CHALLENGES OF GLOBALIZATION AND EXCHANGE RATE POLICIES IN CENTRAL ASIAN INDEPENDENT STATES

BAKHTIOR ISLAMOV

*The Institute of Economic Research, Hitotsubashi University,
Kunitachi, Tokyo 186-8603, Japan*
pc00456@srv.hit.-u.ac.jp

AND

ZIYODULLO PARPIEV

*Center of Economic Research and Statistics, Central Bank of Uzbekistan
Uzbekistanskaya 6, Tashkent 700-001, Uzbekistan*
zparpiev@yahoo.com

Abstract

The paper examines the efficiency of the different exchange rate policies in cushioning the impacts of external shocks on the Central Asian economies that have adopted varying, radical, and gradual, strategies. It deals with a comparative analysis of negative effects of global and regional financial crises, as well as with peculiarities of interdependence between exchange rates fluctuations and competitiveness of the goods produced in the region for different markets. Special focus is made on the system of multiple exchange rates taking Uzbekistan's experience as an example. The study strongly underlines the necessity of finding particular mix of government and market instruments, radical and gradual steps related to exchange rate policy in each individual state and introducing anti-crisis measures, whenever it is required.

Key words: Central Asian states in transition; Exchange rate policy
JEL classification: F 31; F 32; O53; P33; P52

I. *Introduction*

Central Asian states - Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan - appeared in the map of the world as newly independent states (NIS) after the breakup of the former Soviet Union (FSU) in 1991. The problems they have to deal with simultaneously in different fields within this decade — building up a new state and market institutions,

transforming a centrally planned economy, disrupting autarchic dependence and integrating with world community — were unprecedented in their character and scale. Each of the five countries found themselves with rather different initial conditions and abilities to cope with these problems. Some of them had chosen radical market reforms while others have followed more gradual strategies. Their external environment, especially in the second half of the 1990 s, was rather complex and mainly unfavorable too. The substantial loss of traditional ties and low competitiveness outside the FSU markets, worsening terms of trade, global and regional financial crises, changed attitudes of foreign investors towards emerging and transitional economies, all these and some other less prominent developments created additional difficulties [see e.g., Islamov (1998) and (1999)].

Under the circumstances, the choice of right exchange rate policy has become one of the key tasks to meet the challenges of both globalization and systemic transformation to provide a proper linkage between domestic and world markets.

All Central Asian states have chosen more or less similar exchange rates regimes based on managed floating and systems of exchange auctions since the moment of their own currency introduction.[1] (Only the temporarily introduced Uzbek sum-coupon was initially, up to April 1994, fixed at par with the Russian ruble, and, afterwards was regularly adjusted by fixing it on a weekly basis, and turning it into a kind of managed floating currency). However, despite some similarities in initial macroeconomic stabilization procedures and forms of exchange rate regimes, in reality the various countries took two significantly different approaches towards not only the main strategy of market reforms as a whole but also towards currency convertibility as well.

The objective of this paper is to examine the efficiency of the different exchange rate policies in cushioning the impacts of external shocks on the Central Asian economies, which adopted varying, radical, and gradual, strategies. Section II deals with a comparative analysis of the negative effects of global and regional financial crises on the Central Asian states, peculiarities of interdependence between exchange rate fluctuations and competitiveness of their goods in different markets, as well as currency substitution and capital flight.

In section III, special focus is made on the principal issues related to the system of multiple exchange rates in Uzbekistan: its origin and dynamics, causes and rationale, as well as the correlation with the current account balance and especially with inflation. It also summarizes the implications of the multiple exchange rates system and some policy proposals on a step-by-step approach to currency convertibility.

Section IV includes concluding remarks on comparative disadvantages and weaknesses of different exchange rate policies to meet challenges of globalization. It strongly underlines the necessity of finding particular mix of state and market co-ordination, radical and gradual steps related to exchange rate policy in each individual state with implementing anti-crisis measures, whenever they are required.

Appendix gives some details of the regression analysis in addition to the summary of its results presented in the main body of the paper. It contains models that describe the exchange

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[1] The Kyrgyz som was launched first (May 10, 1993), followed by the Turkmen manat (November 1, 1993). To avoid a flood of inflated rubles to each other's markets and due to better coordination between Kazakhstan and Uzbekistan at the time, the Kazakh tenge and the Uzbek sum-coupon were introduced on the same day (November 15, 1993). The latter was replaced by the soum as the permanent national Uzbek currency on July 1, 1994. On May 10, 1995 the Tajik ruble became the last currency to replace the Russian ruble in the FSU.

rate pass-through in Uzbekistan in light of the empirical analysis of different exchange rates and their interactions with price indices, using standard the Dickey-Fuller test, Granger causality of selected variables and the correlation matrix.

II. External Shocks and Exchange Rate Policy

The Central Asian states have been divided into two groups with regards to their exchange rate policies. Kyrgyzstan and Kazakhstan, following the concept of radical "shock therapy" reforms, accepted the conditions of Article VIII of the IMF Charter rather fast — on March 29, 1995 and July 16, 1996 respectively. (It took less than two years in the former and three years in the latter after introduction of the national currencies). Tajikistan has recently unified its exchange rate, abolished surrender requirements, and is making efforts to follow IMF conditionalities. The second group of countries — Uzbekistan and Turkmenistan, giving clear preference to gradual reforms, took a more cautious position concerning exchange rate policy. Turkmenistan achieved unification of exchange rates in 1998 but under the impact of the regional financial crisis, had to restrict access to foreign exchange with a subsequent sharp increase in the spread between the official and parallel market exchange rates. Uzbekistan is an interesting case to study interconnections between exchange rate policies under an overall gradualist's strategy towards transformation and external shocks. Every external shock was accompanied by a tightening of foreign currency supply and further widening in the spread between the official and curb market exchange rates.

So, the region provides a good ground for a comparative analysis of the efficiency of different exchange rate policies because there has been a clear division between countries adhering to currency convertibility and those relying on foreign exchange controls. The countrywide differences within the groups as to their responses to the impacts of external shocks, both financial and trade, are also special subject to examine.

Impacts of Global and Regional Financial Crises

The global and regional financial crises shook fragile macroeconomic stabilization in Central Asian states putting strong pressures on their exchange rates in 1997-1998 and immediately afterwards. The shocks of the former were transmitted mainly via worsened terms of trade and diminished FDI. Investors from highly industrialized countries had become much more cautious about emerging markets in transitional economies of the region. Investors directly affected by crises in their own countries abruptly diminished the scale of their projects (Republic of Korea), or withdrew their participation in securities markets in the region (Russia). Moreover, access not only to foreign, but also to domestic financing declined sharply with growing empirical evidences on capital flight. In addition, a large devaluation of the Russian ruble cut off the exports from all Central Asian states, because of increased competitiveness of the Russian goods in domestic and foreign markets.

Kyrgyzstan received the strongest blow, not being able to find an optimal mix of intervention and free depreciation confronted with rapidly weakened national currency and much lower levels of exchange rates. The average exchange rate of the Kyrgyz som to USD in August 1999 was 41.78 compared to 19.69 in August 1998, i.e. it had increased more than two

times in one year since the Russian ruble crisis. The largest fall was observed in the second half of 1998, when investors, especially Russian and Kazakh banks, rapidly fled from the Kyrgys government securities market. The share of non-resident holders of treasury bills fell from about 18 percent at the end of June to less than 5 percent at the end of October 1998 [IMF, (1999, p. 27)]. Total consumer price inflation in October 1999 in year-on-year terms reached 50.6 percent, sharply up from the 10.6 percent recorded over the same period in October 1998. The strong impact of the Russian crisis directly and indirectly (via Kazakhstan and Uzbekistan, the other two largest trade partners and creditors) is not difficult to explain. Kyrgyzstan has been still closely connected with the CIS economically (more than 52 percent of its imports and about 45 percent of its exports in 1998, as well as more than half of its external debt, of which 70 percent is owed to Russia). The total foreign debt, according to the Kyrgyz government, of USD 1.4 billion was equal to GDP in 1999, about two times up from 52 percent of GDP at the end of 1997. Around USD 87 million of foreign debt servicing in 2000 is more than 44 percent of the proposed budget expenditures for the year [RFE/RL, January 28, 2000]. This sharp increase of external debt is direct evidence that Kyrgyzstan's state budget has become too sensitive to exchange rate movements because of over-reliance on foreign financing of the budget. The devaluation of the national currency itself increased debt stock in som terms by almost 70 percent during 1998 [IMF, (1999, p. 27)]. Gross official reserves have been also suffering adverse effects of regional crises and fell significantly.

In Kazakhstan, the combination of market measures permitted some depreciation at the end of 1998 and free floating of the tenge in April 1999, with state interventions and restrictions saved the currency from overshooting. It also somewhat protected its real economy, banks, private enterprises and households from the possible adverse effects similar to those, which were observed in Russia. Nevertheless, according to the national data, Kazakhstan's net international reserves declined from USD 1.46 billion in July 1998 to USD 0.99 billion in March 1999. This occurred despite the drawing of IMF credit in the amount of USD 217 million in December 1998 [See, Ohno and Zhakparova (December, 1999, p. 7)]. Estimated public external debt servicing ratio to GDP increased up to 5.5 percent in 1999. With sovereign and sovereign-guaranteed debt obligations of USD 0.86 billion in 1999, as well as the dollar guarantee on domestic savings coming due in the end of 1999, the government did everything to stave off a possible default. To ease the country's liquidity squeeze it returned to the international debt markets. In September 27, 1999, the government succeeded in raising USD 200 million in Eurobonds, but it was enough just to repay the 1996 Eurobonds, which were due in December 1999 [E.U.I. Country report. Kazakhstan, (1ˢᵗ quarter 2000, p. 40)].

Tajik ruble had lost almost half of its value by the end of 1999 since the start of the regional financial crisis in August 1998. But its devaluation in USD went from 135 Tajik rubles in 1995 to 775 Tajik rubles in 1998 [EIU, (1ˢᵗ quarter 2000, p. 23, 32)]. The spread between the official non-cash auction exchange rate and the curb market cash rate increased during 1998 from a level of about 7 percent to a level fluctuating around 20 percent. Officially there was no announcement on exchange rates restrictions, however, in reality, access to currency became not as free after the regional financial crisis as before. Starting in June 1999 informal exchange rate restrictions were lifted and the spread was decreased. Following the abolition of the monitoring of export contracts by the Tajik Commodity Exchange, there are no non-tariff barriers in the trading system as well as formal or informal restrictions on foreign exchange. Tajikistan's accumulated external debt stock was also almost as big as in Kyrgyzstan, close to

100 percent of GDP at the end of 1998. But it had managed to reschedule a substantial part of it on favorable terms. Therefore, external debt service in 1999 constituted only 7 percent of its export earnings [IMF, (1999, p.4, 11, 13)]. Although gross official reserves have been growing within recent years, it was hardly able to cover 1.3 months of imports in the end of 1998.

In Turkmenistan, on April 20, 1998 the official rate of manat was devalued by 20 percent and unified with commercial bank rate for a while. Simultaneously, commercial banks were given rights to establish a maximum of 3 percent for cash foreign exchange. Since that time, sales of the Turkmen manat at the official exchange rate 5,200 per 1 USD had been strictly rationed but regularly provided to commercial banks and enterprises to cover priority imports (mainly capital equipment and some other goods). Exchange rate premium relatively small and stable until the currency crisis in Russia, plummeted sharply afterwards. Under these circumstances, plus rapidly worsening terms of trade and nonpayment for gas by traditional partners, the monetary authorities restricted the supply of dollars to commercial banks. Moreover, in December 1998, the latter were forced to close their exchange windows. More rigid requirements for importers to buy foreign currency at the Central Bank's auctions were introduced as well. Sharp increase of disparities between demand for and supply of foreign currency led to a rapid increase of the spread between official and curb market exchange rates. As a result, the spread reached Turkmen manat 12,100 per USD by the end of 1998 and peaked at the level of 19,000 per USD in April 1999. With improvement of the terms of trade started in May 1999, exchange rate pressures were somewhat released resulting in an appreciation of the Turkmen currency on the parallel market up to 14,000 manats per USD by the end of June 1999. But in the second half of the year it started slowly depreciating again and, in December 1999, the curb market rate was again about three times higher than the official one. The large spread was kept by a mix of monetary loosening, growing inflation and external imbalances. The effects of the first two factors may increase more in 2000 because of an expected doubling of state sector wages without a comparable increase in efficiency or productivity. But resumption of gas exports to Russia could increase export revenues, although ambitious state investments with a heavy load of imports could prevent drastic changes in the trade balance. Therefore, continued restrictions on currency exchange and postponed devaluation are unlikely to permit unification of the currency and subsequent convertibility on current account transactions soon. Although, having the largest in the region ratio of its currency reserves to imports, about 14 months in 1998 [Gurgen et al. (1999) p. 46]. and improving prospects for a substantial increase of gas exports, it could potentially achieve exchange rate unification rather fast.

Financial turmoil throughout major partner countries in East Asia (South Korea) and the CIS (especially Russia and neighboring countries) affected Uzbekistan as well. But their impacts were seemingly less than in other states of the region. The closed capital market, non-convertible currency and less tight trade connections with Russia, its financial and banking institutions (than in Kazakhstan and Kyrgyzstan) helped to cushion better the direct adverse effects of the crises. Nevertheless, diminished export possibilities, worsened terms of trade, curtailed opportunities for attracting foreign savings and increased pressure of cheaper imports from the CIS all tend cumulatively and indirectly to lead to a sharp weakening of Uzbek national currency. Devaluation of the Russian ruble and other regional currencies reduced exports to their markets from Uzbekistan in both volume and value terms with the

resulting affect on currency revenues.. On the other hand, a new possibility to bring via informal channels lots of cheap' imported consumer goods from neighboring·countries with good profit margins pushed demand for hard currency in the curb market. In addition, prices for the major exports from Uzbekistan (cotton, gold and other primary exports), under the impact of the world financial crisis, were diminished to a larger extent than world prices for its imports (grain, manufactured commodities). Total net export revenue losses due to terms of trade worsening was estimated at about USD 180 million (about 1.5 percent of GDP) only in 1998 [World Bank, Report No. 19626 (August 25, 1999, P.11)]. Moreover, because of changes of investors' attitude towards emerging and transitional economies, it became more difficult and costly to attract foreign direct investments and loans. All these factors together contributed to a rapid increase of the spread between official and curb market exchange rates and a significant acceleration of inflation in the end·of 1998 and throughout 1999.

Thus, the recent developments in all Central Asian states revealed their rather big vulnerability to external shocks, especially reinforced by global and regional financial crises. They also showed that despite the fast economic disintegration of the FSU, and dramatic, according to official statistics, geographic diversification of trade, there are still enough informal channels and ties between NIS (including Russia and Central Asian states) to effect each other's development. It is interesting also to note that the nature and forms of linkages and impacts within the CIS and beyond it with internal economic developments of Central Asian.states remain different. This was vividly seen in 1997 and 1998 during the financial crises in East Asia and Russia.

In the first case, the impacts were rather direct but limited to diminished investments and trade. In the second case, they were much more comprehensive. Regardless of the level and degree of their disintegration from the Russian financial and trade systems, a sense of insecurity and fragility of national currencies spread widely all over the NIS. This fueled an unjustifiably exaggerated demand of people in the street for cash dollars in all these countries. The Russian crisis was followed by a rather sharp devaluation in Kyrgyzstan, Kazakhstan and Tajikistan, significant losses in foreign reserves (Kazakhstan), and problems with foreign debt and its servicing (Kyrgyzstan). Turkmenistan and Uzbekistan reacted by increased exchange controls and managed more or less to maintain official exchange rates avoiding sharp devaluation, but the premium of curb market rates increased sharply. The direct blows of the financial crises in these countries was somewhat cushioned, but, indirectly, they also suffered rather large adverse balance of payments and welfare effects.

Exchange Rate and Competitiveness

There were more deep impacts of devaluation of Russian ruble on foreign trade of Central Asian states in terms of competitiveness of their goods at home, in the Russian and other NIS markets. Different commodity structures of Central Asian trade within the CIS and outside of it resulted in differentiated impacts of changes in real exchange rates on their competitiveness in respective segments of the world markets. Exports, especially, those of manufacturing goods, of all Central Asian states remain extremely vulnerable to demand in traditional markets. The sharper and larger devaluation of the Russian ruble, therefore, had a strongly adverse effect on price competitiveness of the Central Asian commodities in Russian markets and in their own domestic markets against goods from Russia.

FIGURE 1.   KAZAKHSTAN: CPI-BASED REER (Dec 1994 = 100)
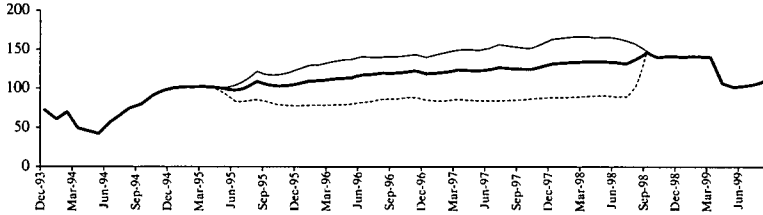
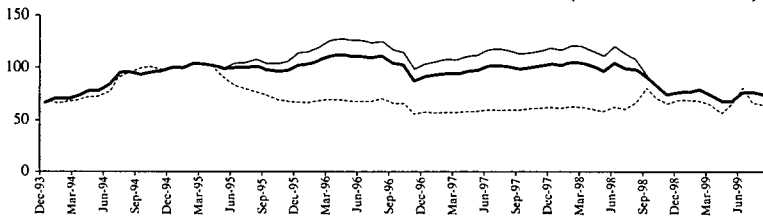FIGURE 2.   KYRGYZSTAN: CPI-BASED REER (Dec 1994 = 100)
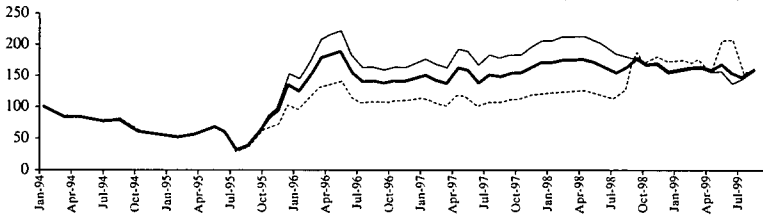
FIGURE 3.   TAJIKISTAN: CPI-BASED REER (Jan 1994 = 100)

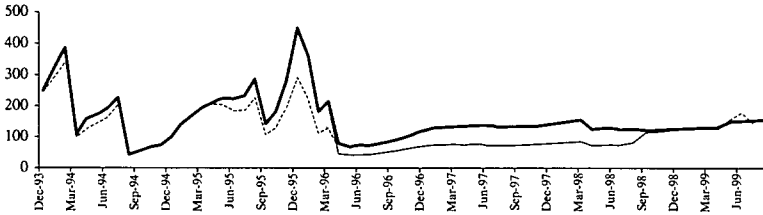FIGURE 4.   TURKMENISTAN: CPI-BASED REER (Dec 1994 = 100)

FIGURE 5.   UZBEKISTAN: CPI-BASED REER (Dec 1994 = 100)
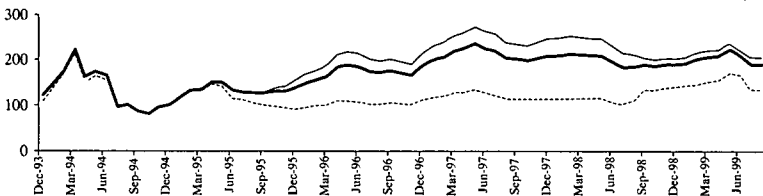
Overall ——— Non-CIS ········· CIS

Note: Real Effective Exchange Rates (REER) given in Figures 1-5 are calculated against 44 trading partners on the basis of data on consumer price indices (CPI) from IMF's International Financial Statistics; trade weights are taken from IMF's Direction of Trade Statitistics and complemented by national and Commonwealth of Independent States (CIS) Statistical Committee data.

Figures 1-5 show dynamics of consumer price indices (CPI) based on real effective exchange rates in Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan in December 1993-July. 1999 (the data for Tajikistan is for the period January 1994-August 1999). The trend of slow appreciation of exchange rates, after a sharp decline in the first years of transition, has been observed but not as clear in a majority of Central Asian countries as in Central and East European states. Moreover, it was interrupted rather fast as a result of the impacts of the regional financial crisis. Despite many differences,[2] one thing is common in all five Central Asian states: between mid-1995 and August 1998, REER has been diverging downwards compared to other CIS states, keeping or gaining competitiveness in traditional (especially Russian) markets. But after Russian currency crisis in August 1998 an about 75 per cent loss in nominal value of Russian Ruble against USD by the January 1999, the situation had clearly changed. The gap in the CIS and overall REER was filled in Kazakhstan and Turkmenistan with somewhat upward diversion in the latter at the beginning of 1999, became negligible in Kyrgyzstan, and narrowed in Uzbekistan. So all these states (including those with multiple exchange rates) had sharply lost price competitiveness of their consumer goods after the regional crisis.

Of course, the changes in real exchange rates have not yet become the only criterion of international competitiveness in Central Asian goods. The high level of inflation in the region and their traditional markets, substantial share of barter and informal trade, as well as multiple exchange rates are to be taken into account.

Besides, exports to countries outside the CIS mainly consisted of raw materials and they were more influenced by world prices rather than exchange rate fluctuations. They had been expanding their exports to OECD states, even though the REER with non-CIS economies had upward trend after macroeconomic stabilization in all five countries under consideration. Indirectly, devaluation of Russian ruble could affect on competitiveness of Central Asian (especially Kazakhstan) tradable commodities because of Russian increased exports (fuels and metals) to the same markets in Europe and East Asia.

In Kazakhstan, the tenge was devaluated on April 5th 1999. According to the Kazakh Agency for Statistics, in the nine months of 1999 exports decreased by about 22 percent, while imports dropped up to 35.5 percent a year on year basis. This permitted a halt in the increase of the trade balance deficit after August 1998 and allowed it to be brought down to USD 69 million from USD 708.5 million in the three months after devaluation. The devaluation of the Kyrgyz som since August 1998 provided also certain protection against a flood of imports, but because of the structural weaknesses of domestic industries it was not enough to spur exports (the exception was export of gold due to increased output).

In Tajikistan, around 80 percent of total export revenues are received from exports of aluminum, cotton, electricity and gold. Again, the dynamics of these exports which are mainly oriented to the countries outside CIS (except hydro-energy), was connected more with some restoration of production and fluctuations of world prices in recent years since peace reconciliation rather than currency depreciation. The production of Tajikistan's aluminum, cotton, and gold is based on cheap labor and energy that make them competitive in world markets anyway. Real exchange rates remain very much undervalued compared even to other

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[2] For example, volatile behavior of REER in Turkmenistan up to May, 1996 that was caused by stair-wise and sharp devaluations of the Turkmen manat in March and August, 1994, September, 1995, February and April, 1996.

countries in the region and expected appreciation of the currency is not going to create problems in this respect in the near future.

For Turkmenistan' current account balance, 1998 was the most difficult year with a deficit of USD 935 million. The main causes were twofold: there were no gas exports via traditional pipelines because of disagreement on prices with Russia and persistent non-payment problems with other traditional partners. The drop of prices for oil and cotton, the other two major exports, was observed throughout the year. The response followed via sharp decrease of consumer goods imports and enforcement of more rigid exchange and trade restrictions.

In Uzbekistan, exports in value terms declined by almost 20 percent in 1998. Imports, especially of consumer goods, were compressed and fell by more than 25 percent. The exchange rate policy has become a main instrument of redistribution of foreign currency in favor of capital intensive import - substitution industries. It has been narrowing the export base in such labor-intensive sectors as agriculture, light and agricultural product processing industries, trade and services. The products of new manufacturing industries (cars, electronics) have been affected on the investment side because of Asian crisis and insolvency of the DAEWOO Corporation, that used to bring the largest amount of FDI to Uzbekistan. On the marketing side due to a sharp devaluation of the Russian currency they have lost their advantages in price competitiveness in Russian and the CIS markets. As for cotton and gold, they were exported mainly to the OECD countries in larger volumes but brought less revenue because of dropping prices.

Judging from the rather low wages in USD terms and the commodity structure of exports, it is not difficult to figure out that the appreciation of the national currencies could affect competitiveness of Central Asian exports mainly in the CIS markets. However, it will not, apparently, become a major impediment in the trade with the OECD countries very soon. For the same reason a rather strong devaluation of national currencies in Kazakhstan, Kyrgyzstan, after August 1998 were accompanied not by increase of exports, but, rather, a greater decrease of imports.

In the other two countries that tried to avoid devaluation by introducing exchange and trade restrictions, disparities between official and curb markets rates increased several times, which also had more implications for restriction of imports rather than promotion of exports. Although the open and hidden devaluation of the currencies resulted not in the growth of exports, but in the reduction of imports, it, together with positive dynamics in terms of trade, contributed to a certain improvement of current account balances.

As for other value added manufacturing commodities, due to inadequate (poor) quality, even after the sharp devaluation of their currencies, they had almost no market outside the CIS. Therefore, competitiveness and diversification of exports have depended, so far more on structural reforms in the manufacturing sector rather than changes in exchange rates and relative prices via currency devaluation.

Currency Substitution and Capital Flight

In the Central Asian states, like in the most of the NIS, hard currency holdings are used to hedge against inflationary and exchange rate depreciation losses, as well as to avoid other risks.

Tajikistan, by the time of peace reconciliation in July 1997, had one of the highest in the

region level of currency substitution with more than 60 percent of foreign exchange deposits to total deposits. In Kyrgyzstan, the share of foreign currency deposits in total deposits had increased from 12 to 45 percent since introduction of the national currency in May 1993 up to October 1998. And, according to the National Bank of Kyrgyz Republic, foreign currency in cash holdings in July 1998 amounted to about 16 percent of foreign currency denominated deposits. Almost 90 percent of this cash was estimated to be in U.S. dollars. In Kazakhstan, the currency substitution ratio in bank deposits was fluctuating around 40-50 percent in 1994-1997, falling to the level of 30 percent between the Asian and Russian financial crises. Conversely, in Turkmenistan, this ratio increased from about 20 percent to more than 60 percent between 1993 and 1998. In Uzbekistan, since the introduction of sum the ratio of foreign deposits to total deposits had stabilized at the level of around 20-30 percent [IMF, (1999, p. 44, 46, 61, 62)].

However, the ratio of foreign currency deposits to total deposits in the banking system of a given country is unable to measure the degree of currency substitution fully. It is known that in the FSU states, the cash dollars play an enormous role in underground and informal transactions while the extent of legal financial intermediation is rather low. Therefore, in a transitional economy it is also important to consider the stock of foreign cash in circulation. In Uzbekistan, for instance, in 1997 the estimated volume of curb market was about 28 percent of the total amount of foreign exchange transactions, while the commercial banks' share comprised only 12 percent [World Bank, Report No. 19626, (1999, p. 18)].

Although, it is not easy to estimate accurately, there are enough evidences, that the existence of the large parallel market in foreign exchange weakens the effectiveness of policies imposed by the government, even including capital controls. In the countries with a larger share of curb market currency substitution, there are bigger possibilities for withdrawing capital from the country and not only through under-invoicing of exports and over-invoicing of imports. Actually, the curb market for foreign exchange has effects similar to an increase in capital mobility and may trigger capital flight any time and on a rather large scale due to higher degree of currency substitution.

Thus, the global and regional financial crises revealed that the countries, which adopted radical reforms, rather fast trade and exchange rate liberalization have become more vulnerable to external shocks. The rapid increase of accumulated external debt and problems of its servicing, enormous losses in gross official reserves, and sharp increase of negative current account balances are some direct consequences of larger openness. These problems were heavily aggravated by lost competitiveness in traditional markets and worsened terms of trade outside the FSU markets.

The most difficult situation in the region was observed in Kyrgyzstan — a country that first introduced both trade and foreign exchange liberalization, including full current account and capital account convertibility, and tried to stick to them even under the crises.

The countries with lesser reforms and openness suffered from the external shocks as well, but in different ways and in more indirect forms. The shocks revealed themselves firstly via a rather tangible increase in the spread between the official and parallel market exchange rates. To understand better a hidden part of the problem that had strongly affected the second group of countries, further special analysis of multiple exchange rate system is undertaken in the following section, choosing case of Uzbekistan as an example.

III. *Multiple Exchange Rates*

This section deals with the analysis of the multiple exchange rates regime with a main focus on the experience of Uzbekistan that is seeking ways to integrate with the global economy with lower economic and social costs. Uzbekistan (together with Belarus and Turkmenistan) is among the few FSU countries that have been trying to protect domestic producers by using extensive trade restrictions and foreign exchange controls. These measures permitted it, to a certain extent, to cushion adverse effects of recent global and regional financial crises better, but, at the same time, they have caused the emergence of the large parallel markets in goods and foreign currencies.

The consequences of the existence of the parallel markets are thoroughly examined at a theoretical level [see Morris (1995), Lizondo (1991), and Agenor (1990)] and well docu-mented regarding some developing countries [see Ffrench-Davis and Mafran (1988), and Kamin (1993)]. The objective of this section is to establish how and to what extent different exchange rates (in this case official and parallel exchange rates) impact on a transitional economy.

In a way, experience with the multiple exchange rates is typical for many developing countries. But almost all countries in transition also faced this problem during their reform period within the old system and at the beginning of systemic transformation. They usually run multiple, or at least dual exchange rate regimes, with an official exchange rate established by authorities and curb market exchange rates determined by market forces. All transactions of the public sector and part of the private market transactions were carried out on the official market at the official exchange rate, while the remaining transactions of the private sector were channeled through curb market at the parallel exchange rate. Different exchange rates for cash and non-cash was a direct result of mono-bank system and a lack of real commercial banks. Transition to a two-tier banking system and radical market reforms permitted many of them to unify their exchange rates within a few years.

Origin and Dynamics of Multiple Exchange Rates in Uzbekistan

It is interesting to note that Uzbekistan had experience with parallel exchange rates and transactions having been a part of the Soviet type of infamous "shortage economy" and having stayed for a while after independence in the ruble zone. In this respect it inherited a rather significant illegal foreign currency market with a certain network of traders. After disruption of the ruble zone and introduction of a national currency in July 1994, Uzbekistan made several attempts to curb the parallel market. Macroeconomic and trade policies in the second half of 1994 through September 1996 brought some results. But because of unfavorable economic domestic and external factors, the financial policies were loosened, while trade and foreign exchange restrictions were tightened. As a result, since October 1996, the spread between the official and parallel exchange rates has been rapidly widening. The August 1998 regional financial crisis and its consequences resulted in a sharp (several times) increase in an already existed wide spread between official and parallel exchange rates (see Figure 5).

Uzbekistan adopted a gradualist strategy for market reforms and integration with the global economy with rather strong state interventions into economy and foreign trade. At the

FIGURE 6.   OFFICIAL (OER) AND PARALLEL (PER) MARKET EXCHANGE RATES
(sums per USD, log scale)
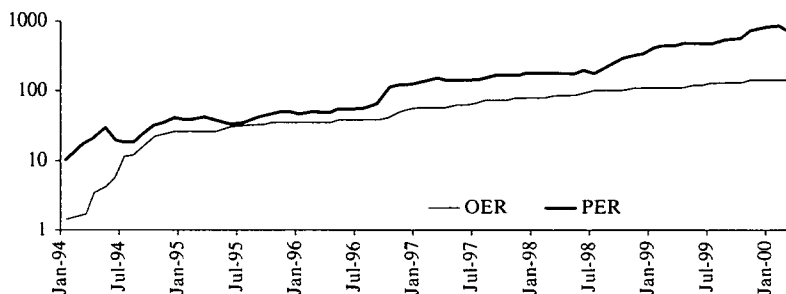
Source: Central bank of Uzbekistan

beginning, (1992-1993), the government tried to cushion the disruption of essential imports immediately after breakup of the FSU, and then, (1994-1996), provide better conditions for import substitution in grain and oil and for diversification of exports. More recently, (since October 1996), it attempted to diminish negative effects of worsening terms of trade, of global and regional financial crises. The results of the measures, based on avoiding rapid economic liberalization and keeping currency controls, were mixed. On the positive side: the lowest decline of GDP, higher general budget revenues, lower fiscal and external current deficit compared with the average for other FSU states. However more recently, lack of further steps as for price, trade, foreign exchange liberalization as well as enterprise restructuring and banking sector reform, and above all the multiple exchange rates have been negatively affecting the chance for sustainable economic growth and improvement in living standards.

The exchange rate regimes have been instrumental in Uzbekistan's government policies. To pursue various targets, both the demand and supply of foreign exchange, as well as its price in the official markets, were regulated. The excessive demand for hard currency was increasingly satisfied by the curb markets. Throughout the period after the introduction of the national currency the authorities were formally following a floating policy, but, actually, pursuing a weakly fixed exchange rate policy with devaluation at much slower pace compared to inflation rates.

The peak of the highly depreciated parallel market exchange rate with a black market premium of around 1000 percent was observed in the first half of 1994 before the introduction of the national currency - sum, reflecting the anticipation of the forthcoming currency reforms.

The 1994-1999 dynamics of parallel market premium- difference between official and parallel exchange rate, - presented in a log scale as the ratio of the parallel over the official market rate (Figure 6).

The premium had been sharply decreasing within a year and half and reached less than 10 percent in mid-1995. The narrowing in the difference between the two exchange rates in this period, can be attributed to favorable external conditions in the commodity markets (rather good prices both for cotton and gold), and slowing down of the inflation rate as a result of the macroeconomic stabilization program. So it was the best time for exchange rate unification from the viewpoint of both the domestic and external preconditions. The next one and half

FIGURE 7.   CURB MARKET PREMIUM (in percent, log scale)
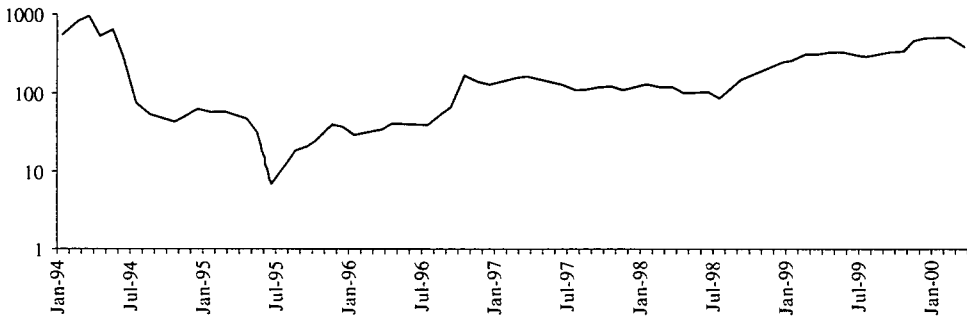
Source: Central bank of Uzbekistan

years, however, were marked by loosening monetary and fiscal policies and worsening terms of trade followed, in the third quarter of 1996, by exchange rate and trade restrictions. All these factors brought the premium again to the level of more than 100 percent, which was kept for about one and a half years, before explosive growth started from the second half of 1998 under direct and indirect effects of regional financial crises. Apart from objective factors, subjective vested interests involved in different sectors of the economy (agricultural, industrial, financial and trade) plus rent-seeking activities aggravated the situation.

Causes and Rationale for the Parallel Exchange Rates

Parallel exchange rates represent the fragmentation of the foreign exchange market that often appears as the consequence of trade and financial constraints imposed by the government. Large scale and durable parallel exchange markets arise as a reaction to the various prolonged restrictions by the government on current and capital account transactions. The underlying reasons for such measures could be connected with certain industrial, trade and exchange rates policies, as those stressed by McKinnon (1973) and Shaw (1973). Governments could promote, directly and indirectly, some enterprises and industries creating for them more favorable conditions, including priority access and at a special lower rate for foreign exchange.

It is worth noting that the existence of the tariffs, trade restrictions and barriers is not sufficient for the emergence of a parallel foreign exchange market. Until foreign currency is freely available to all external trade participants, trade restrictions do not cause the segmentation of exchange rates. Though they may affect the demand and supply of the foreign currency they do not put an edge between different transactions. It's the government policy that creates the boundary among different transactions through imposing quantitative restrictions (often called rationing) on the amount of the foreign currency sold and bought. Unsatisfied demand creates a curb market for foreign exchange where its rate is determined by its supply at the time. The conventional wisdom also indicates that real appreciation of the domestic currency and the subsequent curb market for foreign currency could emerge when the difference between exchange rate devaluation and the domestic inflation rate widens followed by a government policy of foreign exchange rationing. So, the parallel markets for foreign exchange

is a sort of by-product of government policies on currency control via rationing of foreign exchange market that follows a par with its subsequent segmentation.

In the case of Uzbekistan, there are two main segments of the foreign exchange market - legal and formally illegal, each divided in two parts: the former into official and commercial ones, while the latter into the curb market for cash and non-cash sums. According to the World Bank's estimates in 1997, the legal foreign exchange transactions through official Uzbek Republican Currency Exchange market, on the one hand, and 28 commercial banks, on the other, accounted for 72 percent of the total. The ratio between the former and the latter was 5 to 1. The rest was serviced by the curb market, the volumes and precise split of which are not possible to estimate accurately [World Bank, Report No.19626, (August 25, 1999, p. 12)].

The principal sources of supply for the legal exchange market are mandatory sales of gold and all proceeds from centralized exports of cotton to the Central Bank at the official rate. In addition, mandatory sales of all proceeds from centralized exports of some other primary commodities, 50 percent surrender from decentralized exports, as well as voluntary sales by exporters and individuals to Commercial Banks. Cash curb market and non-cash curb market are supplied by owners of currency deposits with proceeds from decentralized exports and other net-exporters engaged into informal trade. The disparity between official and commercial exchange rates was about 25 percent and the curb market rates reached 312 percent of official rate for cash sums in July 1999.

Although commercial banks had access to the Uzbek Republican Currency Exchange and serviced part of mandatory sales, there is a certain overlap between their sources of supply and those of the curb markets in respect to voluntary sales by individuals and exporters of the remained after surrender currency revenues. For example, when from January 1, 1999, the surrender requirement from decentralized exports was administratively increased from 30 to 50 percent, the supply of foreign exchange to the curb market decreased and the spread between legal and illegal exchange rates significantly widened. Therefore, liberalization of commercial exchange rates could be an immediate and first step towards elimination of curb market giving economic incentives to individuals and exporters to voluntarily and legally exchange their cash and non-cash currency at the market rate in commercial banks.

There are certain rules established by the government for access to foreign exchange and regulations on demand side as well. The twenty-eight commercial banks are allowed to participate in currency auctions organized by the Uzbek Republican Currency Exchange and buy on behalf of their clients certain amounts of currency. The size of the latter depends on grants given by the Republican Commission on Monetary and Credit Policies for approved imports of capital and intermediate commodities required by Government-backed investment projects, as well as on quotas, determined by the Central Bank for licensed importers of consumer goods. In addition, the commercial banks service: external private debts, approved repatriation of profits and dividends by foreign investors, as well as sales of foreign currency to public sector servants to cover currency expenses of their business trips abroad. All these transactions are not based, though, on interplay of free market forces. Respectively, exchange rates established through the quasi-demand and quasi-supply are much lower than the market clearing level.

What is the rationale of keeping both official and commercial exchange rates at an overvalued level?

It is difficult to find a reasonable answer to why commercial banks' rates were kept at such

an overvalued level for such a long time (at least 4 years) giving up an increasingly huge premium to the curb markets. Within the existing currency control system, it was possible to operate at the level of curb market rates, getting legally good commissions for the services and bringing the rest of the curb market premium to the Central Bank as a difference between the official and commercial rates.The main, officially admitted, explanation is related to hard currency reserve and debt servicing constraints in a period of balance of payments difficulties. But the latter is the domain of the Central Bank and not the direct responsibility of the commercial banks.

As for an artificially appreciated official exchange rate, for the government adopted developmentalist approach to systemic transformation and the pursuit of aggressive industrial policy, it helps to create a favorable environment. It is less costly to buy bigger volumes of imported capital and intermediate goods for priority areas and potentially export-oriented and import-substituting industries for the same amount of national currency. From a fiscal and balance of payment viewpoint, it also facilitates the lowering of expenditures for debt servicing and financing public investments linked to imports, as well as maintenance of a certain level of official foreign currency reserves. In addition to these traditional reasons for keeping official exchange rate at an overvalued level, the government intended to preserve relatively low prices for imported top necessity consumer goods.

As for negative effects of the appreciated exchange rate on competitiveness of exports from Uzbekistan, the government was less concerned about it, because cotton, gold and other natural resources exports had a broad market. Investment into modern industries, based on heavy capital goods imports purchased by primary commodity export proceeds accumulated in the Central Bank and government-controlled commercial banks, was considered as the best strategy for the catching up period. This type of reasoning could be accepted, judging from past East Asian experiences, provided that industrial policy is based on private sector support and the strength of market forces is redoubled by the strength of the state.

However, in the absence of supporting market forces based on proper private sector, soft access to currency funds has not become a really efficient instrument for industrial policy. With huge public investments and expensive capital intensive imports it has become a new drain in the budget in addition to soft budget constraints for large state owned enterprises. Moreover, under the circumstances the multiple exchange rate system has become one of the main reasons that has impeded almost all other favorable incentives legally given to foreign investors and deterred FDI to large extent. It has also created problems in achieving better current account balance and welfare results as well.

Multiple Exchange Rates and Current Account Balance

It is interesting to note that usually one of the justifications of widespread exchange rate restrictions and currency control had been to protect the current account balance against external shocks. But once the multiple exchange rates are deeply rooted, they become a rather significant factor behind a large and persistent current account deficit.

The current account deficit is one of the most intriguing and difficult to explain indicators of macroeconomic performance. This is especially true for developing and transitional countries, which have a strong need to import modern technology from developed countries and upgrade their economies. The inter-temporal approach to the current account treats the

current account deficits as a natural phenomenon to smooth consumption between now and the future. The advocates of this theory say that when a particular country does not want to reduce consumption in order to invest more, she can choose to borrow from abroad now and pay it back later. This way the country that saves less and invests more can optimize distribution of her income by borrowing from the country that saves more than it invests. In this type of world, reallocation of resources from one country to another (through running deficits for one of them and a surplus for the other) the total efficiency and benefits for both countries are supposed to increase. But in practice there are several questions to be answered. The first of them is related to sustainability of the current account deficit. According to statistical principles, the current account deficit contributes to the change (decrease) in the stocks of net foreign assets. Chronic deficits lead to accumulation of net national debt to foreigners. Foreigners will lend money only as long as they are sure that the borrower will be able to return principal as well as interest in the future.

Like majority of the other NIS, Uzbekistan, since independence has been experiencing rather persistent current account deficit. The break-up of the FSU with a subsequent disruption of economic ties led to sharp fall of exports in 1992. Rather fast recovery and growth of exports from Uzbekistan, especially to non-traditional markets, had continued up to 1997. Afterwards, this trend was reversed because of sharp worsening of terms of trade and regional financial crisis. In 1998-1999, exports have declined considerably and in value term they were almost at the same level as in 1992-1993. While the sum of merchandise imports, net services and net transfers exceeded exports of goods all these years, except 1994. As a result, the current account registered deficit in seven out of eight years, and it was significant not only at the beginning in 1992-1993 but in 1996-1997 as well (see Table 1). The negative impacts of external shocks on current account balance have been redoubled by rapid increase of exchange rate premium that affected export earnings badly. Compression of registered imports of goods by rationing foreign exchange and introducing other restrictions in 1998-1999 resulted in sharp growth of the curb markets prices for goods and foreign exchange premium, hence had also strong adverse welfare effects.

Actually, the best two years, 1994-1995, from viewpoint of current account balance coincided with the biggest achievements in curbing the spread between official and parallel market exchange rates. However, afterwards the official exchange rates fixed by the government have not reflected a market clearing exchange rate. The overvaluation of the official exchange rate has been discouraging exports and encouraging imports, effectively taxing

TABLE 1. UZBEKISTAN: CURRENT ACCOUNT BALANCE (MLN. USD)
AND ITS RATIO TO GDP (%), 1992-1999

	1992	1993	1994	1995	1996	1997	1998	1999*
Exports of goods	1424	2877	2940	3475	3534	3695	2888	1843
Imports of goods	-1664	-3255	-2726	-3238	-4240	-3767	-2717	-1855
Services and Transfers, net	2	-51	-94	-258	-274	-511	-209	-251
Current account balance	-238	-429	119	-21	-980	-584	-39	-265
Current account/GDP	-11.8	-7.8	2.1	-0.2	-7.2	-4.0	-0.3	-2.5

*Figures are for the first three quarters of 1999
Source: Ministry of Macroeconomics and Statistics of Uzbekistan and IMF (March 2000), No 00/36, p. 71

export earnings and subsidizing importers at the same time. The difference between the official exchange rate and the parallel market rate simply has been depended on the amount of the implicit taxes for exporters who have to sell foreign currency earnings at overvalued official rate. And it was fueled by the amount of rent captured by the importers that have access to the foreign exchange at the official rate.

Thus, both factors — discouragement of exporters and extra incentives to importers under multiple exchange rates — promote chronic current account deficit. So, in our opinion, the unification of exchange rates at market clearing rate is better option to promote exports, diminish pressure of imports and improve current account balance from both ends.

Multiple Exchange Rates and Inflation

One of justifications of the maintaining of the multiple exchange rates regime in Uzbekistan has been made on the grounds that it helps to reduce inflation and, in doing so, it works as a social protection measure. The aim of this part of the paper is to test whether this argument in favor of multiple exchange rates is relevant or not. Some statistical techniques are employed to check the validity of this hypothesis.

The relationship between exchange rates and inflation is complex. The existing literature on the relationship between exchange rates and inflation is ambiguous. Both exchange rates and inflation are said to be endogenous variables, i. e. they are determined inside the economic system by the interaction of many real and financial variables. This is one of the reasons that sometimes it is difficult, if not impossible, to establish the direction of causation between them. The empirical literature stresses that, with a certain probability, it is possible to say that usually in the large country, such as the USA, the alterations of the exchange rate to the greater degree are caused by domestic inflation. But, in a small economy, the exchange rate alterations precede the changes in the domestic price level. There are two channels, through which the influence of the exchange rate is transferred into prices: import of goods and expectation of the economic agents.

However the increase in domestic prices due to changes (devaluation) in exchange rates may be incomplete. Consider the following equation: $P = \alpha + \beta E + u_t$, where $0 \leq \beta \leq 1$, P is inflation index, E is exchange rate and u_t is a random disturbance term. β, called the exchange rate pass-through, measures the degree to which the exchange rate impacts on prices. If $\beta = 1$, pass-through is said to be full, and if $0 \leq \beta < 1$, pass-through is partial (incomplete).

What are the reasons for incomplete pass-through? In general, there are two factors, contributing to incomplete pass-through: a) Many goods, potentially tradable across borders, nevertheless are made and consumed domestically and do not directly compete with foreign goods. The prices of such goods follow the increase of the exchange rate with some delay and do not match fully the rate of depreciation of domestic currency; b) the prices of services and factors of production often are not in direct dependence on external prices.

(See appendix for further discussions of the exchange rate pass-through in Uzbekistan in light of the empirical analysis of different exchange rates and their interactions with price indices, using standard the Dickey-Fuller unit root test, Granger causality of selected variables and the correlation matrix. The data used are from various sources: monetary and exchange rate data are from the Central Bank of Uzbekistan, inflation and output data are from the Ministry of the Macroeconomics and Statistics of Uzbekistan. The sample period covers

TABLE 2. SUMMARY RESULTS OF THE REGRESSION ANALYSIS

	Model 1		Model 2		Model 3		Model 4	
Dependant variable	DCPI		DCPI		DWPI		DWPI	
	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
Explanatory variables								
C	0.01	0.79	3.75	6.66**	0.02	2.09*	2.60	2.87**
DOER(-2)	0.14	2.23*			0.33	4.26**		
DPER(-1)			0.24	4.78**			0.12	1.53
DMQ(-2)	0.79	5.15**	0.41	3.71**	0.44	2.82**	0.51	2.80**
DRGDP(-3)	-2.26	-2.57**	0.03	3.52**	-0.42	-0.98	-1.29	-2.85**
DUMMY	-0.01	-0.32	-1.87	-6.64**	-0.01	-0.80	0.01	0.42
Adj R^2	0.51		0.74		0.65		0.53	
D.W.	1.54		1.63		1.93		1.59	

Note: (*) and (**) refer to 5% and 1% significance levels respectively. D.W. - Durbin Watson statistics. Numbers in parentheses denote the lags in months. The sample period covers 54 monthly observations from 1994: 01 to 1998:06. The adopted definition of the all variables is as following:

DOER - second difference of the end of period exchange rate of sum in US$, it is in log

DPER - log of second difference of the end of period parallel (black) market exchange rate

DWPI - first difference of the log Wholesale Price Index

DCPI - first difference of the log of Consumer Price Index

DRGDP - first difference of the log of the Gross Domestic Product.

DUMMY - the variable included to capture the change in the trade and exchange rate policy after October 1996. It takes 0 up to October 1996 and 1 after that period.

monthly observations from 1994:01 to 1998:06, i.e. period of macroeconomic stabilization before the regional crisis with subsequent explosive changes in prices and multiple exchange rates in August 1998).

The main objective and findings of the regression analysis can be briefly summarized as follows. Similar types of regressions were run in order to distinguish the effects of the official exchange rate and the parallel market rate. Taking two (official and parallel) exchange rates and two inflation (CPI and WPI) indices, we have experimented with various models with different explanatory variables. The first model, consistent with the theoretical model given in the Appendix, is a regression of the consumer price index on the official exchange rate with 2 months lag, broad money supply with 2 months lag, real output with 3 months lag and a dummy variable. The interpretation of the other models is also similar.

Comparing Model 1 and Model 3 one can note that they contain similar explanatory variables but different dependant variables - CPI and WPI respectively. The official exchange rate appearing in these models exhibits different meanings; namely, in Model 3, both economic and statistical coefficients are more robust than in Model 1. That is to say, the official exchange rate is more correlated with the wholesale price index than with the consumer price index. The opposite seems to be true for the parallel exchange rate in Model 2: its impact on the CPI is significant and robust. On the contrary, the parallel exchange rate fails to show a statistically significant impact on WPI in Model 4. The coefficients of determination - R_2 — are not very high suggesting existence of other possible explanatory variables not captured by this model. The most important of such omitted variables could be inflationary expectations. However, there is no single good estimator of this variable, and the most commonly used proxy — lagged

actual inflation index — was found not suitable for our purposes.

The results of the regression analysis (see Table 2) are important to consider thoroughly, because they also have certain policy implications for the unification of the different exchange rates. The coefficients of the exchange rates, that is, elasticity of the exchange rates with respect to prices, in all models range from 0.12 to 0.33, indicating incomplete exchange rate pass-through. And, what is more significant to bear in mind, they are only second to money supply in inflation determination. This in turn implies that to fight inflation in Uzbekistan successfully, the authorities should rely primarily on tight monetary policy. And exchange rate nominal anchor policy can only be a complementary tool to tight monetary and fiscal policies.

Since the existence of a parallel market in goods and foreign exchange, a widening of the spread between official and parallel exchange rates are the greatest impediments for trade and economic growth, the different response of price indices to different exchange rates might require different policy actions. The fact, that the official exchange rate has virtually no impact on the consumer price index may indicate that a unification scheme ensuring the future exchange rate potentially is in between official and parallel exchange rates. So it is important to emphasize, that the analysis on the basis of the data available indicates that a possible future unified exchange rate will be less than the current parallel exchange rate, provided the government's stabilization policy is taken resolutely and implemented consistently.

Implications and Policy Options

The analysis of the multiple exchange rates reveals a variety of direct and indirect negative effects for the government and its fiscal, monetary, trade, investment and industrial policies. First, there are law enforcement costs, incurred in attempting to prosecute and punish the offenders. The shift from domestic to foreign money (currency substitution) directly results also in a loss of seignorage for the government. It also encourages more and more transactions to be undertaken in the black market, thus fueling the size of the black market not subject for taxation. All this, together with a reduced flow of foreign exchange to the central bank, diminishes the fiscal capacity of the government to provide public goods and carry other expenditures, as well as to service the external debt. For a given fiscal deficit it also may contribute to higher inflation.

Second, the existence of the large parallel market in foreign exchange weakens the effectiveness of policies imposed by the government, including even capital controls. Actually, it has effects similar to an increase in capital mobility and may trigger capital flight any time and on a large scale due to a rather high degree of currency substitution. The curb foreign exchange market plays a negative role impeding the transmission mechanism of monetary policy. The exchange rate market premium encourages rent-seeking activities contributing to the more sub-optimal allocation of the scarce foreign exchange resources.

Third, it contributes to chronic current account deficit with huge distortions in foreign trade and vast income redistribution. Since there are (at least) two prices at which foreign exchange can be bought and sold, exporters, whose proceeds are repatriated at the official exchange rate, are taxed relative to other producers. Consequently, the parallel market premium may be seen as an implicit tax on exports. This implicit tax on exports induces the exporters to such illegal activities as smuggling and under-invoicing of the part of exports. The consequence of these activities for the government is straightforward: ceteris paribus they

reduce from revenue the tariffs, income taxes and domestic indirect taxes, as well as could promote capital flight of rather big amount of funds to offshore banks via cheated mechanism of invoicing both exports and imports.

Fourth, it does not promote even the proper industrial policy either. Soft access to currency funds to selected importers - state financed investment projects has become a new source of not always efficient financing with more or less similar effects as soft budget constraints given for certain state-owned enterprises. During the period under consideration, the trade off between the exchange rate unification and real sectors concerns were resolved in favor of rescuing state-owned enterprises from bankruptcies by providing them, in addition to massive credits at low interest rates, cheap access to hard currency at the overvalued exchange rate. But such policy has not led to productivity or efficiency growth and, therefore, could not be continued forever.

Finally, parallel exchange markets have a large adverse welfare impact via prices. Under multiple exchange rates, the official exchange rate is not relevant for the determination of market prices of tradable (exportable and importable) goods. It measures only the rent received by those who are involved in the distribution of currency and small number of "privileged" importers to whom foreign exchange is made available at official exchange rate. If domestic prices of the tradable goods are based on the marginal cost of foreign exchange - or its implicit resale prices, that is, the parallel market rate - the aggregate price level will reflect, to a large extent, the behavior of the parallel exchange rate. This effect is largely confirmed by our regression analysis presented in the paper. There are numerous examples where big importers settle resale prices by orienting to the parallel exchange rate rather than at official exchange rate.

To address these problems comprehensive reforms aimed at elimination of the multiple exchange rates based on combination of radical and gradual steps are needed. The first step is unification of exchange rates. The curb market is to be curbed aggressively, within a short period of time using every means (including media, law enforcement) but foremost via liberalization of commercial exchange rates. "Money overhang" is to be taken care of by further rigid macroeconomic stabilization, as well as through realistic and transparent privatization proposals open both for domestic and foreign investors. More measures building confidence in banking and financial systems, and discouraging capital flight as much as possible are important. Financial support and technical assistance of international organizations and bilateral ODA givers are critical. So, initial measures need to be resolutely taken provided that internal and external conditions are not unfavorable.

The second step, after the curb market rate is replaced by liberalized commercial one with easy access to physical and legal persons, is to consistently narrow the spread between the commercial and official exchange rates until elimination of any spread above normal. Surrenders for gold and some other strategic commodities could be accumulated by the Central Bank directly. Meanwhile, state order and regulated prices for cotton are to be liberalized step-by-step aiming eventually at abolishing cotton export surrender. Commercial banks at this stage are supplied with currency bought at auctions at the rate close to market rates, voluntarily sold money of individuals and exporters at commercial rate above surrender. All importers and investors are to be served by commercial banks at market exchange rates, while the Central Bank deals with public external debts and gold and currency reserves at official rates.

The third step, to make currency freely convertible starting with current account

transactions, further impediments for exports and imports of goods are gradually to be eliminated and, so-called, "external commodity convertibility" provided. Protection of "infant industries" and other government-sponsored projects is to be provided not by exchange rate mechanisms but other trade and financial instruments, f. i., transparent and explicit taxes and subsidies. Soft access to hard currency funds to be tightened progressively from the first through the all stages of unification of exchange rates to the achievement of current account convertibility and on. A favorable external environment (stability in international and regional financial markets, positive dynamics of terms of trade, improved competitiveness in traditional markets, attractiveness of the undertaken measures for domestic and foreign investors) is also important for proper timing of such reforms.

As for capital account convertibility, the recent global and regional developments warn against hastiness in this matter. It requires much more maturity of market institutions and could be put as a target for later stages of systemic transformation and integration with the world market.

IV. *Concluding Remarks*

The crucial role of exchange rate policy in transitional economies under consideration has been once again highlighted by recent global and regional developments. They also became a sort of natural testing ground for assessing the efficiency of these policies in transitional economies and comparing the outcomes between different group of countries which announced currency convertibility to a various degree and those that tightened currency controls just before or during crises.

The comparative analysis of exchange rate policies in Central Asian states shows, that in both cases, radical or gradual reforms, external shocks immensely aggravated internally accumulated weaknesses. It is also symptomatic that exchange rate mismanagement redoubled their overall adverse impacts. In the case of more open economies the effects were direct through sharp devaluation, increase of external debt, and loss of foreign currency reserves. In countries with rigid currency controls the negative effects were less transparent and more indirect, though the implications were also rather serious and redistributed among a vast majority of the population.

The special study of the multiple exchange rates regime reveals the existence of large and various adverse consequences of the parallel currency market that entails a variety of direct and indirect costs for the government and its fiscal, monetary, trade, investment and industrial policies. All these consequences of the large and relatively developed parallel market for foreign exchange have a sizeable negative impact on income distribution and result in foregone effectiveness or deadweight loss in the economy can be found not only in Uzbekistan and Turkmenistan. They are typical for any other developing country or transitional economy with a multiple exchange rates regime.

Certain lessons from the Central Asian recent experiences, both gradual and radical reforms, could be drawn for other developing and transitional economies suffering from external shocks vulnerabilities.

First, only currency control, in reality, cannot provide overall protection of domestic producers and consumers against external shocks. Moreover, under the impact of global and

regional financial crises the negative effects of multiple exchange rates tend to accelerate immensely and rapidly. Therefore, all measures leading to and keeping unification of the exchange rates are to be taken as a top priority.

Second, the combination of a unified exchange rate cleared by the market with timely and temporary state interventions via effective administrative measures could provide better results for anti-crisis protection against global and regional financial or other external shocks.

Third, to make reforms successful, another mixture - a combination of radical and gradual steps — is also needed. It is not possible to make the transition over-night, therefore, relaxation of state control and overall deregulation, exchange, trade and capital liberalization need to be done step-by-step. But it does not mean that radical steps must be excluded. A step-by-step approach not only allows, but also requires a government to take certain particular radical measures, whenever it is necessary and feasible.

The analysis of exchange rate policies and recent experience in Central Asia states add new proves to lessons of post-war Western Europe, Japan, other East-Asian countries. It shows that the mixture of market and state, radical and gradual measures aimed at achieving of currency convertibility is not as harmful as one-sided policies in the short- and mid-term. It also permits to address step-by-step the emerging problems on the basis of readiness of state and market institutions, as well as people to resolve them in the long run.

So, the task is to find particular mix of government and market instruments, radical and gradual steps related to exchange rate policy in each individual state and implement a comprehensive system of anti-crisis measures, whenever it is required.

APPENDIX

The properties of data
Stationarity

Since we deal with time series data, the properties of the different time-series variables need to be examined to ensure efficient and consistent estimation. A standard Dickey-Fuller unit root test was used to check the stationarity of the time series. In Table 1 the results of the estimations are presented.

Table 1 shows the results of the standard ADF test which was performed on level and first difference of the variables, using 3 months lag and trend and intercept. The level of all variables except OER turned out to be non-stationary. The unit root test of the first differences reveals that all variables are stationary; that is, the null hypothesis is rejected at least at the 10

TABLE 1. AUGMENTED DICKEY-FULLER (ADF) UNIT ROOT TEST

	Level	First difference
Consumer price index (CPI)	-2.61	-3.20*
Wholesale price index (WPI)	-3.02	-3.33*
Official exchange rate (OER)	-7.15***	-3.53**
Parallel exchange rate (PER)	-2.52	-5.72***
Real Gross domestic product (RGDP)	-3.08	-4.77***
Broad money (MQ)	-1.75	-3.51**

Note: (*), (**) and (***) attributed to 10%, 5% and 1% level of significance respectively

percent level of significance. Thus, the ADF test indicates that it is more appropriate to run regressions using the first-differenced data rather than the levels.

But there is a caveat that should be kept in mind. Compared to the time series data in levels, first or higher order differenced data allow a researcher to avoid the problem of non-stationarity, stochastic trend and related problems. But taking the first (or higher-order) difference we may loose valuable long-term relationships between time series that are given by the levels. How can the problem be solved? There is no clear-cut answer to this question. Or, putting it differently, there is always a certain trade-off between level variables and difference variables. A researcher should decide what is more important for particular purposes: having a stationary series and thus losing some valuable information or dealing with non-stationary series tolerating some amount of biased estimations in his model. It also depends on what side is more severe - non-stationarity or lack of information due to sacrificing the time series in level.

For our purposes non-stationarity and, related with it, existence of the stochastic trend seem to be of a more severe problem capable of putting all regression results under doubt. On the other hand, for the variables of our primary concern -OER and PER - level versus first difference tradeoff seems to be not so important. The speed with that they change might be even more important for such macroeconomic variables as current account, inflation and output than their scale.

Summarizing all above mentioned we shall use in our further investigations the first-difference of log variables which are denoted by capital letter D. For instance, DOER means the first difference of the log of the official exchange rate.

Granger causality test

The Granger causality test is good approximation for revealing the direction and tightness of the relationship between various variables. It is particularly useful when little a priori information about the direction of causality is available. A Granger causality test can be

TABLE 2.   GRANGER CAUSALITY TEST OF SELECTED VARIABLES

Pairwise Granger Causality Tests		Critical F-value (for 4, 47 df)		
Sample: 1994:01 1998:06		at 1% level	at 5% level	at 10% level
Lags: 6		3.83	2.61	2.09
Null Hypothesis:	Obs	F-Statistic	Probability	Conclusion
DOER does not Granger Cause DCPI	47	2.4058	0.0480	Reject*
DCPI does not Granger Cause DOER		1.6031	0.1765	Do not reject
DPER does not Granger Cause DCPI	47	4.9208	0.0010	Reject***
DCPI does not Granger Cause DPER		1.3878	0.2478	Do not reject
DRGDP does not Granger Cause DOER	47	5.2573	0.0006	Reject***
DOER does not Granger Cause DRGDP		1.0334	0.4210	Do not reject
DWPI does not Granger Cause DOER	47	0.8098	0.5697	Do not reject
DOER does not Granger Cause DWPI		6.2983	0.0002	Reject***
DRGDP does not Granger Cause DPER	47	0.8076	0.5712	Do not reject
DPER does not Granger Cause DRGDP		1.3930	0.2458	Do not reject
DWPI does not Granger Cause DPER	47	0.5757	0.7469	Do not reject
DPER does not Granger Cause DWPI		3.3948	0.0099	Reject**

Note: (*), (**) and (***) attribute to 10%, 5% and 1% level of confidence respectively.

TABLE 3. CORRELATION MATRIX

	DCPI	DMQ	DOER	DPER	DRGDP	DWPI
DCPI	1					
DMQ	0.4213	1				
DOER	0.5819	0.4526	1			
DPER	0.2118	0.3385	0.0837	1		
DRGDP	-0.0605	0.2893	0.2224	-0.2539	1	
DWPI	0.7442	0.5134	0.4406	0.1681	0.0842	1

applied as a check on the situation where one has feasible reasons to predict a certain relationship among some variables and their direction. Variable X is said to Granger cause variable Y if, the F-value exceeds the accepted level of confidence, thus leading to the rejection of the null hypothesis.

Table 2 reports results of the Granger causality test for some pairs of variables. The directions of the Granger causality are as follows: both DOER and DPER seem to Granger cause DCPI and DWPI, though the causation from DPER to CPI is stronger than from DPER to DWPI. The opposite is true for DOER where the causation going from DOER to DWPI is stronger than the one going from DOER to DCPI. It is interesting to note that none of the pairs does not exhibit reverse causality, which is to say all pairs indicate unidirectional causality. This can be interpreted as an encouraging fact because it may indicate that there is no stochastic trend, which often leads to misleading feedback, mutual causality.

It is worth mentioning, however, that the Granger test is very sensitive to the number of lags used in the analysis. That is why Davidson and MacKinnon (1993) advise one to use more rather than fewer lags. In our case the length of lag - 6 - seems to be plausible and, when experimented with the different lags, the Granger test results seem not very sensitive to the length of the lags.

Correlation matrix

One simple way to look at the relationship among different variables is to construct a correlation matrix. The correlation matrix, presented in Table 3, confirms the findings of the Granger causality test, namely two variables we are most interested in, perform the same features. That is, DOER is more correlated with the DWPI than with the CPI, and, on the contrary, the correlation coefficient between DPER and DCPI is higher than that between DPER and DWPI.

The model

We follow Frankel (1993) in modelling the relationship between prices, exchange rates, monetary aggregates and output. The fundamental equation in the monetary approach is a conventional money demand function:

$$m = p + \phi y - \lambda i \tag{1}$$

where
m ≡ log of the domestic money supply,
p ≡ log of the domestic price level,

$y \equiv$ log of the domestic output,

$\phi \equiv$ money demand elasticity with respect to output,

$\lambda \equiv$ the money demand semielasticity with respect to the interest rates.

We assume a similar money demand function for the foreign country (the remaining world):

$$m^* = p^* + \phi y^* - \lambda i^* \tag{2}$$

where asterisks denote foreign variables and the parameters are assumed to be the same in both countries. Taking the difference between (1) and (2) yields:

$$(m - m^*) = (p - p^*) + \phi(y - y^*) - \lambda(i - i^*) \tag{3}$$

Recalling the uncovered interest rate parity

$$i = i^* + (\Delta e)e \tag{4}$$

and rearranging (4) we obtain

$$i - i^* = (\Delta e)e \tag{5}$$

where $(\Delta e)e$ — expected depreciation rate of the currency. We combine (3) and (5) to solve for the relative price level:

$$(p - p^*) = (m - m^*) - \phi(y - y^*) + \lambda((\Delta e)e) \tag{6}$$

Equation (6) says that, along with the relative money supply and relative output performance, the inflation rate is determined by the expected exchange rate depreciation of the domestic currency vis-à-vis the foreign currency. For simplicity we will set the growth rates of all foreign variables — p^*, m^* and y^* - equal to zero. This can be justified by noting that the world price level, money supply and output are exogenous for such a small country as Uzbekistan and growth rates of these variables do not change at fast rates. Since the expected depreciation rate of the domestic currency - $(\Delta e)e$ — is not observable, we shall change it with most commonly used proxy — the depreciation rate of the actual exchange rate:

$$p = m - \phi y + \lambda(\Delta e) \tag{7}$$

where Δe — is a actual rate of depreciation and $0 < \lambda < 1$. In this model λ becomes a parameter measuring the degree of exchange rate pass-trough to inflation.

Or alternatively we can rewrite equation (7) in growth rates terms:

$$\Delta p = \Delta m - \phi \Delta y + \lambda \Delta(\Delta e) \tag{8}$$

Now the condition $\Delta(\Delta e)$ becomes the growth rate of the first difference, that is simply the second difference of the actual exchange rate.

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