POLICY OPTIONS FOR MANAGING FOREIGN EXCHANGE INFLOWS:

LESSONS FOR GEORGIA FROM INTERNATIONAL EXPERIENCES

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I. INTRODUCTION

1. **All countries in the Caucasus and Central Asia (CCA) have had large foreign exchange inflows in recent years.** The inflows have included strong remittances, increased oil revenues, and capital flows (portfolio, official and foreign direct investment) that have spread beyond the traditional emerging markets in Latin America, Central and Eastern Europe, and Asia. Georgia is no exception, having received significant remittances and, over the last two years, greater FDI as a share of GDP than any other CCA country.

2. **Managing these foreign exchange inflows has been challenging for many countries.** Although foreign exchange inflows offer opportunities for countries to speed up economic development as investment is no longer held back by domestic savings, they complicate macroeconomic management and may increase the financial sector's vulnerability. Countries are particularly struggling to control inflation while keeping the exchange rate at a level that supports their industries' international competitiveness and allow them to develop their export sectors.

3. **In addition to these macroeconomic challenges, structural reforms have to be pushed forward in order to enhance the efficient allocation of foreign inflows.** If the country receiving the large foreign inflows has a weak institutional framework, there is a high risk that foreign inflows will be misallocated. Misallocation is often associated with a frail financial sector that cannot absorb foreign inflows effectively owing to banks' inadequate management capacity, poor corporate governance, and insufficient banking supervision.

4. **This paper discusses the different policy options for managing foreign exchange inflows.** Drawing on the lessons learned from countries that have been facing foreign exchange inflows for much longer than CCA countries, the paper considers strategies to maximize the benefit from foreign exchange inflows while controlling the risks.

5. **The structure of the paper is as follows:** Section II includes a short description of the different types of foreign exchange inflows. Section III discusses the policy options for managing foreign exchange inflows, differentiated between policies in case of short-term versus medium- to long-term inflows. Section IV presents policies that aim to mitigate the risks of foreign exchange inflows suddenly stopping and to minimize the damage done to an economy if such a sudden stop occurs. Section V summarizes the findings on how to best shape policies in times of large foreign inflows, and attempts to apply these lessons to the specific circumstances in Georgia today.

II. Characteristics of Foreign Exchange Inflows

6. **Policies for managing foreign exchange inflows depend on whether the inflows are considered to be a short-term phenomenon or are expected to persist over a longer period.** In general, although there is a great deal of uncertainty, it is likely that much—but not all—of the foreign exchange inflows are of a long-term nature in CCA countries:

- **Remittances**: This type of inflow tends to be motivated by altruism and is likely to be a relatively long-term source of foreign exchange. Remittances are considered independent from shocks in international financial markets and are usually counter-cyclical, meaning that part of the impact of a shock is typically offset by remittances. However, the large dependence on Russia as a host country for guest workers makes remittances in the CCA region vulnerable to political decisions regarding access to the Russian labor market (for example, visa policy), as well as to developments in Russia's economy (for example, oil prices). In the guest worker's home country, remittances tend to be used mainly for consumption, not investment.

- **Capital inflows**: The literature discusses two types of factors that affect capital inflows: "push factors" in the originating country of the capital flows, for example, low interest rates in the U.S. and Europe, which motivate investors to look for more attractive investment opportunities elsewhere; and "pull factors" in the countries where capital flows to, for example, enhanced macroeconomic stability and improvements in the business climate. As some of the factors determining capital inflows are beyond the host country's control, it is difficult to predict whether inflows are a short-term or a stable, long-term phenomenon. In general, foreign direct investment (FDI) is considered a long-term, relatively stable type of inflow. Portfolio inflows, invested in equities and bonds, are more volatile than FDI, but more stable than inflows in form of lending by foreign banks.

- **Oil revenues:** Although foreign inflows arising from oil exports are potentially volatile due to large fluctuations in oil prices, the economic outlook for the next few years indicates a relatively high level of world demand for petroleum products. Therefore, countries receiving this type of inflow could consider them as medium- to long term, but should keep in mind the risk of a sudden change in prices, for example, in the event of a global recession.

III. Managing Foreign Exchange Inflows

7. **Foreign exchange inflows are welcome in developing countries, but also create challenges for domestic policy makers.** Thanks to foreign capital inflows, investment is no longer limited by domestic constraints. In particular, low- and middle-income transition economies with limited scope for domestic savings, but prospects of high return on investments, can achieve higher investment through capital inflows. Capital inflows also allow economies to smooth the consumption pattern over time. For transition economies, it is the early generation that bears a large share of the costs of transition. Increasing consumption for this generation can help maintain the political support necessary for economic reform. Finally, cross-border flows can reduce the portfolio risk through diversification (Montiel and Reinhart, 1999). However, in order to achieve these benefits, foreign exchange inflows need

to be complemented by carefully calibrated macroeconomic policies and strong structural reforms (Mody and Murshid, 2002). This section discusses different policy options, depending on whether the inflows are considered a short-term phenomenon or are expected to last for a longer period.

A. Managing Short-Term Foreign Exchange Inflows

8. **If foreign inflows are temporary, policies should focus on limiting exchange rate volatility while preserving stable macroeconomic conditions.** Exchange rate volatility creates adjustment costs for the economy in the form of unpredictable changes in prices for imports and exports, especially if—as in many CCA countries—capital markets are underdeveloped and do not offer hedging instruments and easy access to financing. Foreign exchange interventions by the central bank can smooth the exchange rate and, thereby, reduce the adjustment costs. Over the short term, monetary policy can control the impact of the interventions on the domestic economy.

9. **The common way to limit the effects of foreign exchange inflows on domestic monetary conditions is through sterilizing the liquidity that is injected by the central bank's foreign exchange purchases.** Sterilization is usually achieved by the placement of domestic securities by the central bank or increased reserve requirements on commercial banks' liabilities. Some countries also use domestic currency collected by the government to reduce liquidity in the banking system. Such measures include shifting government deposits from commercial banks to the central bank or extra-budgetary funds that invest abroad. For example, Indonesia in the early 1990s moved state-owned enterprises' accounts from commercial banks to the central bank to mop up liquidity (see Folkerts-Landau, at al., 1995). A government's extra-budgetary oil fund that invests its revenues abroad is another example.

10. **Although sterilization has been a common policy response to foreign exchange inflows in many countries, it can be problematic if used over an extended period of time.** First, sterilization results in increased public debt and entails quasi-fiscal costs if the interest earned on international reserves is lower than the interest on domestic securities (Hauner, 2005). Depending on the size of the interest rate differential, the government has to decide how long it is willing to bear these costs. A second and more fundamental shortcoming of sterilization is that it will push up interest rates over time, which can attract more foreign inflows as the interest rate differential between domestic and foreign capital markets increases. Thus, interventions to prevent inflows from causing exchange rate appreciation, plus interventions to control inflation, can in fact result in more inflows, and ultimately be self-defeating. The reaction of foreign inflows is particularly pronounced if an economy is highly integrated into international capital markets (Box 1). As sterilization reaches its limits, money growth increases as a consequence of central bank interventions, creating inflationary pressures that will finally cause a real appreciation (Annex). Therefore, sterilized interventions should only be considered as a short-term policy tool.

11. **Under certain conditions, rapid money growth driven by foreign exchange interventions is not inflationary and, therefore, the central bank does not need to sterilize the injected liquidity.** The following situations would allow for unsterilized interventions:

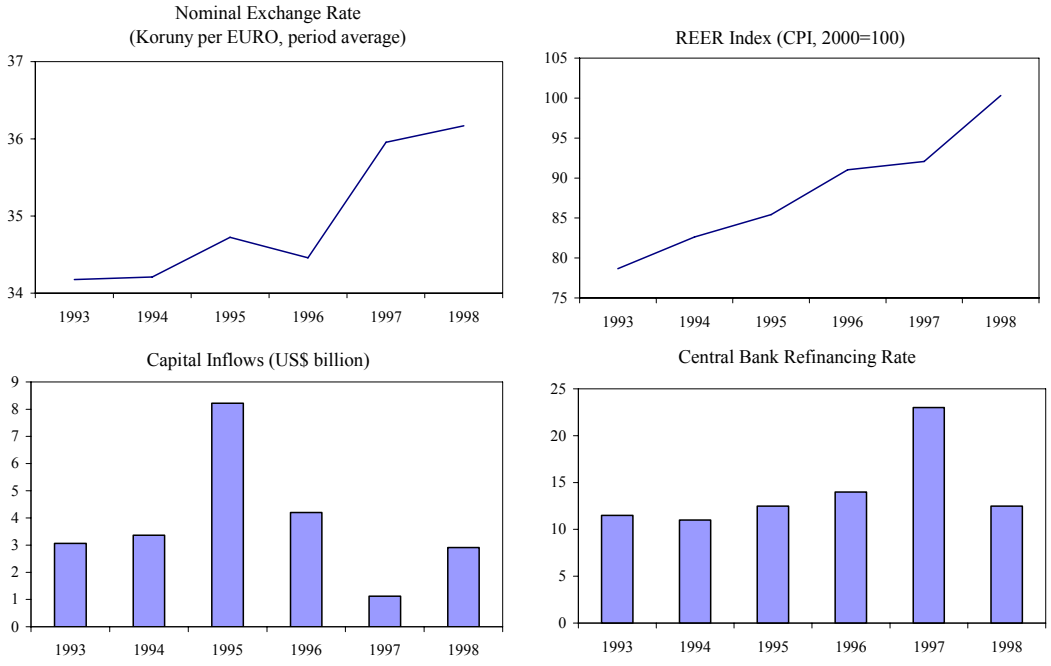
Box 1. Czech Republic: Sterilizing Foreign Exchange Inflows Does not Work Forever

The Czech Republic is an example of how foreign exchange intervention combined with sterilization policies can jeopardize macroeconomic stability if practiced over an extended period.

With a relatively fixed exchange rate regime, the Czech Republic faced large foreign inflows between 1993–1995 due to its reputation for market friendly reforms and strong economic growth. At their peak, foreign currency inflows were equivalent to 18 percent of GDP annually, with the largest shares in FDI and lending from abroad. The central bank sterilized most of the liquidity that was injected through foreign exchange interventions, by issuing central bank paper. However, the large amount of central bank paper placement created a vicious cycle of high interest rates and more capital inflows which finally leaked into the money supply. Limits on short-term open positions of banks with non-residents which the government introduced in 1995 were circumvented by banks that profited from the interest rate differential between low rates abroad and high nominal interest rates on domestic bonds—the differential reached 6 percentage points at its peak.

The increasing money supply triggered a credit boom which fueled both investment (mainly into non-tradables) and consumption. Inflation led over time to a real appreciation, deteriorating export performance, and a widening of the current account balance. The fiscal stance during this period was moderately expansionary (from balanced in 1993 to a 2 percent deficit in 1995), contributing further to domestic demand growth.

The combination of an incoherent policy strategy and contagion effects from the 1997 Asian crisis caused a drop in capital inflows and a run on the currency to which the central bank reacted with 10 percent devaluation and finally a relatively free float in 1997. The crisis was aggravated by turbulence in the financial sector and led to a recession that lasted three years (see Christensen, 2004).

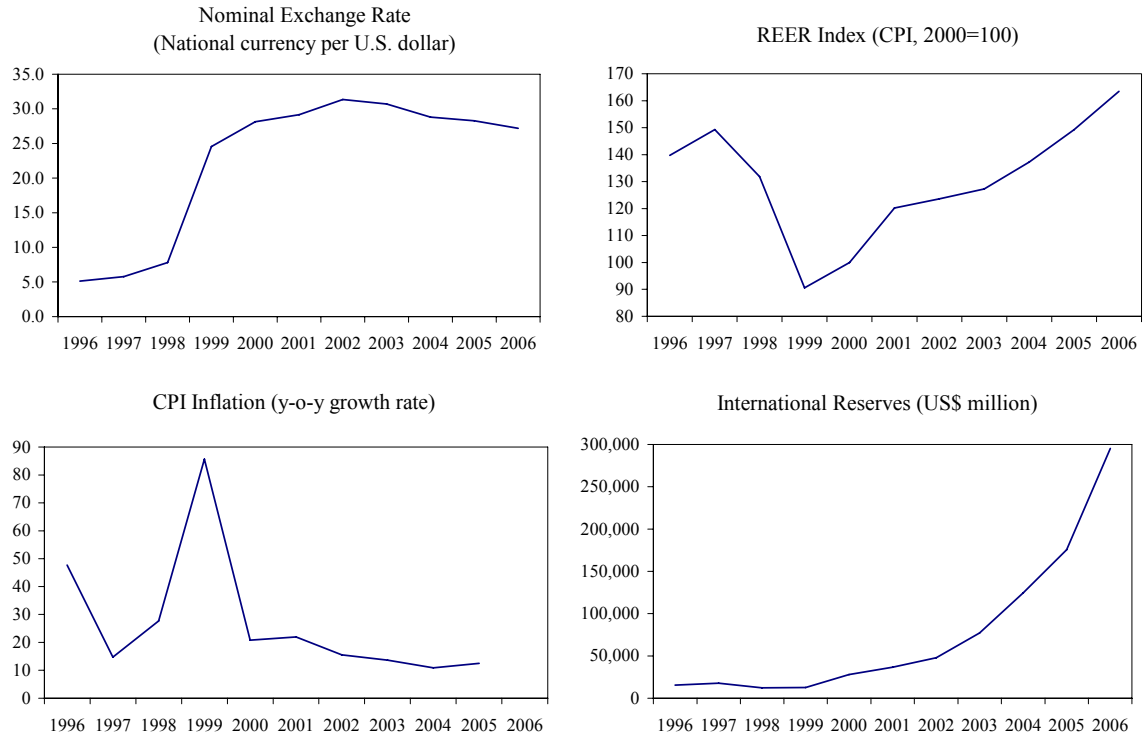


Box 2. Russia: Foreign Exchange Interventions with Limited Sterilization

Thanks to a strong recovery in money demand after the 1998 crisis, Russia was able to offset the nominal appreciation pressure caused by capital inflows through largely unsterilized interventions in the foreign exchange market without increasing inflation. However, the policy has only slowed—not prevented—real exchange rate appreciation.

In the early 2000s, with the economy recovering quickly from the 1998 crisis, foreign inflows increased due to growing oil proceeds and high capital inflows (some FDI, but mainly short-term capital inflows). As the authorities were determined to pursue a combination of inflation and exchange rate targets, the central bank intervened heavily in the foreign exchange market to achieve a nominal depreciation of the ruble and later to slow down the pace of nominal appreciation.

Only a small part of the injected ruble liquidity was absorbed by the central bank owing to concerns that rising interest rates, combined with appreciation expectations, would only stimulate short-term capital inflows further. As money demand was very strong, reflecting high GDP growth, a decline in barter trade, and appreciation expectations leading to de-dollarization, the large increase in broad money slowed down disinflation, but did not lead to higher inflation. In addition, a tight fiscal stance, in particular, the saving of oil revenues in an oil stabilization fund, helped to contain inflation. The combination of a slowdown in nominal appreciation and a relatively stable inflation rate moderated the real appreciation trend. However, with the intensified use of resources, especially price pressures arising from growing employment, and a more expansionary fiscal stance, the central bank gradually moved to a more flexible exchange rate regime in order to continue the disinflation trend.



- In the case of an economy that is going through a period of successful disinflation, money demand might be strong, preventing inflationary pressures despite large money growth. The post-crisis situation in Russia is one example: strong money demand growth limited the inflationary impact of unsterilized foreign exchange interventions (Box 2). But even in such cases, there is a limit to how fast the money supply can grow without a surge in inflation.

- If the banking sector is not receptive to the increase in the money supply due to institutional weaknesses in intermediation or the central bank's prudential constraints on lending, domestic interest rates will decline. Consequently, capital inflows and money supply growth will slow, easing the need for the central bank to intervene. However, transition economies have shown a large appetite for bank credit. Although the credit boom started rather late in most CCA countries compared to the more advanced transition economies in Central and Eastern Europe (Cottarelli, 2003), many of them are now facing high credit growth.

B. Managing Medium- and Long-Term Foreign Exchange Inflows

Macroeconomic and structural policies

12. **If foreign exchange inflows are longer term, as appears to be the case for most CCA economies, including Georgia, monetary and foreign exchange policies will be unable to prevent an appreciation of the real exchange rate beyond the short term.** If the central bank attempts to keep the nominal exchange rate stable through interventions, inflation will increase over time. Due to the rise in domestic prices, the real exchange rate appreciates and exporters will find it more difficult to compete in the world market. Alternatively, a central bank can refrain from foreign exchange market interventions, allowing a nominal appreciation which results also in a change in the real exchange rate. Although the result of both policies for a country's competitiveness is the same, an adjustment of relative prices through nominal appreciation prevents an increase in inflation and, therefore, the potentially harmful effects of inflation on economic growth (Khan and Senhadji, 2000). As a result, the literature emphasizes the advantages of flexible versus fixed exchange rate regimes in case of medium- and long-term capital inflows (Begg, et al., 2003; Rogoff, et al., 2004).

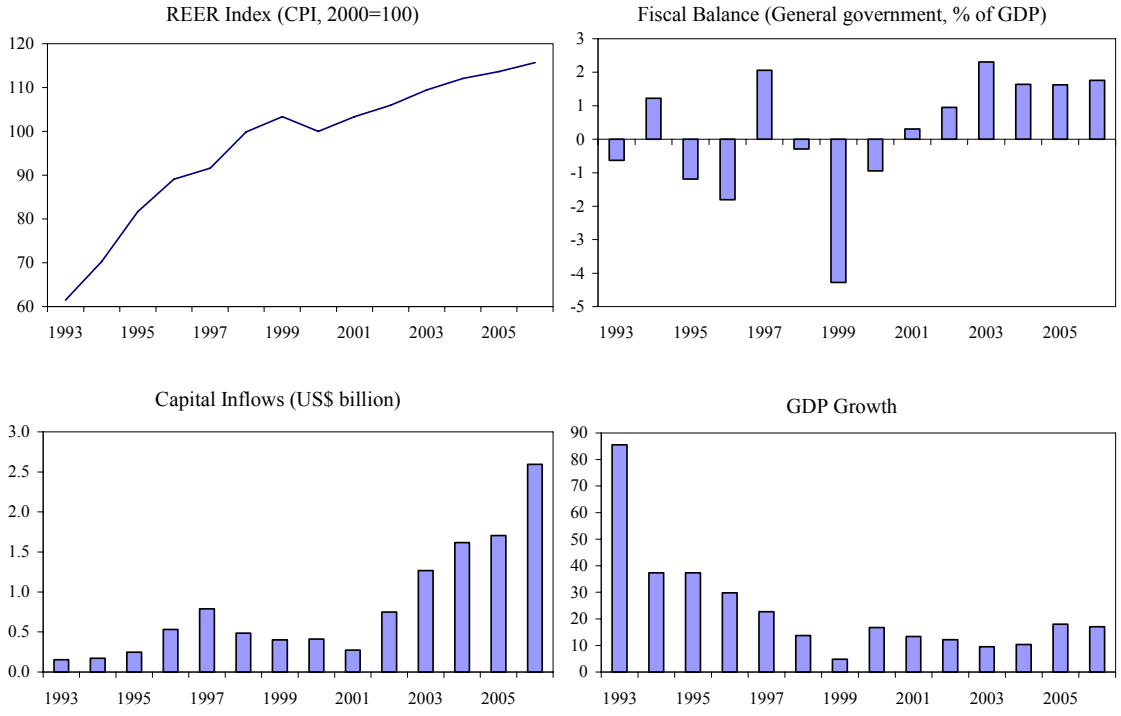
13. **While monetary and exchange rate policies are unable to stop real appreciation, a tightening of fiscal policies can achieve this goal.** During times of large foreign inflows, fiscal policy tightening withdraws public demand (Box 3). Consequently, inflationary pressure declines, which reduces the real exchange rate appreciation and, therefore, the loss of competitiveness for exporters. However, the room for tightening fiscal policies might be limited, in particular during the transition phase. Foreign inflows, especially FDI, often increase the demand for public goods (for example, infrastructure) and a tighter fiscal stance that limits the delivery of public goods can hamper the positive growth stimulus of foreign inflows. In addition, political support for painful structural reforms that enhance the business environment and, therefore, the conditions for the efficient allocation of foreign inflows, often requires additional social spending which is difficult to accommodate within a tight budgetary stance.

Box 3. Estonia: Managing Capital Inflows in a Currency Board

Estonia faced large foreign inflows, but nevertheless succeeded in preserving macroeconomic stability within a fixed exchange rate regime due to prudent fiscal policy.

With the introduction of its own currency in 1992, Estonia set up a currency board that was pegged to the Deutsche Mark and later to the Euro. The currency board puts tight restrictions on monetary policy as base money can only be created against convertible currency which leaves no room for discretionary monetary policy. A currency board also constrains fiscal policy: the central bank may not lend to the government, limiting the fiscal deficit to any financing that is available in the domestic or foreign financial market. This was practically zero during the early period of Estonia's transition. But even during the late1990s and early 2000s when the financial market was well developed, the fiscal stance remained mostly in surplus, taking the heat of macroeconomic adjustment due to the lack of discretionary monetary policy.

The economy's response to the economic program was quick: inflation declined rapidly from over 80 percent in 1992 to the low double digits. Even in the wake of the Asian and Russian crises in the late 1990s, Estonia's currency board was quite resilient. Prior to the crisis, domestic demand was fueled by the stock market boom in 1996 and 1997 and strong credit growth. Concerns that the economy was overheating prompted a tightening of fiscal policies in 1997. After the collapse of the stock market in the wake of the Asian crisis in late 1997, the tight fiscal stance, a drop in credit growth, and the decline in exports to Russia caused a sharp decline in GDP growth. However, Estonia was able to preserve confidence among international investors and continued to have access to borrowing at only moderately increased interest rates. FDI continued to be strong and the exchange markets never seriously tested the exchange rate arrangement. Despite the real appreciation trend, growth recovered quickly and was back into double digits in 2000.



14. **Structural reforms that help to stimulate productivity growth can mitigate the effects of real appreciation on competitiveness.** Structural reforms that strengthen the institutional framework attract investment and direct it toward productivity-enhancing projects. Such reforms include improving governance and transparency, creating an efficient tax system, developing a well functioning financial sector, liberalizing trade, and reducing red tape. Reforms in favor of human capital development have proven to be particularly beneficial in attracting FDI which also has advantages for the recipient country in the form of enhanced access to foreign markets and the introduction of new technologies. These reforms enhance productivity and, therefore, help exporters to offset the loss of competitiveness caused by real appreciation. Looking at the empirical evidence of foreign exchange flows' implications on competitiveness during the 1990s, Asian countries were able to increase investments during this period due to the strong absorptive capacity of domestic investment, supported by structural reforms (Khan and Reinhart, 1995). Increased investment and enhanced productivity limited the impact on competitiveness in Asia compared to Latin America where a larger share of foreign inflows went to consumption during the 1990s.

Capital controls as an instrument to manage capital inflows

15. **Although most international economists emphasized the benefits of fully liberalized capital accounts during the early 1990s, more recently the discussion has intensified over whether governments should rely on capital controls in managing medium- and long-term foreign inflows.** Thailand is the latest example of a country that used capital controls as a way to slow down rapid nominal exchange rate appreciation. In late 2006, the central bank announced it would lock up 30 percent of new foreign currency inflows for a year at an interest rate of zero. After a sharp drop in the stock market, the measure was modified and was not applied to equity inflows anymore.

16. **However, severe doubts remain as to whether capital controls are an efficient way to manage foreign capital inflows** (Edwards, 1998)**.** Chile is the most prominent example of a country that used capital controls—it applied such controls between 1991 and 1998. The main capital control was a mandatory 30 percent deposit for capital inflows held at the central bank without any remuneration for one year, adding a cost factor to foreign inflows with a maturity of less than a yea. Chile's controls had some impact: while there is no empirical evidence that the total amount of capital inflows was affected, the composition of capital inflows moved to longer maturities (Forbes, 2003; Montiel and Reinhart, 1999, came to the same result for a larger sample of Asian and Latin American countries). In addition, the Chilean central bank gained—at least in the short term—some independence in monetary policies as capital controls created a wedge between domestic and foreign interest rates which facilitated the central bank's efforts to further reduce inflation. However, the efficiency of capital controls eroded quickly as capital markets found ways to evade controls, resulting in numerous revisions to close loopholes. In addition, the capital controls led to higher financing expenses, especially for small enterprises (Forbes, 2003). Finally, Malaysia's experience with capital controls introduced in 1998 shows that in an environment of weak governance, the efficiency of capital controls is significantly reduced (Johnson, Mitton, 2001).

IV. Mitigating the Risks of a Currency Crisis

17. **Many countries that faced large foreign exchange inflows over an extended period of time were eventually confronted with a sudden reversal of the flows, causing a currency crisis that led to a severe recession.** This may be relevant for those CCA countries experiencing significant short-term inflows, such as foreign lending to domestic banks. Policies to manage foreign exchange inflows must consider ways to reduce the risks of a sudden stop and the negative implications for the economy in the event of a sudden stop.

18. **Foreign exchange inflows offer an opportunity for the central bank to accumulate international reserves which help protect a currency during a crisis.** A high level of international reserves provides the economy with an adjustment tool if the currency comes under attack. By purchasing the inflows, the central bank prevents a nominal appreciation that would have otherwise led to a widening of the current account deficit. Limiting the current account deficit in itself reduces a country's vulnerability and the potential adjustment costs in case of an external shock.

C. The Exchange Rate Regime Choice

19. **While the choice of the exchange rate regime is important for limiting the possibility of a crisis, perhaps even more important is the consistency of the macroeconomic management.** Both relatively fixed and flexible exchange rates can be found among successful transition economies. Examples range from inflation targeting with a relatively flexible exchange rate and limited foreign exchange interventions in Poland to a heavily managed float in Slovenia to a currency board in Estonia (Corker et al., 2000). What is essential for the positive performance of any regime is that macroeconomic management is consistent in terms of defining a macroeconomic strategy that outlines targets and plausible policy tools to achieve them. For example, if a central bank opts for a fixed exchange rate, but wants to present a plausible strategy on how to achieve an inflation target, a clear commitment to a sufficiently tight and flexible fiscal policy is needed. Empirical evidence shows that inconsistent fixed exchange rate regimes have performed badly in managing a crisis, as have flexible regimes characterized by inconsistent macroeconomic policies (see Rogoff, et al., 2004. See also Box 3 on Estonia for an example of the effects of a credible, fixed exchange rate regime and Box 1 on the Czech Republic for an example of the effects of inconsistent macroeconomic policies during the mid-1990s).

20. **However, empirical evidence suggests that once a country has exposure to international capital flows, rigid exchange rate regimes are more often associated with currency crises** (Rogoff, et al., 2004)**.** Flexible exchange rate regimes have the advantage of adding a powerful shock absorber to a country's policy tools in case of a crisis. Prior to a crisis, the flexibility of the exchange rate discourages undesirable speculative inflows as uncertainties over the future exchange rate reduce overconfidence among investors who take speculative short-term positions. Once an external shock hits, a small share of short-term positions reduces rollover risk, leaving more time for policy measures to stabilize the macroeconomic situation.

D. Mitigating Balance Sheet Risks

21. **The analysis of balance sheet risks, triggered by mismatches in the currency composition of assets and liabilities, is usually differentiated between the public, corporate and financial sectors** (Allen, et al., 2002)**:**

- For the public sector, the main focus is to limit the government's exposure to exchange rate risks arising from high external debt. Especially during the early phase of economic transition, governments find it difficult to finance a fiscal deficit domestically as capital markets are not yet developed and domestic savings rates are often low. Therefore, they rely on borrowing from abroad in foreign currency. Reducing this foreign exchange exposure during times of macroeconomic stability when foreign inflows are large is a priority of a risk-mitigating public debt strategy. The high level of public foreign debt in Ukraine is an example how public sector balance sheet risks aggravated the currency crisis (Box 4).

  The corporate sector faces problems similar to the public sector in generating funding, especially if the banking sector is underdeveloped. Often companies only have access to longer-term funding if they borrow in foreign currency, either from the domestic banking system or directly from abroad. Corporate sector indebtedness should be carefully monitored when assessing a country's vulnerability.

- Finally—and most prominently discussed in the literature—balance sheet risks in the financial sector threaten the sector's liquidity and profitability in case of a currency crisis, leading to a so-called "twin crisis." There is empirical evidence that a "twin crisis," where a currency crisis triggers a financial sector crisis, causes a longer and more severe recession than an isolated currency crisis (Kaminsky and Reinhart, 1999).

Reducing the risk of a "twin crisis" through prudential regulations

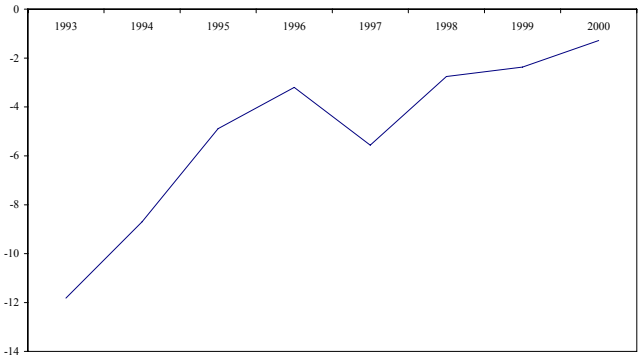
22. **In order to mitigate the risks associated with a "twin crisis," the central bank has to impose prudential regulations that force banks to properly assess portfolio risks and to provision appropriately.** Foreign inflows to the banking sector often accelerate credit growth when institutions are still weak due to limited administrative capacities in commercial banks and poor banking supervision. These weaknesses increase the risk of inefficient lending decisions and create balance sheet mismatches. In contrast to capital controls, specific financial sector provisioning rules can reduce the risks from large foreign inflows for the banking system rather than prohibiting capital movements altogether. The following issues are particularly affected by foreign exchange inflows and should be addressed by specific prudential regulations (Johnston and Oetker-Robe, 1999):

Box 4. Ukraine: Aggravating a Crisis Through High Public External Debt

Ukraine's reliance on foreign capital inflows for financing the fiscal deficit increased the country's vulnerability to a sudden withdrawal of foreign capital.

With a narrow exchange rate band, Ukraine experienced during the mid-1990s large capital inflows encouraged by stable and open foreign exchange markets, improving macroeconomic conditions—inflation had fallen below 10 percent by September 1997—and attractive investment opportunities in the treasury bill market. As the government's fiscal discipline weakened in 1997 in the wake of parliamentary elections, Ukraine became increasingly reliant on the issuances of short-term T-bills which were acquired mostly by nonresidents.

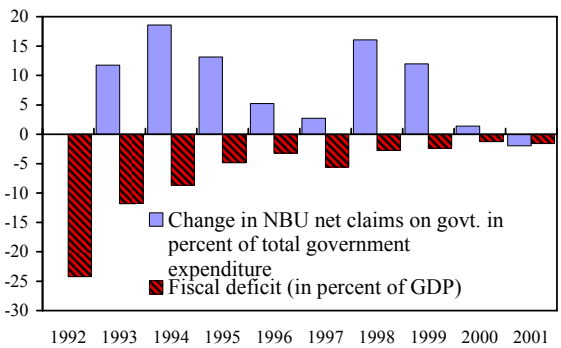
Fiscal Deficit (General government balance, % of GDP)



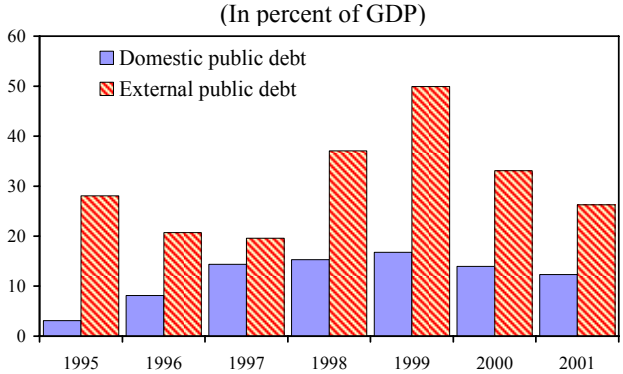
After the Asian and the Russian crises, foreign investors pulled out and interest rates increased sharply. Without access to international financial markets, the government relied increasingly on borrowing from the National Bank of Ukraine (UBK) to help finance the deficit. The increase in broad money was limited by the decision to defend the exchange rate despite substantial depreciation pressure that drained international reserves.

In September 1998, the central bank stopped interventions, depreciated the currency, and broadened the exchange rate band. Fiscal policies had to be tightened and the public debt restructured.

Fiscal Policy and NBU Financing, 1992-2001



Public and External Private Debt, 1995-2001
(In percent of GDP)



Sources: NBU; Ministry of Finance; and staff estimates.

Source: International Monetary Fund, SM/99/77, "Ukraine—Recent Economic Developments."

- **Credit risk:**
  - Establish exposure limits for foreign currency loans.
  - Differentiate capital requirements by cross-border risks (for example, risk weights for foreign currency lending).
  - Differentiate loan classification and loan loss provisioning requirements depending on the cross-border risk (for example, higher provisioning requirements for foreign currency loans and for foreign currency borrowers without foreign exchange income).
- **Foreign exchange risk:**
  - Set limits on net open positions.
  - Develop a market for instruments to hedge foreign exchange risks.
- **Interest rate risk:** Regulate interest rate risks for each currency in which the bank has a substantial position.
- **Liquidity risk:** Separate liquidity risks within each currency component of the bank's balance sheet, taking into account the different volatility and reliability of domestic and foreign funding sources.

Using prudential regulations to address macroeconomic problems

23. **Some countries have used prudential regulations not only as a way to limit balance sheet risks, but also to address macroeconomic problems.** In principle, the appropriateness of prudential regulations for the banking sector should be measured based on international principles (for example, the Basle Core Principles) and the outcome of stress testing that shows whether regulations are sufficiently conservative to protect the banking sector against a crisis. However, several Central and Eastern European countries have experimented with prudential requirements as an instrument to address macroeconomic imbalances. In these countries, strong credit growth fueled domestic demand and widened the current account deficit. With a tightening of prudential regulations, governments intended to slow down credit growth.

24. **A variety of prudential measures were introduced, aimed at increasing the costs of lending** (Tiffin, 2006, Romania Selected Issues Paper). In some countries, minimum reserve requirements were introduced on commercial banks' foreign exchange obligations. For example, a 55 percent requirement currently applies in Croatia. Once a bank exceeds a certain limit for credit growth (for example, a 6 percent quarterly ceiling was introduced in Bulgaria in 2004), an additional reserve requirement kicks in. A variation of this policy was introduced in Croatia in 2006: banks exceeding a certain limit for credit growth have to buy local currency denominated treasury bills equal to the amount in excess of the credit ceiling.

25. **Although some of these measures have only been introduced recently and have not been evaluated thoroughly, the experience so far is not encouraging, as financial market participants have found creative ways to circumvent the sanctions.** In countries like Croatia, where many domestic banks are owned by foreign parent companies, large domestic customers received loans directly from the foreign parent company. Companies also accessed international capital markets directly through the placement of bonds. As prudential regulations target only banks, business was moved to non-supervised financial institutions, for example, leasing companies.

V. Conclusions and Lessons for Georgia

26. **Country examples show that transition economies have been successful with fixed as well as flexible exchange rate regimes.** What matters most is the consistency and credibility of the policy package. A pegged exchange rate with tight fiscal policies can provide an efficient framework for managing foreign inflows as well as a flexible exchange rate system. In contrast, pursuing a flexible exchange rate regime on paper while intervening constantly in the foreign exchange market sends a confusing message about the country's macroeconomic strategy, which makes it more vulnerable to speculative attacks.

27. **The options available for managing foreign exchange inflows depend on inflow characteristics.** While short-term inflows should not be allowed to cause major variations in the exchange rate, the combination of central bank intervention and sterilization does not work for medium- and long-term foreign inflows, such as Georgia is currently receiving. A more flexible exchange rate generally produces better results, from a macroeconomic perspective, in such a case. The policy response should not be driven by the mistaken belief that the central bank can control the real exchange rate beyond the short term**.** Foreign exchange inflows result over the medium- to long-term in a real appreciation in all exchange rate regimes. Furthermore, appreciation during the inflows creates room for depreciation to stimulate growth, should inflows be halted or reversed.

28. **Strong competitiveness, rapid growth, and job creation can coexist with real appreciation, if prudent structural reforms are undertaken to help channel capital flows into productivity-enhancing investments.** Such policies also contribute to medium-term macroeconomic stability as strong export growth will help preserve external stability when current large capital inflows lead to growing future outflows or when the foreign inflows drop, for example, due to lower oil prices or a sudden stop of capital inflows.

29. **Capital controls are not an efficient long-term tool for managing capital inflows.** Financial sector institutions have proven to be quick and innovative in circumventing capital controls. At best, capital controls can influence the composition of inflows.

30. **A flexible exchange rate has advantages compared to a fixed exchange rate in mitigating the risk of a currency crisis, especially if the economy is integrated into world capital markets and attracts large capital inflows**. As exchange rate flexibility discourages short-term capital inflows, it reduces the risk of abrupt capital outflows which make macro management more difficult during a crisis.

31. **Prudential policies designed to enhance the stability of the financial sector are essential to prevent banking sector problems.** If a currency crisis spreads to a weak financial sector, the recession lengthens and becomes more severe. Imposing strict prudential regulations on the financial sector and developing the supervisory capacities of the central bank are therefore essential to limit the damage resulting from a crisis.

32. The key lessons from international experiences managing large-scale foreign exchange inflows can thus be summarized in the following six points:

- Monetary policy should target low to moderate inflation;
- Real appreciation cannot be prevented over the medium- to long-term, except by fiscal tightening that may not be politically sustainable;
- Structural policies need to be designed to encourage these inflows to be directed toward productivity-enhancing investments, to limit the competitiveness declines from the real exchange rate appreciation;
- Capital controls and the use of prudential regulations to restrict inflows pose potentially significant costs and are unlikely to be successful;
- Central banks should seek to hold a substantial level of foreign exchange reserves, while ensuring that any needed accumulation is consistent with the inflation objective;
- Countries with significant inflows should seek to make their exchange rates more flexible, to reduce the risk of a currency crisis, and should strengthen prudential and other financial market regulations, to reduce the risks of financial market problems in the event of a reversal of the inflows.

33. Applied to Georgia, these conclusions imply the following: as the inflows to Georgia seem clearly to be, at least predominantly, of a long-tern nature, monetary policy cannot and should not try to prevent real appreciation. With regard to the exchange rate, then, the policy choice narrows down to allowing the real appreciation (preferably through nominal appreciation, not inflation), or tightening the fiscal stance to reduce the appreciation pressures. Continued aggressive structural reforms would then be necessary to help maintain the competitiveness of the economy in the face of real appreciation.

34. More concretely, the lessons from international experiences in managing large-scale foreign exchange inflows would seem to call for the following policy actions in Georgia. First, the NBG should have as its primary macroeconomic objective keeping inflation at the authorities' target of 9 percent or less. However, as the NBG's foreign exchange reserves are still relatively low—currently less than 3 months' of imports, which is considered to be a minimum comfortable level—they should also seek to continue to increase their foreign exchange holdings.

35. The only way these two NBG objectives—keeping inflation at or below 9 percent, while purchasing reserves (not to stabilize the nominal exchange rate but to provide the NBG with a more comfortable level of reserves)—can be made consistent is for fiscal policy to be

much tighter and more flexible. Having agreed on an inflation target for 2007, which implies reserve and broad money targets, the government and NBG should now agree on an appropriate end-2007 level of NBG international reserves. Combined with the reserve money target that is consistent with the inflation objective, this will produce a level of government deposits necessary to make these objectives consistent.

36. Fiscal policy will then need to be tightened sufficiently to produce that level of deposits. At the same time, as the reserve and broad money targets are based on assumptions about money demand and the money multiplier, fiscal policy will need to be flexible—if money demand turns out to be lower than projected, or the money multiplier higher than projected, the fiscal authorities will need to be prepared to further tighten fiscal policy to keep inflation in line.

37. As noted, given the large and sustained inflows Georgia is receiving, real appreciation is inevitable. However, as Georgia has been aggressively pursuing reforms to both improve the business environment and enhance the economic infrastructure, this real appreciation should not be too damaging to Georgia's international competitiveness. Continued progress in these areas, as the real appreciation continues, will be important.

38. Finally, international experience clearly emphasizes the importance of strengthening prudential regulations and financial market supervision. In addition to adopting Fit and Proper standards in line with international best practices, and passage of legislation on credit information bureaus, the NBG may wish to consider placing prudential limits on unhedged foreign exchange loans. Finally, it is absolutely vital that the NBG Banking Supervision Department be staffed with a sufficient number of qualified and independent bank examiners.

Annex: The Concept of the Real Exchange Rate

The real exchange rate between two countries

The **real exchange rate** measures the relative price of two countries' output baskets. Changes in the real exchange rate, not the nominal exchange rate, are the appropriate measure changes in a country's competitiveness.

Changes in the real exchange rate can be explained in a two country example: Germany's real exchange rate relative to the U.S. can be expressed as the ratio of the US$ value of Germany's price level to the price level in the U.S. It indicates how much more a typical basket of goods costs in Germany than in the U.S. When this ratio rises, it indicates that German goods have become more expensive compared to U.S. goods.

Two factors determine the real exchange rate between two countries: the nominal exchange rate, and the domestic price level in the two countries. A nominal appreciation of the euro—meaning a rise in the US$/Euro exchange rate—appreciates the real euro exchange rate, indicating that one can buy less German products for one US$. Alternatively, if the price level in Germany increases, the real exchange rate also appreciates, as one US$ will now buy less German products.

What does that mean for competitiveness? Both examples result in a loss of competitiveness for the German economy. In case of the nominal appreciation, getting less euro per US$ tells consumers in the U.S. that imports from Germany have become more expensive and, therefore, German products have become less competitive than products produced elsewhere. If the real exchange rate change works through a rise in German prices, consumers will also notice that they get relatively less for their US$ when buying German products as the latter have become more expensive.

The real effective exchange rate (REER)

In order to get a comprehensive overview of real exchange rate movements and, consequently, changes in a country's competitiveness, one should not only compare a country's prices with one other country, but with all its trading partners.

The real effective exchange rate (REER) is the commonly used concept to measure the prices of one country's goods and services relative to the rest of the world when converted into a common currency, for example, the US$. In contrast to the real exchange rate between two countries, the REER is compiled by using inflation and nominal exchange rates from all trading partners, weighted by their share in the domestic country's trade.

Source: Krugman, Obstfeld, 2005

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