho}+(1-\alpha)\right]^{-\frac{1}{\rho}-1}\left(\frac{h_t}{h_t^*}\right)^{-\rho-1}+\beta\frac{p_t}{p_{t+1}}-1=d_{2,t+1} \qquad (4.9)$$

$$\alpha\left(1-\beta\frac{p_t}{p_{t+1}}\frac{e_t}{e_{t+1}}\right)\left(\frac{h_t}{h_t^*}\right)^{-\rho-1}-(1-\alpha)\left(1-\beta\frac{p_t}{p_{t+1}}\right)=d_{3,t+1} \qquad (4.10)$$

where $\frac{p_t}{p_t^*}=e_t$ and $d_{i,t+1}$ is the Euler equation error for all i=1,2,3.

Instrument set contains variables entering estimation equations lagged once.

$$I=\left\{1,\frac{h_t}{h_t^*},\frac{p_{t-1}}{p_t},\frac{e_t}{e_{t-1}},1+r_{t-1}\right\} \qquad (4.11)$$

4.3. ESTIMATION PROCEDURE AND TESTS

Let $d_{t+1}=(d_{1,t+1}, d_{2,t+1}, d_{3,t+1})'$ and let z_t be vector of instruments. Following Hansen's GMM procedure,

$$g_T(\theta)=\frac{1}{T}\sum_{t=1}^{T}z_t\otimes d_{t+1}(\theta) \qquad (4.12)$$

where $g_T(\theta)$ is consistent estimator vector of $Ez_t \otimes d_{t+1}(\theta)$[24]. The parameter vector θ_0 is selected in an admissible parameter space θ_T. θ_0 makes $g_T(\theta)$ close to zero and minimizes quadratic form

$$g_T(\theta)' W_T g_T(\theta) \qquad (4.13)$$

where W_T is a positive definite distance matrix. The choice of W_T depends on the autocovariance structure of the disturbance vector d_{t+1}[25]. Imrohoroglu (1994) notices that Hansen (1982) describes a procedure for obtaining a consistent and efficient estimate for W_T.

Hansen (1982) also shows how to test overidentifying restrictions of the model. Usually, the number of orthogonality conditions (r) exceeds the number of estimated parameter (q). Therefore, $r-q$ linearly independent combinations of orthogonality should be close to zero (Hansen, 1982: 1049).

These overidentifying restrictions are tested by the J-statistic which is defined as sample size times minimized value of the quadratic value (4.13). In other words, the J-statistic is a value of chi-square (χ^2) random variable with degrees of freedom

---

[24] Hansen (1982) shows the consistency and asymptotic distribution properties of the GMM estimator.

[25] Hansen (1982) also shows that W_T minimizes the asymtotic covariance matrix of θ_0 .For further discussion see Eienbachum et al. (1988).

equal to the number of unconditional moment restrictions and the number of coordinates of θ.

To test the null hypothesis $\alpha = 1$, Eichenbaum et al. (1988) proposed the C-statistic, which is calculated as the difference between the J-statistics obtained from the restricted and unrestricted models. This forms a chi-square (χ^2) random variable with one degree of freedom.

CHAPTER 5

DATA

Since precise amounts of foreign currency circulating in the country and of dollar denominated bank deposits abroad are unknown, empirical studies have usually focused on countries that permit dollar denominated bank deposits (Melvin and Peiers, 1996).

However, such bank deposits data do not reflect the foreign currency market. For example, in addition to bank deposits in Bolivia, there is an active informal loan market in which transactions are made through contracts between individuals. These contracts became legal after 1985 (Melvin and Peiers, 1996).

Data (foreign balance measurement) have three components.

i) Foreign currency deposits held in a domestic financial system (it is difficult to distinguish whether the holder of the deposits is a citizen or foreigner).

ii) Foreign money held abroad by citizens.

iii) Foreign currency notes circulating in the country, which are also difficult to measure.

Agénor & Khan (1996) were the first to use data on foreign assets held abroad by citizens, that is component (ii); foreign are bonds and currency holdings.

The most accurate data of cross border deposits are available in Bank of International Settlements (BIS) but they are underestimated because of "legal and tax related restrictions" (Berg and Borensztein, 2000)

The data for the amount of circulating foreign currency in a country are not accurate since they are estimated from sums which are the difference between US printed money and the aggregate data of cross border deposits, foreign currency deposits and the US holdings of dollars. (Berg and Borensztein, 2000)

Therefore, many empirical researches, including this one, use easily measurable foreign currency deposits to represent foreign real balances. Data for Albania, the Czech Republic, Turkey, Jordan and the Slovak Republic are taken from International Financial Statistics (IFS), the source of the International Monetary Fund. The rest of the data are taken from Datastream. The data periods are 1994:XII-2000: XII for Albania, 1993:III-2000: XII for Czech Republic, 1991:I-2000:X for Hungary, 1993:I-2000:XII for Israel, 1994:I-2000:I for Jordan, 1973:V-2000: VI for Korea, 1985:XII-2001:I for Mexico, 1997:I-2001:III for Poland, 1993:I-2001:I for the Slovak Republic and 1986:I-2000:XI for Turkey. M2X is money supply where M2X is defined M2 money supply plus foreign currency deposits. For most of the countries, namely Hungary, Israel, Mexico, Poland, Jordan and Korea the data for M2 and foreign currency deposits are taken directly

from the source Datastream. Other M2 data are calculated as the sum of currency in circulation, demand deposits, time and saving deposits and foreign currency deposits taken from IFS tapes. Prices are consumer price indices for all countries but Korea where wholesale price index is used and real interest rates are found by dividing nominal interest rates by inflation rates which are calculated as the rate of increase in the price index. The price indices and nominal interest rates are taken from IFS tapes.

CHAPTER 6

RESULTS

In order to get realistic results for this study, the choice of the sample set of countries and the sample periods becomes a matter of the availability of data. There are only a few seperate and accurate data of foreign currency deposits available, since these are usually integrated to demand or time deposits. For calculation of domestic real balances and foreign real balances, both m and m^*, which are M2 money supply and foreign currency deposits respectively, enter into the equation (4.2) in terms of national currency. In order to identify the data from different sources, they are indexed to hundred by selecting the base as first January of the second year of the time period, for each country.

The results are obtained with a routine written in Winrats 32. This program automatically calculates the optimal weighting matrix in a non-linear system estimation procedure[26]. The initial values of parameter set θ are taken as $\alpha = 0.5$, $\beta = 1.0$, $\gamma = 0.25$ and $\rho = -0.8$ for the estimation as Imrohoroglu suggested.

[26] The practical procedure used in Generalized Method of Moments recommends estimating a consistent but inefficient initial θ^* by minimizing (4.13) with an arbitrary weighting matrix such as $W_T = I_r$. Then use this estimated θ as real initial θ_0 in order to estimate W_0 which will then be

Moreover, other initial parameter sets are used showing that the estimation is robust to different initial values. Winrats 32 accepts convergence when both relative changes in the parameter vector and relative changes in the function value (4.13) is less than 10^{-5}.

The estimation results are given in table 1 with standard errors in brackets. The estimation results of Turkey are in line with Selçuk's (1997) findings. After updating Hansen's Generalized Method of Moments estimation procedure for Turkey, it is seen that the share of foreign real balances and share of money services in the utility function is a little higher than Selçuk's. The discount factor is almost the same, however, elasticity coefficient is relatively small. These are meaningful, as high inflation has been sustained since 1997 causing the respective differences.

Among the values estimated by replicating the Turkey case to the sample set, Turkey and the Slovak Republic have a moderate share of foreign real balances. The shares are 0.337 and 0.309 respectively. The Czech Republic and Hungary have a relatively low shares of foreign real balances, and Mexico seems to have the lowest share. (Although the latter are so close to zero, they are still statistically significant.)

---

used to estimate θ_1. θ_1 is used for W_1 and the procedure is iterated until the diffrences of the parameter values converge (Hamilton, 1994).

The discount factors are estimated statistically significant and less than 1 for all sample countries except the Czech Republic. The estimate for it is 1.001, which is also significant.

Also, Mexico has the highest and the Czech Republic has the lowest share of money services in their utility function. Although the estimated shares of all countries are small they are significant. The null hypothesis for γ=0 is rejected at very small significance levels for all the countries.

The residents of Albania, Israel, Jordan and Turkey seem to increase their foreign real balances when the exchange rate depreciates. In other words, estimates of ρ for these countries indicate positive elasticity of substitution $\varepsilon = \frac{1}{1+\rho}$, which are 3.74, 6.32, 3.74, and 7.46 respectively. Korea has an estimate of elasticity of substitution equal to 25.67. The Slovak Republic has the highest elasticity, 203.90, meaning that the residents are ultimately vulnerable to any small changes in the exchange rate.

On the other hand, the rest of the sample countries have negative elasticity of substitutions, which means that the residents decrease their foreign real balances in their portfolio when the exchange rate depreciates. The results are significant and ρ=0 is rejected at very small significant levels for all countries.

Since the absolute values of negative elasticity of substitutions are small and the majority of the sample countries have positive elasticity of substitution, it can be inferred that in high inflation countries demand for hard currencies rises when a depreciation in the exchange rate is expected.

In this estimation there are $3 \times 5 = 15$ orthogonality conditions and four parameters are used to minimize the equation (4.13). The remaining eleven overidentifying restrictions are tested by the J-statistic which is the sample size times the minimized value of (4.13). This value is a χ^2 distribution with eleven degrees of freedom. The estimations have large J-statistics relative to the degrees of freedom which means that the overidentifying restrictions are rejected at very small significance levels.

Figure 7 shows the possible trend lines between estimated values of parameter vector and average monthly inflation calculated as the percentage change in the prices. The values are given in table 2. As expected, people have less future utility with an increasing inflation rate. Also share of money services is positively related to inflation rate which explains the rise of the share of money services in Turkey since 1997 (according to Selçuk's (1997) estimates.) The figure 7 also indicates that domestic real balances and elasticity of substitution are positively related to inflation rate.

Moreover, there are some notes to mention: first, figures through 1 to 6 show both FCD/M2X ratio and inflation rates together. When there is a temporary change in

inflation rates, a permanent increase in FCD/M2X ratios can be seen. Secondly, it is assumed that instrument variables are independent of error terms which is a default in Winrats 32. When dependency is assumed the elasticity of coefficient is very much different than the independent one whereas other parameters are very close. Thirdly, instrumental variables are taken as lagged once. When more lags are used it is seen that only estimate of elasticity coefficient increases although other three estimates remain the same. In this study one lag is used as literature suggests.

CHAPTER 7

CONCLUSION

Currency substitution because of loss of at least one of store of value, unit of account or medium of exchange properties of domestic currency has been in the theoretical and empirical economic literature for a long time. Empirical literature has been developed on money demand models. This study follows a dynamic, equilibrium model of Selçuk (1997), which uses Hansen's (1982) Generalized Method of Moments procedure in a money-in-the-utility function model. Money enters the utility function directly to indicate that money has a transaction cost reducing role. The results show that high inflation countries integrate currency substitution with first-order importance. The estimates of shares of foreign balances in producing domestic services are considerably large and statistically significant. Also, it may be important to indicate that these results contradict the results of Imrohoroglu (1994), one of the first researchers who applied the estimation procedure of Hansen (1982) for currency substitution. Since he has examined a developed country, Canada, the results have revealed that the effect of foreign real balance on the economy is small and that currency substitution is of second-order importance.

SELECT BIBLIOGRAPHY

Agénor, P. and M.S. Khan. 1996. "Foreign Currency Deposits and the Demand for Money in Developing Countries," *Journal of Development Economics* 50: 792-807.

Arize, A.C. 1991. "Currency Substitution in Korea," *American Economist* 35(2): 67.

Berg, A. and Borensztein .2000. "The Choice of Exchange Rate Regime and Monetary Target in Highly Dollarized Economies," *IMF Working Paper* WP/00/29.

Calvo, G.A. and C. Végh .1992."Currency Substitution in Developing Countries: An Introduction," *Revista de Analisis Economico* 7: 3-27

-----. 1993. "Currency Substitution in High Inflation Countries," *Finance and Development* 30(1): 34-37.

Calvo, G.A.1999a., "On Dollarization". http://www.bsos.umd.edu/econ/ciecalvo.-htm

-----.1999b."Argentina's Dollarization Project: A Primer". http://www.bsos.umd-edu /econ/ciecalvo.htm

-----. 2000a. "Capital Market and the Exchange Rate with Special Reference to the Dollarization Debate in Latin America". http://www.bsos.umd.edu/econ/-ciecalvo.htm

-----. 2000b. "Testimony on Dollarization". http://www.bsos.umd.edu/econ/-ciecalvo.htm

Calvo, G.A. and C. Reinhart.1999. "Capital Flow Reversals, the Exchange Rate Debate, and Dollarization". http://www.bsos.umd.edu/econ/ciecalvo.htm

Carneiro, F.G. and J.R. Faria. 1997. "Currency Substitution and Indexed Money," *Applied Economics Letters* 4: 163-166.

Carruth, A. and J.R. Sànchez-Fung. 2000. "Money Demand in the Dominican Republic," *Applied Economics* 32: 1439-1449.

Easterly, W.R., P. Mauro, K. Schmidt-Hebbel. 1995. "Money Demand and Seigniorage-Maximizing Inflation," *Journal of Money, Credit, and Banking*, 27(2): 583-603.

Eichenbaum, M.S., L.P. Hansen, K.J. Singleton. 1988. "A Time Series Analysis of Representative Agent Models of Consumption and Leisure Choice under Uncertainty," *Quarterly Journal of Economics* 103: 51-78.

Faria, J.R. 2000. "The Demand for Currency in the Presence of Indexed Money: The Case of Brazil," *Applied Economics Letters* 7: 41-43.

Giovannini, A. and B. Turtelboom.1992. "Currency Substitution," *NBER Working Paper* No. 4232.

Hamilton, J.D. 1994. *Time Series Analysis.* Princeton, N.J.: Princeton University Press.

Hansen, L.P. 1982. "Large Sample Properties of Generalized Method of Moments Estimators," *Econometrica* 50(4): 1029-1054.

Imrohoroglu, A. and E.C. Prescott. 1991."Seigniorage as a Tax: A Quantitative Evaluation," *Journal of Money, Credit, and Banking* 23(3): 462-475.

Imrohoroglu, S.1994. "GMM Estimates of Currency Substitution Between the Canadian and the U.S. Dollar," *Journal of Money, Credit, and Banking* 26(4).

Ize, A. and E. Yeyati-Levy. 1998. "Dollarization of Financial Intermediation: Causes and Policy Implications," *IMF Working Paper* WP/98/28.

Melvin, M. and B. Peiers. 1996."Dollarization in Developing Countries: Rational Remedy or Domestic Dilemma?," *Contemporary Economic Policy* 14: 30-40.

Mongardini J. and J. Mueller. 1999. "Ratchet Effects in Currency Substitution: An Application to the Kyrgyz Republic," *IMF Working Paper* WP/99/102.

Mourmouras, A. and S.H. Russell .2000." Smuggling, Currency Substitution and Unoffical Dollarization: A Crime-Theoretic Approach," *IMF Working Paper* WP/00/176.

Mueller, J. 1994. "Dollarization in Lebanon," *IMF Working Paper* WP/94/129.

Ramirez-Rojas, C.L. 1985. “Currency substitution in Argentina, Mexico, Uruguay,” *International Monetary Fund Staff Papers* 32(4): 629-667

Sahay, R. and C. Végh. 1995. "Dollarization in Transition Economies: Evidence and Policy Implications," *IMF Working Paper* WP/95/96.

Savastano, M .1999. “Dollarization in Latin America - Recent Evidence and Some Policy Issues,” *IMF Working Paper* WP/99/04.

Scacciavillani, F. 1995. "Inflation Expectations, and Currency Substitution in Turkey," *IMF Working Paper* WP/95/111.

Schmitt-Grohé, S and M. Uribe. 1999. "Dollarization and Seignorage: How Much is at Stake?" . http://www.econ.upenn.edu/~uribe/seignorage.pdf

-----. 2000. "Stabilization Policy and the Costs of Dollarization," *Journal of Money, Credit, and Banking* 33: 482-509.

Selçuk, F. 1994. "Currency Substitution in Turkey," *Applied Economics* 26: 509-518.

-----. 1997. "GMM Estimation of Currency Substitution in High Inflation Economy: Evidence from Turkey," *Applied Economics Letters* 4: 225-227.

-----. 2001. "Seigniorage, Currency Substitution, and Inflation in Turkey," *forthcoming in Russian and East European Finance and Trade.*

Sibert, A. and L. Lihong. 1993."Government Finance in a Model of Currency Substitution," *IMF Working Paper* WP/93/80.

Silva M.L.F., J.P. De Anrade, and S.T. Torrance. 2000. "Reflections on the Perspective of the Global Economy from the Point of View of Emerging Economies," *Journal of Evolutionary Economics* 10: 109-129.

Uribe,M.1997. "Hysteresis in a Simple Model of Currency Substitution," *Journal of Monetary Economics* 40(1): 185-202.

-----.1999. "Comparing the Welfare Costs and Initial Dynamics of Alternative Inflation Stabilization Policies," *Journal of Development Economics* 59: 295-31

APPENDIX A

TABLES

Table 1: estimate results of share of domestic real balances, α, discount factors, β, share of money services in the utility function, γ and elasticity coefficient, ρ, from the equation (4.2). Standard errors are given in paranthesis. Asymptotic p-values are in brackets.

	α	β	γ	ρ	J
ALBANIA	0.497 (0.0147)	0.987 (0.0015)	0.031 (0.0019)	-0.733 (0.1588)	82.975 [0.000]
CZECH REPUBLIC	0.872 (0.0462)	1.001 (0.0004)	0.007 (0.0004)	-2.407 (0.4317)	103.244 [0.000]
HUNGARY	0.793 (0.0201)	0.997 (0.0007)	0.022 (0.0009)	-1.246 (0.0652)	134.912 [0.000]
ISRAEL	0.591 (0.0146)	0.992 (0.0006)	0.025 (0.0007)	-0.842 (0.1429)	127.442 [0.000]
JORDAN	0.526 (0.0274)	0.996 (0.0007)	0.013 (0.0007)	-0.733 (0.1750)	61.462 [0.000]
KOREA	0.527 (0.0131)	0.992 (0.0006)	0.024 (0.0007)	-0.961 (0.0454)	399.118 [0.000]
MEXICO	0.929 (0.0103)	0.994 (0.0062)	0.099 (0.0062)	-1.969 (0.0733)	118.918 [0.000]
POLAND	0.572 (0.0180)	0.990 (0.0009)	0.030 (0.0011)	-2.279 (0.6801)	56.683 [0.000]
SLOVAK REPUBLIC	0.691 (0.0296)	0.998 (0.0006)	0.013 (0.0007)	-0.995 (0.1831)	105.723 [0.000]
TURKEY	0.663 (0.0265)	0.987 (0.0016)	0.048 (0.0028)	-0.866 (0.0158)	92.974 [0.000]

Table2: Average monthly inflation rates and estimate results of share of domestic real balances, α, discount factors, β, share of money services in the utility function and elasticity coefficient, ρ, from the equation (4.2).

	Average monthly inflation`	α	β	γ	ρ	ε
ALBANIA	0.981	0.497	0.987	0.031	-0.733	3.740685
CZECH REPUBLIC	0.597	0.872	1.001	0.007	-2.407	-0.71086
HUNGARY	1.452	0.793	0.997	0.022	-1.246	-4.05927
ISRAEL	0.605	0.591	0.992	0.025	-0.842	6.319359
JORDAN	0.281	0.526	0.996	0.013	-0.733	3.744901
KOREA	0.652	0.527	0.992	0.024	-0.961	25.66561
MEXICO	2.350	0.929	0.994	0.099	-1.969	-1.03152
POLAND	0.738	0.572	0.990	0.030	-2.279	-0.7818
SLOVAK REPUBLIC	0.755	0.691	0.998	0.013	-0.995	203.8973
TURKEY	4.187	0.663	0.987	0.048	-0.866	7.45548

APPENDIX B

FIGURES

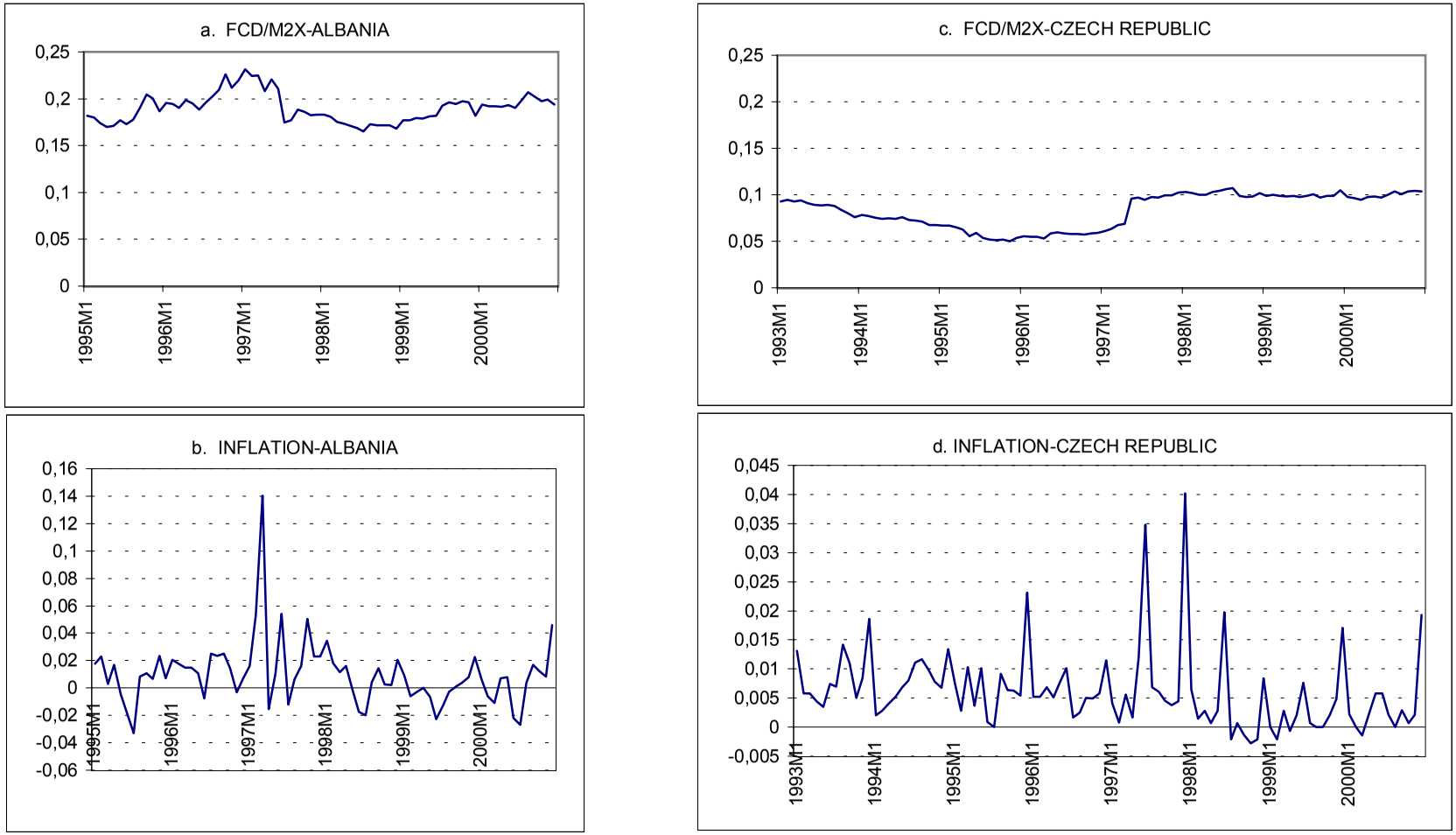

Figure1: (a), (c) Foreign currency deposits ratio to M2X money supply where M2X is defined M2 money supply plus foreign currency deposits. Data for foreign currency deposits are taken directly. Data for M2 is sum of demand deposits, time and saving deposits, and foreign currency deposits held by residents in domestic banks for both Albania and Czech Republic. The figures below (b), (d) indicate monthly inflation data which are calculated as the growth of the consumer price indices of those countries. Scales are different. Source: IFS.

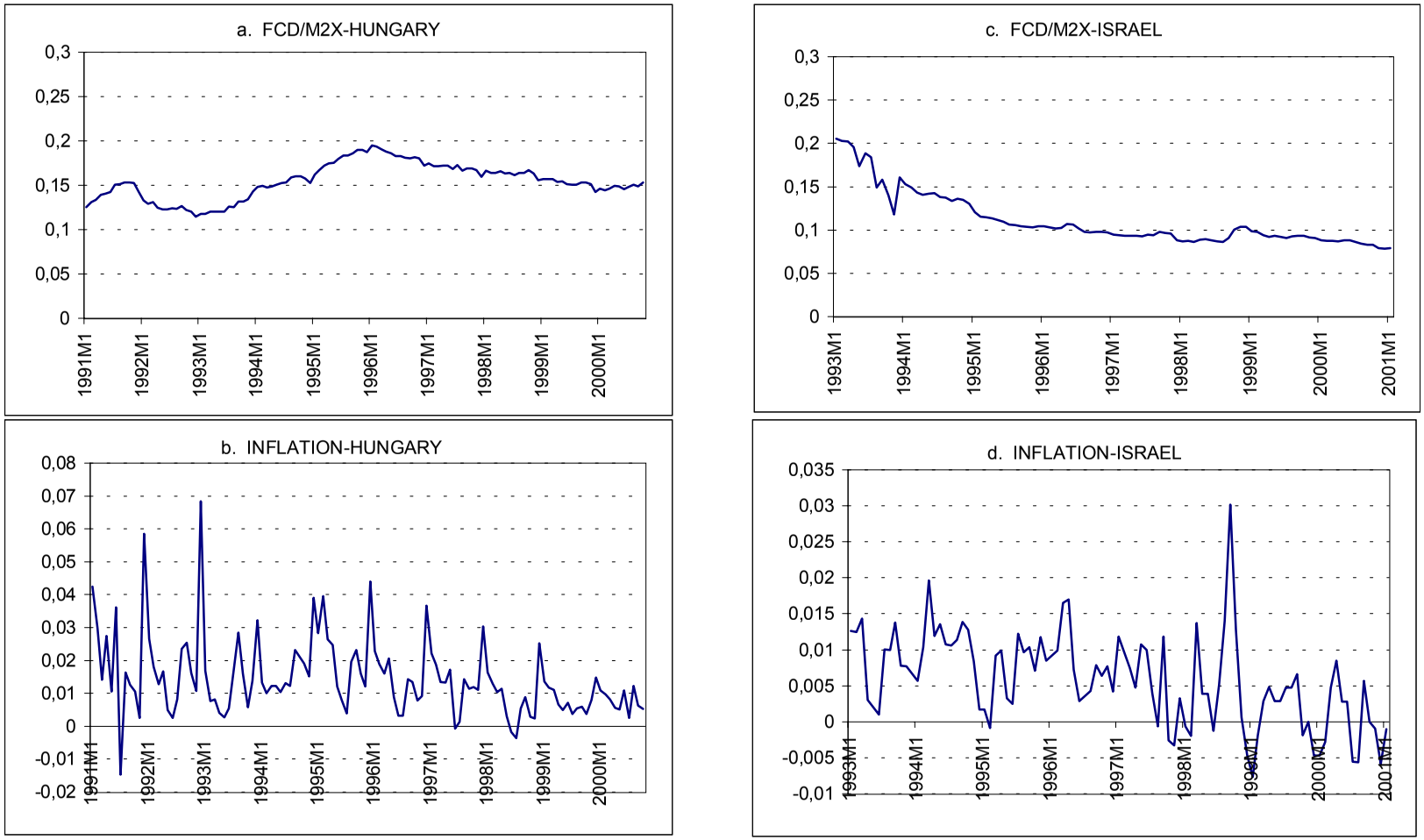

Figure2: Foreign currency deposits ratio to M2X money supply where M2X is defined M2 money supply plus foreign currency deposits. Data for M2 are taken directly. Data for foreign currency deposits are taken as follows: (a) Hungary-sum of household foreign exchange deposits and enterprises foreign exchange deposits.(c) Israel-sum of foreign currency deposits and exchange rate indexed deposits. The figures below (b), (d) indicate monthly inflation data which are calculated as the growth of the consumer price indices of those countries. Scales are different. Source: Datastream.

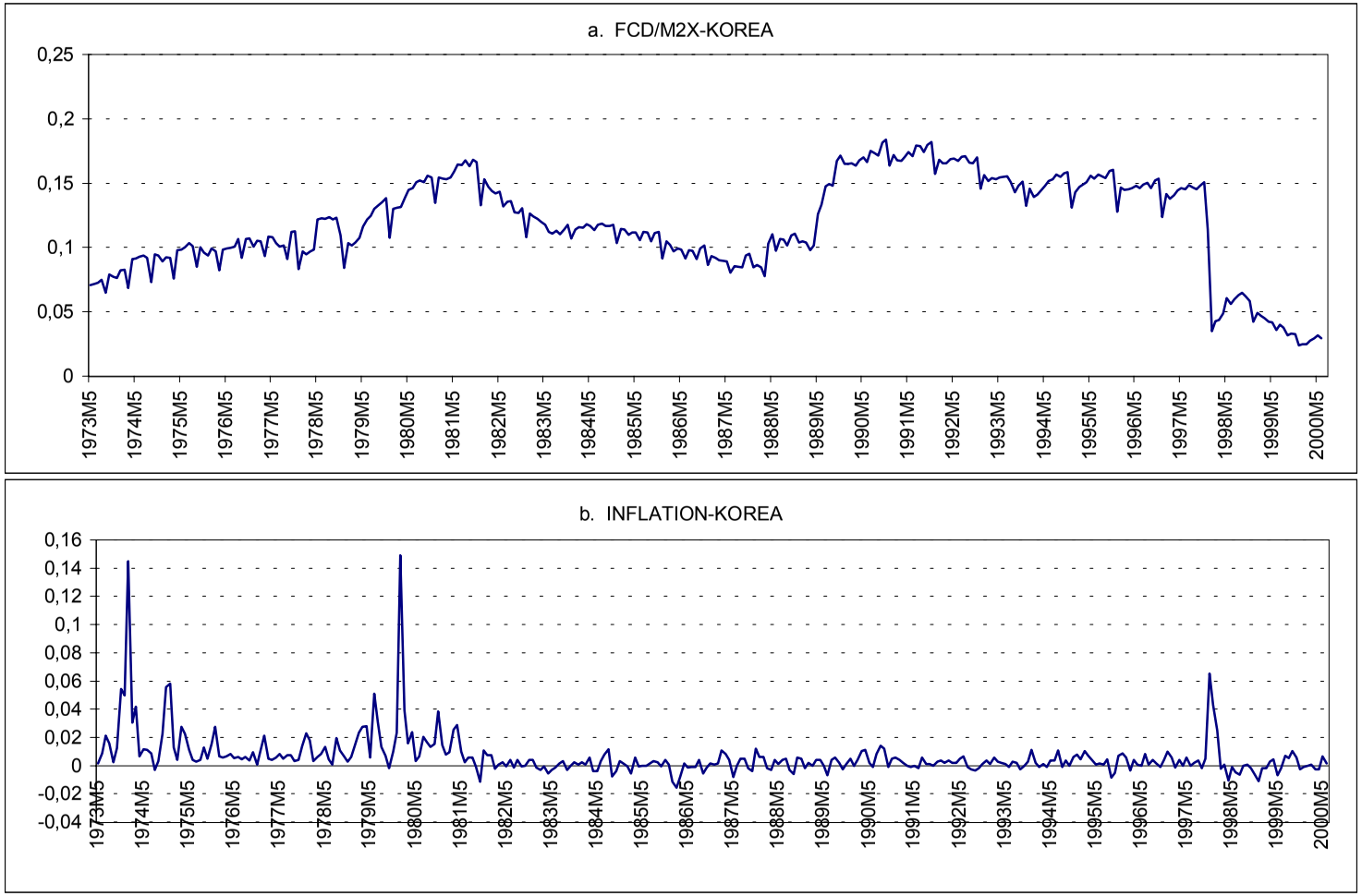

Figure3: Foreign currency deposits ratio to M2X money supply where M2X is defined M2 money supply plus foreign currency deposits. Data for M2 are taken directly. Data for foreign currency deposits are taken as follows: (a) Korea-foreign currency deposits. The figure below indicates monthly inflation data which are calculated as the growth of the wholesale price index of the country. Source: Datastream.

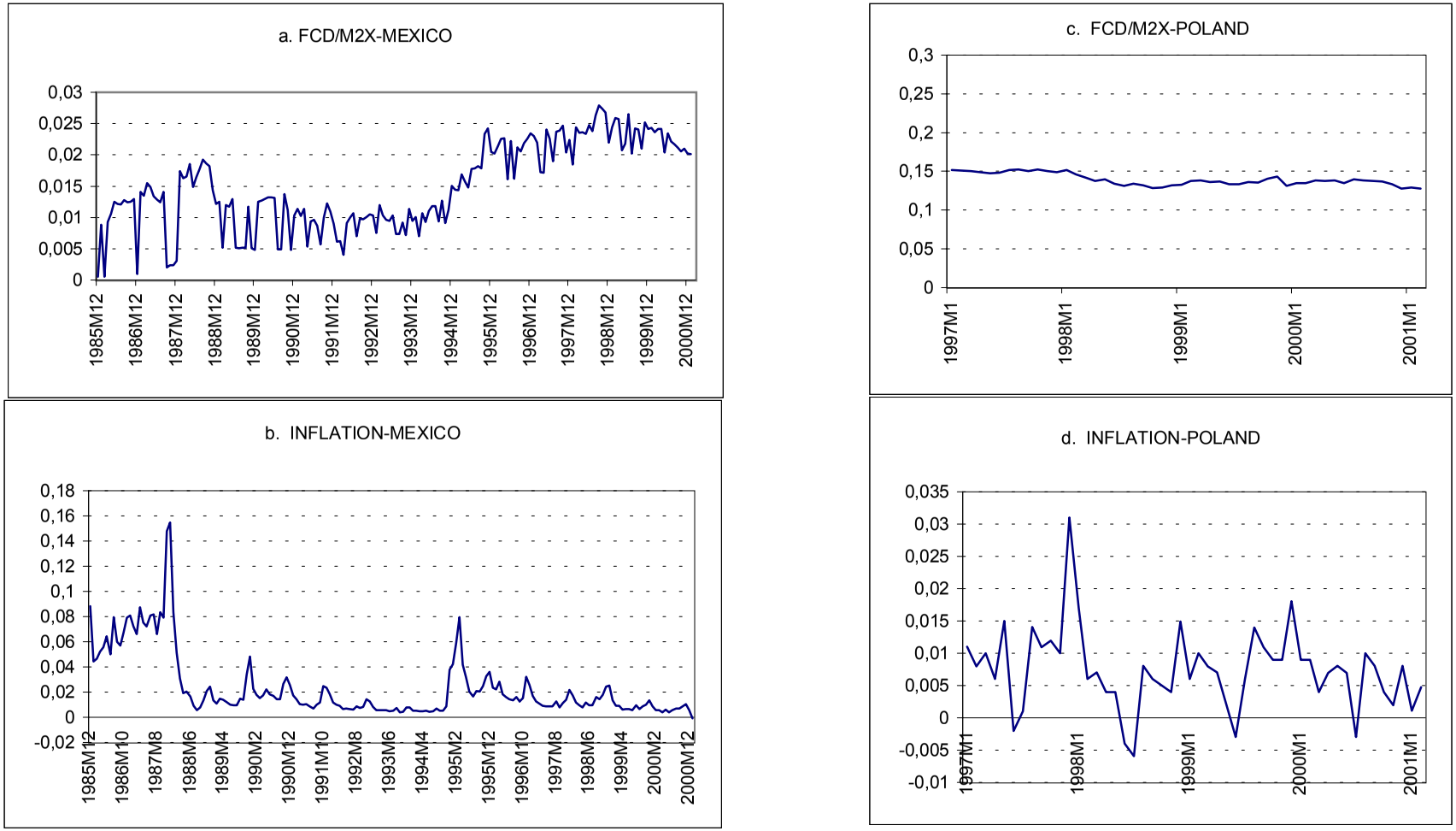

Figure4: Foreign currency deposits ratio to M2X money supply where M2X is defined M2 money supply plus foreign currency deposits. Data for M2 are taken directly. Data for foreign currency deposits are taken as follows: (a) Mexico- demand deposits denominated in foreign currency (c) Poland-foreign currency deposits. Scales are different. Source: Datastream. The figures below (b), (d) indicate monthly inflation data which are calculated as the growth of the consumer price indices of those countries.

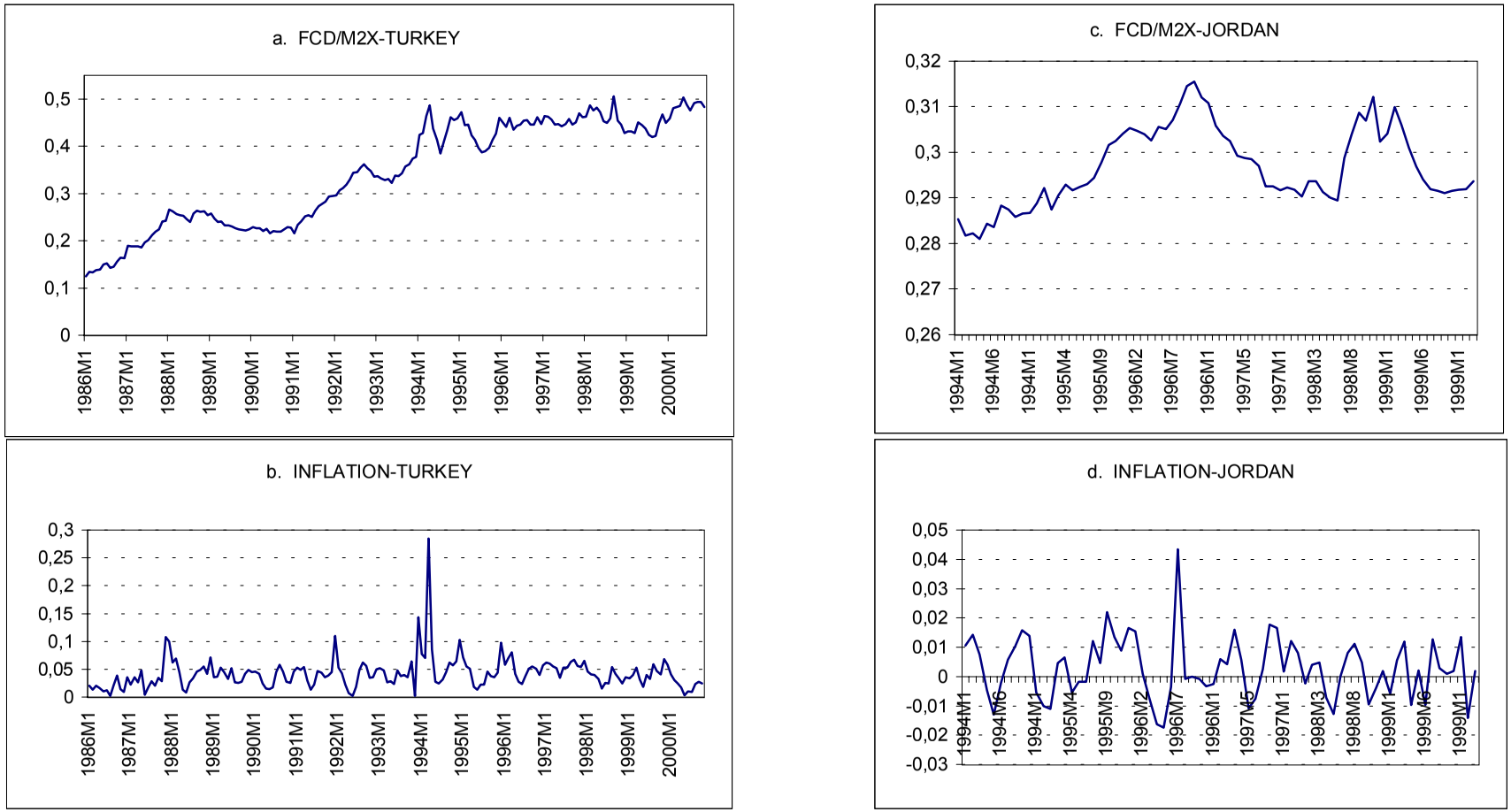

Figure5: Foreign currency deposits ratio to M2X money supply where M2X is defined M2 money supply plus foreign currency deposits.(a) Data for foreign currency deposits for Turkey are taken directly. Data for M2 is the sum of demand deposits, time and saving deposits, and foreign currency deposits held by residents in the domestic bank. Source: IFS. (c) Data for M2 for Jordan and foreign currency deposits are taken directly. Source: Datastream. The figures below (b), (d) are monthly inflation data which are calculated as the growth of the wholesale price index for Turkey and the growth of consumer price index for Jordan.

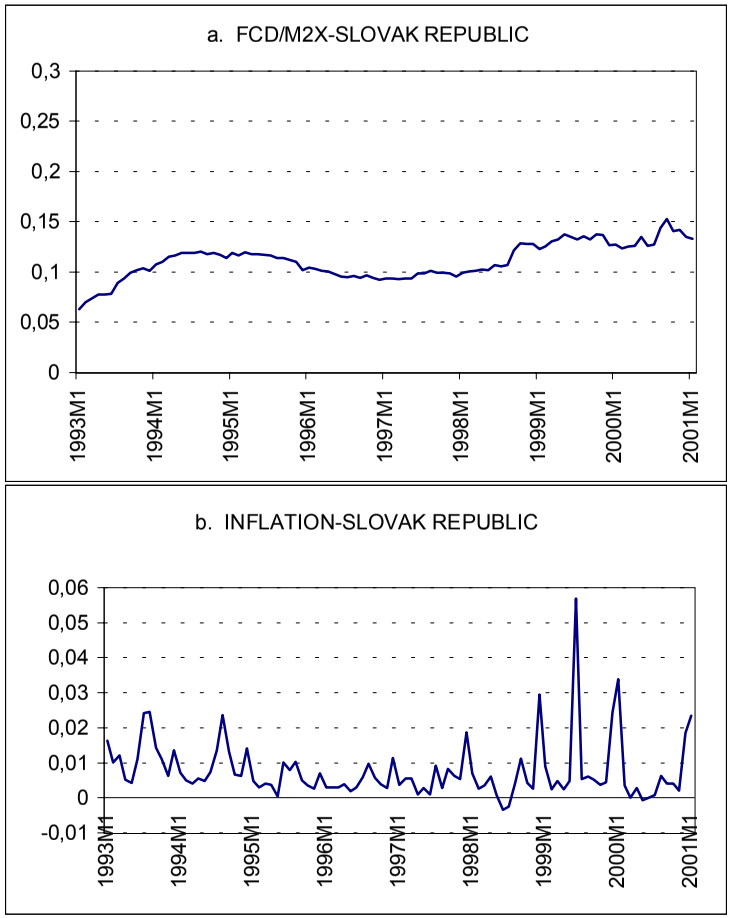

Figure6: (a) Foreign currency deposits ratio to M2X money supply where M2X is defined M2 money supply plus foreign currency deposits. Data for foreign currency deposits are taken directly. Data for M2 is sum of demand deposits, time and saving deposits, and foreign currency deposits held by residents in domestic banks for both Slovak Republic.Romania has other resident time deposits instead of foreign currency deposits. The figure below (b) are monthly inflation data which are calculated as the growth of the consumer price indices of those countries. Scales are different. Source: IFS.

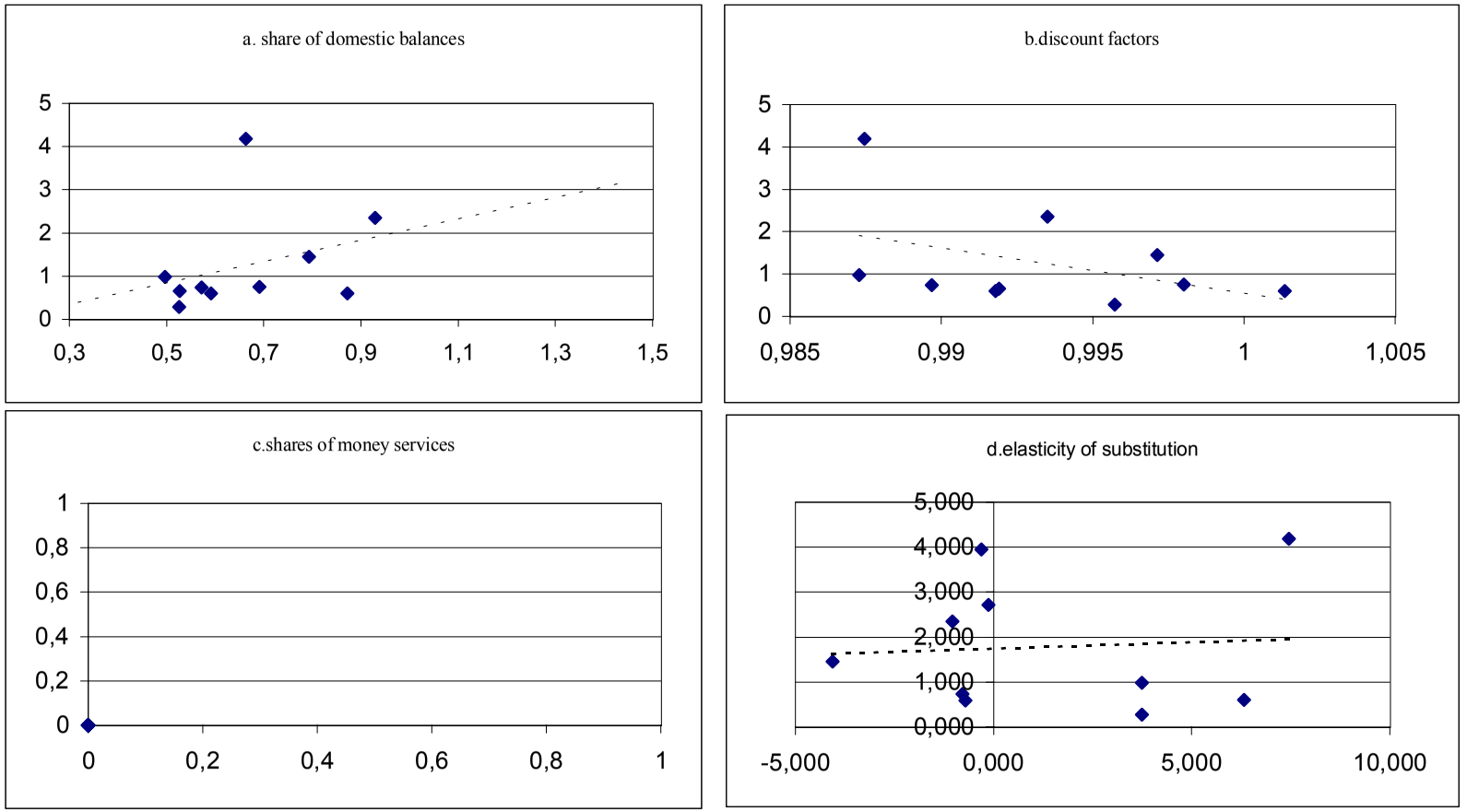

Figure 7: Vertical axes are average monthly inflation rates versus estimate results of (a) share of domestic real balances, (b) discount factors,(c) share of money services in the utility function and (d) elasticity coefficient, from the equation (4.2).

APPENDIX C

DATA

DATA FOR ALBANIA										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1994M12	13,30	94,90	0,14018967	98,24	0,00142703	70,77	96,49	0,7335054	0,9821741	10,00
1995M1	13,15	94,90	0,1385922	98,63	0,00140513	72,23	98,18	0,7356777	0,9953991	12,69
1995M2	13,15	93,68	0,14040564	99,03	0,00141786	73,07	100,45	0,7274538	1,01432342	11,43
1995M3	12,99	91,77	0,14151901	99,35	0,00142438	74,61	100,75	0,7405278	1,01407382	10,17
1995M4	12,86	92,89	0,13848423	99,68	0,00138925	75,85	102,44	0,7405092	1,02761961	12,98
1995M5	13,36	92,43	0,14454398	99,88	0,00144718	78,16	101,95	0,7666611	1,02075797	13,47
1995M6	14,43	91,99	0,15684531	100,08	0,00156725	81,39	100,10	0,8131375	1,00017986	13,85
1995M7	14,69	90,35	0,16259989	100,08	0,00162475	85,03	96,79	0,878527	0,96713331	14,18
1995M8	15,72	91,48	0,17182554	100,34	0,00171245	88,64	97,58	0,9083585	0,97249524	14,70
1995M9	17,65	94,39	0,18695625	100,54	0,0018596	92,79	98,62	0,9409221	0,98094812	14,98
1995M10	19,39	92,18	0,21036884	100,86	0,00208567	94,86	99,28	0,9554678	0,9842828	14,30
1995M11	19,80	92,16	0,21480903	100,80	0,00213108	98,71	101,59	0,9716792	1,00781762	14,40
1995M12	20,08	94,15	0,21327138	100,73	0,00211719	107,45	102,29	1,050482	1,01541699	14,49
1996M1	21,62	95,35	0,22675511	101,32	0,00223794	110,43	104,37	1,0580469	1,03006228	14,45
1996M2	21,85	98,33	0,22221194	101,65	0,00218601	112,30	106,22	1,0572201	1,04491796	15,50
1996M3	21,45	99,03	0,2166394	102,18	0,00212024	112,93	107,80	1,0475608	1,05504174	14,03
1996M4	23,14	102,70	0,22531159	102,57	0,00219666	116,56	109,38	1,065644	1,06643268	15,65
1996M5	23,10	111,35	0,20749998	102,77	0,00201913	118,42	110,55	1,0712013	1,07573443	17,10
1996M6	23,15	110,01	0,21044723	102,83	0,0020465	122,77	109,72	1,1189433	1,06694349	17,89
1996M7	25,03	111,25	0,22497888	103,03	0,00218362	127,95	112,48	1,1375639	1,09167233	18,91
1996M8	26,74	108,84	0,24563671	103,23	0,00237958	132,17	115,11	1,1481817	1,11511523	18,96
1996M9	28,38	108,42	0,26172754	103,56	0,00252743	135,47	117,99	1,1481841	1,13936555	19,90
1996M10	32,43	106,90	0,30338915	103,88	0,00292049	143,63	119,70	1,1999039	1,15223858	20,30
1996M11	30,57	99,78	0,30633193	104,08	0,00294324	144,39	119,30	1,2102936	1,14621445	19,91
1996M12	33,91	102,03	0,33231893	104,08	0,00319292	154,55	120,10	1,2868824	1,15390085	21,06
1997M1	35,19	110,94	0,31718496	104,41	0,00303794	151,97	122,05	1,2451519	1,16895257	20,42
1997M2	34,58	129,10	0,26785747	104,74	0,00255745	154,25	128,54	1,2000451	1,2272571	22,90
1997M3	35,36	143,46	0,246445	105,00	0,00234714	157,03	146,59	1,0712119	1,39614088	29,43
1997M4	33,60	147,05	0,22846787	105,13	0,00217319	161,21	144,35	1,1167697	1,37306192	30,02
1997M5	37,10	159,97	0,23193911	105,06	0,0022076	168,07	145,85	1,152371	1,38818244	30,40
1997M6	36,62	179,07	0,20450047	105,20	0,00194401	173,97	153,75	1,1315033	1,46156186	34,78
1997M7	30,30	171,59	0,17661169	105,33	0,00167681	173,32	151,87	1,1412133	1,44191368	38,20
1997M8	31,89	158,35	0,20140006	105,52	0,00190859	180,17	152,80	1,1791546	1,44798764	38,23
1997M9	34,96	148,63	0,23522422	105,79	0,00222359	185,33	155,25	1,1937174	1,46762331	37,46
1997M10	35,03	147,16	0,23800625	106,05	0,00224433	188,19	163,08	1,1539981	1,53775649	37,49
1997M11	34,66	142,88	0,24259099	105,98	0,00228896	190,31	166,80	1,140952	1,57383731	35,90
1997M12	36,33	149,00	0,24379732	105,85	0,00230321	198,55	170,62	1,1637056	1,61185062	35,90
1998M1	36,65	152,28	0,24068689	106,05	0,0022696	200,08	176,51	1,1335316	1,66447269	32,42

1998M2	36,58	156,48	0,23375256	106,25	0,00220013	202,37	179,71	1,1260799	1,69149607	34,50
1998M3	35,56	159,38	0,2231221	106,44	0,00209618	203,14	181,80	1,1173357	1,70801	30,68
1998M4	35,90	159,29	0,22535376	106,64	0,00211324	207,20	184,74	1,121614	1,73235871	30,00
1998M5	36,14	156,42	0,23101649	106,84	0,00216235	211,07	184,39	1,1447146	1,72588828	29,96
1998M6	35,75	153,37	0,23311665	106,97	0,00217933	212,35	181,17	1,1721219	1,69370927	28,92
1998M7	35,65	150,17	0,23739229	107,10	0,00221659	216,26	177,53	1,2181766	1,65764067	26,82
1998M8	38,44	148,51	0,25882432	107,23	0,00241373	222,27	178,26	1,2468645	1,66243589	26,00
1998M9	38,70	147,99	0,26153254	107,36	0,00243601	225,40	180,85	1,246387	1,68446643	23,29
1998M10	39,17	142,47	0,27495613	107,62	0,00255481	227,92	181,32	1,2570182	1,68477928	24,00
1998M11	39,89	141,13	0,28265925	107,62	0,00262638	232,25	181,70	1,2781524	1,68833799	22,86
1998M12	40,26	140,11	0,2873635	107,56	0,00267171	239,53	185,44	1,2916915	1,72405586	20,44
1999M1	43,00	139,93	0,30732366	107,82	0,00285034	242,56	187,12	1,2962885	1,73547579	20,10
1999M2	43,55	140,48	0,3099879	107,95	0,00287156	245,71	185,98	1,321159	1,72280016	19,75
1999M3	44,89	142,33	0,31541348	108,28	0,00291294	250,50	185,45	1,3508081	1,71264315	18,74
1999M4	46,26	144,72	0,31963764	109,07	0,00293065	258,25	185,47	1,3923853	1,70051436	18,89
1999M5	47,42	141,42	0,3353083	109,07	0,00307433	261,66	184,28	1,4199199	1,6895853	18,48
1999M6	48,15	137,40	0,35043013	109,07	0,00321298	264,39	180,08	1,4681964	1,6510952	18,46
1999M7	51,32	135,55	0,37861453	109,40	0,00346099	266,88	177,73	1,5016227	1,62466292	17,74
1999M8	53,43	132,87	0,40215399	109,66	0,00366735	272,76	177,24	1,5389525	1,61628883	17,16
1999M9	53,49	135,36	0,39514849	110,18	0,00358629	274,88	177,42	1,5492915	1,6102484	15,72
1999M10	55,27	132,53	0,41704218	110,38	0,00377824	279,69	178,11	1,5703804	1,61356224	15,20
1999M11	55,23	134,39	0,41093162	110,45	0,00372069	281,24	179,50	1,5668154	1,62520712	15,20
1999M12	53,21	135,31	0,39324071	110,45	0,00356051	292,87	183,53	1,5957745	1,66172303	15,00
2000M1	57,41	136,62	0,4202007	110,77	0,00379335	296,06	184,69	1,603023	1,66725646	14,62
2000M2	56,53	139,52	0,40519495	111,43	0,00363632	294,61	183,55	1,6050552	1,64725837	13,46
2000M3	56,73	140,81	0,40291457	112,35	0,00358631	295,41	181,51	1,6274737	1,61562289	12,93
2000M4	56,74	142,44	0,39837544	112,41	0,00354382	296,86	182,81	1,6238693	1,62623872	12,80
2000M5	57,69	147,37	0,39144398	112,55	0,00347811	298,88	184,28	1,6218756	1,63737172	12,24
2000M6	57,08	140,75	0,40551972	113,14	0,00358436	299,84	180,20	1,6639859	1,59273794	10,80
2000M7	60,26	140,60	0,42857183	113,40	0,00377936	304,17	175,38	1,7343561	1,54659694	10,32
2000M8	64,43	143,58	0,44870873	113,40	0,00395694	311,49	176,07	1,7691138	1,55269052	9,58
2000M9	63,05	148,38	0,42489015	113,99	0,00372747	311,73	179,07	1,7407909	1,5709586	8,63
2000M10	61,99	149,01	0,41599557	114,19	0,00364314	313,87	181,32	1,7309948	1,58794423	8,63
2000M11	63,17	149,35	0,42293472	114,25	0,0037018	317,50	182,85	1,7363536	1,60045864	7,82
2000M12	63,60	146,08	0,43540389	114,19	0,00381311	328,10	191,24	1,7156231	1,67483755	7,82

DATA FOR THE CZECH REPUBLIC										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1993M1	58,354	28,56	2,04342193	93,58	0,02183614	627,805	79,88	7,85920395	0,85361905	6,75
1993M2	58,563	28,89	2,0274537	93,91	0,02158981	620,279	80,93	7,66468257	0,86176882	6,94
1993M3	57,431	28,83	1,99205689	94,24	0,02113902	619,151	81,40	7,60669816	0,86374103	7,17
1993M4	59,839	28,34	2,1115424	94,50	0,02234472	637,474	81,86	7,78697866	0,86630052	7,28
1993M5	58,505	28,58	2,04741907	94,63	0,02163609	642,979	82,22	7,81978873	0,8689081	7,50
1993M6	58,276	29,64	1,9659942	94,76	0,02074687	652,546	82,51	7,90840231	0,87074851	7,00
1993M7	59,274	29,88	1,98406695	94,76	0,02093759	670,723	83,13	8,06877047	0,87721531	6,96
1993M8	61,125	29,30	2,08624868	95,02	0,02195508	684,881	83,70	8,1823243	0,88086105	6,99
1993M9	60,671	28,68	2,11574139	95,22	0,02221941	691,894	84,89	8,15027547	0,8915327	7,01
1993M10	58,124	29,42	1,97546137	95,61	0,02066077	696,101	85,83	8,11029567	0,89766363	6,99
1993M11	56,508	29,82	1,89484273	95,68	0,019804	706,682	86,26	8,19228419	0,90156857	6,96
1993M12	56,731	29,96	1,89387414	95,68	0,01979388	745,945	86,98	8,57576604	0,90910412	6,84
1994M1	56,787	30,04	1,89037949	95,94	0,0197033	725,235	88,61	8,1850347	0,92352383	7,15
1994M2	56,893	29,87	1,90475074	96,27	0,01978542	737,23	88,79	8,30352356	0,92224817	7,12
1994M3	55,972	29,40	1,90355054	96,60	0,0197058	741,361	89,04	8,32638121	0,9217286	7,49
1994M4	56,139	29,44	1,90683061	96,73	0,01971298	758,912	89,40	8,48912896	0,92420529	7,15
1994M5	57,528	29,08	1,97799477	96,80	0,0204348	771,902	89,87	8,58941076	0,92841912	7,14
1994M6	57,897	28,27	2,04800141	97,12	0,02108657	783,312	90,48	8,65734227	0,93159225	7,14
1994M7	60,266	28,23	2,13489674	97,39	0,02192201	794,556	91,20	8,71219863	0,93648368	7,09
1994M8	58,369	28,35	2,05894388	97,78	0,02105697	798,559	92,21	8,66024002	0,94303623	7,05
1994M9	57,74	27,94	2,06657122	98,04	0,02107838	801,141	93,29	8,58776036	0,95151578	6,91
1994M10	58,086	27,29	2,12831599	98,11	0,02169365	815,103	94,21	8,65242965	0,96022029	6,86
1994M11	56,058	28,13	1,99260655	98,24	0,02028323	828,572	94,94	8,72748799	0,96639933	6,79
1994M12	59,059	28,05	2,10556526	98,24	0,02143307	876,713	95,58	9,17259541	0,97292829	6,95
1995M1	57,559	27,53	2,0911535	98,63	0,0212014	859,165	96,86	8,86993535	0,98205262	6,96
1995M2	56,455	26,86	2,10213732	99,03	0,02122801	846,643	97,60	8,6750031	0,98555035	6,89
1995M3	56,606	25,82	2,19258628	99,35	0,02206827	871,514	97,87	8,90475792	0,98506261	6,98
1995M4	56,892	25,74	2,21008469	99,68	0,02217117	906,77	98,88	9,17052914	0,99193341	6,97
1995M5	53,29	25,96	2,05293166	99,88	0,02055404	959,639	99,25	9,66937444	0,99364736	6,98
1995M6	56,285	26,12	2,15469719	100,08	0,02153039	958,067	100,25	9,55649208	1,00175865	7,02
1995M7	52,036	25,96	2,0042368	100,08	0,02002695	974,596	100,35	9,71245204	1,00267794	6,95
1995M8	51,205	27,10	1,88983207	100,34	0,01883447	988,678	100,35	9,85278788	1,0000598	6,95
1995M9	50,602	26,36	1,91972381	100,54	0,01909489	987,907	101,26	9,75604626	1,00721135	7,02
1995M10	52,338	26,29	1,99079498	100,86	0,01973742	1014,817	101,90	9,95865676	1,010301	6,99
1995M11	51,914	26,59	1,95253498	100,80	0,01937077	1033,119	102,54	10,0748849	1,01732177	6,88
1995M12	57,656	26,60	2,16735584	100,73	0,02151585	1074,716	103,09	10,4246222	1,0234382	6,95
1996M1	58,58	27,29	2,14688851	101,32	0,02118856	1060,56	105,48	10,0548935	1,0409976	6,90
1996M2	59,135	27,01	2,18969859	101,65	0,02154113	1076,55	106,03	10,1535458	1,043039	6,92

1996M3	58,928	27,35	2,15466745	102,18	0,0210876	1077,681	106,58	10,1118545	1,04305274	6,92
1996M4	58,611	27,69	2,11660828	102,57	0,02063574	1100,222	107,31	10,2528399	1,04620259	6,93
1996M5	65,781	27,87	2,35994116	102,77	0,022964	1126,082	107,86	10,4403156	1,04954898	6,82
1996M6	67,447	27,61	2,44275832	102,83	0,02375461	1129,142	108,68	10,3892201	1,05689808	6,70
1996M7	67,184	26,58	2,52799518	103,03	0,0245365	1146,624	109,78	10,4443635	1,06555372	6,74
1996M8	66,162	26,04	2,54088099	103,23	0,0246145	1149,078	109,97	10,4492984	1,065293	6,70
1996M9	65,388	26,94	2,4270814	103,56	0,02343761	1130,261	110,24	10,2525444	1,06457438	6,72
1996M10	65,768	26,90	2,44508885	103,88	0,02353695	1143,414	110,79	10,3203661	1,06650751	6,74
1996M11	67,687	27,05	2,50247708	104,08	0,02404378	1154,329	111,34	10,3674175	1,06977325	6,75
1996M12	69,329	27,33	2,53655056	104,08	0,02437116	1169,46	111,98	10,4431923	1,07593198	6,68
1997M1	67,7943	27,82	2,43662797	104,41	0,02333756	1109,4863	113,27	9,79540462	1,08484024	6,62
1997M2	71,2719	28,78	2,47609436	104,74	0,02364129	1121,9409	113,72	9,86547167	1,08581577	6,66
1997M3	75,8634	29,20	2,59788371	105,00	0,02474222	1121,0894	113,82	9,85001581	1,08398255	6,68
1997M4	78,364	31,01	2,52746331	105,13	0,02404131	1137,112	114,46	9,93484016	1,08871873	6,63
1997M5	114,01	32,69	3,48750421	105,06	0,03319409	1193,376	114,64	10,4096789	1,09115396	9,90
1997M6	115,215	32,05	3,59440319	105,20	0,03416895	1191,266	116,02	10,2682067	1,1028566	8,88
1997M7	114,535	34,61	3,30959055	105,33	0,03142235	1212,887	120,05	10,1034345	1,13976606	8,21
1997M8	120,136	33,80	3,55474021	105,52	0,03368688	1232,326	120,87	10,1952975	1,14545644	7,78
1997M9	118,146	32,79	3,6035503	105,79	0,03406453	1218,523	121,61	10,0203363	1,14953775	7,74
1997M10	123,022	32,89	3,74063488	106,05	0,03527304	1235,323	122,16	10,1127502	1,15188405	7,58
1997M11	124,177	34,45	3,6049759	105,98	0,03401466	1249,213	122,61	10,188259	1,15691196	7,84
1997M12	133,596	34,64	3,85714286	105,85	0,03643936	1305,332	123,16	10,5984102	1,16355065	8,05
1998M1	128,908	34,98	3,68550762	106,05	0,0347532	1251,563	128,11	9,76928781	1,20805673	8,47
1998M2	126,827	34,15	3,71382138	106,25	0,03495526	1247,25	128,94	9,67340386	1,2135724	8,47
1998M3	125,944	33,68	3,739652	106,44	0,03513324	1255,861	129,12	9,72630886	1,213055	8,47
1998M4	125,2	33,15	3,77688618	106,64	0,03541749	1253,755	129,49	9,68255255	1,2142462	8,46
1998M5	131,983	33,35	3,95810466	106,84	0,03704842	1282,84	129,58	9,90013737	1,21286832	8,20
1998M6	135,859	33,42	4,06483559	106,97	0,03800084	1302,311	129,94	10,0220941	1,21480457	8,40
1998M7	138,982	30,88	4,50042096	107,10	0,04202152	1308,091	132,51	9,87163988	1,23727801	8,39
1998M8	143,094	33,46	4,27682468	107,23	0,03988459	1332,048	132,23	10,0734915	1,23317169	8,18
1998M9	129,488	29,94	4,32549439	107,36	0,04028925	1314,338	132,33	9,93250055	1,23254254	8,18
1998M10	127,047	28,93	4,39229041	107,62	0,04081182	1305,593	132,14	9,88007779	1,22784163	7,97
1998M11	129,02	30,54	4,22503848	107,62	0,03925777	1317,65	131,78	9,99908937	1,22443158	7,33
1998M12	137,798	29,86	4,61557528	107,56	0,04291243	1350,175	131,50	10,2673343	1,22261478	6,44
1999M1	133,87	31,83	4,20564858	107,82	0,0390062	1350,913	132,60	10,1877272	1,22984604	6,44
1999M2	136,793	34,41	3,9759628	107,95	0,03683118	1371,937	132,60	10,3462768	1,2283536	5,31
1999M3	135,15	35,85	3,77040033	108,28	0,03482084	1368,599	132,33	10,3425529	1,22208164	4,93
1999M4	135,557	35,59	3,80842277	109,07	0,03491819	1381,207	132,69	10,4089635	1,21662831	4,68
1999M5	137,498	36,13	3,80564628	109,07	0,03489274	1391,053	132,60	10,4904375	1,21578479	4,53
1999M6	136,207	35,40	3,84776406	109,07	0,0352789	1392,952	132,88	10,4830181	1,21830618	4,28

1999M7	137,117	34,40	3,98607518	109,40	0,03643745	1386,131	133,89	10,3531464	1,22386764	4,18
1999M8	140,98	35,02	4,02558465	109,66	0,03671036	1402,017	133,98	10,4646877	1,22176221	4,06
1999M9	135,687	33,84	4,00966312	110,18	0,03639094	1401,522	133,98	10,460993	1,21594075	3,95
1999M10	139,174	34,43	4,04223061	110,38	0,03662104	1409,994	133,98	10,5242282	1,21377061	3,87
1999M11	139,968	35,61	3,93091246	110,45	0,03559158	1418,492	134,25	10,5659697	1,2155462	3,80
1999M12	145,263	35,98	4,03743851	110,45	0,0365561	1389,576	134,89	10,3013203	1,22135905	3,74
2000M1	142,594	36,27	3,93145851	110,77	0,03549113	1465,173	137,20	10,6791035	1,23856897	3,71
2000M2	143,796	36,67	3,92113874	111,43	0,03518926	1487,955	137,50	10,8214909	1,23395854	3,60
2000M3	140,249	37,25	3,7651749	112,35	0,0335135	1483,148	137,50	10,7865309	1,22387581	3,60
2000M4	144,755	39,34	3,67940115	112,41	0,03273081	1487,21	137,30	10,8318281	1,22137812	3,55
2000M5	146,747	38,65	3,79642469	112,55	0,0337325	1498,541	137,60	10,8905596	1,22262206	3,46
2000M6	144,173	37,76	3,81803978	113,14	0,03374735	1482,697	138,40	10,7131286	1,22330646	3,71
2000M7	149,427	38,38	3,89335591	113,40	0,03433355	1496,919	139,20	10,7537284	1,22753488	3,41
2000M8	158,034	39,74	3,97689869	113,40	0,03507027	1528,681	139,50	10,9582867	1,23018043	3,33
2000M9	152,916	40,02	3,82118047	113,99	0,03352236	1523,089	139,50	10,9182007	1,2238023	3,32
2000M10	158,871	40,93	3,88133978	114,19	0,03399138	1532,641	139,90	10,9552609	1,22519398	3,22
2000M11	161,728	40,13	4,03010217	114,25	0,03527411	1553,683	140,00	11,0977357	1,22537221	3,14
2000M12	167,389	37,81	4,42675799	114,19	0,03876796	1611,677	140,30	11,4873628	1,22869704	3,02

DATA FOR HUNGARY										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1991M1	127	68,5942	1,85146849	88,3299	0,02096084	1012,1	38,5902	26,2268659	0,43688717	29,1
1991M2	135,6	69,5312	1,95020365	88,4611	0,02204589	1036,6	40,2299	25,7669047	0,45477504	28,6
1991M3	139,8	72,6464	1,92438992	88,5924	0,02172184	1048,2	41,4313	25,299713	0,46766201	28,8
1991M4	148,6	75,1838	1,97648962	88,7236	0,02227693	1066,5	42,0157	25,3833686	0,4735572	28,9
1991M5	155,4	75,5736	2,05627362	88,9861	0,02310781	1104,4	43,1684	25,5835287	0,48511397	30,7
1991M6	159	76,9751	2,06560303	89,2486	0,02314437	1114,7	43,623	25,5530339	0,48878078	30,4
1991M7	173,7	77,2875	2,24745269	89,3799	0,02514495	1154,4	45,1977	25,5411227	0,50568081	30,9
1991M8	177,5	76,2677	2,32732861	89,6423	0,02596239	1172,5	44,5321	26,329322	0,49677552	31,1
1991M9	182,2	75,4876	2,41364145	90,0361	0,02680749	1187,9	45,2627	26,2445678	0,50271724	31,5
1991M10	184	75,2144	2,44634006	90,1673	0,02713112	1201,7	45,8309	26,2203012	0,50828737	31,9
1991M11	191,8	77,284	2,4817556	90,4298	0,027444	1254,9	46,3179	27,0931972	0,51219731	31,9
1991M12	195,3	76,7791	2,54366097	90,4955	0,02810815	1366	46,4316	29,4196194	0,51308187	31,1
1992M1	196,9	76,9168	2,55990889	90,6267	0,02824674	1478,1	49,1475	30,0747749	0,54230707	31,9
1992M2	190,1	77,811	2,4430993	90,9548	0,02686059	1472,6	50,4535	29,1872714	0,55470959	31,4
1992M3	197,5	79,64	2,47990959	91,4142	0,02712828	1509,3	51,3676	29,3823344	0,56192145	29,8
1992M4	194,4	79,978	2,43066843	91,5454	0,02655151	1559,4	52,0206	29,9765862	0,5682492	28,6
1992M5	192,6	79,2806	2,42934589	91,6767	0,02649905	1572,2	52,8912	29,7251717	0,57693176	28,1
1992M6	199,4	78,464	2,54129282	92,0048	0,02762131	1621,6	53,1524	30,5085001	0,57771334	26,4
1992M7	206,9	77,4897	2,67003228	92,2017	0,0289586	1671,6	53,283	31,3721074	0,57789607	22,1
1992M8	212,9	76,6426	2,77782852	92,4642	0,03004221	1722	53,7183	32,056115	0,58096323	20,6
1992M9	220,6	77,3893	2,85052326	92,7267	0,03074113	1740,4	54,9808	31,6546867	0,59293386	19,6
1992M10	213,2	78,7987	2,70562839	93,0548	0,02907565	1746	56,3738	30,9718344	0,60581292	18,4
1992M11	214,5	82,529	2,59908638	93,186	0,02789138	1782,8	57,288	31,1199553	0,61477046	18,4
1992M12	215,8	82,921	2,60247706	93,1204	0,02794744	1882,3	57,8974	32,510959	0,62174776	17,6
1993M1	219,7	83,83	2,62078015	93,5798	0,02800583	1865,2	61,8588	30,1525409	0,66102727	17,2
1993M2	223,4	85,8029	2,6036416	93,9079	0,02772548	1896,5	62,9036	30,1493078	0,66984354	16,1
1993M3	230,8	87,1248	2,64907351	94,236	0,02811106	1918,4	63,3824	30,2670773	0,67259222	15,1
1993M4	234,2	87,6453	2,67213416	94,4985	0,028277	1945	63,9048	30,4358984	0,676252	14,8
1993M5	236,8	87,6655	2,70117663	94,6298	0,02854467	1965	64,166	30,6236948	0,67807393	14,2
1993M6	238,6	90,2683	2,64323134	94,761	0,02789366	1981,7	64,3401	30,8003873	0,67897236	14,5
1993M7	257,9	94,5871	2,72658745	94,761	0,02877331	2047,2	64,6884	31,6470959	0,68264792	14,6
1993M8	258,7	95,2813	2,71511829	95,0235	0,02857312	2060,2	65,8202	31,3004215	0,69267287	14,7
1993M9	276,6	93,4563	2,95967206	95,2204	0,03108233	2096,4	67,6921	30,9696405	0,71089914	15,7
1993M10	276	97,8523	2,82057754	95,6141	0,0294996	2095,6	68,7804	30,4679822	0,71935415	16,7
1993M11	286,7	99,715	2,8751943	95,6798	0,03005017	2139,8	69,1722	30,9343927	0,72295511	17,1
1993M12	328,3	99,9694	3,28400491	95,6798	0,03432287	2295,4	70,1299	32,7306898	0,73296453	17,1
1994M1	334,4	101,862	3,28287291	95,9423	0,03421716	2262,2	72,3935	31,2486618	0,75455248	17,9
1994M2	340,3	102,995	3,30404389	96,2704	0,03432045	2280,4	73,3512	31,0887893	0,7619289	17,4
1994M3	338,5	103,04	3,28513199	96,5985	0,03400811	2296	74,0913	30,9887936	0,76700259	17,8

1994M4	346,6	103,203	3,3584295	96,7297	0,03471973	2327,2	75,0054	31,0270994	0,77541231	18,5
1994M5	356	102,648	3,46816304	96,7954	0,03582983	2367	75,9196	31,1777196	0,78433066	18,4
1994M6	367,4	102,85	3,57219251	97,1235	0,0367799	2408,7	76,7032	31,4028619	0,78974913	19,1
1994M7	371	101,101	3,66959773	97,386	0,03768096	2424,6	77,7044	31,2028662	0,79790114	20,6
1994M8	396,7	107,807	3,67972395	97,7797	0,0376328	2500,2	78,6621	31,7840485	0,80448293	21,9
1994M9	401,5	108,28	3,70797931	98,0422	0,03782024	2503,9	80,4905	31,108019	0,82097811	22,2
1994M10	405,2	107,51	3,76895173	98,1078	0,03841643	2532,7	82,1926	30,8142096	0,83777844	22,7
1994M11	408,4	109,03	3,74575805	98,2391	0,03812899	2588,4	83,7554	30,904276	0,85256685	23,6
1994M12	405	111,6	3,62903226	98,2391	0,03694081	2651	85,0178	31,1817055	0,86541713	23,6
1995M1	426,2	111,452	3,82406776	98,6328	0,03877075	2634,5	88,3307	29,8254174	0,89555097	24,4
1995M2	446,6	111,773	3,99559822	99,0266	0,04034874	2677,5	90,8259	29,4794767	0,9171869	25,1
1995M3	470,6	116,159	4,05134342	99,3547	0,04077657	2733,4	94,419	28,9496817	0,95032243	26,4
1995M4	479,1	120,278	3,98327209	99,6828	0,03995947	2743,8	96,9142	28,3116406	0,9722259	26,1
1995M5	489,5	123,826	3,95312778	99,8797	0,03957889	2795,9	99,3097	28,1533425	0,99429313	26,4
1995M6	514,4	125,468	4,09985016	100,077	0,04096696	2857,5	100,507	28,4308556	1,00429669	27
1995M7	537,2	126,338	4,25208567	100,077	0,04248814	2926,6	101,306	28,8887134	1,01228054	27
1995M8	547,7	130,635	4,1925977	100,339	0,04178433	2982,4	101,705	29,3240254	1,01361385	26,6
1995M9	566,9	133,665	4,24120001	100,536	0,04218588	3048	103,701	29,3921949	1,03148126	26,1
1995M10	585,4	133,839	4,37391194	100,864	0,04336445	3081,3	106,097	29,0422915	1,05188174	26,1
1995M11	599,6	135,678	4,41928684	100,798	0,043843	3152,9	107,793	29,2495802	1,06939622	25,9
1995M12	626,5	139,066	4,50505515	100,733	0,04472273	3341,9	109,091	30,6340578	1,08297182	26,1
1996M1	647,4	141,92	4,56172492	101,323	0,04502161	3317	113,882	29,1266399	1,12395014	25,6
1996M2	655,9	144,4	4,54224377	101,652	0,04468425	3388,6	116,477	29,0924389	1,14584071	24,6
1996M3	649,6	146,04	4,44809641	102,177	0,04353325	3408,9	118,673	28,7251523	1,16144534	24,1
1996M4	643,8	148,75	4,32806723	102,57	0,04219623	3419,5	120,569	28,3613533	1,17548016	23,3
1996M5	651,3	151,93	4,28684262	102,767	0,04171419	3505,3	123,064	28,4835533	1,19750504	22,5
1996M6	648,5	152,79	4,24438772	102,833	0,04127457	3539,6	124,162	28,5079171	1,20741396	22
1996M7	658,8	153,15	4,30166503	103,03	0,04175158	3601,5	124,561	28,9135444	1,20897797	22
1996M8	669	153,93	4,34613136	103,227	0,04210266	3701,7	124,96	29,6230794	1,210536	21,3
1996M9	669,8	156,67	4,27522819	103,555	0,04128461	3712,8	126,757	29,2906901	1,22405485	20,8
1996M10	687,3	159,03	4,32182607	103,883	0,04160282	3778	128,454	29,4113068	1,23652571	20,4
1996M11	694,5	159,41	4,3566903	104,08	0,04185905	3845,8	129,452	29,7083089	1,24377402	19,8
1996M12	689,4	163,74	4,21033346	104,08	0,04045286	4007,4	130,65	30,6727899	1,2552844	20,1
1997M1	682,4	166,1	4,10836845	104,408	0,03934917	3909,9	135,44	28,8681335	1,2972186	19,6
1997M2	674	173,32	3,88876067	104,736	0,03712917	3935,7	138,435	28,4299491	1,32175183	19,5
1997M3	676,2	176,83	3,82401176	104,998	0,03641985	3945	141,03	27,9727718	1,34316844	19,2
1997M4	680,4	179,77	3,78483618	105,13	0,03600149	3952,7	142,926	27,65557	1,35951679	19
1997M5	701,7	181,4	3,86824697	105,064	0,03681801	4078,5	144,822	28,1621577	1,37841696	19,1
1997M6	687	185,04	3,71271077	105,195	0,0352936	4086,4	147,318	27,7386334	1,40042778	18,7
1997M7	730,7	191,91	3,80751394	105,326	0,0361498	4226,8	147,218	28,711163	1,39773655	18,3
1997M8	712	197,91	3,59759487	105,523	0,03409299	4272,7	147,417	28,9837671	1,39701297	18

1997M9	729,2	195,96	3,72116759	105,786	0,03517637	4322,6	149,513	28,9111984	1,41335337	17,8
1997M10	748,3	195,57	3,82625147	106,048	0,03608037	4429,1	151,21	29,2910522	1,42586376	18
1997M11	744,3	196,19	3,79377134	105,983	0,03579604	4448,5	153,007	29,0738332	1,4436938	17,7
1997M12	756,1	201,47	3,75291607	105,851	0,03545471	4731,4	154,703	30,5837637	1,46151666	17,6
1998M1	754,4	206,26	3,65751964	106,048	0,03448928	4527,1	159,394	28,4019474	1,50303636	17,3
1998M2	749,2	207,78	3,60573684	106,245	0,03393794	4569,8	161,99	28,2103834	1,52468351	17,3
1998M3	763,8	210,55	3,62764189	106,442	0,03408093	4665	164,086	28,4302134	1,54155315	17,1
1998M4	777	211,56	3,67271696	106,639	0,03444065	4683,9	165,782	28,2533689	1,55460948	16,8
1998M5	777,7	210,69	3,69120509	106,836	0,0345502	4755,2	167,679	28,3589478	1,56949905	16,4
1998M6	794	215,89	3,67779888	106,967	0,03438256	4844,1	168,178	28,8034107	1,57224191	16
1998M7	788,9	217,72	3,62346133	107,098	0,03383314	4883	167,878	29,0865986	1,5675176	15,8
1998M8	829,2	221,43	3,74475003	107,23	0,0349226	5054,5	167,279	30,2159865	1,56000187	15,3
1998M9	832,6	220,44	3,77699147	107,361	0,03518029	5075,4	168,178	30,1787392	1,566472	15,3
1998M10	856	215,7	3,96847473	107,623	0,03687385	5129,1	169,675	30,2289671	1,57656821	15,7
1998M11	849,1	217,67	3,9008591	107,623	0,03624559	5200,6	170,174	30,5604852	1,58120476	15,5
1998M12	846,8	217,13	3,89996776	107,558	0,03625921	5440,2	170,573	31,893676	1,58586995	15,4
1999M1	836,9	215,96	3,87525468	107,82	0,03594189	5333,2	174,865	30,4989563	1,62182341	14,7
1999M2	853,5	223,25	3,82306831	107,951	0,03541485	5429,9	177,26	30,6324044	1,6420413	13,5
1999M3	859,4	233,15	3,68603903	108,28	0,03404173	5477,6	179,356	30,5403778	1,65640931	14
1999M4	839,8	235,68	3,56330618	109,067	0,0326708	5465,7	181,352	30,1386254	1,66275775	13,9
1999M5	865,6	235,28	3,67902074	109,067	0,03373175	5603,4	182,55	30,695152	1,67374183	13,7
1999M6	844,1	240,16	3,51474017	109,067	0,03222551	5577,2	183,448	30,4020758	1,6819753	13,1
1999M7	852,1	241,94	3,52194759	109,395	0,03219478	5656,2	184,746	30,6160891	1,68879748	13
1999M8	873,2	239,09	3,65218119	109,658	0,0333052	5790,5	185,445	31,2248915	1,69112149	12,8
1999M9	890,5	242,97	3,66506153	110,183	0,0332634	5821,2	186,443	31,2224111	1,69212129	12,5
1999M10	896,4	240,53	3,72677005	110,38	0,03376309	5858,6	187,541	31,2390357	1,69904874	12,5
1999M11	900,4	246,45	3,65347941	110,445	0,03307963	5950,4	188,239	31,6108777	1,70436869	12,7
1999M12	883,8	251,29	3,51705201	110,445	0,03184438	6202,2	189,736	32,6885778	1,71792295	12,8
2000M1	888,2	251,15	3,53653195	110,773	0,03192594	6077,9	192,531	31,5684227	1,73806794	11,3
2000M2	888,8	259,95	3,41911906	111,43	0,03068401	6145,9	194,627	31,5778386	1,74663017	10
2000M3	903	266,42	3,38938518	112,348	0,03016863	6185,7	196,523	31,4757051	1,74923452	9,8
2000M4	928,8	272,87	3,40381867	112,414	0,03027931	6230,2	198,12	31,446598	1,76241393	9,1
2000M5	929,8	285,52	3,25651443	112,545	0,02893522	6261,3	199,218	31,4293889	1,77011862	9,2
2000M6	915,8	273,66	3,34648834	113,136	0,02957934	6286,1	200,216	31,3965917	1,76969311	9,2
2000M7	942,8	276,63	3,40816253	113,398	0,03005487	6366,4	202,412	31,4526807	1,78496975	9,1
2000M8	981,7	288,18	3,40655146	113,398	0,03004067	6522,8	202,911	32,1461133	1,78937018	9,7
2000M9	979,2	300,99	3,25326423	113,989	0,02854016	6574,3	205,406	32,0063679	1,80198089	9,3
2000M10	1021,7	307,1	3,32692934	114,186	0,02913605	6676,3	206,704	32,2988428	1,81023943	9,3

DATA FOR ISRAEL										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1993M1	8867	2,78	3188,31	93,58	34,07	43192	77,00	560,921952	0,82284638	17,47
1993M2	8850	2,80	3156,77	93,91	33,62	43636	77,97	559,633922	0,83030714	17,48
1993M3	8618	2,79	3089,66	94,24	32,79	42584	78,94	539,427182	0,83771595	17,90
1993M4	8475	2,74	3089,34	94,50	32,69	43285	80,08	540,553029	0,84737218	17,74
1993M5	8416	2,73	3077,37	94,63	32,52	48492	80,32	603,749342	0,84876117	17,70
1993M6	8383	2,77	3029,63	94,76	31,97	44454	80,48	552,362208	0,84929243	17,57
1993M7	8457	2,82	2997,34	94,76	31,63	45974	80,56	570,67528	0,85014616	16,71
1993M8	8469	2,86	2962,22	95,02	31,17	56730	81,37	697,189122	0,85631028	15,60
1993M9	8514	2,86	2980,05	95,22	31,30	53909	82,18	655,99963	0,86303355	14,89
1993M10	8575	2,89	2972,27	95,61	31,09	61246	83,31	735,150785	0,87132337	14,80
1993M11	8767	2,95	2975,39	95,68	31,10	74428	83,96	886,492976	0,8774872	14,78
1993M12	8813	2,97	2964,35	95,68	30,98	54828	84,60	648,047572	0,88425039	14,62
1994M1	8787	2,98	2944,11	95,94	30,69	57342	85,17	673,260491	0,88772731	15,33
1994M2	8650	2,98	2906,59	96,27	30,19	57959	85,66	676,643715	0,88975012	15,57
1994M3	8826	2,97	2969,72	96,60	30,74	61535	86,55	711,004245	0,89594145	15,33
1994M4	8769	2,99	2929,84	96,73	30,29	62446	88,24	707,645096	0,91228237	15,34
1994M5	8934	3,02	2963,18	96,80	30,61	62961	89,30	705,081975	0,92252318	15,65
1994M6	9179	3,05	3012,47	97,12	31,02	64506	90,51	712,698667	0,93190114	16,22
1994M7	9264	3,03	3060,46	97,39	31,43	67260	91,48	735,241872	0,93935576	16,77
1994M8	9392	3,04	3094,56	97,78	31,65	68389	92,45	739,734799	0,94549994	17,20
1994M9	9394	3,02	3107,45	98,04	31,69	70458	93,50	753,546185	0,95369035	18,78
1994M10	9473	3,02	3138,83	98,11	31,99	69770	94,80	736,001519	0,96624325	20,27
1994M11	9509	3,02	3153,90	98,24	32,10	70669	96,01	736,06181	0,97730537	20,48
1994M12	9535	3,03	3149,98	98,24	32,06	73189	96,82	755,936335	0,98554445	22,43
1995M1	9050	3,01	3004,65	98,63	30,46	75039	96,98	773,75588	0,98324492	22,76
1995M2	8879	3,01	2950,23	99,03	29,79	76942	97,14	792,052097	0,98097481	22,93
1995M3	9024	2,98	3032,16	99,35	30,52	78570	97,06	809,493441	0,97691101	21,83
1995M4	9079	2,96	3068,37	99,68	30,78	80262	97,95	819,411378	0,98262489	20,32
1995M5	9179	3,00	3055,39	99,88	30,59	82527	98,92	834,269263	0,99040446	19,62
1995M6	9276	2,98	3111,71	100,08	31,09	84679	99,24	853,232761	0,9916854	19,23
1995M7	9269	2,96	3136,40	100,08	31,34	87385	99,49	878,348903	0,99411253	18,98
1995M8	9446	3,03	3116,67	100,34	31,06	89444	100,70	888,213623	1,00360777	18,75
1995M9	9489	3,04	3125,91	100,54	31,09	91074	101,67	895,762845	1,01129944	18,85
1995M10	9546	3,01	3171,11	100,86	31,44	92149	102,72	897,062975	1,01843076	19,46
1995M11	9655	3,04	3173,90	100,80	31,49	93600	103,45	904,776174	1,02631997	19,93
1995M12	10001	3,12	3205,76	100,73	31,82	95582	104,66	913,227089	1,03902395	19,95
1996M1	10171	3,13	3250,04	101,32	32,08	97665	105,55	925,261004	1,04175755	19,24
1996M2	10215	3,11	3281,30	101,65	32,28	99072	106,53	930,035203	1,04793806	19,72

1996M3	10218	3,10	3297,09	102,18	32,27	100507	107,58	934,288317	1,05283968	19,72
1996M4	10497	3,16	3316,69	102,57	32,34	102416	109,36	936,546111	1,06614995	19,73
1996M5	10940	3,30	3316,16	102,77	32,27	102554	111,22	922,115523	1,08221511	20,40
1996M6	11179	3,26	3433,88	102,83	33,39	104932	112,03	936,683776	1,08938765	21,28
1996M7	11010	3,18	3462,81	103,03	33,61	108215	112,35	963,203945	1,09044938	22,68
1996M8	10956	3,15	3482,41	103,23	33,74	112114	112,75	994,332745	1,09228206	21,78
1996M9	11101	3,17	3505,32	103,56	33,85	113913	113,24	1005,95201	1,09351552	21,39
1996M10	11300	3,23	3503,55	103,88	33,73	115393	114,13	1011,09291	1,09861094	21,04
1996M11	11514	3,24	3548,88	104,08	34,10	117353	114,86	1021,74027	1,10353574	20,64
1996M12	11651	3,28	3555,93	104,08	34,17	119619	115,75	1033,47013	1,11207725	20,53
1997M1	11687	3,28	3567,35	104,41	34,17	123486	116,23	1062,4188	1,11323845	20,01
1997M2	11758	3,34	3523,95	104,74	33,65	124960	117,61	1062,53082	1,12288038	19,58
1997M3	11837	3,37	3516,01	105,00	33,49	126500	118,74	1065,36184	1,13086916	19,43
1997M4	11970	3,39	3531,08	105,13	33,59	128183	119,63	1071,52232	1,13789594	19,19
1997M5	12065	3,40	3549,57	105,06	33,78	129499	120,19	1077,41651	1,14400746	19,09
1997M6	12242	3,45	3545,32	105,20	33,70	132269	121,49	1088,74127	1,15488379	18,72
1997M7	12771	3,54	3603,56	105,33	34,21	134986	122,70	1100,11247	1,16497351	17,73
1997M8	12921	3,53	3660,34	105,52	34,69	137524	123,19	1116,3931	1,16738531	17,74
1997M9	13785	3,51	3929,59	105,79	37,15	140879	123,11	1144,37152	1,16372677	18,44
1997M10	13829	3,52	3926,46	106,05	37,03	143052	124,56	1148,44013	1,17458132	18,21
1997M11	13905	3,53	3935,75	105,98	37,14	145278	124,24	1169,34296	1,17225404	18,31
1997M12	13072	3,53	3698,92	105,85	34,94	147803	123,83	1193,56714	1,1698803	18,08
1998M1	13319	3,58	3723,51	106,05	35,11	153013	124,24	1231,60199	1,17153553	18,12
1998M2	13525	3,59	3763,22	106,25	35,42	154958	124,16	1248,08106	1,16859146	17,70
1998M3	13439	3,59	3747,32	106,44	35,21	155471	123,92	1254,65844	1,16415513	17,20
1998M4	14018	3,71	3783,43	106,64	35,48	157452	125,61	1253,46899	1,1779274	16,71
1998M5	14229	3,67	3881,87	106,84	36,33	159136	126,10	1262,00257	1,18029503	16,32
1998M6	14268	3,66	3894,10	106,97	36,40	162179	126,58	1281,19668	1,18339301	16,03
1998M7	14464	3,66	3951,91	107,10	36,90	167091	126,42	1321,69243	1,18043287	15,62
1998M8	14587	3,71	3933,93	107,23	36,69	169324	127,07	1332,53587	1,18501352	14,17
1998M9	15503	3,85	4031,99	107,36	37,56	171124	128,85	1328,09723	1,20014717	13,72
1998M10	17413	4,19	4151,88	107,62	38,58	173929	132,73	1310,38717	1,23329586	13,86
1998M11	18009	4,23	4261,48	107,62	39,60	173948	134,43	1293,97675	1,24907315	17,17
1998M12	18257	4,18	4371,89	107,56	40,65	176568	134,51	1312,66588	1,25059038	17,57
1999M1	18152	4,08	4449,02	107,82	41,26	184152	133,89	1375,41826	1,24177333	17,67
1999M2	18141	4,07	4459,44	107,95	41,31	185972	132,87	1399,70647	1,2307899	17,74
1999M3	17734	4,03	4399,40	108,28	40,63	189187	132,61	1426,64203	1,22469523	17,24
1999M4	17761	4,06	4373,55	109,07	40,10	192828	132,99	1449,9109	1,21936975	16,71
1999M5	18320	4,12	4448,76	109,07	40,79	196215	133,63	1468,31247	1,2252377	16,35
1999M6	18196	4,09	4449,99	109,07	40,80	197333	134,02	1472,45851	1,2287493	16,44

1999M7	18170	4,10	4435,39	109,40	40,54	200742	134,40	1493,61607	1,22857535	16,26
1999M8	18886	4,20	4493,46	109,66	40,98	204102	135,04	1511,43003	1,23145598	15,73
1999M9	19282	4,25	4540,15	110,18	41,21	206217	135,68	1519,88886	1,23139686	15,79
1999M10	19558	4,26	4586,77	110,38	41,55	209482	136,57	1533,83514	1,23730748	15,71
1999M11	19368	4,23	4583,06	110,45	41,50	212504	136,32	1558,88437	1,2342614	15,62
1999M12	19627	4,19	4680,90	110,45	42,38	216690	136,32	1589,59198	1,2342614	15,10
2000M1	19672	4,11	4792,20	110,77	43,26	222747	135,68	1641,72053	1,22483818	14,57
2000M2	19737	4,05	4868,52	111,43	43,69	226290	135,04	1675,73812	1,21187292	14,08
2000M3	19955	4,00	4983,77	112,35	44,36	228660	134,66	1698,1048	1,19856161	13,65
2000M4	20109	4,04	4977,48	112,41	44,28	232287	135,30	1716,89272	1,20354226	13,21
2000M5	20533	4,15	4952,48	112,55	44,00	232428	136,45	1703,44312	1,21236839	12,96
2000M6	20613	4,11	5018,99	113,14	44,36	233842	136,83	1708,99657	1,20942936	12,93
2000M7	20693	4,09	5060,65	113,40	44,63	239420	137,21	1744,8784	1,21001252	12,86
2000M8	20426	4,05	5045,95	113,40	44,50	242397	136,45	1776,50499	1,20324873	12,56
2000M9	20457	4,04	5064,87	113,99	44,43	246412	135,68	1816,13956	1,19028152	12,30
2000M10	20846	4,11	5078,20	114,19	44,47	251470	136,45	1843,00016	1,19494509	12,01
2000M11	19953	4,11	4854,74	114,25	42,49	252506	136,45	1850,59291	1,19426526	11,81
2000M12	20221	4,08	4954,91	114,19	43,39	258472	136,32	1896,09589	1,19382411	11,55

DATA FOR JORDAN										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1994M1	1790,1	1,42	2536,93	95,94	26,44	6274,79531	95,10	65,98	0,99	8,50
1994M2	1782,6	1,42	2539,81	96,27	26,38	6327,99453	96,10	65,85	1,00	8,50
1994M3	1794,4	1,43	2560,73	96,60	26,51	6356,59531	97,47	65,21	1,01	8,50
1994M4	1798,1	1,42	2554,60	96,73	26,41	6398,39688	98,20	65,15	1,02	8,50
1994M5	1821,3	1,43	2604,17	96,80	26,90	6406,39766	97,75	65,54	1,01	8,50
1994M6	1819,5	1,44	2619,02	97,12	26,97	6416,09766	96,47	66,51	0,99	8,50
1994M7	1894,7	1,45	2741,40	97,39	28,15	6570,19609	96,29	68,24	0,99	8,50
1994M8	1895,8	1,44	2724,34	97,78	27,86	6596,29609	96,83	68,12	0,99	8,50
1994M9	1906,4	1,44	2736,10	98,04	27,91	6668,79453	97,84	68,16	1,00	8,50
1994M10	1911,3	1,44	2750,46	98,11	28,04	6669,99531	99,39	67,11	1,01	8,50
1994M11	1930,3	1,43	2769,69	98,24	28,19	6731,39766	100,76	66,81	1,03	8,50
1994M12	1966,1	1,42	2795,77	98,24	28,46	6807,6	100,21	67,93	1,02	8,50
1995M1	1990,3	1,43	2845,57	98,63	28,85	6812,99531	99,21	68,67	1,01	8,50
1995M2	1976,8	1,43	2828,94	99,03	28,57	6877,69453	98,11	70,10	0,99	8,50
1995M3	1995,4	1,46	2908,77	99,35	29,28	6867,09531	98,57	69,67	0,99	8,50
1995M4	2044,5	1,46	2980,35	99,68	29,90	6980,79688	99,21	70,37	1,00	8,50
1995M5	2048,1	1,44	2947,26	99,88	29,51	7022,69766	98,66	71,18	0,99	8,50
1995M6	2070,4	1,44	2983,84	100,08	29,82	7078,9	98,48	71,88	0,98	8,50
1995M7	2103,3	1,44	3019,83	100,08	30,18	7178,19453	98,29	73,03	0,98	8,50
1995M8	2153	1,41	3037,54	100,34	30,27	7313	99,48	73,51	0,99	8,50
1995M9	2180,6	1,40	3055,63	100,54	30,39	7322,29531	99,94	73,27	0,99	8,50
1995M10	2204,7	1,41	3098,93	100,86	30,72	7310,39531	102,13	71,58	1,01	8,50
1995M11	2217,4	1,41	3127,51	100,80	31,03	7331,69688	103,50	70,84	1,03	8,50
1995M12	2254,9	1,41	3180,40	100,73	31,57	7414,69688	104,42	71,01	1,04	8,50
1996M1	2254,8	1,41	3180,26	101,32	31,39	7385,8	106,15	69,58	1,05	8,50
1996M2	2263,3	1,41	3192,25	101,65	31,40	7426,49531	107,80	68,89	1,06	8,50
1996M3	2255,9	1,41	3181,81	102,18	31,14	7420,9	107,89	68,78	1,06	8,50
1996M4	2243,7	1,41	3164,60	102,57	30,85	7414,29766	107,07	69,25	1,04	8,50
1996M5	2260,9	1,41	3188,86	102,77	31,03	7399,4	105,33	70,25	1,02	8,50
1996M6	2282,7	1,41	3219,61	102,83	31,31	7480,49688	103,50	72,27	1,01	8,50
1996M7	2318,3	1,41	3269,82	103,03	31,74	7549,89766	103,14	73,20	1,00	8,50
1996M8	2367,2	1,41	3338,79	103,23	32,34	7620,39531	107,61	70,81	1,04	8,50
1996M9	2371,8	1,41	3345,28	103,56	32,30	7539,8	107,52	70,12	1,04	8,50
1996M10	2382,9	1,41	3360,94	103,88	32,35	7551,9	107,52	70,24	1,04	8,50
1996M11	2355,5	1,41	3322,29	104,08	31,92	7548,5	107,43	70,26	1,03	8,50
1996M12	2334	1,41	3291,97	104,08	31,63	7509,29688	107,07	70,14	1,03	8,50
1997M1	2311,5	1,41	3260,23	104,41	31,23	7556,5	106,79	70,76	1,02	8,50
1997M2	2310,5	1,41	3258,82	104,74	31,11	7610,39844	107,43	70,84	1,03	8,50

1997M3	2273,1	1,41	3206,07	105,00	30,53	7514,39688	107,89	69,65	1,03	8,50
1997M4	2286,4	1,41	3224,83	105,13	30,67	7639,79844	109,62	69,69	1,04	8,50
1997M5	2287,6	1,41	3226,52	105,06	30,71	7656,39688	110,26	69,44	1,05	8,50
1997M6	2293,7	1,41	3235,13	105,20	30,75	7684,99688	109,07	70,46	1,04	8,50
1997M7	2296,3	1,41	3238,79	105,33	30,75	7731,09688	108,25	71,42	1,03	8,25
1997M8	2293,3	1,41	3234,56	105,52	30,65	7839,09688	108,53	72,23	1,03	8,25
1997M9	2287,6	1,41	3226,52	105,79	30,50	7819,1	110,45	70,80	1,04	8,25
1997M10	2283,7	1,41	3221,02	106,05	30,37	7829,49688	112,27	69,74	1,06	8,00
1997M11	2306,8	1,41	3253,60	105,98	30,70	7892,49922	112,45	70,18	1,06	8,00
1997M12	2297,6	1,41	3240,63	105,85	30,61	7874,19766	113,83	69,18	1,08	7,75
1998M1	2303,8	1,41	3249,37	106,05	30,64	7934,89766	114,74	69,16	1,08	7,75
1998M2	2347,9	1,41	3311,57	106,25	31,17	7996,29844	114,46	69,86	1,08	7,75
1998M3	2342,6	1,41	3304,10	106,44	31,04	7976,79922	114,92	69,41	1,08	7,75
1998M4	2358,2	1,41	3326,10	106,64	31,19	8095,89922	115,47	70,11	1,08	7,75
1998M5	2356,5	1,41	3323,70	106,84	31,11	8122,59766	114,65	70,85	1,07	7,75
1998M6	2381,9	1,41	3359,53	106,97	31,41	8228,69688	113,19	72,70	1,06	7,75
1998M7	2486,6	1,41	3507,20	107,10	32,75	8323,39688	113,19	73,54	1,06	7,75
1998M8	2543,8	1,41	3587,88	107,23	33,46	8369,69844	114,10	73,35	1,06	9,00
1998M9	2569,8	1,41	3624,55	107,36	33,76	8324,99922	115,38	72,15	1,07	9,00
1998M10	2594	1,41	3658,68	107,62	34,00	8450,09766	115,93	72,89	1,08	9,00
1998M11	2658,4	1,41	3749,51	107,62	34,84	8515,69688	114,83	74,16	1,07	9,00
1998M12	2602,2	1,41	3670,25	107,56	34,12	8605,39922	114,37	75,24	1,06	9,00
1999M1	2627,5	1,41	3705,93	107,82	34,37	8640,89844	114,59	75,41	1,06	9,00
1999M2	2694,7	1,41	3800,71	107,95	35,21	8693,7	113,93	76,31	1,06	9,00
1999M3	2672,7	1,41	3769,68	108,28	34,81	8735,39922	114,57	76,25	1,06	9,00
1999M4	2635,5	1,41	3717,21	109,07	34,08	8755,39844	115,93	75,52	1,06	9,00
1999M5	2607,6	1,41	3677,86	109,07	33,72	8782,19766	114,80	76,50	1,05	9,00
1999M6	2618,6	1,41	3693,38	109,07	33,86	8907,19766	115,04	77,43	1,05	9,00
1999M7	2651,5	1,41	3739,78	109,40	34,19	9084,29688	113,93	79,74	1,04	8,50
1999M8	2668,9	1,41	3764,32	109,66	34,33	9152,99766	115,37	79,33	1,05	8,50
1999M9	2676	1,41	3774,34	110,18	34,26	9194,69922	115,71	79,47	1,05	8,50
1999M10	2690,7	1,41	3795,07	110,38	34,38	9226,99688	115,82	79,67	1,05	8,00
1999M11	2703,3	1,41	3812,84	110,45	34,52	9262,39766	116,04	79,82	1,05	8,00
1999M12	2781,4	1,41	3923,00	110,45	35,52	9528,99766	117,60	81,03	1,06	8,00
2000M1	2820,9	1,41	3978,71	110,77	35,92	9605,4	115,93	82,86	1,05	7,00

DATA FOR KOREA										
date	fcd	exc	mstar	pstar	hstar	m	p	h	ppp	n
73M5	125,00	398,90	0,31	35,66	0,01	1766,60	15,03	117,56	0,42	15,10
73M6	130,00	398,86	0,33	36,41	0,01	1810,00	15,05	120,27	0,41	15,40
73M7	135,00	398,70	0,34	35,96	0,01	1864,80	15,18	122,87	0,42	16,20
73M8	142,00	398,57	0,36	38,05	0,01	1895,60	15,50	122,28	0,41	16,60
73M9	126,00	397,82	0,32	37,41	0,01	1939,40	15,75	123,17	0,42	17,50
73M10	161,00	397,26	0,41	37,14	0,01	2033,80	15,78	128,88	0,42	17,80
73M11	162,00	397,04	0,41	37,27	0,01	2095,70	15,98	131,16	0,43	18,50
73M12	164,00	397,16	0,41	37,97	0,01	2144,50	16,85	127,28	0,44	18,90
74M1	183,00	397,78	0,46	39,25	0,01	2220,40	17,68	125,56	0,45	19,30
74M2	186,00	398,28	0,47	40,03	0,01	2244,90	20,25	110,87	0,51	20,00
74M3	153,00	398,65	0,38	40,54	0,01	2229,10	20,86	106,84	0,51	20,70
74M4	206,00	398,96	0,52	40,89	0,01	2266,50	21,73	104,29	0,53	21,40
74M5	209,00	399,00	0,52	41,50	0,01	2287,20	21,87	104,57	0,53	21,60
74M6	218,00	399,00	0,55	41,69	0,01	2343,00	22,13	105,88	0,53	21,70
74M7	223,00	399,00	0,56	43,30	0,01	2381,40	22,37	106,45	0,52	21,50
74M8	224,00	399,00	0,56	44,82	0,01	2435,60	22,57	107,92	0,50	21,30
74M9	186,00	399,00	0,47	44,77	0,01	2544,40	22,50	113,09	0,50	21,00
74M10	240,00	399,00	0,60	45,57	0,01	2537,20	22,57	112,42	0,50	20,90
74M11	245,00	399,00	0,61	46,03	0,01	2613,30	23,08	113,23	0,50	21,10
74M12	241,00	467,00	0,52	45,92	0,01	2697,50	24,37	110,70	0,53	21,10
75M1	256,00	484,00	0,53	46,00	0,01	2765,30	25,79	107,23	0,56	20,90
75M2	258,00	484,00	0,53	45,87	0,01	2805,70	26,12	107,42	0,57	20,70
75M3	212,00	484,00	0,44	45,63	0,01	2797,20	26,23	106,64	0,57	20,80
75M4	283,00	484,00	0,58	46,08	0,01	2886,80	26,95	107,13	0,58	20,60
75M5	289,00	484,00	0,60	46,37	0,01	2944,40	27,55	106,86	0,59	20,90
75M6	302,00	484,00	0,62	46,51	0,01	3016,60	27,86	108,29	0,60	21,10
75M7	321,00	484,00	0,66	47,04	0,01	3106,20	27,97	111,07	0,59	21,50
75M8	319,00	484,00	0,66	47,31	0,01	3158,30	28,05	112,60	0,59	21,50
75M9	276,00	484,00	0,57	47,58	0,01	3250,30	28,16	115,42	0,59	21,20
75M10	330,00	484,00	0,68	47,90	0,01	3297,70	28,52	115,63	0,60	21,20
75M11	327,00	484,00	0,68	47,71	0,01	3402,40	28,66	118,73	0,60	21,30
75M12	326,00	484,00	0,67	47,85	0,01	3476,00	29,10	119,46	0,61	21,50
76M1	354,00	484,00	0,73	48,03	0,02	3568,10	29,90	119,34	0,62	21,40
76M2	354,00	484,00	0,73	48,03	0,02	3642,30	30,09	121,04	0,63	21,40
76M3	299,00	484,00	0,62	48,12	0,01	3636,20	30,26	120,18	0,63	21,30
76M4	369,00	484,00	0,76	48,54	0,02	3744,40	30,45	122,97	0,63	21,70
76M5	376,00	484,00	0,78	48,70	0,02	3789,40	30,70	123,44	0,63	21,30
76M6	392,00	484,00	0,81	49,05	0,02	3938,00	30,86	127,60	0,63	21,40

76M7	403,00	484,00	0,83	49,37	0,02	4010,50	31,06	129,14	0,63	21,40
76M8	441,00	484,00	0,91	49,21	0,02	4129,60	31,19	132,38	0,63	21,50
76M9	381,00	484,00	0,79	49,48	0,02	4145,40	31,39	132,07	0,63	21,80
76M10	461,00	484,00	0,95	49,61	0,02	4323,60	31,50	137,27	0,63	22,20
76M11	474,00	484,00	0,98	49,69	0,02	4428,60	31,80	139,26	0,64	22,20
76M12	470,00	484,00	0,97	50,10	0,02	4674,80	31,83	146,87	0,64	21,80
77M1	501,00	484,00	1,04	50,36	0,02	4763,70	32,19	148,00	0,64	20,90
77M2	512,00	484,00	1,06	50,93	0,02	4882,90	32,88	148,52	0,65	21,00
77M3	455,00	484,00	0,94	51,41	0,02	4886,20	33,04	147,88	0,64	22,00
77M4	545,00	484,00	1,13	52,02	0,02	5034,60	33,18	151,74	0,64	21,70
77M5	555,00	484,00	1,15	52,27	0,02	5147,10	33,37	154,23	0,64	22,10
77M6	549,00	484,00	1,13	52,08	0,02	5318,70	33,65	158,07	0,65	20,80
77M7	554,00	484,00	1,14	52,16	0,02	5513,40	33,81	163,05	0,65	20,30
77M8	580,00	484,00	1,20	52,10	0,02	5707,80	34,06	167,57	0,65	19,40
77M9	542,00	484,00	1,12	52,29	0,02	5944,00	34,31	173,24	0,66	20,00
77M10	697,00	484,00	1,44	52,56	0,03	6215,50	34,42	180,57	0,65	29,20
77M11	712,00	484,00	1,47	52,77	0,03	6328,50	34,56	183,12	0,65	19,70
77M12	533,00	484,00	1,10	53,07	0,02	6407,30	35,03	182,92	0,66	20,50
78M1	656,00	484,00	1,36	53,58	0,03	6765,40	35,83	188,83	0,67	20,40
78M2	669,00	484,00	1,38	54,11	0,03	7060,00	36,46	193,63	0,67	21,00
78M3	675,00	484,00	1,39	54,54	0,03	6967,50	36,57	190,51	0,67	20,70
78M4	696,00	484,00	1,44	55,29	0,03	7075,40	36,79	192,30	0,67	20,20
78M5	886,00	484,00	1,83	55,69	0,03	7283,20	37,10	196,33	0,67	20,30
78M6	921,00	484,00	1,90	56,12	0,03	7500,80	37,59	199,53	0,67	21,90
78M7	937,00	484,00	1,94	56,42	0,03	7668,50	37,76	203,09	0,67	22,10
78M8	971,00	484,00	2,01	56,39	0,04	7864,10	37,79	208,12	0,67	22,00
78M9	988,00	484,00	2,04	56,87	0,04	8105,50	38,53	210,36	0,68	22,30
78M10	1026,00	484,00	2,12	57,54	0,04	8325,20	38,94	213,77	0,68	22,50
78M11	921,00	484,00	1,90	57,75	0,03	8434,00	39,19	215,19	0,68	23,20
78M12	730,00	484,00	1,51	58,24	0,03	8658,70	39,30	220,31	0,67	22,60
79M1	932,00	484,00	1,93	59,12	0,03	9024,20	39,55	228,17	0,67	22,90
79M2	928,00	484,00	1,92	60,00	0,03	9125,30	40,16	227,23	0,67	23,60
79M3	949,00	484,00	1,96	60,70	0,03	9139,30	41,10	222,39	0,68	23,80
79M4	989,00	484,00	2,04	61,58	0,03	9200,00	42,23	217,87	0,69	23,40
79M5	1064,00	484,00	2,20	62,12	0,04	9148,70	43,41	210,74	0,70	23,70
79M6	1152,00	484,00	2,38	62,52	0,04	9463,00	43,66	216,74	0,70	25,70
79M7	1204,00	484,00	2,49	63,43	0,04	9670,80	45,89	210,72	0,72	25,90
79M8	1290,00	484,00	2,67	63,81	0,04	9931,30	47,30	209,96	0,74	24,70
79M9	1378,00	484,00	2,85	64,80	0,04	10370,40	47,94	216,34	0,74	26,00
79M10	1413,00	484,00	2,92	65,76	0,04	10474,10	48,27	217,00	0,73	26,50

79M11	1504,00	484,00	3,11	66,19	0,05	10876,80	48,18	225,73	0,73	28,10
79M12	1193,00	484,00	2,46	66,86	0,04	11070,80	48,65	227,55	0,73	27,90
80M1	1476,00	549,45	2,69	68,25	0,04	11337,30	49,78	227,73	0,73	29,00
80M2	1509,00	580,08	2,60	69,67	0,04	11508,40	57,20	201,19	0,82	29,40
80M3	1554,00	583,50	2,66	70,12	0,04	11830,90	59,44	199,05	0,85	32,60
80M4	1653,00	589,65	2,80	70,37	0,04	11911,80	60,37	197,30	0,86	31,00
80M5	1767,00	593,60	2,98	70,74	0,04	12212,80	61,81	197,59	0,87	30,50
80M6	1828,00	598,95	3,05	71,12	0,04	12491,00	62,00	201,46	0,87	30,30
80M7	1900,00	605,40	3,14	72,40	0,04	12591,90	62,42	201,74	0,86	29,40
80M8	1957,00	615,90	3,18	73,31	0,04	12864,30	63,70	201,95	0,87	27,90
80M9	2029,00	618,70	3,28	73,52	0,04	13467,30	64,75	207,97	0,88	26,50
80M10	2108,00	637,66	3,31	74,38	0,04	13528,90	65,62	206,16	0,88	26,10
80M11	2157,00	656,37	3,29	74,73	0,04	13970,60	66,62	209,71	0,89	25,90
80M12	1951,00	659,93	2,96	75,19	0,04	14485,50	69,16	209,44	0,92	26,50
81M1	2290,00	662,22	3,46	76,26	0,05	14837,60	70,16	211,49	0,92	26,10
81M2	2321,00	667,74	3,48	77,01	0,05	15135,80	70,71	214,04	0,92	24,70
81M3	2348,00	671,56	3,50	77,73	0,04	15361,50	71,40	215,15	0,92	23,70
81M4	2420,00	676,48	3,58	78,56	0,05	15681,10	73,20	214,23	0,93	22,70
81M5	2486,00	682,14	3,64	78,75	0,05	15617,70	75,31	207,38	0,96	22,10
81M6	2639,00	684,23	3,86	78,93	0,05	16038,00	76,05	210,88	0,96	21,80
81M7	2658,00	686,13	3,87	79,31	0,05	16209,80	76,24	212,61	0,96	21,60
81M8	2776,00	686,56	4,04	79,36	0,05	16562,00	76,68	216,00	0,97	21,20
81M9	2777,00	684,98	4,05	79,17	0,05	17042,20	77,11	221,01	0,97	22,70
81M10	2937,00	686,52	4,28	79,28	0,05	17480,80	77,05	226,88	0,97	25,60
81M11	2937,00	688,12	4,27	79,12	0,05	17643,90	76,18	231,61	0,96	26,00
81M12	2403,00	695,66	3,45	79,20	0,04	18074,10	76,99	234,77	0,97	25,20
82M1	2843,00	705,51	4,03	79,87	0,05	18578,70	77,54	239,59	0,97	21,30
82M2	2797,00	709,83	3,94	79,95	0,05	19023,00	78,10	243,56	0,98	20,40
82M3	2733,00	714,88	3,82	79,79	0,05	19002,30	77,92	243,88	0,98	19,30
82M4	2768,00	720,90	3,84	79,79	0,05	19492,60	77,98	249,97	0,98	18,30
82M5	2817,00	725,50	3,88	79,95	0,05	19651,10	78,17	251,41	0,98	16,70
82M6	2624,00	738,43	3,55	80,14	0,04	19912,60	78,10	254,95	0,97	16,30
82M7	2812,00	740,02	3,80	80,43	0,05	20774,80	78,41	264,94	0,97	14,50
82M8	2824,00	741,68	3,81	80,38	0,05	20784,20	78,29	265,48	0,97	15,00
82M9	2773,00	742,20	3,74	80,14	0,05	21785,50	78,60	277,17	0,98	16,40
82M10	2787,00	743,36	3,75	80,27	0,05	21955,00	78,54	279,55	0,98	17,50
82M11	2883,00	745,07	3,87	80,41	0,05	22076,10	78,54	281,09	0,98	17,50
82M12	2415,00	745,63	3,24	80,51	0,04	22319,20	78,85	283,07	0,98	15,80
83M1	2866,00	749,87	3,82	80,30	0,05	22668,40	79,16	286,37	0,99	13,70
83M2	2854,00	752,20	3,79	80,57	0,05	23023,30	79,03	291,31	0,98	13,40

83M3	2805,00	758,22	3,70	80,49	0,05	22986,10	78,79	291,75	0,98	12,90
83M4	2785,00	765,27	3,64	80,49	0,05	23253,10	78,72	295,38	0,98	13,00
83M5	2743,00	768,08	3,57	80,73	0,04	23287,80	78,29	297,46	0,97	13,00
83M6	2649,00	775,27	3,42	80,97	0,04	23621,60	78,04	302,68	0,96	12,90
83M7	2655,00	779,40	3,41	81,18	0,04	23973,90	77,92	307,69	0,96	12,80
83M8	2719,00	786,50	3,46	81,58	0,04	24072,80	78,04	308,46	0,96	13,00
83M9	2729,00	789,84	3,46	81,74	0,04	24708,40	78,29	315,60	0,96	13,00
83M10	2833,00	790,39	3,58	81,93	0,04	24833,80	78,04	318,22	0,95	13,00
83M11	2982,00	795,73	3,75	81,80	0,05	25350,10	78,04	324,83	0,95	13,10
83M12	2753,00	798,21	3,45	81,96	0,04	25691,10	78,23	328,42	0,95	13,10
84M1	2971,00	798,31	3,72	82,47	0,05	26077,60	78,29	333,09	0,95	13,90
84M2	2991,00	796,35	3,76	82,71	0,05	25856,90	78,48	329,49	0,95	13,70
84M3	2998,00	792,52	3,78	83,27	0,05	26019,10	78,54	331,30	0,94	13,60
84M4	3029,00	794,62	3,81	83,35	0,05	25679,40	78,97	325,17	0,95	13,20
84M5	3021,00	799,56	3,78	83,41	0,05	25843,50	78,66	328,54	0,94	14,10
84M6	2927,00	800,34	3,66	83,35	0,04	25835,20	78,35	329,74	0,94	14,40
84M7	3057,00	808,82	3,78	83,51	0,05	25962,70	78,60	330,32	0,94	14,40
84M8	3150,00	809,20	3,89	83,19	0,05	26534,60	79,22	334,95	0,95	14,70
84M9	3140,00	813,53	3,86	82,82	0,05	26899,70	80,15	335,61	0,97	14,60
84M10	3158,00	818,15	3,86	82,84	0,05	27049,20	79,53	340,11	0,96	14,80
84M11	3234,00	816,59	3,96	83,08	0,05	27489,60	79,22	347,00	0,95	15,20
84M12	2846,00	823,72	3,46	82,95	0,04	27551,60	79,47	346,70	0,96	15,20
85M1	3177,00	830,30	3,83	82,88	0,05	27776,50	79,59	348,98	0,96	15,00
85M2	3184,00	836,90	3,80	82,80	0,05	27944,00	79,53	351,36	0,96	15,00
85M3	3071,00	848,97	3,62	82,64	0,04	27966,30	79,10	353,57	0,96	15,00
85M4	3115,00	859,34	3,62	82,80	0,04	27940,90	79,53	351,32	0,96	14,80
85M5	3166,00	868,92	3,64	82,96	0,04	28350,10	79,47	356,75	0,96	14,60
85M6	3039,00	872,87	3,48	82,80	0,04	28757,20	79,47	361,87	0,96	13,70
85M7	3253,00	874,33	3,72	82,72	0,04	29052,70	79,47	365,59	0,96	13,10
85M8	3328,00	882,92	3,77	82,32	0,05	29817,60	79,59	374,63	0,97	12,90
85M9	3215,00	891,59	3,61	81,84	0,04	30710,80	79,84	384,65	0,98	12,80
85M10	3392,00	892,24	3,80	82,48	0,05	30484,50	80,03	380,92	0,97	12,30
85M11	3505,00	890,98	3,93	82,88	0,05	31299,70	79,97	391,42	0,96	11,80
85M12	2878,00	890,88	3,23	83,04	0,04	31443,20	80,28	391,69	0,97	11,90
1986M1	3257,00	890,53	3,66	82,72	0,04	31036,80	80,34	386,33	0,97	11,00
1986M2	3256,00	886,35	3,67	81,52	0,05	31847,00	79,41	401,06	0,97	11,00
1986M3	3125,00	884,37	3,53	80,40	0,04	32267,60	78,17	412,81	0,97	11,20
1986M4	3215,00	885,60	3,63	79,83	0,05	32352,50	77,54	417,21	0,97	11,50
1986M5	3292,00	887,21	3,71	80,16	0,05	33431,60	77,67	430,44	0,97	12,20
1986M6	3067,00	888,34	3,45	80,07	0,04	33523,60	77,54	432,32	0,97	11,50

1986M7	3321,00	885,06	3,75	79,67	0,05	33932,80	77,48	437,94	0,97	12,20
1986M8	3380,00	882,37	3,83	79,59	0,05	34759,10	77,42	448,97	0,97	11,60
1986M9	3199,00	879,11	3,64	79,67	0,05	35089,50	77,73	451,43	0,98	11,70
1986M1	3531,00	874,63	4,04	79,91	0,05	35552,00	77,30	459,95	0,97	11,10
1986M1	3728,00	869,39	4,29	79,99	0,05	36697,90	77,17	475,54	0,96	11,70
1986M1	3199,00	864,49	3,70	79,91	0,05	37032,10	77,30	479,10	0,97	12,10
1987M1	3473,00	858,75	4,04	80,56	0,05	37293,50	77,36	482,09	0,96	11,70
1987M2	3443,00	856,30	4,02	80,96	0,05	37430,90	77,48	483,09	0,96	11,70
1987M3	3306,00	852,01	3,88	81,12	0,05	36714,90	78,30	468,88	0,97	12,10
1987M4	3397,00	840,90	4,04	81,68	0,05	37844,30	78,94	479,41	0,97	13,00
1987M5	3437,00	828,22	4,15	82,24	0,05	38581,10	79,26	486,78	0,96	12,10
1987M6	3147,00	814,27	3,86	82,56	0,05	39145,90	78,62	497,90	0,95	12,30
1987M7	3380,00	808,11	4,18	82,96	0,05	39495,10	78,62	502,35	0,95	11,80
1987M8	3430,00	808,14	4,24	83,20	0,05	40258,70	79,02	509,48	0,95	12,60
1987M9	3514,00	806,38	4,36	83,12	0,05	41550,10	79,42	523,18	0,96	12,70
1987M1	3897,00	804,48	4,84	83,44	0,06	41519,60	79,26	523,85	0,95	13,40
1987M1	4150,00	798,51	5,20	83,52	0,06	43626,30	78,94	552,65	0,95	13,00
1987M1	3711,00	794,74	4,67	83,52	0,06	43990,50	79,90	550,60	0,96	12,70
1988M1	3743,00	787,46	4,75	83,84	0,06	43253,50	80,37	538,15	0,96	12,80
1988M2	3654,00	773,44	4,72	84,00	0,06	43285,40	80,85	535,37	0,96	12,40
1988M3	3360,00	753,49	4,46	84,08	0,05	43173,00	80,69	535,03	0,96	13,30
1988M4	4575,00	741,80	6,17	84,80	0,07	44496,30	80,45	553,07	0,95	12,30
1988M5	5097,00	735,67	6,93	85,37	0,08	46243,70	80,77	572,52	0,95	12,10
1988M6	4533,00	729,46	6,21	85,93	0,07	46611,20	80,85	576,50	0,94	12,10
1988M7	5087,00	725,81	7,01	86,49	0,08	47801,60	81,17	588,91	0,94	13,15
1988M8	5140,00	722,81	7,11	86,57	0,08	48383,10	81,57	593,16	0,94	14,20
1988M9	5096,00	720,30	7,07	86,65	0,08	50208,90	81,33	617,35	0,94	14,30
1988M1	5546,00	709,35	7,82	86,73	0,09	50627,20	80,85	626,17	0,93	13,50
1988M1	5821,00	693,00	8,40	86,81	0,10	52477,80	81,33	645,25	0,94	13,20
1988M1	5683,00	685,03	8,30	87,37	0,09	54621,80	81,73	668,34	0,94	13,10
1989M1	5604,00	682,42	8,21	88,57	0,09	53486,40	81,57	655,72	0,92	12,30
1989M2	5390,00	676,99	7,96	88,81	0,09	51918,70	81,73	635,26	0,92	12,50
1989M3	5172,00	672,97	7,69	89,37	0,09	52911,50	81,73	647,41	0,91	12,70
1989M4	5379,00	667,36	8,06	90,01	0,09	52977,00	82,05	645,69	0,91	15,80
1989M5	7063,00	666,56	10,60	90,74	0,12	56174,20	82,37	682,01	0,91	15,90
1989M6	7594,00	666,71	11,39	90,50	0,13	56886,00	82,37	690,66	0,91	16,00
1989M7	8694,00	667,28	13,03	90,41	0,14	58888,30	81,81	719,84	0,90	15,90
1989M8	9017,00	668,38	13,49	89,77	0,15	60290,20	82,13	734,12	0,91	15,80
1989M9	9123,00	670,03	13,62	90,09	0,15	61578,10	82,60	745,46	0,92	15,20
1989M1	10531,00	671,27	15,69	90,41	0,17	62983,00	82,76	761,00	0,92	15,10

1989M1	11268,00	672,33	16,76	90,33	0,19	65767,90	82,52	796,95	0,91	14,90
1989M1	11584,00	675,17	17,16	90,58	0,19	70222,00	82,60	850,10	0,91	14,80
1990M1	11680,00	683,43	17,09	92,10	0,19	70826,40	83,00	853,31	0,90	14,70
1990M2	11544,00	689,87	16,73	91,70	0,18	69803,90	83,00	840,99	0,91	14,30
1990M3	11452,00	697,80	16,41	91,54	0,18	69907,00	83,32	839,01	0,91	14,00
1990M4	11793,00	706,03	16,70	91,38	0,18	70352,50	84,20	835,57	0,92	14,30
1990M5	12153,00	709,20	17,14	91,78	0,19	71557,10	85,15	840,33	0,93	14,90
1990M6	12078,00	715,33	16,88	91,62	0,18	72548,70	85,31	850,39	0,93	14,90
1990M7	12870,00	715,94	17,98	91,62	0,20	73439,90	85,23	861,64	0,93	14,70
1990M8	13084,00	715,47	18,29	93,38	0,20	75604,60	85,95	879,64	0,92	14,60
1990M9	13374,00	714,99	18,71	94,82	0,20	77927,10	87,14	894,23	0,92	15,60
1990M1	14098,00	715,04	19,72	96,83	0,20	77752,90	88,18	881,75	0,91	16,30
1990M1	14672,00	714,32	20,54	96,27	0,21	79745,30	88,10	905,16	0,92	16,00
1990M1	13439,00	715,75	18,78	95,06	0,20	82146,50	88,52	927,99	0,93	16,00
1991M1	14415,00	718,14	20,07	95,38	0,21	83776,20	89,03	940,94	0,93	16,00
1991M2	14208,00	721,60	19,69	93,94	0,21	84620,30	89,38	946,78	0,95	16,00
1991M3	14073,00	725,08	19,41	93,06	0,21	84241,40	89,55	940,74	0,96	16,00
1991M4	14435,00	725,48	19,90	92,98	0,21	84727,20	89,55	946,16	0,96	16,30
1991M5	14991,00	725,13	20,67	93,38	0,22	86111,40	89,46	962,54	0,96	16,20
1991M6	14912,00	725,37	20,56	93,22	0,22	87125,50	89,46	973,87	0,96	16,40
1991M7	15734,00	728,96	21,58	92,98	0,23	87794,40	89,29	983,23	0,96	16,40
1991M8	16048,00	731,12	21,95	93,14	0,24	89657,70	89,81	998,36	0,96	16,60
1991M9	16074,00	739,73	21,73	92,98	0,23	92244,70	89,89	1026,19	0,97	16,90
1991M1	16864,00	749,25	22,51	93,30	0,24	93847,40	89,98	1043,02	0,96	17,00
1991M1	17350,00	753,10	23,04	93,30	0,25	95250,20	89,98	1058,61	0,96	16,90
1991M1	15595,00	757,28	20,59	92,90	0,22	99340,90	90,23	1100,93	0,97	16,80
1992M1	17099,00	762,66	22,42	92,66	0,24	101721,40	90,58	1123,05	0,98	16,70
1992M2	16767,00	765,74	21,90	93,06	0,24	101307,90	90,75	1116,38	0,98	16,20
1992M3	16621,00	771,10	21,55	93,06	0,23	100425,20	91,09	1102,49	0,98	16,20
1992M4	17068,00	778,28	21,93	93,22	0,24	101126,60	91,26	1108,11	0,98	16,20
1992M5	17460,00	782,78	22,31	93,86	0,24	103159,90	91,43	1128,27	0,97	16,10
1992M6	17304,00	789,07	21,93	94,58	0,23	103489,30	91,86	1126,60	0,97	16,10
1992M7	17955,00	787,15	22,81	94,42	0,24	105267,20	92,46	1138,53	0,98	15,70
1992M8	18024,00	789,23	22,84	94,26	0,24	105314,20	92,37	1140,09	0,98	14,50
1992M9	17755,00	785,55	22,60	94,42	0,24	107100,80	92,12	1162,66	0,98	14,30
1992M1	18217,00	783,59	23,25	94,66	0,25	110188,30	91,77	1200,64	0,97	13,40
1992M1	19003,00	784,04	24,24	94,42	0,26	111859,70	91,60	1221,13	0,97	12,40
1992M1	16397,00	788,62	20,79	94,26	0,22	112655,60	91,69	1228,67	0,97	13,20
1993M1	17906,00	791,99	22,61	94,58	0,24	114496,90	92,03	1244,11	0,97	12,80
1993M2	17509,00	796,59	21,98	94,74	0,23	115508,50	92,12	1253,94	0,97	12,34

1993M3	17769,00	793,25	22,40	95,14	0,24	115269,20	92,63	1244,40	0,97	11,50
1993M4	17923,00	795,84	22,52	95,54	0,24	117235,90	92,89	1262,13	0,97	11,10
1993M5	18173,00	799,99	22,72	95,95	0,24	117785,80	93,06	1265,72	0,97	11,30
1993M6	18489,00	802,68	23,03	95,87	0,24	119249,50	93,14	1280,27	0,97	11,80
1993M7	18793,00	806,20	23,31	95,62	0,24	121078,80	93,06	1301,11	0,97	12,20
1993M8	18702,00	810,21	23,08	95,22	0,24	123886,30	93,32	1327,61	0,98	12,20
1993M9	18548,00	808,57	22,94	95,14	0,24	129935,60	93,49	1389,89	0,98	13,05
1993M1(	18893,00	810,21	23,32	95,46	0,24	127842,00	93,23	1371,26	0,98	12,39
1993M1:	19382,00	807,12	24,01	95,38	0,25	128210,80	93,23	1375,22	0,98	12,29
1993M1:	17090,00	809,40	21,11	95,06	0,22	129309,10	93,49	1383,18	0,98	12,00
1994M1	18820,00	810,48	23,22	95,46	0,24	129360,10	94,51	1368,69	0,99	11,90
1994M2	18327,00	805,12	22,76	95,54	0,24	131417,50	94,69	1387,94	0,99	11,90
1994M3	18424,00	807,73	22,81	95,95	0,24	130635,20	94,60	1380,93	0,99	12,10
1994M4	19278,00	808,54	23,84	96,03	0,25	133128,60	94,69	1406,02	0,99	12,10
1994M5	19863,00	806,55	24,63	96,11	0,26	134294,70	94,60	1419,61	0,98	12,00
1994M6	21058,00	806,64	26,11	96,51	0,27	138907,00	94,94	1463,07	0,98	11,90
1994M7	21676,00	805,12	26,92	96,67	0,28	141677,70	95,28	1486,89	0,99	12,00
1994M8	22138,00	803,46	27,55	97,15	0,28	141393,20	96,31	1468,08	0,99	12,20
1994M9	22465,00	800,73	28,06	96,91	0,29	145212,00	96,23	1509,07	0,99	12,40
1994M1(	23255,00	798,79	29,11	96,91	0,30	147744,50	96,57	1529,95	1,00	12,70
1994M1:	23931,00	796,33	30,05	97,39	0,31	150975,20	96,57	1563,40	0,99	12,90
1994M1:	20071,00	791,86	25,35	97,63	0,26	153249,60	97,17	1577,17	1,00	13,50
1995M1	22433,00	790,48	28,38	98,51	0,29	157035,00	97,94	1603,41	0,99	13,90
1995M2	22619,00	790,92	28,60	98,99	0,29	153896,60	98,37	1564,53	0,99	14,20
1995M3	23047,00	778,69	29,60	99,31	0,30	154826,60	99,39	1557,71	1,00	14,00
1995M4	23762,00	767,50	30,96	99,87	0,31	157597,30	100,08	1574,74	1,00	13,50
1995M5	24586,00	761,44	32,29	100,11	0,32	157825,10	100,42	1571,63	1,00	13,50
1995M6	24716,00	761,04	32,48	100,43	0,32	161002,30	100,51	1601,90	1,00	13,20
1995M7	25396,00	757,01	33,55	100,43	0,33	161982,50	100,68	1608,92	1,00	12,80
1995M8	25427,00	767,96	33,11	100,27	0,33	163616,60	100,76	1623,78	1,00	12,10
1995M9	25443,00	772,35	32,94	100,35	0,33	165211,00	101,19	1632,66	1,01	11,20
1995M1(	26990,00	767,40	35,17	100,43	0,35	169269,00	100,34	1687,04	1,00	10,80
1995M1:	27741,00	769,41	36,05	100,51	0,36	172818,80	99,82	1731,28	0,99	10,40
1995M1:	22538,00	771,08	29,23	100,76	0,29	176483,30	100,51	1755,93	1,00	9,20
1996M1	25465,00	787,27	32,35	101,24	0,32	173448,70	101,36	1711,16	1,00	10,00
1996M2	25719,00	780,28	32,96	101,16	0,33	177626,00	101,96	1742,08	1,01	10,70
1996M3	25810,00	781,25	33,04	101,32	0,33	177500,50	101,62	1746,73	1,00	10,80
1996M4	26259,00	780,43	33,65	102,12	0,33	179711,60	102,05	1761,05	1,00	10,30
1996M5	27037,00	780,16	34,66	102,68	0,34	182436,10	102,13	1786,26	0,99	10,30
1996M6	27327,00	797,96	34,25	102,60	0,33	187080,70	102,13	1831,74	1,00	10,70

1996M7	27913,00	812,76	34,34	102,52	0,33	187737,00	102,99	1822,88	1,00	11,05
1996M8	28643,00	816,81	35,07	102,68	0,34	190646,00	103,08	1849,59	1,00	11,53
1996M9	29088,00	821,76	35,40	102,60	0,35	198847,90	103,50	1921,18	1,01	11,36
1996M1(	30118,00	827,61	36,39	102,52	0,35	198199,10	103,67	1911,75	1,01	11,26
1996M1:	30908,00	828,13	37,32	102,68	0,36	201522,50	103,59	1945,42	1,01	11,32
1996M1:	25196,00	839,02	30,03	103,24	0,29	203507,60	104,02	1956,48	1,01	11,44
1997M1	29199,00	849,88	34,36	103,96	0,33	206319,00	105,04	1964,12	1,01	11,26
1997M2	29248,00	866,85	33,74	103,00	0,33	211879,70	105,64	2005,62	1,03	11,10
1997M3	29846,00	896,20	33,30	102,04	0,33	211967,40	105,47	2009,70	1,03	11,40
1997M4	30936,00	893,56	34,62	101,80	0,34	214725,70	105,90	2027,63	1,04	11,46
1997M5	31407,00	892,05	35,21	102,12	0,34	215038,70	105,90	2030,58	1,04	11,36
1997M6	31924,00	889,49	35,89	101,96	0,35	219715,00	106,50	2063,05	1,04	11,04
1997M7	32964,00	890,50	37,02	101,72	0,36	222244,70	106,50	2086,80	1,05	11,17
1997M8	33552,00	895,90	37,45	101,96	0,37	229127,90	106,70	2147,40	1,05	11,68
1997M9	33588,00	909,53	36,93	102,20	0,36	231178,20	107,10	2158,53	1,05	11,25
1997M1(	34721,00	921,85	37,66	102,44	0,37	234593,20	106,90	2194,51	1,04	11,25
1997M1:	36246,00	1025,58	35,34	102,44	0,35	240793,20	107,40	2242,02	1,05	12,11
1997M1:	26154,00	1484,08	17,62	101,56	0,17	229685,50	114,40	2007,74	1,13	15,32
1998M1	7348,00	1701,53	4,32	100,51	0,04	211773,90	119,30	1775,14	1,19	16,58
1998M2	9327,00	1626,75	5,73	100,19	0,06	218593,20	122,30	1787,35	1,22	15,25
1998M3	9324,00	1488,87	6,26	99,95	0,06	213486,20	122,00	1749,89	1,22	15,20
1998M4	10615,00	1388,32	7,65	100,11	0,08	218199,00	122,10	1787,05	1,22	15,20
1998M5	14046,00	1400,13	10,03	100,27	0,10	231259,70	120,80	1914,40	1,20	15,20
1998M6	12914,00	1395,26	9,26	100,03	0,09	231256,30	120,70	1915,96	1,21	14,26
1998M7	14506,00	1293,73	11,21	100,11	0,11	243343,70	120,10	2026,18	1,20	12,24
1998M8	15899,00	1312,12	12,12	99,55	0,12	252037,50	119,30	2112,64	1,20	11,69
1998M9	17024,00	1372,58	12,40	99,23	0,12	263521,50	119,30	2208,90	1,20	11,85
1998M1(	16517,00	1336,24	12,36	99,39	0,12	266784,60	119,40	2234,38	1,20	9,78
1998M1:	15765,00	1290,21	12,22	98,99	0,12	270542,10	119,20	2269,65	1,20	8,72
1998M1:	11400,00	1211,50	9,41	98,35	0,10	269938,40	118,50	2277,96	1,20	7,59
1999M1	13579,00	1174,00	11,57	98,51	0,12	275386,70	117,20	2349,72	1,19	7,53
1999M2	13402,00	1189,05	11,27	98,03	0,11	286532,90	117,00	2449,00	1,19	8,56
1999M3	13132,00	1228,79	10,69	98,27	0,11	291394,00	116,80	2494,81	1,19	8,23
1999M4	12165,00	1205,76	10,09	99,07	0,10	289043,90	117,10	2468,35	1,18	7,28
1999M5	12110,00	1196,75	10,12	99,95	0,10	288268,60	117,60	2451,26	1,18	8,15
1999M6	10322,00	1168,45	8,83	100,35	0,09	286288,40	116,80	2451,10	1,16	8,19
1999M7	11740,00	1187,57	9,89	100,76	0,10	294771,10	116,60	2528,05	1,16	8,37
1999M8	11615,00	1198,03	9,70	101,72	0,10	307236,30	117,40	2617,00	1,15	9,21
1999M9	9997,00	1199,09	8,34	102,60	0,08	316183,70	118,00	2679,52	1,15	9,78
1999M1(	10688,00	1205,19	8,87	102,36	0,09	323217,00	119,20	2711,55	1,16	9,31

1999M1	10960,00	1176,03	9,32	102,84	0,09	334025,80	119,90	2785,87	1,17	9,92
1999M1	8109,00	1137,09	7,13	102,44	0,07	337426,40	119,60	2821,29	1,17	10,07
2000M1	8496,00	1130,32	7,52	102,84	0,07	342149,70	119,50	2863,18	1,16	9,91
2000M2	8849,00	1129,29	7,84	104,04	0,08	355025,00	119,50	2970,92	1,15	8,78
2000M3	9864,00	1115,75	8,84	104,84	0,08	360510,00	119,60	3014,30	1,14	9,21
2000M4	11094,00	1110,01	9,99	104,76	0,10	378087,40	119,30	3169,22	1,14	9,10
2000M5	12157,00	1121,37	10,84	105,48	0,10	383058,90	119,00	3218,98	1,13	9,18
2000M6	11599,00	1117,67	10,38	107,25	0,10	391471,20	119,80	3267,71	1,12	8,83

DATA FOR MEXICO										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1985M12	8	0,35668	22,4290681	71,7289	0,31269221	23,37	3,95527	5,90857261	0,05514193	65,66
1986M1	139	0,38976	356,629721	71,9479	4,95677735	154,658	4,3051	35,9243688	0,05983635	68,55
1986M2	9	0,42324	21,2645308	71,7508	0,29636646	25,278	4,49646	5,62175578	0,06266773	70,3
1986M3	163	0,457918	355,958927	71,4221	4,98387652	180,403	4,70544	38,3392414	0,06588213	71,79
1986M4	195	0,488537	399,150934	71,2688	5,60064059	213,303	4,95108	43,0821154	0,06947051	73,48
1986M5	244	0,522374	467,098286	71,4879	6,5339489	263,322	5,22622	50,3847905	0,07310636	75,02
1986M6	248	0,55554	446,4125	71,8384	6,21412085	268,201	5,56159	48,2237993	0,07741807	76,97
1986M7	260	0,603781	430,619711	71,8603	5,99245636	281,314	5,83912	48,1774651	0,08125655	81,36
1986M8	294	0,66584	441,547519	71,9918	6,13330294	316,806	6,30463	50,2497371	0,08757428	84,4
1986M9	305	0,727461	419,266462	72,3423	5,7955921	329,213	6,68298	49,2614073	0,09237998	87,72
1986M10	335	0,780591	429,162007	72,408	5,92699711	361,503	7,0649	51,1688771	0,09757071	91,48
1986M11	376	0,834294	450,680456	72,4738	6,21852939	404,667	7,5423	53,6529971	0,10406933	94,19
1986M12	31	0,891935	34,7558959	72,5395	0,47913062	62,911	8,13796	7,73056147	0,1121866	95,33
1987M1	483	0,9581	504,122743	72,9777	6,90790122	516,765	8,797	58,7433216	0,12054367	95,89
1987M2	499	1,02441	487,109653	73,2625	6,64882653	535,471	9,43169	56,7736005	0,1287383	96,2
1987M3	622	1,09447	568,311603	73,5911	7,72255888	661,519	10,0551	65,7894004	0,13663473	96,25
1987M4	654	1,16302	562,329109	73,9855	7,6005313	697,225	10,9348	63,7620258	0,14779653	95,79
1987M5	634	1,24179	510,553314	74,2045	6,88035516	680,623	11,7591	57,8805351	0,15846883	94,79
1987M6	666	1,32017	504,480484	74,5113	6,77052318	717,125	12,6099	56,869999	0,16923473	93,76
1987M7	696	1,3873	501,693938	74,6646	6,71930122	751,252	13,6312	55,1126827	0,18256577	92,91
1987M8	845	1,45963	578,913834	75,0809	7,71053403	904,257	14,7453	61,3251002	0,19639216	92,15
1987M9	128	1,53537	83,367527	75,4533	1,10488908	191,569	15,7167	12,1888819	0,20829705	91,02
1987M10	164	1,61558	101,511531	75,6505	1,34184878	232,812	17,0263	13,6736696	0,22506527	90,3
1987M11	169	1,70657	99,0290466	75,76	1,30714159	241,216	18,3769	13,1260441	0,24256732	92,37
1987M12	247	2,03178	121,56828	75,7301	1,6052835	326,841	21,0907	15,4969252	0,27849825	104,29
1988M1	1463	2,21392	660,818819	75,9269	8,70335572	1545,591	24,3533	63,465362	0,32074667	122,54
1988M2	1511	2,25334	670,560146	76,1238	8,80881073	1602,226	26,3837	60,7278736	0,34658937	135,88
1988M3	1659	2,281	727,312582	76,4519	9,5133356	1757,879	27,7347	63,3819367	0,36277319	117,16
1988M4	1954	2,281	856,641824	76,8457	11,147557	2057,202	28,5884	71,9593262	0,37202342	81,03
1988M5	1619	2,281	709,776414	77,1082	9,20494077	1726,25	29,1411	59,2376403	0,37792479	60,59
1988M6	1825	2,281	800,087681	77,4363	10,3322044	1934,068	29,7354	65,0426091	0,3839982	46,76
1988M7	1961	2,281	859,710653	77,7644	11,0553242	2069,628	30,2326	68,4568314	0,38877173	40,72
1988M8	2132	2,281	934,677773	78,0925	11,9688545	2240,477	30,5099	73,4344262	0,39068925	39,9
1988M9	2108	2,281	924,156072	78,6175	11,7550936	2219,032	30,6842	72,3183919	0,39029733	39,9
1988M10	2073	2,281	908,811925	78,88	11,5214493	2184,806	30,918	70,664532	0,39196247	40,03
1988M11	1683	2,281	737,834283	78,9456	9,34611027	1798,697	31,332	57,4076663	0,39688089	41,65
1988M12	1501	2,281	658,044717	79,0769	8,32157959	1622,603	31,9857	50,7290133	0,40448854	45,48
1989M1	1587	2,29482	691,557508	79,4706	8,70205469	1712,716	32,7701	52,2645949	0,41235501	49,37

1989M2	671	2,3243	288,689068	79,7988	3,61771189	800,195	33,2138	24,0922448	0,41621929	48,7
1989M3	1599	2,3534	679,442509	80,2581	8,46571883	1731,238	33,5744	51,5642275	0,41833036	47,3
1989M4	1664	2,3845	697,840218	80,7831	8,63844317	1804,597	34,0755	52,9587827	0,42181471	46,91
1989M5	1874	2,41586	775,707202	81,2425	9,54804692	2016,496	34,545	58,3730207	0,42520848	49,15
1989M6	779	2,44605	318,47264	81,4394	3,91054747	928,516	34,965	26,5555842	0,42933764	51,97
1989M7	811	2,47624	327,512681	81,6362	4,01185602	969,338	35,3136	27,4494246	0,4325728	51,5
1989M8	836	2,507	333,466294	81,7675	4,07822539	996,498	35,6504	27,9519444	0,43599719	38,12
1989M9	858	2,53776	338,093437	82,03	4,1215828	1022,364	35,9911	28,4060226	0,43875533	35,24
1989M10	2025	2,56795	788,566756	82,4237	9,56723316	2195,882	36,5239	60,1217833	0,44312376	37,4
1989M11	902	2,59995	346,929749	82,6206	4,1990708	1079,881	37,037	29,1568162	0,44827803	39,51
1989M12	923	2,62984	350,971922	82,7518	4,24126028	1113,782	38,2869	29,09042	0,46267151	40,11
1990M1	2418	2,66042	908,879049	83,6049	10,8711218	2608,68	40,1351	64,997471	0,48005679	42,08
1990M2	2514	2,69004	934,558594	83,9987	11,1258697	2709,991	41,0424	66,0290578	0,48860756	44,87
1990M3	2660	2,71948	978,128172	84,4581	11,581224	2862,624	41,7674	68,5372803	0,49453398	47,15
1990M4	2795	2,75017	1016,30081	84,5893	12,0145315	3004,007	42,4033	70,8437079	0,50128444	47,2
1990M5	2902	2,78037	1043,74598	84,7862	12,3103285	3118,716	43,1421	72,2893879	0,50883398	42,62
1990M6	2974	2,80737	1059,35448	85,2455	12,4271015	3197,249	44,093	72,5114871	0,51724724	35,16
1990M7	1139	2,83174	402,226193	85,5737	4,70034827	1368,831	44,8972	30,4881151	0,5246612	33,05
1990M8	1158	2,85651	405,389794	86,3612	4,69411951	1392,817	45,6619	30,5028262	0,52873165	31,27
1990M9	3327	2,881	1154,80736	87,083	13,2609965	3565,983	46,3136	76,9964546	0,53183285	31,11
1990M10	2814	2,90539	968,54467	87,608	11,0554364	3063,444	46,9792	65,2085178	0,53624327	31,52
1990M11	1265	2,9278	432,065032	87,8049	4,92073941	1527,3	48,2251	31,6702298	0,54923017	29,56
1990M12	2819	2,9409	958,550104	87,8049	10,9168179	3090,244	49,7465	62,1198275	0,56655722	29,23
1991M1	3059	2,95317	1035,83607	88,3299	11,7269018	3324,847	51,0143	65,1748039	0,57754283	27,14
1991M2	2817	2,96499	950,087521	88,4611	10,740173	3088,478	51,9037	59,5040045	0,58674039	25,71
1991M3	3196	2,9769	1073,60005	88,5924	12,1184216	3474,633	52,6446	66,0016982	0,59423382	24,29
1991M4	1526	2,98896	510,545474	88,7236	5,75433677	1810,096	53,1952	34,027431	0,59956088	23,62
1991M5	2793	3,00117	930,637052	88,9861	10,4582294	3087,673	53,7162	57,4812254	0,60364709	23,1
1991M6	2887	3,0134	958,054025	89,2486	10,7346673	3185,138	54,2788	58,6810689	0,60817537	21,79
1991M7	2692	3,0322	887,804235	89,3799	9,93292938	3001,063	54,7602	54,8037261	0,61266795	20,99
1991M8	1785	3,03798	587,561472	89,6423	6,55451134	2098,714	55,1405	38,0612073	0,61511697	20,55
1991M9	3066	3,05021	1005,17669	90,0361	11,1641519	3370,78	55,6892	60,5284328	0,61852079	21,72
1991M10	3958	3,06235	1292,47147	90,1673	14,3341485	4276,804	56,337	75,9146564	0,62480522	21,29
1991M11	3591	3,06981	1169,77924	90,4298	12,9357716	3916,436	57,7355	67,8341055	0,63845657	20,52
1991M12	3095	3,07002	1008,13675	90,4955	11,1401866	3434,051	59,0964	58,1093095	0,65303137	19,95
1992M1	2052	3,06846	668,739368	90,6267	7,3790546	2386,475	60,1699	39,662273	0,66393127	18,98
1992M2	2101	3,06364	685,785536	90,9548	7,53984986	2436,048	60,8824	40,0123517	0,66936984	18,22
1992M3	1371	3,06721	446,986023	91,4142	4,88967822	1706,89	61,5017	27,7535418	0,6727806	16,6
1992M4	3140	3,06751	1023,63154	91,5454	11,1816819	3482,306	62,0506	56,1204243	0,67781232	15,75
1992M5	3458	3,09823	1116,12114	91,6767	12,1745344	3802,718	62,4595	60,8829401	0,68130179	15,56

1992M6	3724	3,11848	1194,17152	92,0048	12,979448	4069,406	62,8825	64,7144436	0,68346978	16,01
1992M7	2494	3,11653	800,248995	92,2017	8,67933015	2845,867	63,2795	44,9729691	0,68631598	18,07
1992M8	3418	3,09126	1105,698	92,4642	11,95812	3762,082	63,6676	59,089427	0,68856487	19,54
1992M9	3407	3,08573	1104,11475	92,7267	11,9071934	3754,902	64,2217	58,4678076	0,69259124	20,16
1992M10	3621	3,12381	1159,16141	93,0548	12,4567611	3976,546	64,6839	61,4765962	0,69511621	21,86
1992M11	3865	3,11975	1238,88132	93,186	13,2947151	4229,777	65,2217	64,8522961	0,69990878	21,79
1992M12	3981	3,11817	1276,71038	93,1204	13,7103189	4361,487	66,1506	65,93269	0,7103771	22,76
1993M1	2896	3,1146	929,814422	93,5798	9,93605909	3280,075	66,9802	48,9708153	0,7157549	22,79
1993M2	4685	3,0989	1511,82678	93,9079	16,0990372	5070,509	67,5277	75,087838	0,71908434	22,72
1993M3	4026	3,1083	1295,24177	94,236	13,7446599	4413,692	67,921	64,9827299	0,72075428	21,31
1993M4	3853	3,0955	1244,71006	94,4985	13,1717441	4248,43	68,3128	62,1908339	0,72289825	20,16
1993M5	3870	3,1227	1239,31213	94,6298	13,0964256	4276,671	68,7032	62,2484979	0,72602077	19,75
1993M6	4297	3,1213	1376,66998	94,761	14,5278118	4710,595	69,0884	68,1821406	0,72908053	18,68
1993M7	3075	3,1236	984,44103	94,761	10,3886729	3492,942	69,4203	50,3158586	0,73258302	17,36
1993M8	3125	3,1126	1003,98381	95,0235	10,565637	3545,716	69,7921	50,8039735	0,734472	16,91
1993M9	3969	3,1127	1275,09879	95,2204	13,3910253	4397,307	70,3091	62,5425016	0,73838274	16,18
1993M10	3166	3,1142	1016,63349	95,6141	10,6326733	3602,527	70,5966	51,0297521	0,73834926	15,57
1993M11	5149	3,1553	1631,85751	95,6798	17,0554026	5596,077	70,9077	78,9205827	0,74109373	16,62
1993M12	4469	3,1077	1438,04099	95,6798	15,0297241	4938,768	71,4484	69,1235633	0,74674487	14,68
1994M1	4806	3,1075	1546,58085	95,9423	16,119906	5277,969	72,0025	73,3025798	0,75047711	13,22
1994M2	3380	3,1115	1086,29278	96,2704	11,2837672	3859,356	72,3729	53,3259825	0,7517669	11,96
1994M3	5168	3,2841	1573,6427	96,5985	16,2905501	5646,788	72,7447	77,6247342	0,75306242	11,53
1994M4	4390	3,3536	1309,04103	96,7297	13,5329793	4859,631	73,101	66,4783108	0,75572446	14,16
1994M5	5308	3,312	1602,657	96,7954	16,5571608	5785,384	73,4543	78,761679	0,75886147	17,03
1994M6	5768	3,3607	1716,3091	97,1235	17,6714091	6251,049	73,8218	84,6775478	0,76008175	17,18
1994M7	5855	3,4009	1721,60311	97,386	17,6781376	6345,463	74,1492	85,5769583	0,76139486	17,82
1994M8	4747	3,3821	1403,56583	97,7797	14,3543684	5248,003	74,4951	70,4476268	0,76186673	17,16
1994M9	6606	3,3998	1943,05547	98,0422	19,8185626	7121,774	75,0247	94,9257245	0,76522865	16,73
1994M10	4805	3,4158	1406,69828	98,1078	14,338292	5330,961	75,4188	70,6847762	0,76873398	15,96
1994M11	6032	3,4426	1752,16406	98,2391	17,8357096	6565,991	75,8218	86,5976672	0,77180878	16,34
1994M12	8486	3,9308	2158,84807	98,2391	21,9754464	9040,93	76,4869	118,202333	0,778579	16,96
1995M1	8026	5,5133	1455,75245	98,6328	14,7593139	8574,283	79,3655	108,035393	0,80465626	29,87
1995M2	8017	5,6854	1410,10307	99,0266	14,2396394	8566,925	82,7292	103,553824	0,83542402	35,98
1995M3	9801	6,7019	1462,4211	99,3547	14,719194	10372,405	87,6063	118,397935	0,88175295	56,82
1995M4	9228	6,2996	1464,85491	99,6828	14,6951622	9805,797	94,5855	103,67125	0,9488648	70,26
1995M5	8909	5,9627	1494,12179	99,8797	14,9592138	9503,352	98,5404	96,4411754	0,98659087	57,86
1995M6	10980	6,2232	1764,3656	100,077	17,6300808	11586,083	101,667	113,961098	1,01588777	46,39
1995M7	11352	6,1394	1849,04062	100,077	18,4761796	11976,59	103,741	115,447027	1,03661181	41,42
1995M8	11880	6,1909	1918,94555	100,339	19,124623	12521,448	105,46	118,731728	1,05103698	37,1
1995M9	11897	6,3025	1887,66363	100,536	18,7759969	12551,371	107,645	116,599666	1,07071099	34,61

1995M10	16216	6,6911	2423,51781	100,864	24,0275798	16894,713	109,86	153,784025	1,0891894	37,08
1995M11	17671	7,6584	2307,40102	100,798	22,8913374	18382,238	112,563	163,30622	1,11671859	47,54
1995M12	15762	7,6647	2056,44057	100,733	20,4147654	16516,407	116,237	142,092509	1,15391183	46,54
1996M1	15806	7,5048	2106,11875	101,323	20,7861863	16572,231	120,415	137,625969	1,18842711	40,18
1996M2	16932	7,5042	2256,33645	101,652	22,1966754	17709,836	123,223	143,721838	1,21220438	35,91
1996M3	18551	7,5736	2449,4296	102,177	23,9724165	19354,962	125,934	153,691314	1,23250829	39,12
1996M4	19124	7,4713	2559,66164	102,57	24,955266	19949,536	129,512	154,036197	1,2626694	35,21
1996M5	13931	7,4345	1873,83146	102,767	18,2337858	14781,498	131,875	112,087189	1,28324268	29,38
1996M6	19600	7,54258	2598,58033	102,833	25,2699068	20461,049	134,023	152,668191	1,3033073	27,05
1996M7	14495	7,6229	1901,5073	103,03	18,4558604	15374,806	135,926	113,11159	1,31928564	29,18
1996M8	19182	7,5141	2552,80073	103,227	24,7299712	20070,758	137,734	145,721158	1,3342827	27,52
1996M9	19273	7,5447	2554,50846	103,555	24,6681325	20190,22	139,941	144,276659	1,35136884	24,92
1996M10	20987	7,6851	2730,86882	103,883	26,287928	21926,665	141,682	154,759708	1,36386127	25,04
1996M11	21899	7,9189	2765,40934	104,08	26,5700359	22847,326	143,83	158,849517	1,38191776	28,03
1996M12	23856	7,8767	3028,67952	104,08	29,0995342	24851,167	148,438	167,417824	1,42619139	26,97
1997M1	23550	7,8299	3007,70125	104,408	28,8071915	24551,494	152,252	161,255642	1,45824075	24,08
1997M2	22701	7,7926	2913,14837	104,736	27,8142031	23714,21	154,815	153,177728	1,47814505	21,06
1997M3	18281	7,9628	2295,80047	104,998	21,8651829	19326,172	156,741	123,300043	1,49279986	21,1
1997M4	18645	7,9037	2359,02172	105,13	22,4390918	19711,882	158,43	124,420135	1,50699134	21,07
1997M5	27022	7,9057	3418,04015	105,064	32,5329337	28117,275	159,875	175,870367	1,52169154	18,73
1997M6	26003	7,9465	3272,25823	105,195	31,1065947	27129,566	161,297	168,196346	1,53331432	18,78
1997M7	22123	7,8857	2805,45798	105,326	26,6359492	23265,431	162,704	142,992373	1,54476577	18,05
1997M8	28249	7,7843	3628,97113	105,523	34,3903332	29414,505	164,149	179,193934	1,55557556	17,34
1997M9	28881	7,7792	3712,59255	105,786	35,0953109	30063,386	166,193	180,894418	1,57103019	17,18
1997M10	30780	7,81137	3940,40994	106,048	37,1568529	31997,072	167,519	191,005629	1,57965261	16,56
1997M11	25925	8,28375	3129,62125	105,983	29,5294646	27173,732	169,393	160,41827	1,5983035	17,74
1997M12	29617	8,136	3640,2409	105,851	34,3902363	30912,084	171,771	179,961018	1,62276218	17,79
1998M1	24439	8,1798	2987,72586	106,048	28,1733353	25741,483	175,504	146,671774	1,6549487	16,98
1998M2	33092	8,4932	3896,29351	106,245	36,6727235	34414,437	178,578	192,713755	1,68081321	17,03
1998M3	32359	8,5689	3776,33068	106,442	35,4778253	33703,363	180,667	186,549636	1,69732812	17,37
1998M4	33094	8,49962	3893,58583	106,639	36,5118374	34462,388	182,356	188,984119	1,71003104	17,66
1998M5	33705	8,56123	3936,9343	106,836	36,8502592	35115,411	183,815	191,0367	1,72053428	16,85
1998M6	36177	8,89935	4065,12835	106,967	38,0035745	37603,773	185,986	202,186041	1,73872316	17,24
1998M7	35445	8,904	3980,79515	107,098	37,1696497	36898,398	187,778	196,500112	1,75332873	17,75
1998M8	39897	9,2596	4308,71744	107,23	40,1820147	41373,419	189,586	218,230349	1,76803133	19,05
1998M9	43197	10,2154	4228,61562	107,361	39,3868874	44703,735	192,658	232,036744	1,79448776	27,54
1998M10	43273	10,1523	4262,38389	107,623	39,6047675	44810,549	195,419	229,304975	1,81577358	29,28
1998M11	43370	9,9874	4342,47151	107,623	40,3489172	44946,21	198,88	225,996631	1,84793213	27,76
1998M12	37181	9,9117	3751,2233	107,558	34,8762835	38837,127	203,733	190,627571	1,89416873	28,56
1999M1	41236	10,1104	4078,57256	107,82	37,8276067	42886,056	208,877	205,317273	1,93727509	28,31

1999M2	44793	10,015	4472,59111	107,951	41,4316784	46480,806	211,684	219,576378	1,96092672	26,9
1999M3	45815	9,76935	4689,66717	108,28	43,3105576	47548,812	213,651	222,55366	1,97313447	22,84
1999M4	36777	9,44609	3893,35693	109,067	35,6969288	38512,739	215,612	178,620573	1,9768766	19,16
1999M5	39796	9,36234	4250,64674	109,067	38,9728033	41581,531	216,909	191,700349	1,98876837	17,82
1999M6	49047	9,5418	5140,22511	109,067	47,1290593	50847,191	218,334	232,887187	2,00183374	18,62
1999M7	38031	9,3671	4060,06128	109,395	37,1137737	39876,279	219,777	181,439728	2,00902235	18,08
1999M8	46282	9,3981	4924,61242	109,658	44,9088295	48145,697	221,014	217,840033	2,01548451	18,17
1999M9	47016	9,3403	5033,6713	110,183	45,6846455	48920,707	223,15	219,227905	2,02526706	17,94
1999M10	41126	9,5403	4310,76591	110,38	39,0538676	43046,078	224,563	191,688203	2,03445371	17,25
1999M11	50679	9,4205	5379,65076	110,445	48,7088665	52642,723	226,56	232,356652	2,05133777	16,26
1999M12	49580	9,4135	5266,90391	110,445	47,6880249	51585,684	228,83	225,432347	2,07189099	15,42
2000M1	50284	9,4793	5304,6111	110,773	47,8872207	52304,494	231,905	225,542761	2,09351557	15,29
2000M2	49413	9,4456	5231,32464	111,43	46,9471833	51458,754	233,959	219,947743	2,09960513	15,18
2000M3	51342	9,2959	5523,08007	112,348	49,1604663	53415,354	235,256	227,052037	2,09399366	13,67
2000M4	51878	9,3748	5533,77139	112,414	49,2267101	53974,73	236,595	228,131321	2,10467557	12,48
2000M5	44163	9,5078	4644,92312	112,545	41,2716968	46287,577	237,479	194,912295	2,11008041	12,51
2000M6	51761	9,7978	5282,92066	113,136	46,6953106	53916,123	238,89	225,694349	2,11152949	13,53
2000M7	49509	9,4688	5228,64566	113,398	46,1087996	51698,998	239,853	215,544513	2,11514312	12,98
2000M8	48477	9,2846	5221,22655	113,398	46,0433742	50667,441	241,186	210,076211	2,12689818	13,05
2000M9	48449	9,3319	5191,76159	113,989	45,5461632	50689,151	242,89	208,691799	2,13081964	13,29
2000M10	47625	9,5182	5003,5721	114,186	43,8194884	49889,708	244,59	203,972803	2,14203142	13,51
2000M11	49165	9,5179	5165,53021	114,251	45,2121225	51459,459	246,693	208,597159	2,15921961	14,44
2000M12	48109	9,4441	5094,0799	114,186	44,6121232	50440,159	249,267	202,353938	2,18299091	14,39
2001M1	47698	9,7701	4882,03805	114,908	42,486494	50018,536	250,66	199,547339	2,18139729	14,66

DATA FOR POLAND									
fcd	exc	mstar	pstar	hstar	m	p	h	ppp	n
24289,9	2,9273	8297,71462	104,41	79,4724128	160374,4	131,583	1218,8079	1,26025285	23,5
24607,8	3,0279	8127,01873	104,74	77,5923117	163161,05	133,031	1226,48894	1,27010693	23,7
25049,3	3,0793	8134,73841	105	77,4736992	166637,3	134,091	1242,718	1,27705714	23,9
25384,2	3,1212	8132,83353	105,13	77,3597786	170562,7	135,433	1259,38804	1,28824313	24,1
25756,8	3,1713	8121,84278	105,06	77,3067083	174403,3	136,245	1280,0712	1,29683038	24,3
26462,3	3,2385	8171,15949	105,2	77,6726187	178223,3	138,294	1288,72764	1,31458175	24,3
28188	3,3965	8299,13146	105,33	78,7917161	185949,56	138,011	1347,35318	1,31027248	24,75
28702,4	3,4817	8243,78895	105,52	78,1253692	188368,4	138,152	1363,48659	1,30924943	26,3
28722,4	3,4566	8309,43702	105,79	78,5465263	190993,9	140,095	1363,31703	1,32427451	26
30063,5	3,4223	8784,58931	106,05	82,8344112	197428,5	141,631	1393,96389	1,33551155	26,2
30143	3,5033	8604,17321	105,98	81,1867636	200023	143,327	1395,57097	1,35239668	26,2
30820,7	3,5256	8741,973	105,85	82,5883136	207257,7	144,757	1431,76289	1,36756731	26,3
31397,2	3,5386	8872,77454	106,05	83,6659551	207128,45	149,243	1387,8604	1,40728901	25,8
30462,5	3,5386	8608,63053	106,25	81,022405	208715,75	151,786	1375,06588	1,42857412	26,9
29777,4	3,4593	8607,92646	106,44	80,8711618	210183,4	152,704	1376,41057	1,43464863	26,8
29371,3	3,4194	8589,60636	106,64	80,5476966	212951,55	153,781	1384,77153	1,44205739	26,2
30486,3	3,4188	8917,25167	106,84	83,463606	217876,55	154,399	1411,12669	1,44514227	25,8
29742,8	3,4789	8549,48403	106,97	79,9241286	222005,8	155,018	1432,12917	1,44917267	25,7
29789,3	3,4592	8611,6154	107,1	80,40724	226695,55	154,399	1468,24494	1,44163399	25,34
31285,9	3,585	8726,88982	107,23	81,3847787	233492,9	153,481	1521,31469	1,43132519	23,71
30931,2	3,6066	8576,27683	107,36	79,8833534	234454,95	154,717	1515,37937	1,44110469	23,49
30249,8	3,4955	8653,92648	107,62	80,4118795	235052,55	155,653	1510,10613	1,44632039	22,55
30712,8	3,2191	9540,80333	107,62	88,6526977	237839,55	156,43	1520,42159	1,45354023	21,97
33641,5	3,4858	9651,01268	107,56	89,7267821	254362,69	157,048	1619,64934	1,46009669	19,61
33970,4	3,5409	9593,71911	107,82	88,9790309	255723,9	159,397	1604,32066	1,47836208	18,22
36251,2	3,7948	9552,86181	107,95	88,4933933	263010,01	160,351	1640,21434	1,48541918	16,6
37067,5	3,943	9400,83693	108,28	86,8196982	267323,31	161,958	1650,57181	1,49573328	16,4
36491,6	4,0016	9119,2523	109,07	83,6091712	267252,54	163,247	1637,10537	1,4967177	16,7
37081	3,9368	9419,07133	109,07	86,3580391	270430,25	164,395	1645,00289	1,50724305	16,9
36395,3	3,9431	9230,12351	109,07	84,6256854	272634,18	164,73	1655,03661	1,51031448	16,35
36643	3,8827	9437,50483	109,4	86,2660405	275103,25	164,236	1675,04841	1,50124314	16,33
38026,3	3,951	9624,47482	109,66	87,7665039	279788,86	165,225	1693,3809	1,50670254	15,78
38460,4	4,0799	9426,79968	110,18	85,5581746	284435,9	167,538	1697,73962	1,5205845	16,08
fcd	exc	mstar	pstar	hstar	m	p	h	ppp	n
40882,3	4,1092	9948,96817	110,38	90,1337939	291612,8	169,375	1721,69919	1,53447182	16,46
42476,4	4,2527	9988,10168	110,45	90,4309794	297083,9	170,894	1738,41036	1,54725215	17,9
39704,4	4,1696	9522,35226	110,45	86,2141445	303203,03	172,43	1758,41228	1,5611589	20
39821,4	4,1036	9704,01599	110,77	87,6050915	295089,53	175,538	1681,05783	1,58470705	19,3

40104,5	4,1439	9677,96038	111,43	86,8523771	297908,19	177,11	1682,05178	1,58942834	19,4
42159,7	4,0902	10307,4911	112,35	91,7444689	304132,58	178,699	1701,92659	1,5905563	19,6
42435,4	4,2347	10020,8752	112,41	89,1457624	308210,78	179,406	1717,95135	1,5959968	19,57
43072,3	4,4988	9574,17534	112,55	85,0659737	311804,11	180,66	1725,91669	1,60515327	19,54
44434,8	4,3994	10100,1955	113,14	89,2716588	329314,74	182,108	1808,34856	1,60958105	19,75
45132,4	4,3229	10440,3063	113,4	92,0661929	322277,53	183,379	1757,43967	1,61709877	19,63
44506,2	4,3593	10209,4832	113,4	90,0307158	322378,14	182,832	1763,2479	1,61227513	20
44840,5	4,49	9986,74833	113,99	87,6107407	325424,44	184,668	1762,21349	1,62003685	20,65
45671	4,6369	9849,46839	114,19	86,2550871	333115,38	186,152	1789,48053	1,63019529	20,88
44834,5	4,5606	9830,83366	114,25	86,0466841	335992,19	186,893	1797,77835	1,63582495	20,85
43008	4,3126	9972,63832	114,19	87,3337273	337486,38	187,264	1802,19572	1,63993344	20,89
43246,1	4,113	10514,4906	114,91	91,5019636	335419,85	188,767	1776,89877	1,64273779	20,73
43167,1	4,0901	10554,0451	115,37	91,4799786	338459,1	188,968	1791,09214	1,63793014	20,58
46086,4	4,0629	11343,2277	115,63	98,0993492	347091,59	189,87	1828,04861	1,64204791	19,57

DATA FOR THE SLOVAK REPUBLIC										
date	FCD	exc	mstar	pstar	hstar	m	p	h	ppp	n
1993M1	13760	28,56	481,84	93,58	5,14901005	217904	74,93	2908,28332	0,80065677	7,39
1993M2	15454	29,03	532,44	93,91	5,66978448	219637	76,15	2884,11261	0,81094455	7,47
1993M3	16398	29,03	564,92	94,24	5,99476117	222815	76,92	2896,78619	0,81622734	7,67
1993M4	17763	28,60	621,08	94,50	6,5724209	229003	77,85	2941,67216	0,82380038	7,70
1993M5	18252	28,78	634,23	94,63	6,70227016	234418	78,25	2995,89502	0,82686849	7,70
1993M6	18958	29,59	640,78	94,76	6,7620228	241553	78,58	3074,03425	0,82922827	7,88
1993M7	21986	33,07	664,81	94,76	7,01567175	247255	79,44	3112,39647	0,83834067	8,11
1993M8	23308	32,58	715,32	95,02	7,5278263	248507	81,37	3054,10092	0,8562966	8,15
1993M9	24731	32,01	772,70	95,22	8,11484586	249024	83,36	2987,29622	0,87545316	8,34
1993M10	25600	32,68	783,38	95,61	8,19311905	251458	84,56	2973,84237	0,88435283	8,27
1993M11	26869	33,04	813,13	95,68	8,49842862	258533	85,49	3024,25529	0,89346445	8,88
1993M12	28509	33,20	858,65	95,68	8,97423587	281717	86,02	3275,09739	0,89901839	8,68
1994M1	30023	33,31	901,46	95,94	9,39581642	278109	87,18	3190,04408	0,90867428	8,94
1994M2	30672	33,09	926,84	96,27	9,6274923	277989	87,81	3165,75069	0,91213291	9,05
1994M3	31387	32,64	961,55	96,60	9,95411524	272891	88,24	3092,49108	0,91350383	9,27
1994M4	32602	32,62	999,48	96,73	10,3326986	279999	88,61	3159,96	0,9160413	9,22
1994M5	33718	32,30	1044,06	96,80	10,7862827	283143	89,11	3177,57607	0,92056647	9,57
1994M6	34112	32,58	1047,02	97,12	10,7803231	286800	89,54	3203,09498	0,92190253	9,55
1994M7	35075	31,53	1112,57	97,39	11,4243705	294227	90,20	3261,84611	0,92623786	9,50
1994M8	35878	31,62	1134,59	97,78	11,6035316	298580	91,43	3265,61772	0,93507548	9,40
1994M9	35618	31,22	1140,91	98,04	11,6369051	301624	93,59	3222,81606	0,95459098	9,41
1994M10	37272	30,58	1219,00	98,11	12,4250599	312393	94,82	3294,6245	0,96647769	9,41
1994M11	37043	31,37	1180,88	98,24	12,0204604	315272	95,45	3303,00681	0,97160906	9,25
1994M12	38395	31,28	1227,58	98,24	12,4958328	335854	96,05	3496,73808	0,97769422	9,23
1995M1	38460	30,74	1251,14	98,63	12,6848126	323582	97,41	3321,87312	0,98759743	9,80
1995M2	38114	30,06	1267,76	99,03	12,8022381	326156	97,87	3332,38995	0,98836575	9,48
1995M3	39088	29,00	1348,09	99,35	13,5685025	326910	98,17	3329,9244	0,98811028	9,77
1995M4	39179	28,96	1352,96	99,68	13,572647	331919	98,57	3367,2781	0,98885565	9,04
1995M5	39208	29,27	1339,48	99,88	13,410961	332607	98,94	3361,7992	0,99056365	8,86
1995M6	39622	29,35	1349,98	100,08	13,4894428	337997	98,97	3415,1322	0,98894251	9,15
1995M7	39887	29,19	1366,27	100,08	13,6522267	342484	99,97	3425,97742	0,99889885	8,99
1995M8	39859	30,33	1314,22	100,34	13,0978056	348810	100,76	3461,65297	1,00423564	8,92
1995M9	40306	29,54	1364,55	100,54	13,5727238	352978	101,79	3467,60583	1,01250298	8,82
1995M10	39647	29,44	1346,84	100,86	13,3530537	353890	102,29	3459,60583	1,01415768	8,80
1995M11	39617	29,71	1333,46	100,80	13,2290001	359897	102,66	3505,82035	1,01844283	8,20
1995M12	39896	29,57	1349,25	100,73	13,3943286	390939	102,92	3798,36383	1,02174064	8,23
1996M1	40001	30,20	1324,62	101,32	13,073282	383344	103,64	3698,91062	1,02283786	9,64
1996M2	40161	29,86	1345,16	101,65	13,232959	390004	103,95	3751,98661	1,02256719	9,43

1996M3	39919	30,18	1322,52	102,18	12,94344	394591	104,26	3784,86404	1,02033726	8,64
1996M4	39278	30,65	1281,54	102,57	12,4943222	390069	104,56	3730,43304	1,01944038	8,77
1996M5	38866	30,97	1254,79	102,77	12,2100902	396922	104,98	3781,03775	1,02150496	8,20
1996M6	38211	31,01	1232,33	102,83	11,983844	399087	105,18	3794,2158	1,02285259	8,76
1996M7	38363	30,25	1268,24	103,03	12,3094271	403533	105,49	3825,24741	1,02389595	8,96
1996M8	39322	30,62	1284,40	103,23	12,4425109	409183	106,11	3856,21525	1,02792874	9,63
1996M9	38539	30,96	1244,80	103,56	12,0206629	407912	107,14	3807,28019	1,03461928	9,90
1996M10	39545	31,13	1270,36	103,88	12,2287461	409552	107,76	3800,66445	1,03730158	9,67
1996M11	39745	31,21	1273,51	104,08	12,2358844	420414	108,17	3886,60442	1,03929669	9,72
1996M12	41690	31,90	1307,10	104,08	12,5586225	451355	108,48	4160,75923	1,04226556	10,24
1997M1	41103	32,45	1266,62	104,41	12,1314206	437825	109,72	3990,56647	1,05082944	11,62
1997M2	40923	33,27	1230,17	104,74	11,7454834	438321	110,13	3980,14111	1,05147227	10,63
1997M3	40986	33,09	1238,81	105,00	11,7984069	439253	110,75	3966,3103	1,0547439	11,81
1997M4	41134	33,59	1224,55	105,13	11,6479996	440260	111,36	3953,34219	1,05929801	11,82
1997M5	41572	33,31	1247,92	105,06	11,8777244	444850	111,47	3990,86725	1,06094381	13,44
1997M6	44509	33,38	1333,40	105,20	12,6755381	449455	111,78	4021,03314	1,06256001	12,00
1997M7	45071	34,88	1292,02	105,33	12,2669141	456782	111,88	4082,82162	1,06221636	13,19
1997M8	47071	34,53	1363,35	105,52	12,9199261	463357	112,91	4103,80926	1,06999422	13,39
1997M9	45629	33,79	1350,41	105,79	12,7654878	458135	113,22	4046,48554	1,07025504	15,77
1997M10	45804	33,25	1377,61	106,05	12,9903944	459881	114,15	4028,91936	1,07635222	15,83
1997M11	46103	34,21	1347,73	105,98	12,7164326	467569	114,87	4070,56048	1,08381533	15,39
1997M12	46964	34,78	1350,24	105,85	12,7560309	492351	115,48	4263,36982	1,09100528	16,34
1998M1	48304	35,27	1369,43	106,05	12,913329	487124	117,65	4140,52088	1,10938443	17,77
1998M2	49581	35,16	1410,35	106,25	13,2745461	493967	118,47	4169,48308	1,11508306	16,57
1998M3	49125	35,06	1401,33	106,44	13,1651914	485415	118,78	4086,63844	1,11592229	15,62
1998M4	50369	34,68	1452,48	106,64	13,6205054	490374	119,19	4114,11744	1,11772428	16,55
1998M5	50581	34,44	1468,63	106,84	13,7465602	497818	119,91	4151,45855	1,12241192	15,59
1998M6	53402	35,31	1512,55	106,97	14,1403184	499283	120,02	4160,10232	1,12200024	15,32
1998M7	53898	34,57	1558,92	107,10	14,5559871	508303	119,61	4249,84741	1,11678089	14,46
1998M8	54659	35,54	1538,17	107,23	14,3446203	509589	119,30	4271,63526	1,11252448	14,20
1998M9	61571	34,70	1774,33	107,36	16,526758	505049	119,81	4215,38089	1,1159639	18,57
1998M10	66061	35,06	1884,33	107,62	17,5086602	513831	121,15	4241,2444	1,12569804	18,00
1998M11	66464	36,55	1818,54	107,62	16,8973175	519126	121,67	4266,81242	1,13048326	16,33
1998M12	68548	36,91	1857,02	107,56	17,2652443	536061	121,98	4394,84321	1,13403931	16,02
1999M1	65873	37,30	1766,17	107,82	16,3807663	535023	125,58	4260,41567	1,16471898	15,83
1999M2	69286	39,81	1740,59	107,95	16,1239069	552218	126,71	4357,98728	1,17381034	15,58
1999M3	72094	41,86	1722,31	108,28	15,9060384	552795	127,02	4351,92839	1,17309752	14,31
1999M4	73878	42,38	1743,19	109,07	15,9827153	557613	127,64	4368,60413	1,17029899	13,54
1999M5	77531	43,66	1775,95	109,07	16,283137	564684	127,95	4413,3177	1,17313211	15,95
1999M6	76489	43,77	1747,56	109,07	16,0228214	565325	128,57	4397,08948	1,17879835	15,56

1999M7	75426	41,82	1803,46	109,40	16,4857391	569928	135,88	4194,28622	1,24212258	14,17
1999M8	78208	42,27	1850,07	109,66	16,8712705	576223	136,60	4218,23093	1,24571851	13,78
1999M9	75590	41,10	1839,17	110,18	16,6919829	570024	137,43	4147,80103	1,24727045	13,60
1999M10	80459	41,61	1933,65	110,38	17,5180808	585813	138,15	4240,44329	1,25157637	13,48
1999M11	80308	42,54	1887,73	110,45	17,0920773	585359	138,66	4221,42012	1,25550274	13,36
1999M12	75851	42,27	1794,61	110,45	16,2489051	597709	139,28	4291,35854	1,26109828	13,29
2000M1	75753	42,95	1763,95	110,77	15,9240419	594794	142,68	4168,66879	1,28805756	13,29
2000M2	74824	43,33	1727,00	111,43	15,4985188	604281	147,52	4096,18161	1,32390739	10,63
2000M3	76442	43,46	1758,78	112,35	15,654781	609919	148,04	4119,98865	1,31768256	9,69
2000M4	77562	45,09	1720,01	112,41	15,3006485	616037	148,04	4161,3156	1,31690893	8,89
2000M5	84518	45,76	1847,19	112,55	16,4128669	627199	148,45	4224,95638	1,31903683	8,50
2000M6	78144	45,42	1720,63	113,14	15,2084844	619865	148,35	4178,45202	1,31123603	8,08
2000M7	80785	46,10	1752,23	113,40	15,4520722	635261	148,35	4282,23501	1,30820649	7,52
2000M8	98106	48,05	2041,62	113,40	18,0040275	680646	148,45	4584,98764	1,3091148	7,14
2000M9	105947	49,37	2145,85	113,99	18,8250528	692915	149,38	4638,66834	1,31045978	7,06
2000M10	95654,1	51,22	1867,41	114,19	16,354065	678217,7	150,00	4521,57191	1,31361113	7,06
2000M11	95944,9	49,78	1927,42	114,25	16,8700246	676952	150,61	4494,61537	1,31827293	6,88
2000M12	93949	51,22	1834,12	114,19	16,0625426	694855	150,92	4604,0365	1,32172946	6,66
2001M1	92155	47,61	1935,46	114,91	16,8435632	691685	153,71	4500,08132	1,33763533	6,51

DATA FOR TURKEY										
date	fcd	m	n	p	pstar	exc	mstar	hstar	h	ppp
1986M1	1,11	8,87	45,00	0,99	82,72	585,8776	0,00189050	2,2854E-05	8,91990938	0,01202731
1986M2	1,23	9,19	45,00	1,01	81,52	592,0918	0,00207924	2,5507E-05	9,0562431	0,01244983
1986M3	1,31	9,87	44,00	1,03	80,40	634,09625	0,00207003	2,5748E-05	9,60507373	0,0127873
1986M4	1,39	10,11	44,00	1,05	79,83	667,39355	0,00208857	2,6161E-05	9,64033992	0,01313333
1986M5	1,47	10,54	42,00	1,07	80,16	670,36885	0,00218566	2,7268E-05	9,89616681	0,01328888
1986M6	1,63	10,89	40,00	1,08	80,07	682,12235	0,00238652	2,9804E-05	10,1244991	0,01343132
1986M7	1,70	11,15	40,00	1,09	79,67	685,75735	0,00247405	3,1052E-05	10,2399236	0,01366418
1986M8	1,65	11,58	40,00	1,09	79,59	679,7712	0,00241993	3,0403E-05	10,6152802	0,01370155
1986M9	1,71	11,79	40,00	1,11	79,67	692,34145	0,00247248	3,1032E-05	10,5808484	0,01398273
1986M10	1,91	12,30	36,00	1,16	79,91	708,1829	0,00269959	3,3781E-05	10,628488	0,01448473
1986M11	2,10	12,77	36,00	1,17	79,99	747,7147	0,00280348	3,5046E-05	10,8748702	0,01468172
1986M12	2,28	13,99	35,00	1,19	79,91	756,5063	0,00302007	3,7791E-05	11,8053962	0,01483185
1987M1	2,66	14,05	35,00	1,23	80,56	752,4565	0,00353642	4,39E-05	11,4422051	0,01524473
1987M2	2,68	14,24	35,00	1,26	80,96	760,59085	0,00352239	4,351E-05	11,3492367	0,01550314
1987M3	2,78	14,77	35,00	1,30	81,12	775,1307	0,00358378	4,4181E-05	11,3699231	0,01601727
1987M4	2,86	15,24	35,00	1,33	81,68	789,66195	0,00362206	4,4346E-05	11,4318821	0,01632449
1987M5	2,97	15,95	35,00	1,40	82,24	805,5965	0,00368299	4,4784E-05	11,4173008	0,01698476
1987M6	3,17	16,16	35,00	1,40	82,56	835,5193	0,00379680	4,5989E-05	11,5143071	0,0169956
1987M7	3,41	16,91	35,00	1,43	82,96	867,12585	0,00393518	4,7434E-05	11,8464158	0,01720532
1987M8	3,68	17,37	35,00	1,47	83,20	889,83025	0,00413989	4,9758E-05	11,8351144	0,01763587
1987M9	3,96	17,99	35,00	1,50	83,12	912,76905	0,00433297	5,2129E-05	12,0162281	0,01801477
1987M10	4,22	18,84	35,00	1,55	83,44	946,32475	0,00445576	5,34E-05	12,1600046	0,0185709
1987M11	4,61	19,16	35,00	1,59	83,52	957,115	0,00481771	5,7682E-05	12,0228675	0,01907928
1987M12	5,24	21,65	35,00	1,77	83,52	993,548	0,00527534	6,3161E-05	12,2637811	0,02113348
1988M1	5,59	20,98	35,00	1,94	83,84	1080,3556	0,00516959	6,1659E-05	10,8098501	0,02315185
1988M2	5,68	21,62	45,00	2,06	84,00	1151,35265	0,00493359	5,8732E-05	10,4873861	0,02454227
1988M3	5,81	22,66	45,00	2,20	84,08	1201,77635	0,00483276	5,7476E-05	10,2812153	0,02620816
1988M4	5,92	23,32	45,00	2,30	84,80	1247,9305	0,00474746	5,5982E-05	10,1260293	0,02715249
1988M5	6,05	23,97	45,00	2,33	85,37	1294,15575	0,00467448	5,4759E-05	10,2756808	0,02732701
1988M6	6,02	24,54	45,00	2,35	85,93	1350,6727	0,00445630	5,1862E-05	10,4350988	0,02736561
1988M7	6,31	26,32	45,00	2,41	86,49	1416,80945	0,00445409	5,15E-05	10,9005856	0,02791789
1988M8	7,03	27,25	42,00	2,50	86,57	1493,6374	0,00470596	5,4362E-05	10,9174305	0,02883672
1988M9	7,64	29,05	42,00	2,61	86,65	1586,86475	0,00481761	5,56E-05	11,1273836	0,03013463
1988M10	8,05	30,88	67,10	2,74	86,73	1722,24355	0,00467350	5,3887E-05	11,2816822	0,03156247
1988M11	8,70	33,14	66,80	2,89	86,81	1725,64275	0,00504369	5,8102E-05	11,4735905	0,03326867
1988M12	8,98	35,40	66,10	3,01	87,37	1797,34615	0,00499703	5,7195E-05	11,7726949	0,03441797
1989M1	9,04	35,14	62,20	3,22	88,57	1850,81425	0,00488288	5,5129E-05	10,9058859	0,03638045
1989M2	9,38	38,08	60,70	3,34	88,81	1910,71775	0,00490967	5,5282E-05	11,4063927	0,03759043

1989M3	9,76	40,73	56,90	3,46	89,37	1981,6609	0,00492592	5,5117E-05	11,766281	0,03873494
1989M4	10,01	41,54	54,20	3,64	90,01	2056,04765	0,00486720	5,4072E-05	11,4006394	0,04048315
1989M5	9,77	42,09	51,50	3,81	90,74	2072,1109	0,00471698	5,1986E-05	11,0595691	0,04194802
1989M6	10,13	43,61	50,50	3,93	90,50	2118,99885	0,00478198	5,2842E-05	11,0985227	0,04342284
1989M7	10,52	45,80	51,40	4,13	90,41	2142,52605	0,00491042	5,431E-05	11,0848194	0,04569871
1989M8	10,90	48,04	51,50	4,24	89,77	2188,21885	0,00498085	5,5482E-05	11,3325345	0,04722368
1989M9	11,44	50,96	51,60	4,35	90,09	2242,42285	0,00509957	5,6603E-05	11,7239317	0,04824994
1989M10	12,19	54,55	51,40	4,47	90,41	2278,07025	0,00534922	5,9163E-05	12,2103614	0,04941171
1989M11	12,57	56,62	50,50	4,65	90,33	2314,27455	0,00543285	6,0141E-05	12,1667748	0,05152024
1989M12	13,52	60,22	49,00	4,88	90,58	2312,1859	0,00584879	6,4574E-05	12,3377036	0,053886
1990M1	13,80	60,29	47,50	5,10	92,10	2330,89435	0,00592095	6,429E-05	11,8284723	0,05534718
1990M2	14,21	62,58	46,70	5,33	91,70	2379,11825	0,00597154	6,5122E-05	11,7350661	0,05815493
1990M3	14,80	65,45	46,70	5,56	91,54	2454,99725	0,00602962	6,5871E-05	11,7819346	0,06068617
1990M4	15,11	68,52	46,70	5,69	91,38	2501,82915	0,00604154	6,6117E-05	12,0451968	0,06225274
1990M5	15,58	69,28	46,90	5,78	91,78	2550,0561	0,00611116	6,6587E-05	11,9950588	0,06293456
1990M6	15,88	73,67	46,90	5,86	91,62	2629,035	0,00604054	6,5932E-05	12,5700567	0,06396852
1990M7	16,87	76,53	47,00	5,96	91,62	2666,165	0,00632785	6,9068E-05	12,8422713	0,06504899
1990M8	17,27	78,93	47,00	6,22	93,38	2679,363	0,00644452	6,9014E-05	12,6818969	0,06664753
1990M9	17,82	81,27	47,10	6,58	94,82	2718,4285	0,00655408	6,9119E-05	12,3462494	0,06941596
1990M10	19,03	85,10	47,80	6,89	96,83	2741,61905	0,00693955	7,1669E-05	12,3575743	0,07112051
1990M11	19,99	87,40	49,00	7,08	96,27	2776,9482	0,00719895	7,4782E-05	12,3489906	0,07351716
1990M12	21,05	92,47	50,70	7,25	95,06	2874,0279	0,00732449	7,7048E-05	12,7483329	0,07630318
1991M1	19,87	91,94	51,90	7,59	95,38	2993,45795	0,00663637	6,9575E-05	12,1188135	0,07953617
1991M2	23,36	100,02	53,40	7,99	93,94	3140,05725	0,00743961	7,9194E-05	12,525074	0,08500334
1991M3	24,92	103,45	59,30	8,37	93,06	3539,4569	0,00704193	7,5671E-05	12,3556411	0,08997119
1991M4	26,88	106,91	60,80	8,82	92,98	3790,98305	0,00709101	7,6264E-05	12,116579	0,09489373
1991M5	28,44	111,95	62,00	9,08	93,38	3981,3624	0,00714341	7,6498E-05	12,3293282	0,09723658
1991M6	29,50	117,74	61,20	9,20	93,22	4217,0735	0,00699627	7,5051E-05	12,7936041	0,09872731
1991M7	32,22	122,26	62,10	9,41	92,98	4377,66175	0,00735909	7,9147E-05	12,9923581	0,10120446
1991M8	35,82	131,21	63,80	9,85	93,14	4508,0114	0,00794510	8,5303E-05	13,3147974	0,10580534
1991M9	39,13	140,91	68,50	10,29	92,98	4646,8724	0,00841992	9,0556E-05	13,6986759	0,11063263
1991M10	42,76	151,20	69,60	10,65	93,30	4841,2898	0,00883207	9,4663E-05	14,1997727	0,11412706
1991M11	46,06	157,09	69,80	11,06	93,30	4947,7143	0,00930973	9,9782E-05	14,205319	0,11852468
1991M12	49,89	169,31	69,60	11,55	92,90	5054,94	0,00986940	0,00010624	14,6602852	0,12431808
1992M1	50,93	171,82	68,70	12,82	92,66	5317,2684	0,00957903	0,00010338	13,3995633	0,138389
1992M2	56,62	184,91	68,10	13,50	93,06	5668,77525	0,00998718	0,00010732	13,7015464	0,1450238
1992M3	60,31	193,20	68,00	14,07	93,06	6093,9457	0,00989623	0,00010634	13,7276842	0,151237
1992M4	64,95	203,93	69,20	14,38	93,22	6423,12075	0,01011135	0,00010847	14,1787172	0,15428523
1992M5	71,09	215,37	69,40	14,48	93,86	6709,1335	0,01059584	0,00011289	14,8702341	0,15430182
1992M6	77,49	225,58	69,70	14,52	94,58	6882,71025	0,01125879	0,00011904	15,5369452	0,15350343

1992M7	84,31	244,14	69,40	14,79	94,42	6945,3952	0,01213869	0,00012856	16,5116295	0,15659069
1992M8	90,66	255,83	68,40	15,50	94,26	7094,56525	0,01277863	0,00013556	16,5035416	0,16445192
1992M9	96,70	267,31	68,10	16,47	94,42	7273,26435	0,01329547	0,00014081	16,2314601	0,17441269
1992M10	99,32	280,94	68,00	17,39	94,66	7559,9086	0,01313708	0,00013878	16,1568814	0,18368634
1992M11	98,83	284,64	68,80	18,00	94,42	8115,11455	0,01217874	0,00012898	15,8160885	0,19059738
1992M12	101,39	301,88	69,10	18,64	94,26	8351,59695	0,01214031	0,00012879	16,1914848	0,1977919
1993M1	104,28	309,97	69,10	19,58	94,58	8703,08875	0,01198241	0,00012669	15,8330967	0,20698456
1993M2	107,64	324,79	66,40	20,60	94,74	9040,65075	0,01190644	0,00012567	15,7652972	0,21744885
1993M3	112,03	340,87	63,70	21,58	95,14	9377,2635	0,01194656	0,00012556	15,7946177	0,2268322
1993M4	116,19	351,26	63,80	22,15	95,54	9548,6324	0,01216803	0,00012735	15,8613759	0,23178156
1993M5	119,43	370,88	64,00	22,78	95,95	9970,66975	0,01197773	0,00012484	16,2792977	0,23745251
1993M6	125,71	372,35	64,00	23,32	95,87	10550,1056	0,01191533	0,00012429	15,9695662	0,24321835
1993M7	132,00	392,68	64,00	24,42	95,62	11175,4494	0,01181187	0,00012352	16,0789279	0,25539687
1993M8	141,95	414,22	64,00	25,34	95,22	11634,7829	0,01220066	0,00012813	16,3471789	0,26609965
1993M9	152,09	425,61	64,00	26,36	95,14	11870,4359	0,01281217	0,00013466	16,148246	0,27701408
1993M10	163,58	451,63	64,00	27,29	95,46	12495,9988	0,01309083	0,00013713	16,5467182	0,28591226
1993M11	173,74	464,65	64,00	29,03	95,38	13364,0778	0,01300022	0,00013629	16,0054873	0,3043527
1993M12	186,79	495,47	64,00	29,10	95,06	14047,8511	0,01329670	0,00013987	17,0275518	0,30608812
1994M1	224,92	530,45	67,70	33,28	95,46	15179,4248	0,01481769	0,00015522	15,9414277	0,34855957
1994M2	248,59	581,54	85,40	35,86	95,54	17722,66	0,01402668	0,00014681	16,2189684	0,37527356
1994M3	282,84	609,94	86,70	38,38	95,95	20607,4671	0,01372493	0,00014305	15,8914045	0,40003856
1994M4	354,84	729,35	131,40	49,29	96,03	32190,5386	0,01102299	0,00011479	14,7958105	0,51334644
1994M5	337,67	772,63	131,80	53,49	96,11	33866,1519	0,00997057	0,00010375	14,4451684	0,55654706
1994M6	351,93	850,85	121,70	54,94	96,51	31714,2989	0,01109676	0,00011498	15,4871739	0,56927609
1994M7	363,96	947,04	79,30	56,28	96,67	31000,8255	0,01174030	0,00012145	16,8263875	0,58223446
1994M8	401,81	980,28	67,50	58,06	97,15	31695,7268	0,01267717	0,00013049	16,8849538	0,59761209
1994M9	451,17	1039,17	67,30	60,64	96,91	33950,5153	0,01328914	0,00013713	17,1375843	0,62572105
1994M10	505,26	1094,53	62,50	64,40	96,91	34917,167	0,01447013	0,00014932	16,9957826	0,6645509
1994M11	516,80	1134,03	74,50	68,06	97,39	36294,6364	0,01423907	0,00014621	16,6632729	0,69880468
1994M12	561,88	1223,64	77,30	72,41	97,63	37440,2955	0,01500723	0,00015372	16,8989195	0,74168354
1995M1	588,66	1246,95	87,20	79,83	98,51	40197,1591	0,01464419	0,00014866	15,6204151	0,81035017
1995M2	604,03	1360,24	87,45	85,47	98,99	41043,05	0,01471696	0,00014867	15,9143536	0,86343258
1995M3	642,45	1440,67	78,68	90,20	99,31	41762,1819	0,01538358	0,0001549	15,9714488	0,90827795
1995M4	654,31	1547,91	73,72	94,83	99,87	42305,5	0,01546633	0,00015486	16,3237087	0,94946487
1995M5	653,25	1580,89	73,00	96,60	100,11	43065,8421	0,01516866	0,00015151	16,3653482	0,96489902
1995M6	666,56	1678,31	73,13	97,84	100,43	43185,2045	0,01543494	0,00015368	17,1542567	0,97413525
1995M7	698,80	1805,19	68,75	100,04	100,43	44459,381	0,01571763	0,0001565	18,0447021	0,99607703
1995M8	735,59	1887,84	68,80	102,30	100,27	46618,2955	0,01577900	0,00015736	18,4543491	1,02018469
1995M9	777,46	1960,47	69,11	107,03	100,35	47772,9524	0,01627396	0,00016217	18,3171757	1,06651454
1995M10	831,82	2010,42	69,83	111,01	100,43	49999,7728	0,01663654	0,00016565	18,1107498	1,10527311

1995M11	937,35	2197,22	78,59	114,93	100,51	52386,2273	0,01789300	0,00017802	19,117688	1,14343276
1995M12	1145,82	2487,00	83,92	119,93	100,76	56729,7619	0,02019786	0,00020047	20,7370549	1,19031314
1996M1	1116,96	2481,30	85,50	131,60	101,24	60442,7955	0,01847962	0,00018254	18,8556024	1,29988344
1996M2	1174,07	2665,06	84,80	139,28	101,16	64053,8889	0,01832941	0,0001812	19,1342959	1,376903
1996M3	1301,09	2831,05	82,70	149,07	101,32	68276,381	0,01905622	0,00018809	18,991923	1,47129772
1996M4	1354,12	3109,02	79,70	161,11	102,12	72543,2369	0,01866639	0,00018279	19,2978642	1,57767071
1996M5	1428,65	3220,44	79,40	167,77	102,68	76727,2955	0,01861984	0,00018134	19,195246	1,63395631
1996M6	1497,06	3358,65	79,10	172,34	102,60	79678,2	0,01878883	0,00018313	19,4883081	1,67977933
1996M7	1620,10	3563,34	79,60	176,43	102,52	82703,2174	0,01958932	0,00019108	20,1971512	1,72094657
1996M8	1774,55	3901,43	79,70	183,09	102,68	84908,0714	0,02089966	0,00020354	21,3083443	1,78316891
1996M9	1863,90	4179,11	79,60	192,45	102,60	88845,1191	0,02097921	0,00020448	21,715662	1,87573832
1996M10	2006,97	4506,77	79,50	202,98	102,52	93721,9546	0,02141409	0,00020888	22,2026968	1,97997425
1996M11	2185,03	4740,26	79,60	213,36	102,68	98480,4048	0,02218746	0,00021609	22,2174139	2,07791272
1996M12	2409,59	5385,73	79,70	221,74	103,24	104705,727	0,02301297	0,00022291	24,2880709	2,14784967
1997M1	2551,19	5507,90	77,16	234,27	103,96	112089,091	0,02276038	0,00021893	23,5108977	2,25344119
1997M2	2683,97	5804,19	76,62	248,78	103,00	119193,333	0,02251779	0,00021862	23,3302544	2,41540209
1997M3	2813,09	6165,62	76,54	263,81	102,04	124859,762	0,02253000	0,0002208	23,3715415	2,58542489
1997M4	2856,25	6400,74	76,63	278,41	101,80	130905	0,02181926	0,00021434	22,9904349	2,73494307
1997M5	2985,21	6682,04	76,84	292,86	102,12	137096,191	0,02177457	0,00021323	22,8162014	2,86792601
1997M6	3152,78	7128,26	77,41	302,86	101,96	144079,286	0,02188226	0,00021462	23,5362359	2,97049737
1997M7	3381,58	7566,41	79,23	318,83	101,72	153194,783	0,02207373	0,00021701	23,7319464	3,1344613
1997M8	3634,39	7931,14	82,60	335,76	101,96	163382,143	0,02224472	0,00021818	23,6213795	3,2931628
1997M9	3730,18	8376,36	82,18	356,78	102,20	170153,182	0,02192248	0,00021451	23,4776501	3,49106636
1997M10	4046,81	8976,98	82,57	380,59	102,44	177906,364	0,02274685	0,00022205	23,5867696	3,71535953
1997M11	4403,28	9376,31	82,92	401,88	102,44	187022	0,02354418	0,00022984	23,3310632	3,92316328
1997M12	4893,82	10616,83	83,20	423,44	101,56	199530,652	0,02452666	0,00024151	25,0729221	4,16950254
1998M1	5063,66	10945,49	82,49	451,07	100,51	211650	0,02392469	0,00023802	24,2657227	4,48761367
1998M2	5482,87	11274,49	82,79	471,66	100,19	223232	0,02456131	0,00024514	23,9040044	4,70743757
1998M3	5677,30	11941,94	82,73	490,63	99,95	235361,818	0,02412158	0,00024133	24,3398711	4,90862724
1998M4	6302,02	13070,81	81,88	510,31	100,11	245595,294	0,02566018	0,00025631	25,6135687	5,09726911
1998M5	6482,67	13723,14	81,19	526,92	100,27	251915,75	0,02573348	0,00025663	26,044172	5,2547819
1998M6	6707,68	14813,35	77,60	535,14	100,03	260682,5	0,02573122	0,00025723	27,6810965	5,34966461
1998M7	7033,97	15663,12	71,29	548,69	100,11	268271,957	0,02621955	0,0002619	28,5463832	5,48065206
1998M8	7378,44	16079,76	73,00	561,91	99,55	273915,238	0,02693695	0,00027058	28,6160551	5,64439868
1998M9	9455,02	18694,31	81,68	591,96	99,23	275287,273	0,03434601	0,00034612	31,5801984	5,96545664
1998M10	8119,58	17897,78	82,24	616,48	99,39	278620,952	0,02914203	0,0002932	29,0324035	6,20245854
1998M11	8278,80	18555,58	81,80	637,39	98,99	294248,571	0,02813540	0,00028422	29,1119508	6,43881186
1998M12	8654,30	20209,71	82,60	653,19	98,35	306908,913	0,02819827	0,00028671	30,9399227	6,64149808
1999M1	8893,89	20616,02	83,60	676,58	98,51	321282,294	0,02768248	0,00028101	30,4711075	6,86805975
1999M2	9308,80	21576,66	82,20	699,37	98,03	341155,7	0,02728607	0,00027835	30,8516546	7,13426061

1999M3	9971,71	23278,96	81,10	727,27	98,27	359993,75	0,02769968	0,00028187	32,0087781	7,40071232
1999M4	10844,70	24038,90	80,90	765,70	99,07	379360,857	0,02858677	0,00028855	31,3945075	7,72880193
1999M5	11342,30	25488,59	81,40	790,16	99,95	395041,225	0,02871169	0,00028725	32,2573823	7,90532969
1999M6	11947,60	27335,01	85,30	804,46	100,35	412498,886	0,02896396	0,00028862	33,9792433	8,0162425
1999M7	12095,60	28498,68	81,20	836,45	100,76	426591,5	0,02835406	0,00028142	34,0711127	8,30179147
1999M8	12698,10	30289,17	81,30	863,76	101,72	435016,119	0,02918995	0,00028697	35,0668534	8,49174671
1999M9	13636,40	32341,19	76,40	914,29	102,60	453405,568	0,03007550	0,00029314	35,3731655	8,9113433
1999M10	15470,50	34431,88	76,00	956,91	102,36	466685,275	0,03314975	0,00032386	35,9822095	9,34869771
1999M11	17152,30	36694,13	72,30	995,94	102,84	495693,818	0,03460261	0,00033647	36,8436785	9,68446795
1999M12	18137,80	40328,87	59,50	1064,10	102,44	527105,196	0,03441021	0,00033591	37,8995113	10,3877467
2000M1	18958,50	41285,22	38,10	1125,66	102,84	545189,625	0,03477414	0,00033814	36,6764565	10,9458474
2000M2	20060,60	41700,44	38,71	1171,51	104,04	563752,071	0,03558408	0,00034202	35,5954623	11,2600802
2000M3	20882,20	43221,22	39,95	1207,79	104,84	580772,119	0,03595593	0,00034295	35,7853766	11,519987
2000M4	21696,40	44659,96	42,51	1236,66	104,76	595845,15	0,03641282	0,00034757	36,1133699	11,8043584
2000M5	22980,60	45638,50	39,00	1257,63	105,48	617574,455	0,03721106	0,00035276	36,2892902	11,9224717
2000M6	23184,70	47556,94	40,98	1261,34	107,25	616587,955	0,03760161	0,00035061	37,7035058	11,7610749
2000M7	23784,00	49968,48	37,77	1274,29	107,17	627934,31	0,03787657	0,00035344	39,2128009	11,890694
2000M8	24701,50	50296,64	33,84	1286,39	106,53	645847,955	0,03824662	0,00035904	39,0990602	12,0758313
2000M9	25726,10	52153,16	50,47	1316,11	107,81	664705,191	0,03870302	0,000359	39,6267485	12,2079066
2000M10	26183,40	53079,66	47,55	1352,88	108,53	677376,114	0,03865415	0,00035616	39,2345663	12,4654934
2000M11	26143,00	54141,63	51,45	1385,41	108,21	684567,045	0,03818910	0,00035292	39,0798608	12,803094