EFFECTIVENESS OF CENTRAL BANKS AND THEIR ROLE IN THE GLOBAL FINANCIAL CRISIS

CASE OF SELECTED ECONOMIES

Caucasus and Central Asia: Afghanistan, Armenia, Georgia, the Kyrgyz Republic, and Tajikistan | South Asia: Nepal and Sri Lanka

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Asian Development Bank
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Currency Equivalents

(as of 31 July 2009)

Currency Unit = afghani (AF)

$1 ≡ AF50.88
AF1 ≡ $0.0197

Currency Unit = dram (AMD)

$1 ≡ AMD370
AMD1 ≡ $0.0027

Currency Unit = lari (GEL)

$1 ≡ GEL2
GEL1 ≡ $0.5

Currency Unit = som (Som)

$1 ≡ Som44
Som1 ≡ $0.0227

Currency Unit = Nepalese rupee (NRe/NRs)

$1 ≡ NRs78
NRe1 ≡ $0.0128

Currency Unit = Sri Lanka rupee (SLRe/SLRs)

$1 ≡ SLRs115
SLRe1 ≡ $0.0087

Currency Unit = somoni (TJS)

$1 ≡ TJS3.44
TJS1 ≡ $0.2907
Abbreviations

ADB — Asian Development Bank
AFG — Afghanistan
ARM — Armenia
CAMEL — capital adequacy, asset quality, management, earnings, and liquidity
CAEL — capital adequacy, asset quality, earnings, and liquidity
CAR — capital adequacy ratio
CBRA — Central Bank of Republic of Armenia
CBSL — Central Bank of Sri Lanka
CD — certificate of deposit
CN — capital note
CRR — cash reserve requirement
DAB — Da Afghanistan Bank
DMC — developing member country
FSAP — Financial Sector Assessment Program
GDP — gross domestic product
GEO — Georgia
IMF — International Monetary Fund
KGZ — Kyrgyz Republic
LCBRA — Law on Central Bank of Republic of Armenia
LDAB — Law on Da Afghanistan Bank
LNBKCR — Law for the National Bank of the Kyrgyz Republic
LNBSG — Organic Law for National Bank of Georgia
LNBT — Law on National Bank of Tajikistan
LOLR — lender of last resort
M1 — narrow money
M2, M3 — broad money
NBG — National Bank of Georgia
NEER — nominal effective exchange rate
NEP — Nepal
NFA — net foreign asset
NPL — nonperforming loan
NRB — Nepal Rastra Bank
OMO — open market operation
REER — real effective exchange rate
ROA — rate of return on asset
ROE — rate of return on equity
SAFSR — State Agency for Financial Supervision and Reporting
SRI — Sri Lanka
SRR — statutory reserve requirement
TAJ — Tajikistan
TB — treasury bill
Broad money = A relatively broad definition of money that applies to M2 or M3 (Source: *The Oxford Dictionary of Economics*).

Dollarization = A situation in which foreign currency (often the US dollar) replaces a country’s currency in performing one or more of the basic functions of money (Source: *The New Palgrave Dictionary of Economics*).

De-dollarization = A process to revert a country back to using local currency instead of foreign currency in performing the basic functions of money (see dollarization).

M1 = A measure of money supply consisting of currency (coins and notes in circulation), plus demand deposits, traveler’s checks, and other checkable deposits (Source: Dornbusch, R. and Fisher, S.).

M2 = In addition to M1, M2 includes overnight repurchase agreements, overnight Eurodollars, money market mutual funds, money market deposit accounts, savings deposits, and small time deposits (Source: Dornbusch, R. and Fisher, S.).

M3 = A measure of money supply including M2 plus large-denomination time deposits, term repurchase agreements, and money market mutual funds held by institutions (Source: Dornbusch, R. and Fisher, S.).

Overheating = A level of activity leading to excess demand. High output levels relative to capacity, at least in some important sectors, lead to shortages of factor inputs, or unusually high levels of imports (Source: *The Oxford Dictionary of Economics*).

repo = Or repurchase agreements are two simultaneous transactions in which a holder of securities sells securities to an investor with an agreement to repurchase them at a fixed price on a fixed date. A reverse repo is the same transaction from the perspective of the lender (Source: *The Oxford Dictionary for Business World*).

Reserve money = A measure of base money that includes cash in circulation and the legally required reserves based upon percentages of net demand deposits and of time savings deposits that banks in the country are required to maintain at the central bank. (Source: *The Encyclopedia of Banking and Finance*).
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Sterilization</td>
<td>The method by which a central bank prevents balance-of-payments surpluses or deficits from affecting the domestic money supply (Source: <em>The Oxford Dictionary for Business World</em>).</td>
</tr>
<tr>
<td>Step-devaluation</td>
<td>Also called discrete devaluation, a step-devaluation is a fall in the price of a currency in terms of other currencies. Less foreign currency can be bought with a unit of the currency that has been devalued (Source: <em>The Oxford Dictionary for Business World</em>).</td>
</tr>
<tr>
<td>Taylor rule</td>
<td>A monetary-policy rule proposed by John B. Taylor that prescribes how a central bank should adjust its interest rate policy instrument in a systematic manner in response to developments in inflation and macroeconomic activity (Source: <em>The New Palgrave Dictionary of Economics</em>).</td>
</tr>
</tbody>
</table>
The Asian Development Bank (ADB) Management requested for a study of central banks in selected developing economies to assess the effectiveness of these institutions in performing their standard roles and functions. This study has been prepared by Shamshad Akhtar, special senior advisor, Office of the President (task manager), and staff consultants Henri Lorie and Arne Petersen, former staff members of the International Monetary Fund, who led the country case work on monetary and financial policies in two South Asia and five Caucasus and Central Asian economies. Financing for the staff consultants was provided by ADB’s South Asia Department and Central and West Asia Department (CWRD).

I would like to acknowledge the support of regional departments and resident missions that provided logistical support to the missions and who helped in data gathering. ADB headquarters staff members Syed Ali-Mumtaz H. Shah (Sri Lanka), Vivek Rao (Nepal), Jose Antonio Tan III (Afghanistan), and Sona Shrestha (Tajikistan) helped compile evidence of laws and regulations of central banks, and coordinated the data compilation on the banking sector.

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Shamshad Akhtar
Special Senior Advisor
Office of the President
In the 5 years leading to the global financial crisis, most of the developing member countries (DMCs) of the Asian Development Bank (ADB) that had been selected for the study benefited from a favorable external environment, a strengthening of macroeconomic management, and continued structural reforms. The good macroeconomic performance in these countries was underpinned by surging workers’ remittances and capital inflows. The origin of remittances has mostly been the Russian Federation in the Caucasus and Central Asia, and India and the Gulf countries in South Asia. Georgia, in particular, received large foreign direct investments, while Afghanistan obtained large donor funds.

The international financial crisis has had little direct impact on the DMCs selected for this study. It did, however, have significant secondary impact. In particular, private capital inflows have slowed, or reversed, and remittances have sharply declined, except in Afghanistan and Nepal. In many cases, exports are being threatened by the global financial crisis and several countries have been adversely affected by the decline in specific commodity prices. The correction in oil prices has provided some relief to the balance of payments and inflation in most of the countries.

The finance sector has grown significantly in most of the selected countries in recent years, but continues to be, by far, dominated by banks. Bank penetration remains low, despite a large number of banks. Most banks are privately owned and foreign ownership of banks is significant in Armenia, Georgia, and the Kyrgyz Republic. In Afghanistan, Nepal, and Sri Lanka, state-owned banks still account for a significant share of assets while foreign ownership is low. Indexes of financial deepening show in most cases a rapid degree of progress in recent years, although these indexes are still low by international standards. After declining significantly, dollarization is still high in the Caucasus and Central Asia countries and the recent crisis has caused some reversal of the downward trend. While competition has improved in most banking systems in recent years, there is room for further progress. Bank interest spreads have declined where competition has increased, but remain high by international standards, also explaining a high level of profitability.

Laws governing central banks (“laws”) provide an appropriate framework for implementing the central banks’ mandate, but institutional independence is frequently undermined.

- Central bank role. Irrespective of their different historical and legal backgrounds, all the selected central banks have transformed over the past 15 years—especially since 2000—to assume all the key responsibilities assigned to them in the advanced economies. Except in the Kyrgyz Republic, all the laws identify price stability as the single primary objective.
- **Independence.** Most laws have been amended to grant a reasonable degree of legal independence to the central banks. However, in practice, central banks are able to exercise less policy independence than inscribed in the laws. In particular, decisions on exchange rate policy have not been consistent with monetary policy objectives, presumably because of government and political pressure. The Tajikistan law has a number of shortcomings and a new law has been drafted and is under consideration in the parliament. In Nepal and Sri Lanka, the laws are more ambiguous about central bank independence and assign a greater representational and consultative role to the Ministry of Finance. In some cases, amendments to the laws have tended to increase the parliaments’ oversight of the central banks.

- **Relationship with government.** The prohibition of direct government borrowing from the central bank under most laws has helped eliminate fiscal subservience of monetary policy in the Caucasus and Central Asia. In South Asia, exceptions to the laws allow for direct financing of the government when needed. Rules of interaction between the Ministry of Finance and the central bank have been adequately provided for in the laws. Operationally, however, difficulties in coordination occur due to conflicting policy positions and lack of interaction.

- **Governance.** The laws incorporate a well-defined governance structure, with some being closer to best practices, while others leave substantial scope for improvement. Laws on the appointment and dismissal of the governors and their terms and conditions are clear. However, actual practices deviate from legal procedures, and political interferences occur, such as in changes in the governor. All the central banks have full-time boards. The roles and responsibilities of the board versus the management of the central bank are well defined. In most cases central banks have constituted a monetary policy committee to formulate and approve the monetary policy, but in some cases, the arrangements for approval of monetary policy are suboptimal.

- **Accountability and financial independence.** The degree of accountability of central banks is broadly appropriate, but varies across the selected countries. In all instances, the laws require the central bank to submit an annual report to the parliament, including financial statements (generally based on international accounting standards), and more specific monetary policy reports. The laws generally provide budgetary independence to the central banks and also clearly define the rules for sharing the central banks’ profits and losses with the government. Provisions for recapitalization of central banks have not always worked smoothly.

The central banks under review have traditionally been the regulators of banks while oversight of the securities and insurance sectors has been entrusted to separate entities. However, in recent years, two countries have opted to move toward unified regulatory models. Armenia, in 2005, designated its central bank as the unified regulator for all segments of the financial markets. In 2008, Georgia transferred all financial regulation and supervision to a new independent agency.
The legal and regulatory framework for banking supervision is broadly appropriate but implementation in some cases suffers from lack of trained staff and delays in addressing identified problems.

- **Licensing.** The central banks have adequate powers to issue and revoke licenses and have detailed guidelines on the processing and approval of licenses. In most countries, the paid-up capital requirement for licenses has been raised to fairly substantial levels. Generally, the central banks have been fairly liberal in their licensing policy.

- **Loan classification and provisioning.** In recent years, central banks have tightened loan classification and provisioning standards, which are broadly appropriate. However, implementation in some countries suffers because of a mechanical approach in applying the regulations, delays by banks in acknowledging loan difficulties, improper classification of restructured loans, and rolling over of unsecured overdraft.

- **Risk management.** All selected countries have raised risk-weighted capital adequacy requirements to 12%, except for Nepal, which maintains a risk-weighted capital adequacy ratio of 11% (with Tier 1 at 5.5%), and Sri Lanka, at 10%. Capital adequacy tends to significantly exceed the minimum on average (Nepal is an exception), but the average tends to mask significant variations across banks. Central bank guidelines for credit and foreign exchange risks are in place, although these frequently do not offer instructions on operational risks, market risks, interest rate risks, counterparty risks, and liquidity risks. Banks frequently have weak risk assessment capacities and internal controls.

- **Bank supervision capacity.** Bank supervision in almost all countries under review complies with, at least, basic international norms, and some countries are positioned to adopt a risk-based supervision system. In some cases, additional staff is needed, and in most cases additional training would be helpful.

All the selected countries have made good progress in formulating a comprehensive monetary policy framework, which, however, remains a “work in progress” in many cases. In most countries, the establishment of a comprehensive monetary framework has been hindered by slow development of the financial system. In addition, in some instances, political considerations have forced deviations from best practice and the global financial crisis has demonstrated how fragile progress has been in many cases. Armenia, Nepal, and Sri Lanka appear to be ahead in implementing a transparent and coherent monetary policy, with Armenia having adopted inflation targeting. Georgia has also formally adopted inflation targeting, although similar to the Kyrgyz Republic, its monetary policy framework is still hybrid, and seem mostly to have been developed when the main challenge was to mop up liquidity. The monetary policy framework in Afghanistan and Tajikistan is quite rudimentary.
Most central banks are targeting monetary aggregates and only Armenia and Sri Lanka appear to have been successful in establishing interest rate corridors to guide the interbank market. A main reason for the apparent ambivalence between targeting market interest rates (via the policy interest rates) and targeting monetary aggregates—with a bias toward targeting monetary aggregates—appears to be the belief that the relationship between the policy interest rate and inflation is weak, while the relationship between monetary aggregates and inflation is stronger.

Most central banks of selected countries have relied on market mechanisms to mop up structural liquidity, including the sale of their own securities when needed. Many central banks have also introduced liquidity management techniques based on repo and reverse repo operations, and outright purchases or sales of government securities, although, in practice, these techniques frequently remain underdeveloped, if used at all. Central bank operations have been aimed more at bringing the reserves of banks or reserve money toward a desired level, instead of bringing the interbank interest rate toward a desired level. The shallowness of interbank (call money) markets where banks can lend among themselves, often without collateral, and their—before the 2008 global crisis—relatively ample cash reserves at the central bank have also made it difficult for the central banks to calibrate their open market operations (OMOs) for any desired impact on liquidity and overnight rates. Cash reserve ratios remain an important policy instrument in all countries. While these cash reserve ratios are sparingly used, the global financial crisis has forced exceptions.

The challenges faced by the selected countries in meeting their inflation objectives are illustrated by comparing the annual inflation outcomes with targets. In most cases, actual inflation has more often overshot than met or undershot the inflation objective. Noteworthy, however, is Armenia's quite good inflation performance. There is little evidence that monetary policy might have been hostage to the growth objective pursued by the policy makers in the selected countries. Broadly speaking, the data show that overshooting of the inflation objective has often coincided with the overshooting of targets for monetary aggregates.

The growth of reserve money (and, in the case of Afghanistan, cash in circulation) has been relatively high in all selected countries in the 2003–2008 period, averaging from 15% to 40% annually, with the growth in net foreign assets (NFA) being by far, the largest contributor. The surge in autonomous private capital inflows and in workers' remittances was evidently not fully anticipated and posed monetary management problems for the monetary authorities, as they were unwilling to fully sterilize the monetary impact of their intervention on the foreign exchange market. Nevertheless, most central banks did try to mop up excess liquidity through the sale or lending of government securities on their books, or when these are depleted, through the issuance of their own bills or certificates of deposit on a fairly large scale at times, as in the case of Armenia and Georgia. The impact of the global financial crisis led to a dramatic reversal of monetary conditions in most of the countries, particularly in Georgia, the Kyrgyz Republic, and Sri Lanka. Several central banks had to turn to existing facilities to inject liquidity, or create new instruments to do so, including refinance and last-resort facilities (Georgia).
The developments in broad money growth mirrored those of reserve money, with private sector credit growth being generally, and by far, the main source. In the Caucasus and Central Asia, some positive contribution of the NFA to broad money growth was mostly offset by a reduction in net credit to government and other items. Net credit to government was at times a contributing factor only in Sri Lanka. In several countries, broad money growth stalled in late 2008, reflecting a slowdown in deposits. Private sector credit also stalled, mostly due to a lack of liquidity, rising interest rates for the borrowers, and a tightening of banks’ standards for extending loans, as well as a decline in the demand for credit itself.

Evidence shows that before the global financial crisis, the failure to sufficiently mop up liquidity and accept the consequences for market interest rates have been the main cause for the overshooting of monetary aggregates. Of course, the need to absorb liquidity on a large scale resulted, in the first place, from a policy of intervention in the foreign exchange market to prevent the significant appreciation of the exchange rate. Thus, the central banks lost relative control over monetary aggregates and the exchange rate adjustment was not sufficient to support the inflation objective.

The monetary policy transmission mechanism has been weak. The link between market interest rates and inflation appears to be weak, which is probably why the focus has remained on monetary aggregates, even when an interest rate “corridor” is in place. This focus is also consistent with significant credit channels in the monetary transmission mechanism. Furthermore, the link between policy rates and market interest rates is generally poor as well, except in Armenia and Sri Lanka. In most cases, this weak link has reflected poorly functioning and shallow interbank markets, as well as structural weaknesses in the banks’ interest rate-setting. Only in the case of Armenia and Sri Lanka does this transmission seem to operate well, and in Sri Lanka, only when it is not interfered with. In all other selected countries, the transmission from policy to market interest rates has been quite limited. More research is needed to evaluate other channels of monetary policy transmission.

Dollarization is still high in the Caucasus and Central Asia countries. After significant improvements in dollarization in recent years, a wave of re-dollarization has returned, in some cases as local currency came under pressure with the onset of the global financial crisis. Seventy-five percent of deposits and loans were denominated in foreign currency in Georgia at the end of 2008 and dollarization had also increased to 60% in Armenia and 50% in the Kyrgyz Republic. Views on the impact of dollarization differ. Some researchers (and a 2003 International Monetary Fund board paper) maintain that dollarization had little impact on monetary policy implementation and the transmission mechanism. Most practitioners and most academicians note, however, that dollarization generally implies higher volatility in (domestic) money demand and exchange rate. They also agree that dollarization does increase the exchange rate pass through to prices.

In all selected countries, the exchange rate policy pursued in practice by the monetary authorities has interfered, in various degrees, with the conduct of monetary policy.
During the years of surging private foreign exchange inflows, and also in some cases a process of de-dollarization (e.g., Armenia), the central banks often intervened on the foreign exchange market, buying foreign exchange against domestic currency. In part, this reflected the desire to build up international reserves and to accommodate a perceived increase in real money demand. But the intervention was also often motivated by the desire to reduce pressure on the appreciation of the domestic currency, given concerns about the impact of such appreciation on competitiveness.

The experience varies across countries. The monetary–exchange rate policy mix pursued in Armenia and Georgia appears to have been broadly appropriate, although a somewhat greater tilt toward upward flexibility of the exchange rate, particularly in the case of Georgia, might have been desirable. In the case of the Kyrgyz Republic, and even more so Tajikistan, however, the significant rise in inflation since 2005 suggests that these countries were far less able to adopt the right policy mix. Looking ahead, more flexibility would also appear desirable. Sri Lanka offers an interesting contrast to the Caucasus in that only partially sterilized interventions on the foreign exchange market appear to have hampered the ability of the central bank to reach the inflation objective. The cases of Afghanistan and Nepal are unique. In Afghanistan, the strong foreign exchange inflows are mostly donor funds, and dollarization is heavy. In Nepal, given the currency peg to the Indian rupee, there is no possible policy mix. Furthermore, inflation in the country strongly tends to follow India’s. But the recent tendency toward the appreciation of Nepal’s real bilateral exchange rate with India appears to be in the wrong direction, given the likely differential in productivity growth.

Except for Afghanistan and Nepal, the reversal of foreign exchange flows in late 2008 put severe pressures on the foreign exchange market in all selected countries. The countries reacted similarly as in the upturn, initially intervening to prevent depreciation of the exchange rate. But as the loss in international reserves mounted, the countries were eventually forced to allow greater flexibility. The delay in allowing market forces to play their role led to large losses of reserves and may have accentuated the adjustment difficulties of banks.

The issue of potential conflict between monetary policy and the desire to finance the government at low interest rates has differed considerably between groups of countries. In general, the issue of potential conflict has not come up in practice in the Caucasus and Central Asia countries, in part because of relatively low budget deficits. Explicit provisions against government borrowing from the central bank have also been included in the laws. The situation is different in Sri Lanka, and to a lesser extent in Nepal. In Sri Lanka, the budget deficits have tended to be quite large, and at times, financing of the government has been a major component of reserve money growth.

There is little evidence that the financial health of the central bank has interfered with the conduct of monetary policy in the selected DMCs. However, the financial position of the central bank of Armenia and Tajikistan presents risks for the future.
Judging from official macro-prudential ratios, central banks have been quite effective as banking supervisors. Capital adequacy ratios have been consistently high in countries of the Caucasus and Central Asia, with the exception of Georgia, and improving in South Asia. Nevertheless, the weight of insolvent state banks has continued to negatively affect capital adequacy ratios, especially in Nepal. After declining over several years, the nonperforming loan ratio rose sharply in Georgia in 2008 (partly because of the more stringent loan classification and income recognition standards) and to a lesser extent in Armenia and the Kyrgyz Republic, and have also moved up in Sri Lanka. Provisioning coverage has generally been adequate, with the exception of Tajikistan, but has declined at the end of 2008 in some cases. Furthermore, in some cases, implementation of the loan classification systems that underpin provisioning is lax.

The rapid private sector credit growth presents considerable credit risks. More could probably have been done to strengthen the risk management systems as the credit boom took place. The decline in the provisioning coverage also suggests some complacency, as do the lax criteria for loans classification. Liquidity risks appear to have been somewhat overlooked, despite the generally high loans to deposits ratios going into the crisis. Some countries appear to have allowed considerable maturity mismatches.

Stress tests show overall good resistance to shocks. These tests have highlighted greater vulnerability to credit and asset quality and liquidity risks rather than to exchange rate and interest rate risks in the selected countries. Moreover, the weaknesses in data and problems with implementation of accounting and auditing standards have an impact on the loan quality that is not captured by the banks' official data. The situation of banks could therefore be weaker than indicated by official data.

Central banks across the selected countries were found to have taken quick and appropriate policy actions and have been vigilant, although the scope and effectiveness of these actions vary. The National Bank of Tajikistan is an exception, as its involvement in commercial lending has resulted in financial distress both for itself as well as the country's. The variances in the scope and effectiveness of the policy responses of the central banks of the selected countries have reflected weaknesses in their monetary policy frameworks, concerns about exchange rate flexibility and economic growth, and lingering distortions in the regulatory regime for the countries' banking sector. Generally, institutional frameworks and capacities at central banks have benefited from internal reforms, although across the board, investing more heavily in staff skills in both monetary management and banking supervision systems is needed.

The key findings and recommendations of this study are as follows:

Legal framework

- In most countries, the de facto independence of central banks needs to be strengthened.
A common problem that needs to be resolved is the opaque process of changing the governor.

In most cases, the proper criteria for the selection of the board members need to be strengthened, and board and management roles and responsibilities should be in line with best practices.

In Tajikistan, there is a compelling case for a complete overhaul of the central bank legislation to enable a comprehensive institutional development program. It is encouraging that an amended central bank law now includes provisions that augur well for the central bank’s independence.

Nepal and Sri Lanka need to further amend their laws to bring them at par with best practices, particularly with regard to the elimination of the remaining elements of fiscal subservience.

**Banking supervision**

- Except in Afghanistan and the Kyrgyz Republic, relevant laws need to be amended in the selected countries to provide legal immunity to the staff of the central bank or regulator.

- Enforcement of the laws must be strengthened, and this should include strengthening and consistently imposing penalties and fines on violations of prudential regulations.

- Loan loss and provisioning regulations have been tightened in almost all countries with the special monitoring of the “watch” loan category and the general provisioning for all loans, including performing ones. However, Nepal and Sri Lanka still have weaker loan classification and provisioning standards and need to align themselves to the best practices.

- A management information system for off-site supervision needs to be developed and automated in many cases.

- The resolution capacities of the central banks and regulators with problem banks must be strengthened, in close collaboration with the ministries of finance.

- Almost all regulators have recognized the need to move toward risk-based and consolidated supervision, and a number of these regulators have issued, or are in the process of issuing guidelines for both risk-based and consolidated supervision.

- In jurisdictions where regulatory frameworks are segregated, consolidated supervision requires enhanced coordination and cooperation among the regulators.
Contingency plans for dealing with the likely deterioration of the banks’ financial position—as credit risks and losses are being recognized as resulting from the global financial crisis—need to be comprehensively developed. These plans should focus on prompt corrective actions, including possible mergers, and how limited government intervention and resources can be used effectively.

The capacities of the staff at the banking supervision departments need to be built, and the number of staff increased.

These efforts need to be complemented by those that encourage the faster build up of capacities in risk management and internal controls at the banking sector. Both banks and central banks need to strengthen their stress testing for a diverse and greater range of risks and develop appropriate capacities within institutions to be able to recognize these risks and ensure that appropriate provisions are made.

Monetary policy and management

- The transmission mechanism from policy rates to other interest rates directly affecting aggregate demand tends to be weak where financial markets are weak (e.g., thin secondary markets for government securities, poorly functioning and shallow interbank markets, and the absence of competitive behavior by banks to attract retail deposits).

- Weak dependence of aggregate demand on market interest rates but possibly stronger dependence on monetary aggregates could be understood in the context of a significant credit channel to monetary policy (although interest rates also play a role in this), as well as a significant direct real money wealth effect, especially given the relatively high share of currency in monetary aggregates.

- Both considerations above would support the focus on monetary aggregates rather than interest rates as operational and intermediate targets for monetary policy, but consistent policy interest rates should still serve as powerful signaling devices. A particular concern should be the ability to predict the behavior of money demand in the immediate aftermath of the financial crisis, which could be problematic in setting appropriate monetary targets.

- Policy rate adjustment must be flexible and consistent in areas where better functioning interest rate channels prevail (e.g., in Armenia and Sri Lanka). This is the key to guiding the market rates to the level necessary to meet the inflation objective. Monetary targets should play a secondary role to the policy and target market interest rates. Otherwise, greater volatility in interbank rates could undermine the signaling of the monetary policy stance through the policy rates. In this regard, the renewed emphasis on reserve money as the primary operating target in Sri Lanka may have its risks.
The overshooting of the inflation objective appears to correlate primarily with the overshooting of the monetary targets. The inflation objective has been met in only a few instances when an overshooting of the monetary targets occurred—essentially cases where re-monetization was much stronger than anticipated. **Liquidity management has thus been a main issue in most countries.** To a large extent, this was correlated with the exchange rate policy pursued, with not enough of the liquidity injected as a result of the interventions on the foreign exchange market being mopped up.

Most selected DMCs appear to have the tools to conduct the necessary OMOs, but perhaps not the will to see the required higher interest rates because of concerns about their impact on either aggregate demand and/or the income position of the central bank. A clearly articulated budget policy of absorbing the cost of a sustained need for sterilization would increase the probability of the correct policies being pursued.

In countries where there is less segregation between the primary treasury bill (TB) market and the conduct of monetary policy, reform should focus on getting the central bank out of the primary TB market as lender of last resort to government. To the extent it is needed, liquidity management could operate ahead of TB auctions through repo or reverse repo operations to smoothen the volatility in market interest rates.

There is little evidence of the financial health of the central bank undermining the conduct of monetary policy, except in Tajikistan. Nevertheless, the negative net worth of the central bank of Armenia and Tajikistan is a concern since generating profits would be difficult.

**De-dollarization should be supported by a multifaceted approach** that (i) ensures sound macroeconomic policies; (ii) if necessary, modifies prudential regulation to ensure that all foreign exchange risks are internalized; (iii) considers measures to encourage intermediation in domestic currency; (iv) deepens the financial market for instruments in local currency; (v) enhances the transparency of monetary policy; and (vi) safeguards central bank independence to achieve the single objective of price stability.

Where central banks have authority over exchange rate policy, more flexibility in exchange rate management should be allowed to avoid conflicts with monetary policy.

**Banking sector soundness**

Besides liquidity challenges, the global financial and economic crisis is likely to adversely affect the quality of the bank assets.
• Stress tests should be conducted to locate and quantify the greatest credit risks.

• Provisioning should be intensified, and where capital adequacy ratios are no longer met, timely corrective action plans should be formulated for banks considered viable.

• For Nepal and Sri Lanka, there is a strong case for aligning the loan classification and provisioning standards to conform to best practices.

• Given the likely limited scope for mobilizing externally, on market terms, equity resources for recapitalization, the governments would be called upon to contribute, including assistance from foreign donors. Financial support from international institutions could be used for recapitalizing the banking sector, as needed, since government support with recapitalization is likely to be limited.

• A strategy for dealing with insolvent banks must also be formulated.

• The capitalization of deposit insurance funds, already under way in several of the selected countries, should help improve confidence in the banking sector.

• Given the fragmentation of the banking system in most countries, the global financial crisis and government assistance in this regard should be viewed as an opportunity to foster banking sector consolidation through mergers and acquisitions.
Introduction

Objectives

The global financial crisis that started in the United States (US) and other advanced economies has quickly affected the developing and emerging market economies. The financial crisis initially took the form of severe external financing constraints that resulted from the global re-pricing of risk. As the global financial crisis turned into a global economic crisis as well, the developing and emerging world started to confront significantly lower commodity prices and demand for their exports, and a declining trend in workers’ remittances. These developments have negatively fed back on their domestic demand. The more dependent economies have been on the exports and availability of external finance, the greater the shock. Political and security weaknesses have further amplified and complicated the assessment of risks. Economic growth has stalled or even turned negative in most developing and emerging countries.

This study examined the role and performance of central banks in low-income countries that have faced a range of domestic and external fragilities, aggravated by the global financial crisis. It focused on a selected group of developing member countries (DMCs) of the Asian Development Bank (ADB) in the Caucasus, Central Asia, and South Asia that have been and will continue to be vulnerable to adverse external developments. The general objectives of the study were to do the following:

- Take stock of progress made by the central banks in strengthening their policy, institutional, legal, and regulatory frameworks to judge their effectiveness in meeting their principal mandates and core functions. In this context, the study broadly evaluated the capacities of central banks to play an effective role in economic management and in ensuring the stability of the banking sectors under their respective jurisdictions, and thus promote the development of resilient financial systems that are able to withstand domestic and external shocks.

- Assess the central banks’ strengths and weaknesses in shaping monetary policy and its conduct. The study thus broadly evaluated the principal objectives, methods, and instruments for monetary policy formulation and implementation, the empirical evidence on monetary policy performance, and the central banks’ ability to manage complex policy trade-offs, including the need to maintain a balance between economic growth and inflation, and between monetary and exchange rate policies.

\(^{1}\) Signs of revival of commodity price pressures are, however, emerging in a few strategic commodities.
Evaluate the effectiveness of central banks in promoting the growth and stability of the banking system, as well as their flexibility, risk management capacities, and general soundness. Since most of the countries covered have experienced crises, the study also looked at the central banks’ role and capacities in crisis management and resolution.

The findings of the study should help identify areas where support from the international community, and ADB, in particular, could be beneficial, whether it be in the form of technical assistance, or project and policy-based financial assistance.

More specifically, the goals of the study were to

- assess the progress made by the central banks of selected DMCs in the years leading to the global economic and financial crisis in establishing the institutional, legal, and regulatory frameworks for macroeconomic and finance sector soundness management;

- assess how this framework operated in practice during those years that saw a favorable macroeconomic environment, recognizing each country’s specific circumstances, macroeconomic challenges, and different states of advancement with regard to policy framework and instruments;

- assess how the framework is being tested in the selected DMCs by the unfolding global financial and economic crisis; and

- draw lessons and policy recommendations for strengthening the management of macroeconomic and finance sector soundness as policy makers grapple with the effects of the crisis.

The study is divided in two parts. Part I provides regional comparative evidence and analysis of the countries under examination. Section 1 broadly sketches the macroeconomic context. Section 2 reviews the structure and state of development of the finance sector in the selected countries. Sections 3 and 4 assess the legal framework for monetary policy and financial regulation and supervision. Section 5 reviews the key elements of the monetary policy framework. Section 6 assesses monetary and financial performance in the selected countries in recent years, looking at the developments in interest rates and inflation, and their relation to the developments in monetary aggregates. The section also assesses the state of liquidity management, the experience with the transmission mechanism, and the exchange rate and international reserves policy. It concludes with an overview of the state of financial soundness in the selected countries. Section 7 draws lessons and makes policy recommendations for macroeconomic and monetary policy, and crisis management and resolution.

Part II provides country studies focusing on the core mission of a central bank, with deeper perspectives on monetary policy, its objectives, target, formulation, and its track record of implementation. In addition, the country studies provide an assessment of exchange rate policies, central bank finances, and broader aspects of financial soundness management.
Part I

Regional Comparative Analysis
The Macroeconomic Context

In the 5 years leading to the global financial crisis, the selected developing member countries (DMCs) benefitted to varying degrees from a favorable external environment and a strengthening of macroeconomic management, as well as from continued structural reforms. Among the countries of the Caucasus and Central Asia, Armenia and Georgia stand out in terms of progress with market-oriented reforms and macroeconomic management, although the Kyrgyz Republic also pursued coherent macroeconomic policies. As a result, growth rates in the 5 years leading to the 2008 global crisis were especially high in this group of countries, averaging more than 10% annually in Armenia and Georgia. Growth was also in the double digits in Afghanistan, reflecting the reconstruction effort in that country. Inflation in the strong economic performers was mostly under control, at least until the surge in international commodity prices, but evidence of domestic overheating was emerging during 2007–2008. Although the external current account deficit was often large, capital inflows were sufficiently strong and helped finance these deficits, while allowing for an increase in international reserves. In South Asia, progress with structural reforms, starting from a higher base, was probably less, but in Nepal, the exceptionally fast development of the finance sector is notable. Growth was steady but relatively weak in Nepal as activity in the export sectors was under strong pressure from external competition. There was little progress with fiscal consolidation in Sri Lanka, but buoyant private sector activity helped maintain a fairly high rate of economic growth of about 7% annually.

A key factor underpinning the growth in domestic demand was surging workers’ remittances and capital inflows, in various degrees (Figures 1a and 1b). In the Caucasus and Central Asia, the origin of remittances has mostly been the Russian Federation and, to a much lesser extent, Kazakhstan. In South Asia, remittances were mostly from India and the Gulf countries. Remittances reached 50% of gross domestic product (GDP) in Tajikistan, 20% in the Kyrgyz Republic, and about 10% in Armenia. In Nepal, remittances reached 19% of GDP, and in Sri Lanka, 6%. Foreign workers from Nepal are mostly employed in the construction sector. Besides remittances, there was a surge in private capital inflows, especially in Georgia (where it reached 20% of GDP in 2007), Armenia, and the Kyrgyz Republic. In the latter case, capital inflows were mostly reflected in drawings by Kazakh banks located in the Kyrgyz Republic on credit facilities from their head offices. Inflows of official transfers were particularly high in Afghanistan in support of its reconstruction efforts. In Sri Lanka, the rise in private capital inflows mainly coincided with direct and portfolio investment as well as external borrowing by banks.

The global financial crisis has generated severe shocks impacting the selected DMCs—as evident from the trends in private capital inflows that have suddenly stopped and reversed, and the remittances that have sharply declined. Afghanistan and Nepal appear to be exceptions so far. In Sri Lanka, while net capital inflows have reversed, remittances

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2 In particular, the United Arab Emirates, Qatar, and Saudi Arabia.
Effectiveness of Central Banks and Their Role in the Global Financial Crisis: Case of Selected Economies

Figure 1a: Current Transfers and Capital Inflows ($ billion)

Armenia

Georgia

Kyrgyz Republic

Tajikistan

Afghanistan

Current Transfers (net)
Foreign Liabilities of Banks
Capital Inflows (net)

have remained strong, although declining somewhat in early 2009. In part, this may reflect differences in the timing and intensity of the global financial crisis in originating countries. The correction in international commodity prices, particularly oil, has generally provided some relief to balance of payments and inflation in most oil importing countries. But in many cases, their exports are being threatened as well by the global recession (e.g., textiles in Nepal and Sri Lanka, and wines in Georgia). Several countries have also been adversely affected by the decline in some specific commodity prices (e.g., diamond and mineral products in Armenia, and aluminum and cotton in Tajikistan). As a result, while imports decelerated fairly automatically with the slowdown or decline in remittances and, to some extent, the lesser availability of foreign financing, the overall external current account positions might not improve without adjustment policies. On the financing side, the reduced amount of foreign capital that might be available will certainly be on more expensive terms, as the global financial crisis has sharply reduced the appetite for risk, as shown by the surging spreads and credit default swap (CDS) rates for both official and private debts.
Development of Finance Sectors

The finance sector, which has been dominated by banks, has grown significantly in most selected countries in recent years. The growth was perhaps most impressive in the Kyrgyz Republic and Nepal, while it was more modest in Sri Lanka, which has started from a higher base. Banks have dominated the finance sector, largely because of underdeveloped financial markets. They have been in a better position to address the severe asymmetric information problems that characterize financial intermediation in most developing and emerging countries, particularly in the former Soviet Union. The assets of banks account for anywhere between 65% of total financial assets in Sri Lanka and 95% in Armenia. The ratio of about 65% in Tajikistan entirely reflects the importance of a cotton financing nonbank financial intermediary (Table 1).

Nevertheless, bank penetration is low despite the large number of banks. Corporate lending remains the main banking activity in most countries. Banks continue to be present mostly in urban centers, except for those in Nepal and Sri Lanka, where penetration in the rural areas appears to be deeper. Sri Lanka has a ratio of about one bank branch per 10,000 people—about three times the level in Tajikistan. Moreover, the banking system in the selected countries remains somewhat fragmented, with the number of banks often above 20, despite the small country size. However, a few banks tend to account for a large share of assets and deposits and concentration is fairly high, giving much room for

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= not available.

Note: Based on data for 2007 or 2008.
Sources: Central banks, 2007 or 2008 annual reports.
consolidation. Most banks in the Caucasus and Central Asia are privately owned. Foreign ownership of banks is significant in Armenia, Georgia, and the Kyrgyz Republic (HSBC, in particular). In Nepal and Sri Lanka, state-owned banks still account for a significant share of assets (20%–30%), while foreign ownership is relatively low.

The indexes of financial deepening show, in most cases, some progress in 2003–2008, with both deposits and private sector credit rising significantly, as a percentage of gross domestic product (GDP), although still low by international standards (Figures 2a and 2b). Broad money/GDP ratios now range from a still very low level of 15% of GDP in Tajikistan to 30% in the Kyrgyz Republic. It is about 40% in Sri Lanka and more than 80% in Nepal. Typically, private sector credit/GDP ratios are somewhat below the broad money/GDP ratios, and average less than 20% of GDP in the Caucasus and Central Asia, with that in Afghanistan accounting for 10%. Georgia and Tajikistan are exceptions, with higher private sector credit/GDP ratios that reflect the utilization of some foreign lines of credit by banks. The private sector credit/GDP ratio is just above 30% of GDP in both Nepal and Sri Lanka. This is still only about a third of that in Thailand, and less than those in Egypt and India, although slightly higher than those in Pakistan and Philippines.

Dollarization is still high in the Caucasus and Central Asia countries. After significant improvements in this front in recent years, a wave of re-dollarization has returned, in some cases as local currency came under pressure with the onset of the global financial crisis. Reportedly, 75% of deposits and loans were denominated in foreign currency in Georgia at the end of 2008. Dollarization has also increased in 2008–2009 to 60% in Armenia and 50% in the Kyrgyz Republic. In Sri Lanka, by contrast, foreign currency deposits accounted for only 25% of total deposits in 2008, with little being changed from previous years. Because open foreign exchange positions of banks are strictly limited by prudential regulations, dollarization on the deposits side has tended to be matched by dollarization on the loans side. The financial crisis has also led to some financial disintermediation with the dollar currency in circulation outside the formal sector being quite high, especially in Armenia. In Tajikistan, recent changes in cotton financing (away from foreign sources) has led to a reduction in foreign exchange-denominated claims and deposits.

Dollarization introduces significant vulnerabilities even if open foreign exchange positions are strictly limited. At the bank borrowers’ level, vulnerabilities result if the corporate entities and individuals borrow in foreign currency, while their revenue and income stream is mostly in local currency. This situation creates higher credit risks in an environment of exchange rate instability (depreciation) if the borrowers do not have adequate hedging options as is the case in all selected countries. At the banks’ level, the financial crisis is a reminder that foreign funding cannot be a substitute for domestic resource mobilization, which is key to the sustainability of the banking system. The reliance on foreign funding (as in the case of the Caucasus and Central Asia) can endanger the solvency of some large banks of systemic significance.
Figure 2a: Indexes of Financial Deepening (% of GDP)

GDP = gross domestic product.
Source: International Monetary Fund: International Financial Statistics.
While competition has improved in most banking systems in recent years, there is room for further progress. The banking system has improved most in Armenia, Georgia, and Nepal. There is still evidence of weak price competition in Sri Lanka.

Bank interest spreads have declined where competition has increased, but remain generally large by international standards. The large spreads explain the higher level of profitability (Figures 3a and 3b). The spreads have ranged in 2008 from 6–8 percentage points in Nepal and Sri Lanka to 20 percentage points in the Kyrgyz Republic and Tajikistan. In Armenia and Georgia, interest spreads have declined to just above 10 percentage points, compared to the world median of about 6 percentage points. The higher spreads are perhaps not surprising given the high cost of doing business in most selected countries, with Nepal and Sri Lanka perhaps relative exceptions. However, where spreads are high, profitability is also high. The rate of return on assets is as much as 4% in the Kyrgyz Republic, and 3% in Armenia. Not surprisingly, the rate of return on assets has been somewhat lower in Nepal and Sri Lanka, at about 2%, but even this is good by international standards, though less so when compared to the risk-free domestic interest rates.

GDP = gross domestic product.
Source: International Monetary Fund: International Financial Statistics.
Figure 3a: Interest Rate Spread (%)

Source: International Monetary Fund: International Financial Statistics.
Figure 3b: Interest Rate Spread (%)

Source: International Monetary Fund: International Financial Statistics.
Objectives, roles and functions, and governance structure significantly affect central banks’ performance of their mandates. The group of seven central banks studied includes a mix of older and newer institutions. In Nepal and Sri Lanka, central banks had to transform themselves from currency boards in the 1950s and have a longer existence, history, and tradition of central bank operations. On the other hand, the central banks of the Caucasus and Central Asia, including those in Armenia, Georgia, the Kyrgyz Republic, and Tajikistan, have common origins, history, and legal traditions established before and after the breakup of the Soviet Union in the early 1990s. Upon their creation, the first preoccupation of these central banks was dealing with immediate transition issues, launching domestic currencies, and resolving legacy debt issues. It was only during the mid-1990s that the governments in these countries focused on laying down the legal framework for their central banks and the banking system. The central bank of Afghanistan, after the 2001–2002 conflict, is the youngest and more nascent one. Earlier, it operated on the basis of an outdated 1994 Money and Banking Law. This law primarily positioned the central bank to provide for directed credit to state-owned enterprises. It was not until 2003 that the government adopted a new central bank law and an associated law for the banking sector, which now gives a stronger basis for central banking in a war-torn environment.

The development of central banks in the selected group of countries varies in terms of their historical experience, legal traditions, capacities, and sophistication. This should not be a surprise since some have long traditions while others have not been in existence for long. The countries of the Caucasus and Central Asia had to face the massive challenges of transformation from a centrally planned and closed economy to a market-oriented economy to be integrated within the world economy, and had to assume key roles in liberalizing the banking system and providing a supportive core infrastructure. The dependence of the region on the developments in the Russian Federation made it especially vulnerable to the financial crises in that country.

Irrespective of these differences, all central banks have transformed enough over the past 15 years, and especially since 2000, to assume all the key responsibilities assigned to them by the advanced economies. Considerable progress, in particular, was made in strengthening the legal framework for central banking.

All the laws, except those in the Kyrgyz Republic, identify price stability as the primary objective for central banks, although they still contain a host of subordinated objectives. In the Kyrgyz Republic, the central bank law was amended in 2008 to add the

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3 In the case of Tajikistan, the law refers to “maintaining the purchasing power of the national currency.”
promotion of growth as a subordinate objective. Subordinate objectives, not uncommon in most laws, refer especially to the maintenance and promotion of economic growth (e.g., in Afghanistan, Nepal, and Sri Lanka), as well as financial stability. Stability of the balance of payments is also mentioned in the case of Nepal, which is not surprising in view of its pegged exchange rate regime. Often, the architecture of monetary policy has been redefined toward conducting monetary policy based on indirect rather than direct monetary policy instruments. However, only the Central Bank of Republic of Armenia (CBRA) and the National Bank of Georgia (NBG) are covered by laws that formally include inflation targeting as the explicit goal for the central bank.

In addition to the standard role of supporting the payment system and being a lender of last resort, most central banks in the countries under study have been assigned by laws to supervise banks. For instance, Armenia’s central bank serves as an umbrella finance sector regulator. Meanwhile, in Georgia, the functions of financial regulator were transferred from the central bank to a new body. Thus, laws have defined the powers of the central banks in supervising the financial system and providing safety nets. These powers include the licensing, monitoring and inspecting, and supervising of commercial banks, as well as undertaking resolution measures and revoking licenses in the cases of violations of prudential norms or relevant laws and regulations. However, no legal provision designates the central bank as the lender of last resort in Sri Lanka. Generally, the more specific and detailed prudential and other regulations pertaining to banks are spelled out in separate legislations and discussed further in the succeeding sections.

Laws must provide the right blend of independence and accountability to enable central banks to meet their objectives. To assess the level of independence and accountability of central banks, the laws were reviewed from four perspectives, namely:

i. the legal provisions related to the independence of the central bank and clauses that protect the sanctity of this independence, including the level of acceptance, tolerance, or buy-in of the central banks’ independence by the legislative and executive branches of government;

ii. the relation between the central bank and the government, including the central bank lending to the government or other public sector agencies;

iii. the multiple facets of the governance structure applied to the central bank; and

iv. the accountability and budgetary independence of the central bank.

Independence

Most central bank laws have recently been amended to grant some degree of legal independence to the central banks, the law for the central bank in Afghanistan being the newest. The law on Da Afghanistan Bank (LDAB), law for the Central Bank of Republic of Armenia (LCBRA), the law for the National Bank of the Kyrgyz Republic
(LNBKR), and the Organic Law of the National Bank of Georgia (LNBG), now contain specific articles that assign independence to the central bank in the pursuit of its objectives and operations. In some cases, these articles include legal provisions that disallow the government or its agencies from interfering with, or exerting improper influence on, the central bank. The statutory independence of the central bank in the Kyrgyz Republic has been further reinforced by a few amendments in the constitution passed by the parliament, but awaiting the president’s endorsement. These amendments provide the central bank with exclusive powers for the issuance of currency, formulation of monetary policy, supervision over the banking system, and debt management. The Tajikistan law, meanwhile, has a number of shortcomings and a new law has been drafted and is under consideration in parliament.

Generally, the central banks have been empowered to issue their own securities for the conduct of monetary policy. For instance, CBRA has issued certificates of deposit (CDs) and worked aggressively to develop a liquidity management framework and to market this instrument. Currently, the banks hold a significant amount of such CDs, and can access the central bank’s refinancing facility using these as collateral. In contrast, the laws in Nepal and Sri Lanka are more ambiguous about central bank independence and assign a greater representative and consultative role to the Ministry of Finance, as reflected in the financial arrangements between the central bank and the ministry. The Nepal and Sri Lanka central banks should thus be viewed as semi-autonomous bodies.

In some cases, amendments to the laws have tended to increase the parliaments’ oversight over central banks, in addition to strengthening accountability provisions. In Armenia, for instance, the law now mandates that a forward-looking monetary policy framework be regularly submitted to parliament, and debated upon. As a result, political considerations could excessively influence the direction of monetary policy. In most cases, however, the central banks have full independence in managing their administration and oversight of the banking system.

In practice, the central banks are able to exercise less policy independence in selected countries than permissible under their legal mandates. Often, the government and parliament’s pressures, not visible, result in management and/or board compromises. One way of assessing the true level of independence is to look at the system’s ability to allow for the completion or longevity of the term in office of the governor, an area in which many of the countries covered do not have a strong track record.

Relations with the Government

To ensure cooperation, the rules of interaction between the ministries of finance and the central bank have been provided for in the laws. Operationally, however, difficulties in coordination have occurred due to conflicting policy positions and the lack of interaction.
The prohibition of direct government borrowing from the central bank under most laws has helped eliminate fiscal subservience in monetary policy. Specifically, the LDAB, LNBG, LCBRA, and LNBKR do not allow direct central bank lending to the government, nor central bank participation in the primary auction of government securities. Furthermore, the issuance of guarantees for state agencies or the provision of any directed credit or sector-specific financing is also prohibited. In line with good practices, some laws further specifically prohibit the central bank from holding any stake in companies. However, in some countries, legacy issues regarding the outstanding government obligations to the central bank need to be settled within a specific timetable (Box 1).

The central bank in Afghanistan has on occasion also extended moderate amounts of advances to ministries and the Office of the President.

In Tajikistan, a more ambiguous legal framework for the central bank has allowed a departure from good practices. Under the existing law of the National Bank of Tajikistan (LNBT), the central bank cannot extend direct loans to the government. However, the law's ambivalence on sector-specific lending has provided an opportunity for the government to leverage the central bank's balance sheet to provide for substantial direct and nontransparent lending to financial institutions. In recent years, the central bank provided financing to the cotton sector through an insolvent financial company, KreditInvest, which was funded externally ($328 million) and collateralized with the central bank's international reserves. As many of the loans to the cotton sector have defaulted, the central bank now has a negative net worth, which is expected to grow as KreditInvest's real losses unfold. This, in addition to the central bank's failure to report to the International Monetary Fund (IMF) that most of its international reserves were in fact pledged, has hurt the credibility of the central bank. It has also complicated the conduct of monetary policy. Directed lending to commercial banks has further undermined the central bank's role in the formulation and implementation of banking sector policy. These issues are now being addressed as a part of the IMF and World Bank structural reforms programs.  

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Box 1: Georgia: Settlement of Government’s Past Borrowings from the Central Bank

The Law of the National Bank of Georgia was amended in 2005 to abolish the fiscal subservience of monetary policy. This was a major reform as until 2004, the government relied on central bank borrowings. Under Article 51 of the amended law, the government can no longer borrow from the central bank. Subsequently, the government and the central bank agreed on the resolution of the outstanding past government debts to the central bank, which were securitized and used for the central bank's monetary operations. Under the arrangements, a part of the outstanding debts will carry market interest rates and all outstanding to be retired in a phased manner over 25 years.

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Tajikistan is positioning to grant independence to its central bank, but the process of restoring its financial health will take some time. Strengthening the governance of the central bank and its financial independence is also critical for restoring its credibility, solvency, and role in monetary and economic management. Amendments to the law, to be enacted by the parliament, aim to (i) strengthen the institutional and policy framework of the National Bank of Tajikistan (NBT), (ii) affirm price stability as the primary objective, (iii) introduce clearer rules for the appointment and dismissal and term in office of the board including the governor, (iv) disallow conflicts of interest and restrict commercial activities and lending by the central bank, and (v) initiate the process of recapitalizing the NBT based on the completed international audit.

In Nepal and Sri Lanka, however, there are significant exceptions to the rule prohibiting direct government borrowing from the central bank. In Sri Lanka, while the law states that the central bank shall not subscribe to any issue of government securities or agree to purchase the unsubscribed portion of such issues, it makes an exception in the case of treasury bills (TBs), and the central bank often intervenes in the primary TB market, buying residually TB offerings. In Nepal, the central bank can purchase government debts, but up to a limit of 10% of its fiscal revenues. In addition, there is no limit to its purchase of securities on the primary market when viewed as necessary to maintain market stability. In both countries, there are limits to the amount of temporary advances and overdrafts that the central bank can make to the government, with the limits defined as a proportion of annual fiscal revenues (10% in Sri Lanka, and 5% in Nepal). Transacting government securities as part of open market operations (OMOs) for the purpose of monetary policy implementation is not subject to limits.

Governance Structure

Good governance is key to the central bank’s effective performance and delivery of its mandate. Elements of the governance framework that are recognized as critical to shaping the performance of the central bank include the

i. rules governing the appointment and dismissal of the governor and the board members and due diligence on their integrity, qualifications, and experience;
ii. roles and responsibilities of management and the board in the formulation of monetary policy and its approval process;
iii. accountability of management and the board;
iv. independence of internal and external audits; and
v. flexibility to set the remuneration of the staff.

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5 The Sri Lanka Monetary Law Act The (SLMLA) allows central bank to issue guarantees in favor of the government or any agency acting on behalf of the government. The SLMLA also allows the central bank to acquire and hold shares in companies engaged in human resources and technological development. In Armenia, the central bank is also legally authorized to provide for any type of credit for 1 year in the public or welfare interests to the financial institutions subject to being backed by government guarantees.
Generally, all laws incorporate a well-defined governance structure—some closer to best practices, while others leave substantial scope for improvement.

The Governor

The laws are clear regarding the appointment and dismissal of the governors and their terms and conditions. But the legal powers and required competencies of governors vary across the countries. In the Caucasus and Central Asia, all laws clearly define the terms and conditions for the appointment and removal of the governor. Under these laws, the term of the governor is generally for 6–7 years, and is renewable, for as many as three terms in the Kyrgyz Republic. In Afghanistan, the governor’s term is 5 years. The power of nomination is generally vested on the president of the country. In some countries, the parliament has asserted itself and has the prerogative to nominate and dismiss the governor. The process, however, does generally involve consultations. For instance, in Armenia, the parliament has retained exclusive powers for the appointment and dismissal of the governor, but the president recommends. In the Kyrgyz Republic, a constitutional amendment in 2009 now requires parliament to elect the governor of the central bank, on submission of the president’s nomination. In some countries, the appointment and dismissal powers are solely vested on the president (e.g., Afghanistan) and in others, the president nominates and parliament endorses such appointment and/or dismissal. These practices vary. In Georgia, the supervisory council of the board of the central bank, whose members are elected by the parliament, has the right to dismiss the governor if he is not a member of the council. This is awkward as the governor is appointed and dismissed by the president. In Sri Lanka, the governor is appointed by the president on the recommendation of the minister of finance and concurrence of the constitutional council, for a term of 6 years. A number of other policy decisions require the endorsement of the ministry of finance. In Nepal, the governor is appointed by the council of ministers for a renewable term of 5 years. In all laws, conditions are explicit for the dismissal of the governor, such as misconduct, legal disqualifications, and criminal offense, and in some laws, due process is provided for the governor’s removal. This is a critical condition but is missing from LDAB and LNBG.

Central Bank Board

All the central banks of the selected countries have full-time boards. The members of the board are generally appointed by the president (with the consent of the parliament in the case of Afghanistan), but by parliament on the recommendation of the president in Georgia. The involvement of the parliament carries the risk of the board being politicized. There are some interesting cross-country variations in the size and composition of the boards. In the countries of the Caucasus and Central Asia, central bank laws propose five to seven board members, including the governor and deputies, with the remaining 2–3 members being non-executive. In general, the board members

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6 The constitutional council has 10 members, including the prime minister, the speaker, and the leader of the opposition of the parliament, as well as other members appointed by the president and parliament. In the previous and current administrations, the president held the portfolio of the minister of finance.
have to be citizens of the country and meet the fit and proper criteria. However, Georgia allows foreigners to be non-executive members. In the Kyrgyz Republic, there is an unusual arrangement whereby nine board members are primarily appointed by the president on the recommendation of the governor of the central bank. The board includes full-time serving or former officials of the central bank whose remunerations are paid for by the central bank. Moreover, the governor has delegated to the board members the oversight of some strategic departments of the central bank. One of the ex-staff members of the central bank chairs the monetary policy committee and manages the banking regulation and supervision departments. The representation of the central bank staff to the board carries the risk of blurring the role and responsibility of the board, while diluting management’s accountability.

In Sri Lanka, the monetary board is the incorporated body vested with all the powers related to the management, operations, and administration of the central bank. This board also sets all policies. The governor chairs the board, which also includes the secretary of finance and three non-executive members appointed by the president on the recommendation of the Ministry of Finance. For these reasons, the board can only be viewed as a semi-autonomous body. In Nepal, three of the six directors appointed are to be among renowned economists and financial experts from outside. To various degrees, the composition of the boards generally provides for an independent perspective, except in the Kyrgyz Republic, because of the dominance by the staff of the central bank itself.

Board and Management

The roles and responsibilities of the board versus the management of the central bank are generally well defined. The legal framework across all countries fully empowers the boards to approve strategies, broad policies, and administrative decisions, while delegating the day-to-day management and administration of the central bank to the governor. This ought to place the real accountability of policies on the board. However, in reality, the accountability rests more with the governor. The effectiveness of the board depends on the quality of its members and their understanding of what an appropriate role of the board is. Appropriate due diligence in the selection of board members and restricting these positions to professionals are key to avoiding conflicts of interest emerging from political affiliations which would undermine the central bank’s effectiveness. However, the fit and proper criteria for the selection of board members only deal with conflict of interest issues and not competence. In Armenia, the law requires all board members to fully disclose financial interests and prohibits them and other employees of the central bank from undertaking entrepreneurial activities or acquiring shares in banks. The board appoints the chief accountant to the central bank’s supervisory committee that reports to the board and informs it of breaches or omissions.

The conduct of the boards appears to vary across the countries under study, depending on the experience, qualifications, and demeanor of their members. However, it is difficult for outsiders to evaluate the performance of the board unless the minutes of meetings are fully disclosed, which is not a tradition in any of the central banks being reviewed.
Having independent committees, chaired by board members, helps enhance vigilance and accountability, provided there is full disclosure.

In most cases, the central bank boards are policy and supervisory bodies. However, in some instances, these have administrative powers, which could carry the risk of undermining the role of management, particularly as the accountability of the institution often resides with the governor. The generic responsibilities of the boards include (i) formulation and adoption of monetary policy, including policy interest rates and OMOs; (ii) management of exchange rate policy and international reserves; and (iii) approval of the budget of the central bank. Where applicable, the boards may also approve the borrowing limits and terms and conditions of loans to the government and other state bodies (as permissible in the case of Nepal and Sri Lanka). But some boards (e.g., that of the central bank of Nepal) are more intrusive and are involved in the approval and/or revocation of licenses of banks and in prudential regulations, besides approving the by-laws and administrative procedures for the operations of the central bank.

Monetary Policy Committee

In most cases, central banks have constituted a monetary policy committee to formulate and approve the monetary policy. But in some cases, the arrangements for the approval of monetary policy are suboptimal. For example, in Georgia, the governor of the central bank has the powers to appoint the members of the monetary policy committee, which includes relevant staff of the central bank, and the decisions of the monetary policy committee are approved by the chair who is the final decision maker. In the Kyrgyz Republic, the monetary policy committee is chaired by one of the board members (ex-staff of the central bank), and the board approves monetary policy. In some cases the process for the approval of monetary policy process is more convoluted and could undermine the stance of monetary policy. For instance, in the case of Armenia, the Main Directions of the Monetary Policy prepared by the central bank is formally submitted to parliament after board approval. The parliament has the power to review or propose changes to it.

In Nepal, the law requires the board to establish a management committee that is chaired by the governor and includes two deputy governors. This committee evaluates the monetary and financial conditions of the country on a monthly basis, and submits a report to the board covering, inter alia, the monetary and financial policies and the soundness of the banking system.

Accountability and Financial Independence

The degree of accountability of central banks varies across the selected countries. However, in all instances, the law requires central banks to submit to parliament an annual report that includes the financial statements and more specific monetary policy reports.
Financial independence helps central banks to have adequate resources to perform their multiple functions effectively. The laws generally provide budgetary independence to the central banks to cover their expenses from their own revenues. The central banks are not responsible for the liabilities of the government, but do enjoy tax exemptions. The budgets are generally approved by the boards of the central banks. In Armenia, the budget is vetted by the board, but the annual expenses must also be approved by the parliament, in accordance with Article 15 of the LCBRA. The central banks in some cases are also legally mandated to establish an audit committee chaired by the board member to whom the chief of the internal audit department reports.

The laws clearly define the rules for sharing the profits and losses of the central bank with the government. These profits and losses are generally computed based on international accounting standards. The central bank can legally claim a percentage of net profits (15%–20%) to be used for building up general and special reserves, until they reach an adequate level. The rest is to be transferred to the government. In the case of losses, if these exceed the level of reserves booked, the government has generally to transfer securities carrying market interest rates to the central bank to make up for the gap. Generally, a clear distinction is made between non-realized and realized gains or losses, with non-realized gains or losses being generally fully transferred to the reserves accounts.
Banking Supervision and Regulation

The Regulatory Structure

In the countries being reviewed, the central banks have traditionally been the regulators for the banks and other financial institutions. In recent years, two countries, Armenia and Georgia, have opted to move toward unified regulatory models. Armenia took the lead in 2005 in this direction and designated the central bank as the unified regulator for all segments of the financial markets (Box 2). In 2008, Georgia transferred all financial regulation and supervision functions (over banking, securities, insurance, and other such sectors) to a new independent agency, the Financial Supervision Authority of Georgia. In both countries, the transition has been relatively smooth, but could be speeded up with a faster build-up of expertise. According to the regulators, the primary motivation behind the move has been to promote a more sustainable and well balanced finance sector. An objective was to encourage business and income diversification in banks so that they can raise their non-interest incomes and achieve more stability in their revenue sources. This is undoubtedly critical as currently, banks are excessively dependent on interest income, which is eventually expected to decrease as exceptionally high interest spreads also come down with rising competition. At the same time, policy makers have been keen to develop the insurance and securities markets that currently constitute barely 3%–4% of total financial assets.

Integrating different segments of the markets and regulatory cultures, and getting the communication right between the regulator and the central bank (as in case of Georgia) are challenging. As experience has shown, even the developed countries’ unified regulators took time to build credibility and expertise. The financial market turmoil has also highlighted weaknesses with the most reputed unified regulators, who were unable to

Box 2: Armenia: Unified Financial Regulator

The Law on Establishment of a Unified Financial Regulation and Supervision Framework, 2005, appoints the Central Bank of Armenia as the independent and sole regulator with mandate to regulate and supervise the banks and financial institutions, as well as the insurance sector, securities markets, credit organizations, and pawnshops, among others. This law laid out all the transitional arrangements from the previous regulators. Upon assumption of these responsibilities, the law as well as the law on Banks and Banking, 1996 (updated 2008) were revised to reflect the broader mandate of the unified regulator. Within a short period, the government also revised laws for insurance and securities and other key businesses. The law assigns to the board of directors all the licensing, regulatory, and supervisory powers on these sectors.
get a full appreciation of the risks associated with financial innovation and conglomerate structures and their attendant systemic implications. The lack of effective systemic risk management and the ill-defined role of the central bank and finance sector regulator in this context have been the key issues facing the regulators globally. The Central Bank of Republic of Armenia (CBRA) has made substantial progress with implementing a unified regulatory model, while in Georgia, the process is still in its infancy.

In other countries, the regulatory structure is segregated where the central bank regulates and supervises the banking system, while oversight of the securities and insurance regulation is vested on separate entities. For instance, in the case of the Kyrgyz Republic, a nonbank financial regulator, the State Agency for Financial Supervision and Reporting, was established in 2005 to supervise insurance, pension, stock exchange, and auditing operations. At this stage, the agency has yet to perform its functions effectively and coordination between it and the central bank must be enhanced, in particular, for information sharing in the case of emerging financial groups. Irrespective of the regulatory model adopted in the countries under review, the priority in these countries is to maintain the quality of oversight of the banking system, which forms the bulk of the financial system.

In the case of Afghanistan, the Law on Da Afghanistan Bank (LDAB) offers appropriate legal autonomy to the central bank and entrusts it with the exclusive responsibility of regulating and supervising banks. While the central bank has taken important steps toward strengthening its capacities in this regard, its performance and effectiveness have been impacted by weaknesses in the law. Tajikistan’s present law designates the central bank to be the regulator of banks and other nonbank financial institutions, and entrusts it with, among other mandates, the powers for licensing as well as for developing and establishing standards and procedures for the inspection of regulated entities. The law also prohibits interference from legislative or executive bodies in central bank activities. In practice, the regulatory effectiveness of the central bank has been undermined by (i) the government’s conflicting policy objectives and interests that draw the National Bank of Tajikistan (NBT) to areas and functions that ought to be outside central bank domain and business; (ii) the central bank’s involvement in commercial lending, which has carried reputational risks that have threatened its institutional financial viability; (iii) the absence of legal immunity for the central bank’s staff; and (iv) weak coordination between the central bank and other regulators. While the old laws and regulations remain in force, the new laws (which have been already drafted) once passed by the parliament, would

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First, Chapter VIII of the LDAB focuses primarily on defining the relationship between the central bank and commercial banks rather than establishing ground rules for the writ of the central bank in banking supervision. Second, Chapter XII establishes the Financial Services Tribunal (FST) that is empowered to accept appeals regarding the central bank’s decisions on licensing, penalties, bankruptcy proceedings against banks, appointment of a conservator, and any other decision and acts of the central bank as per its mandate. While tribunals play a role in dispute resolution between the consumers banks, to subjugate central bank decisions to a tribunal (composed of three judges without necessarily a banking background) on licensing and bankruptcy matters can potentially undermine the effectiveness of the central bank.
help strengthen the central bank’s governance structure and align its legal mandate with international best practices.

In the case of Nepal and Sri Lanka, the central bank serves as the regulator for both deposit and non-deposit-taking institutions, including banks, development financial institutions, finance companies, microcredit and development banks, savings and credit cooperatives, and nongovernment organizations licensed by the central bank. Supported by a liberal licensing regime, financial institutions have proliferated in Nepal, reaching close to 170. The central bank of Sri Lanka has an equally broad mandate and maintains the three-tiered structure of the finance sector. This structure consists of licensed commercial banks that are allowed full range of banking activities, licensed specialized banks that can raise deposits and grant loans for the purchase and lease of land, housing, and other development activities, and a number of specialized financial institutions, some of which are set up under special laws. The central bank is also now bringing under its fold microfinance institutions. It is recognized that this three-tiered structure creates an unnecessary fragmentation of regulatory oversight; in particular, the segregation between banks and specialized banks is losing its merits. In Nepal and Sri Lanka, the regulators appear overstretched and their effectiveness is undermined by the still relatively large share of state-owned financial institutions. Persistent political and state involvement in the finance sector has undermined its efficiency and development. Despite bail-outs, recapitalization, and bank restructuring, the public sector banks’ performance has been affected by state and political interference, particularly for directed lending. In addition, central banks have had high tolerance for regulatory forbearance in these cases. This has not only distorted the incentive framework for the banking sector, it has also risked the credibility of the central banks. In Sri Lanka, for instance, although the bank supervision department generally has adequate legal powers to fulfill its supervision mandate, the regulator’s decision can be subject to further appeal to the monetary board, which has the ultimate authority to confirm or revoke the decision of the bank supervisor.

**Licensing Regime**

Recent revisions in the law and in supporting regulations clearly define the bank licensing process and procedures in the selected countries. Generally, the central banks have adequate powers to issue and revoke licenses, and have detailed guidelines for the processing and approval of licenses. In most cases, supportive fit and proper requirements for the management and board of the bank have been laid out. And in most countries, the paid up capital requirements for licenses have been raised.

The central banks have been fairly liberal in their licensing policy. In some cases, ambiguities or issues in the legal framework have resulted in weak due diligence and monitoring of the ownership structure; hence, there is a degree of opacity in shareholder ownership patterns of banks in some jurisdictions. The USAID-sponsored *Basel Core Principle Assessment Report*, however, indicates that following the 2006 legal
amendments, the CBRA seems to have managed to better identify the ownership structures of the banking groups, including direct and indirect participation, as well as beneficial owners. Imposing better requirements for notifying the central bank on a timely basis of changes in ownership structure will further enhance the CBRA’s writ in this area. In contrast, a similar report for Georgia rates the licensing framework in the country to be noncompliant with best practices on the grounds that the National Bank of Georgia (NBG) focuses more on a mechanical review rather than exercising proper supervisory judgment of the shareholders and management’s competence.

In Tajikistan, while the licensing powers are defined in the existing law, these have been undermined by the intervention of the executive, and the absence of a legal framework for the owners’ review process. The key issues range from the absence of defined fit and proper criteria for the owners and management, to the issuance of licenses without the conduct of appropriate due diligence. The new draft central bank law does empower the central bank (NBT) with better powers for the issuance of bank licenses and specifies in details conditions under which it can revoke licenses. While the old law did not specify the owners’ fit and proper criteria, the new law does, and this applies to the management and the board as well. In Afghanistan, regulations for licensing banks are relatively new but quite comprehensive and require information on the shareholders and/or owners. These regulations, however, do not specify fit and proper criteria for them, although it does so for management and the board. The regulations also require business plans and other standard requirements.

In Nepal, steps toward a stricter licensing regime (as adopted in April 2007) and for raising the minimum capital requirement have at times been undermined. In Sri Lanka, the monetary board has granted time extension for banks not complying with the higher minimum capital requirement.

The numbers suggest that the share of foreign banks in the total banking assets is significantly higher in Caucasus and Central Asia. This proportion often averages more than 20%, while in South Asia it is typically less than 10%. In Armenia, all banks have foreign participation, except for one bank, and nine of the banks are 100% foreign-owned. In some countries, foreign holding is largely by individuals—sometimes a national of the country living overseas. Most countries have allowed 100% foreign ownership except Nepal where, as a prerequisite for a license, the central bank requires foreign parties to seek joint ventures with local partners.

Loan Classifications and Provisioning

In recent years, central banks have tightened loan classification and provisioning standards, although standards adopted and compliance vary in each country. In line with general norms, most central banks require loans to be classified in four categories (i) special or “watch” loans, (ii) substandard loans, (iii) doubtful loans, and (iv) losses. However, the criteria (period of loan delinquency or past overdue payments of principal...
and interest payments) adopted under each category of loan classification vary significantly across countries.

**Loan classification and provisioning requirements have generally tended to be more stringent in the countries of the Caucasus, with Georgia adopting the most stringent standards** (Table 2). In contrast, the standards in Nepal are relatively lax, as it recognizes loans as “substandard” only if they are overdue by 6 months as compared to 2–3 months in other countries; “doubtful” if overdue by 1 year, relative to the norm of 3–6 months; and “loss” if overdue for over 1 year as compared to the norm of 6 months. Sri Lanka has more lax standards as well. For example, a loan is classified as “doubtful” if it is overdue for over 1 year and a loan “loss” is recognized only if it is overdue by at least 540 days.

Some central banks require the monitoring and tracking of loans at an early stage and classify these under a “watch” category as soon as they are overdue. **Georgia has the most rigorous regime for tracking loans and classifies loans under the “watch” category if any of one or a combination of the following emerges:** (i) overdrafts are frequent within a specified period; (ii) the borrower faces business and financial difficulties or liquidity problems; and (iii) the bank staff has not pursued due diligence on the loan or there are problems with collateral, etc. Other central banks have prescribed different guidelines and qualitative criteria for classifying loans under the special or “watch” category.

**Under central bank regulation, rescheduled loans cannot be treated as performing loans unless the borrower makes repayments on agreed rescheduling terms and conditions.** If in arrears for a continuous period of some months, restructured loans have to be classified as nonperforming. Regulations of the Central Bank of Sri Lanka (CBSL) specify that before it is treated as performing, a rescheduled loan under the “watch” category must be settled on new terms and conditions continuously for 3 months, 6 months if it is in the substandard or doubtful category, and 1 year if in the loss category. However, some of these requirements have been relaxed in response to the financial crisis. For example, loans under the “watch” category can now be reclassified as performing even if only two of the past three monthly debt servicing payments have been made. This adjustment could raise credibility issues in bank supervision.

**Provisioning standards have been tightened in most countries.** With the exception of Nepal, most of the countries under study have a general provisioning requirement for performing loans that ranges from 1% to 2%, after the onset of the financial crisis. The provisioning requirement for loans under the “watch” category is higher in Georgia at close to 10%, and the lowest in Nepal at 1%. Similarly, Georgia requires a 30% provisioning for substandard loans compared to the 20%–25% average in the countries under review. The other two categories of loans, i.e., “doubtful” and “loan loss,” carry 50% and 100% provisioning requirement, respectively, on the outstanding principal balance. To improve provisioning, the CBSL requires a valuation of the collateral at least once in 3 years and imposes discounts on the value of collateral in arriving at the unsecured portion of a loan for the purpose of calculating the provision. But valuations should be based on a *current*
Table 2: Selected Developing Member Countries: Loan Classification and Income Standards

<table>
<thead>
<tr>
<th>Loan Classification</th>
<th>Afghanistan</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Kyrgyz Republic</th>
<th>Tajikistan</th>
<th>Nepal</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>General provisioning for performing loans</td>
<td>Nil</td>
<td>Raised from 1% to 2%</td>
<td>2% of unpaid balance</td>
<td>0%–2%; 0% for normal loans</td>
<td>2%</td>
<td>Nil</td>
<td>Raised from 0.1% to 1%</td>
</tr>
<tr>
<td>Watch loans (no. of days)</td>
<td>31–60</td>
<td>Below 90</td>
<td>Below 30</td>
<td>1-29</td>
<td>Below 90</td>
<td>90 to below 180</td>
<td></td>
</tr>
<tr>
<td>Provisioning</td>
<td>5%</td>
<td>10%–15%</td>
<td>10%</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Substandard loans (no. of days)</td>
<td>61–90</td>
<td>90–180</td>
<td>30 to below 90</td>
<td>30–59</td>
<td>1–30</td>
<td>90 to below 180</td>
<td>180 to below 360</td>
</tr>
<tr>
<td>Provisioning</td>
<td>25%</td>
<td>20%–25%</td>
<td>30%</td>
<td>25%</td>
<td>5%</td>
<td>25%</td>
<td>20–25%</td>
</tr>
<tr>
<td>Doubtful loans (no. of days)</td>
<td>91–180</td>
<td>181–270</td>
<td>90 and above</td>
<td>60–90</td>
<td>30 to below 60</td>
<td>180–360</td>
<td>360 to below 540</td>
</tr>
<tr>
<td>Provisioning</td>
<td>50%</td>
<td>50%–70%</td>
<td>50%</td>
<td>50%</td>
<td>30%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Loss loans (no. of days)</td>
<td>181 and above</td>
<td>271 and above</td>
<td>150 and above</td>
<td>Above 90</td>
<td>60–180 and above</td>
<td>360 and above</td>
<td>540 and above</td>
</tr>
<tr>
<td>Provisioning</td>
<td>Immediate charge off against the reserve loss</td>
<td>100% or more</td>
<td>100%</td>
<td>100%</td>
<td>75%–100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

assessment by a professional independent evaluator, which would be especially important during a period of declining asset prices, post-bubble.

While the commercial banks tend to follow the prescribed loan classification and provisioning standards, a few practices do undermine the quality of the exercise at the bank level. In some countries, banks tend to be very mechanical in their classification. In other instances, banks would reportedly move loans under the “watch” category only
when the amount of outstanding loan exceeded the facility limit, and even this may not be required as banks may revise the limit upwards. In other cases, it has been pointed out that banks often do not properly restructure loans and often classify them under the “standard” category after being restructured. Widespread practices of rolling over unsecured overdraft loans have also been observed.

Following substantial cleaning up and write-offs, nonperforming loans (NPLs) across all the countries in the study did show a persistent declining trend during the last few years. However, the economic stress and its consequent negative impact on business, real estate, and construction activity have resulted in an uptick in NPLs. The rapid credit growth for several years before the onset of the global financial crisis had also contributed to the improvements in the NPL ratio. But a comparative analysis of NPLs is complicated because countries have different loan classification standards, and, thus, even the reported provisioning coverage is not comparable across countries. NPLs are generally expected to rise in 2009 as the global financial crisis has resulted in the closure or downscaling of businesses, decline in assets prices, in particular real estate, and fall in remittances. In some countries, about 60% or more of the loans is collateralized with real estate, which if marked to market, would have to reflect a diminution in collateral values.

While provisioning coverage had been on the rise, the recent growth in NPLs has been accompanied by an across-the-board reduction in the provisioning coverage. Higher provisioning would be prudent as it does cushion against potential losses even though it may act as a deterrent to loan growth, as provision charges reduce profit and funding. The banks often compromise provisioning standards to ensure an adequate level of profitability under stress when the intermediation margins are low.

<table>
<thead>
<tr>
<th>Loan Classification</th>
<th>Afghanistan</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Kyrgyz Republic</th>
<th>Tajikistan</th>
<th>Nepal</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall NPL ratio</td>
<td>1%</td>
<td>4.6%</td>
<td>14.2%</td>
<td>5.7%</td>
<td>4.8%</td>
<td>–</td>
<td>6.2%</td>
</tr>
<tr>
<td>NPLs under watch loans</td>
<td>4.6%</td>
<td>79%</td>
<td>6%</td>
<td>56.4%</td>
<td>40.5%</td>
<td>150%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Provision coverage</td>
<td>38.5%</td>
<td>70.5%</td>
<td>56.4%</td>
<td>40.5%</td>
<td>150%</td>
<td>47.4%</td>
<td></td>
</tr>
<tr>
<td>in 2008 down relative to 66%</td>
<td>70.5%</td>
<td>56.4%</td>
<td>40.5%</td>
<td>150%</td>
<td>47.4%</td>
<td>(Jan 08)</td>
<td></td>
</tr>
<tr>
<td>in 2007 down from over 130%</td>
<td>56.4%</td>
<td>40.5%</td>
<td>150%</td>
<td>47.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Central banks’ regulations. Latest available data.

Table 2: continued
Risk Management

All countries have raised risk-weighted capital adequacy requirements to 12%, except for Nepal, which maintains its risk-weighted capital adequacy requirement at 11% (with Tier 1 at 5.5%), and Sri Lanka at 10%. Over 2003–2008, with new capital injection in most countries, improved bank practices and debt recovery efforts, risk-weighted capital adequacy at the system level increased by 20% to 30%. However, reflecting growing stress in the banking system, capital adequacy ratios (CARs) have now fallen in most cases although the system averages, except in Nepal, remain above the norms. In the Caucasus and Central Asia, small banks tend to report considerable variation from the average CAR, while in the case of Nepal, the state-owned banks report negative capital adequacy while all the other banks meet the norm. In Sri Lanka, most commercial banks continue to maintain capital above CARs of 10% except for a significant private bank.

Central banks have not only been closely monitoring capital adequacy but have also augmented risk management by issuing guidelines for credit risk and foreign exchange risks. Nevertheless, the regulatory framework in many countries does not comprehensively capture all dimensions of risks. For instance, regulations often do not offer instructions on operational, market, interest rate, counterparty, liquidity, and other risks. Other problems relate to weak capacities to assess risks and weak internal controls in the banks. More than the other countries, Afghanistan and Tajikistan need to develop more expertise and experience in credit assessment, at both the banks and central banks’ levels. Creditworthiness of borrowers is often marred by the borrowers’ lack of business and banking experience and absence of cash flow or financial statements. Banks often extend loans to customers without proper collateral. And the assets of some banks are highly concentrated in a few industries. For instance, in Afghanistan, over 30% of loans are to the petroleum sector; in Tajikistan, exposure to the cotton sector is high. In Nepal, banks have been observed to violate the sector exposure limits for housing and construction.

Bank Supervision Capacities

Bank supervision in almost all the countries under review complies with basic international norms. In fact, some countries are now positioned to adopt a risk-based supervision system. Generally, the central banks and/or regulators have the basic capacities for on-site examination that is conducted in most cases once a year on the basis of capital adequacy, asset quality, management, earnings, and liquidity (CAMEL) framework with the ratings kept confidential. The quality of off-site surveillance, a key tool for early warning signals that is meant to help analyze risks based on capital adequacy, asset quality, earnings liquidity, and sensitivity to market risks (CAELS) rating, varies across countries. Generically, on-site inspections have revealed some common issues: (i) weak corporate governance and internal controls; (ii) high asset–liability mismatches; (iii) high dependence of banks on interest incomes; and (iv) large proportions of dollar deposits and
low proportions of domestic currency deposits, which could magnify the liquidity and credit risks in case of a reversal of inflows and depreciation of the exchange rate.

**Generally, all central banks and/or regulators plan to further strengthen their supervisory capacities, and, in this context, the following key core issues need to be addressed:**

i. Barring a few countries, relevant laws need to be amended to provide legal immunity to the staff of the central bank or regulator. The central bank laws of Afghanistan and the Kyrgyz Republic now provide such protection.

ii. Enforcement must be strengthened, including by imposing penalties and fines on violations of prudential regulations, based on off-site and on-site supervision findings. In Afghanistan, the IMF reported that on-site examinations of banks reveal violations of related party, sector, and state-owned enterprise exposure limits, as well as weak corporate governance at the bank level.

iii. A management information system for off-site supervision needs to be developed and automated in many cases. Transparency in banking supervision outcomes needs to be improved.

iv. The capacities of the staff at the banking supervision departments need to be built, and staff number increased.

v. The resolution capacities of the central banks and regulators as regards problem banks must be strengthened, in close collaboration with the ministries of finance concerned.

**Finally, almost all regulators have recognized the need to move toward consolidated supervision, and a number of them have issued, or are in the process of issuing guidelines for consolidated supervision.** In jurisdictions where there are segregated regulatory frameworks, consolidated supervision is complicated by the problems of coordination and cooperation among the regulators.

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Review of Monetary Policy Frameworks

Generally, all the selected countries have made good progress in formulating a comprehensive monetary policy framework, which, however, remains a “work in progress” in many cases. In most countries, the establishment of a comprehensive monetary framework has been hindered by the low level of development of the financial system. Furthermore, in some instances, political considerations and now the current global financial crisis have forced deviations. Developments of this nature carry credibility and reputational risks for the central banks, and hamper the effectiveness of monetary policy. Sri Lanka, for instance, had to resort to a blunt easing of monetary conditions while Armenia had to de facto suspend its inflation targeting framework. While price stability has been recognized as the primary objective of central banks, the implementation of the supportive monetary policy framework has varied greatly, and is being especially tested by the global financial crisis.

Armenia, Nepal, and Sri Lanka appear ahead in implementing a transparent and coherent monetary policy. Nepal, however, is a special case where the scope for an independent monetary policy is limited because the Nepalese rupee is pegged to the Indian rupee. On paper, Sri Lanka has probably the clearest monetary policy framework among the six countries although it deviated from the framework in 2007–2008. There are short-term (overnight) policy interest rates at which the central bank is willing to absorb or inject liquidity. These rates define a corridor within which the interbank (call money) rate is expected to move. The policy rates are set to bring the interbank rate and other interest rates to a level viewed as consistent with reaching reserve money (operational) and broad money (intermediate) targets. In turn, these targets are chosen to be consistent with achieving the inflation objective. A similar framework is in place in Armenia, which has formally adopted inflation targeting. The refinance (policy) rate is signaled by the 7-day repo rate (rate at which the central bank accepts to lend, i.e., inject liquidity), and the corridor is defined around that policy rate with standing 1-day lending (Lombard) and deposit facilities.

The communication by the Central Bank of Republic of Armenia (CBRA) of its monetary policy stance is consistent with what is expected under a full-fledged inflation-targeting framework. Monetary aggregates, however, remain indicative targets under the International Monetary Fund (IMF) program, as the CBRA continues to use a broad set of indicators. In the meantime, given the peg to the Indian rupee, Nepal’s monetary policy framework aims mainly at bringing liquidity in the banking system to a level viewed as consistent with limiting the inflation of non-traded goods and maintaining a satisfactory level of international reserves. The excess reserves of banks at the central bank are the operational target, and broad money the intermediate target. A standing facility allows the banks to borrow from the central bank, and offer a last resort discount window. The interest rate at this window is the policy bank rate, which serves to signal the monetary policy stance.
While Georgia has also formally adopted inflation targeting, its monetary policy framework—as well as that of the Kyrgyz Republic—is still hybrid, and seem mostly to have been developed when the main challenge was to mop up liquidity (which has not been a primary concern since the outset of the global financial crisis). Hence, in Georgia, the policy rate is the rate on the 1-week certificates of deposit (CDs) issued by the central bank. Standing facilities exist, but are rarely used. A new refinance rate, introduced as policy rate since September 2008, reflects the changing environment where the National Bank of Georgia (NBG) is more concerned with injecting liquidity, rather than absorbing it. In the Kyrgyz Republic, policy rates are the 28-day central bank note (determined via weekly auctions) and the discount rate, surprisingly set at the same level. There is also a little-used overnight credit facility, with the interest rate linked to the discount rate (1.2 times), and the central bank has no explicit corridor to guide the overnight interbank rate. Moreover, both Georgia and the Kyrgyz Republic have also monetary aggregates as targets. In the case of Georgia, liquid reserves appear to be the main operating target, with reserve money the intermediate target. In the Kyrgyz Republic, reserve money is the operational target and broad money the intermediate target. Much work remains to be done in Georgia to have its inflation targeting framework fully operational.

In Afghanistan and Tajikistan, the monetary policy framework is quite rudimentary. In Tajikistan, the outright sales of central bank CDs and the liquid (cash) reserves requirement are the two instruments of monetary policy. The outright sales of central bank CDs was discontinued in September 2008, and the liquid (cash) reserves have been proactively used. Cash reserve ratios (CRRs) were progressively cut in half in 2008 to 11% for domestic currency-denominated deposits, and 9% for foreign currency-denominated deposits. A refinance rate is defined as the policy rate, but no transactions take place at that rate. There is no government securities market, and a system of credit auctions introduced earlier became inoperative when liquidity was plenty. Liquid reserves appear to be the operational target, with reserve money the intermediate target. The monetary framework is focused on limiting the amount of currency in circulation with the main instrument being auctions of cash foreign exchange. Central bank bills (capital notes) are in place, but relatively rarely used, and a rudimentary interest rate corridor is not operational.

Besides interest rate policy, the CRR remains an important policy instrument in all countries, but is sparingly used. Changes in the CRR have allowed central banks to at times broadly affect the level of free reserves within the banking system, and, thus, the ability of banks to extend loans and in the process expand M1 or M2. This remains the main instrument of monetary policy used in Tajikistan. Other central banks have changed their cash reserves requirement only sparingly, preferring to use less blunt and more market-based instruments. But the global financial crisis has forced Georgia, Sri Lanka, and Tajikistan to cut the cash reserve requirement with a view to addressing systemic liquidity problems.

A main reason for the apparent ambivalence between targeting market interest rates (via the policy interest rates) and targeting monetary aggregates— with a bias toward
targeting monetary aggregates—appear to be the belief that the relationship between the policy interest rate and inflation is generally weak, while that between monetary aggregates and inflation is stronger. (For a more theoretical discussion on this topic see Box 3.) This has been evidenced in the case of Georgia, the Kyrgyz Republic, and Sri Lanka. There are various explanations for this. One is that (real) monetary aggregates have a direct impact on aggregate domestic demand, in the form of a wealth effect in consumption. The second is that the availability of credit, rather than the interest rate per se, is a main determinant of aggregate demand. It is then not possible to identify the level of interest rate that will align inflation (determined from the output gap on the market for goods and services) to target level, without referring to the situation on the money market, including available money supply. The third reason is that aggregate demand depends on somewhat longer-term market interest rates that may or may not respond to the policy rate, depending on the strength of the transmission mechanism from policy to market rates, which has been weak in most selected countries (discussed below). Likely, for all these reasons, the selected countries, even Armenia and Sri Lanka, have continued to focus on monetary aggregates as targets.

Most central banks of the selected countries have introduced liquidity management techniques based on repo and reverse repo operations, and outright purchases or sales of government securities. However, in practice, these techniques remain underdeveloped, if used at all. The purpose of these open market operations (OMOs) would be to fine tune liquidity management, as they are done at the initiative of the central bank rather than the banks, and, in particular, to address the impact of random shocks to money demand and supply. In practice, OMO sales have also been used to bring reserve money within the target. The amounts and frequency of these operations are generally low, with the relative exceptions of Armenia, Sri Lanka, and, to some extent, Nepal. In the Kyrgyz Republic, auctions of repos based on government treasury bills (TBs) have been sparingly used to inject liquidity, while weekly auctions of central bank notes have been used to absorb liquidity. Similarly, in Georgia, central bank deposit certificates, in addition to government securities, have been auctioned off to absorb liquidity, while repos have been used to inject liquidity. The lack of private repo markets where the banks can lend and borrow funds among themselves based on government securities as collateral may inhibit the proper function of the central banks’ OMOs because of the lack of prior market price discovery. However, secondary repo (in addition to outright transaction) markets based on government securities operate daily in Sri Lanka.

The OMOs have apparently been used more to bring the reserves of banks (reserve money), rather than the interbank interest rate, toward a desired level. This approach is consistent with the reliance on monetary aggregates as operational targets, but it can

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9 Even if interest rates do affect aggregate demand, there is also the issue of the elasticity of aggregate demand to interest rate and (real) monetary aggregates. The elasticity to (real) monetary aggregates is likely to be higher in developing and emerging market countries, including the selected developing member countries. For instance, currency continues to account for a large share of money supply in developing countries, and this may strengthen the wealth effect in household consumption.
Box 3: Targeting Monetary Aggregates Versus Interest Rates

Monetary economists have long debated on the virtues of using monetary aggregates as operating and intermediate targets versus price variables, in particular interest rates. Much of this debate has focused on advanced countries, where doubts about the usefulness of monetary aggregates as targets emerged from the apparent breakdown of the demand for money in the 1980s in the context of rapid financial innovation. Using interest rates as target avoided such pitfalls and appeared to provide a more direct link between the money market and aggregate demand, and, thus, price stability. The popularity of monetary policy rules (e.g., the Taylor’s Rule—further discussed in the text) and of the inflation targeting framework (where an inflation forecast is the intermediate target and interest rates generally the operational target) has further contributed to the view that interest rate targeting is a preferable option for monetary policy implementation although, interestingly, near-zero short-term interest rates in advanced economies in the current global financial crisis have encouraged a renewed focus on monetary aggregates, this time to avoid deflation. Nevertheless, targets for monetary aggregates remain in use in many eclectic monetary policy frameworks, if not necessarily as primary targets, at least as supportive targets. In developing and emerging countries, in particular, monetary targets are still viewed as contributing significantly to the implementation and communication of the monetary policy stance. Hence, most International Monetary Fund programs with these countries continue to have targets on monetary aggregates, often reserve money, at least as indicative targets.

The countries covered in this study have generally adopted reserve money as the operational target and broad money as the intermediate target of monetary policy, although variations exist.

Several factors explain the view that monetary aggregates continue to play a more significant role in many developing and emerging economies. First, for these countries, it is not obvious whether interest rates are the sole significant links between aggregate demand—and thus inflation—and the money market. Monetary aggregates could be a significant variable in aggregate demand as well, either via the wealth (including currency) effect, or via the credit channels effect, especially in underdeveloped and inefficient financial systems, where quantities often adjust quicker than prices. Second, the transmission of changes in the short-term policy interest rate to short-term and longer-term market interest rates relevant in aggregate demand is often very weak, resulting in a poor linkage between the policy interest rate and the goods market. The strength of the transmission through the spectrum of interest rates depends on the state of development of financial markets, starting with the overnight interbank market, to the repo and reverse repo markets for treasury bills, etc. The less developed and the shallower the financial markets are, the weaker the transmission through interest rates become. Third, in many developing countries, random and other shocks in the macroeconomy might well affect less the level of monetary aggregates consistent with achieving the inflation objective than the level of market interest rates consistent with this objective, again because of underdeveloped and shallow financial markets (the reverse would be true in the advanced economies).
Box 3: continued

All three explanatory factors appear to apply in various degrees to the countries covered in this study. In particular, the data show that the transmission of changes in the short-term policy interest rate to the market interest rates is generally extremely weak, with the possible exception of Armenia and Sri Lanka (see further discussions in Part II of the study). Hence, it seems appropriate to support a continued focus on monetary aggregates as primary targets in most of these countries, although interest rates should increasingly serve as signaling device and indicative target as well. There is an argument for reversing this order of primacy in the case of Armenia and Sri Lanka, especially since these countries have had well-established interest rate “corridors.” But monetary aggregates would continue to be useful as secondary targets, to guide monetary policy implementation, anchor inflationary expectations, and strengthen credibility.

2 Afghanistan has currency in circulation as operating target. As part of its inflation targeting framework, Armenia has the short-term interbank rate as operational target, though reserve money is a target under the International Monetary Fund program. Georgia has reserve money as intermediate target under a yet to be fully implemented inflation targeting framework. Tajikistan has reserve money as intermediate target and liquid reserves of banks at the central bank as operational target. Nepal has excess reserves of banks at the central bank as operational target and broad money as intermediate target.

lead, in practice, to greater volatility in the interbank rate. Armenia and Sri Lanka are exceptions since, although they have a well established corridor, they still have explicitly (Sri Lanka) or implicitly (Armenia, in the context of the IMF program) reserve money as operational targets. It is not entirely clear, in these cases, which purpose the OMOs have mostly served: ensuring the achievement of the reserve money target, or ensuring that market interest rates move properly within the corridor.10 In Sri Lanka, the achievement of the reserve money target now seems to be the overriding factor. Of course, the two objectives are not necessarily inconsistent, that is, if the link between reserve money and interest rates is correctly estimated, notwithstanding possible random shocks. However, high volatility of the interbank rate weakens the signaling of the monetary policy stance.

The shallowness of interbank (call money) markets where banks can lend among themselves, often without collateral, and the banks’ (until the global crisis) relatively ample cash reserves at the central bank also have made it difficult for the central bank to calibrate its OMOs for any desired impact on liquidity and overnight rates. Only Armenia and Sri Lanka have generally been successful in establishing an interest rate corridor for the call money rate. However, there have been problems in Sri Lanka with this mechanism since 2007. Lack of trust and great variance in the financial conditions of banks is a major problem, in addition to the fact that, until 2008, abundant liquidity as a result of the central banks’ interventions on the foreign exchange market reduced the need

10 If the interbank rate moves above the upper-bound of the corridor, there would be incentives to borrow at the standing facility to invest on the interbank market, as observed in Sri Lanka.
to borrow reserves among banks. Nevertheless, average daily interbank transactions are fairly sizeable in Sri Lanka (from SLRs5 billion to SLRs15 billion), Armenia, and Nepal (about NRs1 billion) in 2008. In the case of Nepal, the standing liquidity facility at the central bank has more recently discouraged the further deepening of the interbank market. Poorly functioning interbank markets naturally also inhibit the interest rate transmission mechanism.
Monetary Policy and Financial Performance

Interest Rates, Inflation, Growth, and Money Growth

The challenges faced by the selected developing member countries (DMCs) in meeting their inflation objective are illustrated by comparing the annual inflation outcomes with targets. In most cases, actual inflation has more often overshot than met or undershot the inflation objective. A noteworthy exception is Armenia’s quite good inflation performance, despite the target being on occasion slightly surpassed. This is significant as Armenia is, among the countries under study, the sole inflation “targeter” with a track record (Table 3, Figure 4). The inclusion of the 2007 and 2008 inflation performance, which significantly reflected the impact of external shocks, in particular the surge in international prices for food and oil, naturally worsens the overall results of the assessment. Nevertheless, there were domestically driven price pressures as well in the period in the selected countries, e.g., in Georgia and Sri Lanka, because of overheating. Empirical studies in the case of Sri Lanka have suggested that external shocks cannot explain more than 30% of changes in inflation, pointing to considerable room for monetary policy to affect the outcome.

There is little evidence that monetary policy might have been hostage to the growth objective pursued by the policy makers in the selected DMCs (Figures 5a and 5b). The implementation of a so-called Taylor rule, with a significant weight attached to the output gap in the policy reaction function would imply especially low real interest rates in years of poor growth, even if inflation was above the objective. But there is little evidence of this. One possible exception is Nepal, where the economic managers might have felt constrained to respond to relatively low growth rates since 2005 by adopting a relatively loose monetary policy stance. The low growth rates were probably associated with the depressing effect of the appreciation of the real effective exchange rate for the rupee.

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11 The numbers have been collected either from the monetary policy statements of the countries’ central banks or, when not readily available, from the IMF country reports issued at a time closest to the beginning of the year concerned. Projections for the year are interpreted as targets for the year.


13 See for instance C. Carlstrom and T. Fuerst. 2003. The Taylor Rule: A Guidepost for Monetary Policy? Cleveland: The Federal Reserve Bank of Cleveland (July). A formal representation would have: \( r – dp/p = i^* + a(dp/p – (dp/p)^*) + b(y – y^*) \), where \( r \) is the policy rate, \( dp/p \) actual inflation, \( i^* \) the real short-term interest rate in the long-run, \( (dp/p)^* \) the inflation target, \( y \) is output, \( y^* \) is potential output, and positive \( a \) and \( b \) are “weights” in the policy reaction function. Hence, starting from a situation where inflation is on target and output is at its potential, an increase in inflation above the target, ceteris paribus, would lead the central bank to increase the nominal policy rate so that the real interest rate moves its long-run level (to fight inflation). Similarly, a decline in output below its potential, ceteris paribus, would lead the central bank to reduce the policy rate so that the real interest rate moves below its long-run level (to fight recession).
### Table 3: Selected Developing Member Countries: Inflation and Monetary Performance, 2004–2008

(%)  

<table>
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<tr>
<th>Year</th>
<th>DMC</th>
<th>Inflation</th>
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<sup>a</sup> Money refers to broad money, except for Georgia and Tajikistan where it refers to reserve money, and Afghanistan where it refers to currency.

Sources: Central banks and International Monetary Fund.
There is also little evidence that the other component of the Taylor rule is being implemented, which would imply especially high real interest rates at times of especially high inflation (above the objective) (Figures 6a and 6b). Even Armenia does not seem to fit this mode. Instead, adjustments to the nominal interest rate appear to have been mostly in response to inflationary developments, with a view to preventing “excessive” decline (or increase) in the real interest rate. In the context of monetary policy frameworks detailed above, interest rate policy would have been more dependent on achieving the monetary targets, except perhaps in Armenia.

**Broadly speaking, the data show that the overshooting of the inflation objective has often coincided with the overshooting of the targets for monetary aggregates, with most of the exceptions otherwise explained.** Armenia might have been an exception because it experienced several years of very low inflation despite missing reserve money targets. This might also have been the case at times in the Kyrgyz Republic. In Box 3, the overshooting or undershooting of the inflation target is compared with the overshooting (or undershooting) of the monetary targets. The analysis shows that (i) the overshooting of both the inflation and monetary targets, especially the inflation target, has been far more prevalent than undershooting; and (ii) most often, the overshooting of the inflation target correlates with the overshooting of the monetary target. However, there is a surprising number of cases where the overshooting of the inflation target coincides with the undershooting of the monetary target (12 cases). In some, the deviations are relatively
Figure 5a: Real Policy and GDP Growth Rates (%)

GDP = gross domestic product.

Source: International Monetary Funds: *International Financial Statistics.*
small. The cases where the deviations are quite large mostly pertain to the year 2008. In these cases, the impact from the global financial crisis led to a significant decline in the growth of deposits in the banking system and thus in broad money late in the year, while the average inflation for the year still reflected the inflationary pressures of the beginning of the year. Four of the five cases where inflation undershot while money overshot relate to Armenia and the Kyrgyz Republic, where there was, early in the period, considerable and not fully expected re-monetization.

To better understand monetary developments, it is useful to look at the sources of money growth in the selected countries, and their respective contribution to the overall growth in monetary aggregates.

The growth of reserve money (and cash in circulation in the case of Afghanistan) has been relatively high in all selected countries in the 5 years to 2008, averaging across countries from 15% to 40% annually, with the growth in net foreign assets (NFA) being by far, the largest contributor (Figures 7a and 7b). The financing of fiscal deficits have not been a significant source of reserve money expansion, except occasionally in Nepal and Sri Lanka. Very little or no credit was extended to the banks by the central banks until 2008. Monetary growth has been especially rapid in Armenia, Georgia, and the Kyrgyz Republic, and can, to some extent, be understood as a consequence of the re-monetization and initial de-dollarization that accompanied macoconomic stabilization, as well as the success of market-oriented reforms there. But this is not the entire story, since, typically, such growth would not be inflationary.
Figure 6a: Policy and Inflation Rates (%)

Source: International Monetary Fund: International Financial Statistics.
Increases in NFA have been the main factor behind the high reserve money growth and the overshooting above its targets. The surge in autonomous private capital inflows and in workers’ remittances was evidently not fully anticipated. These events posed monetary management problems for the monetary authorities. To prevent these inflows from leading to excessive monetary expansion and inflation, they had to either let the exchange rate appreciate, or sterilize the monetary impact of their intervention on the foreign exchange market. In fact, they often felt unable to do either as much as necessary because of concerns of competitiveness or sterilization that might be too costly or even destabilizing. Nevertheless, most central banks did try to mop up excess liquidity through the sale or lending of government securities on their books, or when depleted, through the issuance of their own bills or certificates of deposit on a fairly large scale at times, as in the case of Armenia and Georgia.

The reversal of monetary conditions by the end of 2008 was dramatic in countries where the impact of the global financial crisis had already been felt—in particular in Georgia, the Kyrgyz Republic, and Sri Lanka. As capital inflows and the growth in remittances stalled, or even reversed, the authorities were faced with the opposite problem of preventing the excessive depreciation of their currency, and managing a severe liquidity shortage. Reserve money growth decelerated massively. Several central banks, in Georgia and Sri Lanka, in particular, had to turn to existing facilities to inject liquidity or create new instruments to do so, including refinance and last-resort facilities in the case of Georgia.

The developments in broad money growth mirrored those of reserve money, with private sector credit growth being generally, and by far, the main source
Figure 7a: Contributions to Reserve Money Growth
(annual, in % of beginning of period reserve money)

Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter.
Source: International Monetary Fund: International Financial Statistics.
In the Caucasus and Central Asia, some positive contribution of NFA to broad money growth was mostly offset by contraction from net credit to government and other items. Only in Sri Lanka was net credit to government at times a contributing factor. The banks increasingly used the resources from workers’ remittances and capital inflows to expand credit to the private sector. In some countries, Georgia and Sri Lanka in particular, a secular rise in the money multiplier allowed broad money growth to exceed that of reserve money. Hence, private sector credit growth was very rapid everywhere during the period, contributing from 20 to 50 percentage points annually (measured as a percentage of the beginning of period broad money) to a similar range of overall broad money growth.

In late 2008, broad money growth stalled in countries where the impact of the global financial crisis had already been felt strongly, reflecting a slowdown in deposits. Private sector credit stalled mostly because of lack of liquidity, rising interest rates for the borrowers, and a tightening of the banks’ standards for extending loans, as well as a decline in the demand for credit itself.
Figure 8a: Contributions to Broad Money Growth
(annual, in % of beginning of period broad money)

Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter.
Source: International Monetary Fund: International Financial Statistics.
Liquidity Management and Interest Rates Setting

Once inflation has been clearly defined as the main objective of monetary policy, managing the monetary aggregates—and consequently interest rates—and vice versa to a level consistent with the inflation objective has been the main task for the central banks in the selected developing member countries (DMCs). In theory, whether interest rates or some monetary aggregates are taken as the primary operational variable or not should not make much difference. However, several reasons for the prevalence of targeting monetary aggregates were offered. One practical reason is mainly the weakness of the transmission mechanism in less developed financial markets that impedes the impact of the policy rate on the market interest rates. Another practical consideration is that, in practice, the macroeconomy is subject to various random shocks and uncertainties, and if these alter less the level of the monetary aggregates consistent with the inflation objective than the interest rates consistent with the inflation objective (or vice-versa), it would make sense for central banks to focus more on the monetary aggregate than the interest rates (or vice-versa). However, the presumption has generally been in favor of greater interest rate predictability, which is a reason for the popularity of the inflation targeting framework. Open market operations (OMOs) can then be directed toward daily liquidity management narrowly defined and be broadly accommodative.

As elsewhere, the central banks of selected countries targeting monetary aggregates have used policy interest rates as a signaling device supporting the monetary policy...
There is then the additional issue of whether the link between policy rates and monetary aggregates has been properly assessed.

The inflation objective might be missed, either because of the failure to meet the targets for the monetary aggregates and associated interest rates, or because the targets set may be inconsistent with the inflation objective. Which explanation is relevant matters, since the fault would be in monetary policy management proper in the first instance, and in macroeconomic modeling in the second instance. The earlier observation that missing the inflation objective in the selected countries has often been found to be correlated with missing the monetary targets suggests that monetary policy and liquidity management and their effective calibration have often been a main issue.

Evidence shows that, in the macroeconomic context prevailing in the 5 years before the onset of the global financial crisis, failure to sufficiently mop up liquidity and to accept the consequences for market interest rates and the implications for the supportive policy rates has been the main cause for the overshooting of monetary aggregates. The need to absorb liquidity on a large scale resulted in the first place from a policy of intervention on the foreign exchange market to prevent the significant appreciation of the exchange rate. Thus, the central banks lost relative control over monetary aggregates and exchange rate adjustment was insufficient to support the inflation objective. In Sri Lanka, the OMOs were used extensively to absorb liquidity, pushing market interest rates upward in the process, but clearly not enough. In addition, policy rates were not adjusted accordingly, reducing the effectiveness of the “corridor” and undermining the tightening stance of monetary policy and eventual impact on inflation. When Georgia ran out of government securities on its books, the central bank began to issue its own certificates of deposits but the liquidity withdrawals were insufficient to prevent the overshooting of the monetary targets. In Armenia, the excess liquidity pressures were not sufficiently and timely addressed by the increase in policy rates, and the inflation target was overshot in 2006 and 2007, albeit by small amounts.

Experience with the Transmission Mechanism

As noted earlier, one reason for the observed generally weak transmission mechanism from policy interest rates to prices might be the weak transmission from policy interest rates to market interest rates that are most relevant in aggregate demand. More specifically, policy rates would be expected to affect, first, the interbank rate or call money rate; second, the rates on repos and reverse repos based on government securities; third, the term interbank rates and the treasury bill (TB) rates; and fourth, the lending and deposit rates at banks. But poorly functioning and shallow interbank markets in the Caucasus and Central Asia often meant a break in this chain from policy to relevant interest rates.

Only in the case of Armenia and Sri Lanka does this transmission seem to operate generally well (Figures 9a and 9b). In the case of Sri Lanka, it did so only when it was
**Figure 9a: Monetary Policy Transmission (%)**

Armenia

Georgia

Kyrgyz Republic

Tajikistan

Afghanistan

Source: International Monetary Fund: International Financial Statistics.
not interfered with. In the case of Armenia, both the call money rate and TB rates have moved in the direction signaled by the policy rates, and so generally have the lending rates of banks. In Sri Lanka, between 2001 and 2006, the call money rate and TB rate moved within the policy interest rates “corridor,” and the prime bank lending rates moved in parallel, generally just above the corridor. However, after 2006, when the corridor largely became non-operational because of the central bank’s decision to leave the policy rates unchanged while tightening liquidity through OMOs, the call money rate became very volatile.

In all other selected countries, the transmission from policy to market interest rates has been quite limited. In Georgia, the co-integration between the nominal policy rate and the TB rate appears to be quite weak and the average lending rate of banks even weaker. In Nepal, the call money rate and TB rate generally moved in parallel, but did not conform to the policy bank rate, which has not really served to signal the monetary policy stance. Furthermore, the level of co-integration between the rates, which have moved together along the cycle, also appears to be weak. And all these rates display considerable volatility. In part, this volatility might be the result of the focus on the excess reserves target, and the OMOs viewed as necessary to meet it, rather than on interest rates themselves as operating target. But then, the volatility in rates would put into question the appropriateness of the liquidity management and forecasting framework.14 More importantly, very little direct

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14 Control of the liquidity in the banking system has also been made more difficult in Nepal by the banks using increasingly the short-term liquidity financing facility as first resort. The incentive for this appears to have been a narrowing of the spread between the rate on that facility and the call money rate.
relationship exists between the call money rates and TB rates and the banks’ average deposit rate, and even less the lending rate. For instance, the lending rate appears to have declined in 2008 while all the other rates were increased, probably reflecting greater competition that pushed lending rates to the opposite direction than intended by the monetary policy stance. In the Kyrgyz Republic, the TB rate has tracked the policy rate (the 28-day central bank note, and the discount rate) reasonably well when the Ministry of Finance did not interfere to lower the government’s borrowing costs. But the lending rate of banks has moved quite independently, and showed great volatility in the 20%–30% interest rate range for several years, irrespective of the monetary policy stance. This range has been significantly above the TB rate, except in 2008, when the TB rate increased sharply as a result of monetary tightening. Surprisingly, the interbank rate has tended to move below the policy rate. There is little evidence of the policy rate affecting the lending rate of banks in Tajikistan.

Other possible channels of monetary policy transmission include the exchange rate, the equity price, and the credit and expectations channels. The evidence on the significance of these channels in the selected countries needs to be further researched. Most of these channels have changes in monetary aggregates or interest rates at the origin of their effect. Hence, increases in bank reserves and deposits drive the credit channels. Therefore, the focus on monetary aggregates as key variable in affecting prices is consistent with significant credit channels. Further, the impact of monetary policy on the exchange rate generally results from changes in interest rate differentials. Even in the case of the credit channel, interest rates play a key role: their decline (following an increase in bank liquidity) as a result of competition among banks encourages more borrowing when credit is not rationed. When credit is rationed, it is the decline in interest rates and favorable impact on the borrowers’ balance sheet that reduce the adverse selection costs and encourage more lending.

**Exchange Rate Policy and International Reserves**

In all the selected countries, the exchange rate policy pursued in practice by the monetary authorities has interfered in various degrees with the conduct of monetary policy. During the years of surging private foreign exchange inflows, and also in some cases of a process of de-dollarization (e.g., Armenia), the central banks often intervened in the foreign exchange market, buying foreign exchange against domestic currency. In part, this reflected the desire to build up international reserves and to accommodate a perceived increase in real money demand. But the intervention was also often motivated by the desire to reduce pressures toward the appreciation of the domestic currency, given concerns about the impact of such appreciation on competitiveness.

Among the countries of the Caucasus and Central Asia, Armenia is the country that seems to have allowed appreciation of its currency the most against the US dollar in its run up to the global financial crisis (Figures 10a and 10b). This is not surprising given the country’s adherence to an inflation targeting framework requiring exchange rate
Figure 10a: Exchange Rate and International Reserves

NEER = net effective exchange rate, REER = real effective exchange rate.
flexibility to be effective. As a result, Armenia’s real exchange rate also appreciated sharply in 2005–2008. But Armenia felt compelled to intensify its intervention in the foreign exchange market during 2005–2008, in the process tripling its international reserves compared with those in 2004. Since the resulting expansion in liquidity was mostly not sterilized, reserve money growth accelerated, precisely at a time when the central bank was embarking on a path of gradual monetary tightening by increasing the policy interest rate. Faced with similar pressures toward the appreciation of their currency as a result of the surge in capital inflows and workers’ remittances, the monetary authorities in Georgia were apparently even less inclined to see a real appreciation of their exchange rate. They intervened strongly in the foreign exchange market to put a check on the pressures for the nominal appreciation of their currency. This very much limited the extent of the real appreciation of the domestic currency. It also led to a build-up of international reserves and rapid reserve money growth in the presence of only limited sterilization, with inflationary pressures rising later in the period.

Viewed in the context of two broadly recognized “equilibrium” trends in transition countries, namely real appreciation, on the one hand, and re-monetization, on the other hand, the monetary–exchange rate policy mix pursued in Armenia and Georgia appears to have been broadly appropriate. A somewhat greater tilt toward upward flexibility of the exchange rate, particularly in the case of Georgia, might have been desirable. But the good inflation performance in both countries, especially in Armenia, does not suggest significant inconsistencies. The build-up in international reserves from low to more normal (and certainly not excessive) levels was also facilitated by the exchange policy pursued. And, again given the satisfactory inflation performance, the only partial sterilization of the monetary impact of sterilization appears to have been broadly warranted by the need to accommodate re-monetization. In the case of the Kyrgyz Republic, and even more so Tajikistan, however, the significant rise in inflation since 2005 suggests that

Figure 10b: Exchange Rate and International Reserves

NEER = net effective exchange rate, REER = real effective exchange rate.
Source: International Monetary Fund: International Financial Statistics.
these countries were far less able to adopt the right policy mix, with the weak monetary policy framework and transmission mechanism to interest rates and prices compounding the problem.

**Sri Lanka offers an interesting contrast to the Caucasus as its partially sterilized interventions in the foreign exchange market appear to have more fundamentally hampered the ability of the central bank to reach the inflation objective.** This is not surprising given that increased monetization, from an already higher base, has apparently not been a significant phenomenon as evidenced by the rather stable money/gross domestic product (GDP) ratio. Real exchange rate equilibrium is also a less evident requirement than in the Caucasus and Central Asia, which could explain the greater reluctance toward nominal appreciation in response to a surge in private foreign exchange inflows. Thus, insufficient sterilization led to higher inflation, and the very real appreciation that the monetary authorities wanted to avoid in the first place.

**The case of Nepal is unique given this country’s currency peg to the Indian rupee, and the strong tendency for its inflation to follow India’s.** Central bank intervention in this case is then at the discretion of banks, and there is little room for an independent monetary policy. The management of domestic liquidity is geared toward maintaining an adequate level of international reserves and limiting the inflation of nontraded goods. In general, the sole instrument, interest rate policy, cannot alone achieve both objectives, and fiscal policy must assume a critical role as well. During the years of strong private foreign exchange inflows, the Nepal Rastra Bank (NRB) should not have been overly concerned with the international reserves position, but rather with the inflationary consequences of non-sterilized intervention. Mopping up liquidity through OMOs was therefore prioritized, not only to contain the inflation of nontraded goods per se, but also to prevent a real appreciation of the Nepalese rupee, especially vis-à-vis the Indian rupee. In this regard, the NRB was fairly successful in maintaining a fairly constant real bilateral exchange rate vis-à-vis India. But it should be noted that the small real appreciation (due to the slightly higher inflation in Nepal, especially in recent times) has been in the wrong direction at a time when faster productivity gains in India than in Nepal would argue for a relatively more ambitious inflation objective to compensate.

**In all selected countries, except for Afghanistan and Nepal, the reversal of foreign exchange flows in late 2008 put severe pressures on the foreign exchange market.** The countries reacted similarly as in the upturn, initially intervening to prevent the depreciation of the exchange rate. But as the loss in international reserves mounted, these countries were eventually forced to allow greater flexibility. Georgia undertook a step-devaluation in November 2008, while Armenia postponed allowing much adjustment until March 2009. The Kyrgyz Republic and Tajikistan have allowed a more gradual depreciation of their currency. In all countries, the depreciation, averaging about 20%, has been less than that of the Russian Federation. In Sri Lanka, the exchange rate of the rupee against the US dollar depreciated by about 5% from June 2008 through March 2009 (and somewhat further since then) and a similar depreciation occurred in Nepal, fully reflecting the movement of the Indian rupee.
Other Factors Affecting Central Bank Effectiveness

A host of other factors can affect the effectiveness of the central bank in pursuing its main objective of price stability by interfering with the working of monetary policy. Here, two factors are explicitly discussed: the first relates to the interaction between monetary policy and possible financing of the budget by the central bank; and the second relates to the income position of the central bank itself, which can also influence reserve money growth and therefore the success of monetary policy.

Interaction Between Monetary Policy and Budget Financing

Fiscal deficits have generally been quite small in the selected DMCs from the Caucasus and Central Asia. While this has also reflected in some cases the narrow coverage of primary budget data (because, for instance, of the exclusion of foreign financed capital expenditures), it has implied little need for the government to issue domestic securities for financing. Thus, the issue of potential conflict between monetary policy and the desire to finance the government at low interest rates has not come up in practice. Explicit provisions against government borrowing from the central bank have been included in the law.15

The situation is quite different in Sri Lanka, and to a lesser extent in Nepal. In Sri Lanka, the budget deficits have tended to be quite large, averaging almost 8% of GDP in 2004–2008, and the domestic financing requirements has been hostage to the ability of government to attract foreign financing. Domestic financing needs were reduced in 2007 and 2008 because of foreign financing on commercial terms and the opening up of the TB market to foreign investors. Nonetheless, these financing needs remained substantial. At times, however, financing of the government has been the major component of reserve money growth. The process was facilitated by the arrangements prevailing for the functioning of the primary TB market. Similar arrangements exist in Nepal, and thus similar issues arise. Specifically, on the primary TB market, the central bank set the cut-off rates at the primary auctions of TB, and takes up the residual TBs not placed with the banks and other participants at those rates. In essence, the central bank becomes the lender of last resort for the government, and thus loses control over reserve money. A potential conflict with monetary policy arises when the cut-off rates are not consistent with the monetary policy stance needed or signaled by the policy rates and transmitted to other market rates. While the central bank has the means through OMOs to mop up the liquidity that was created, it complicates monetary policy and could be costly on the central bank’s income position.

The lack of government paper in the Caucasus and Central Asia—and thus of active primary and secondary markets where these can be traded—had forced their central...
banks to issue their own securities. These securities were essential instruments to mop up liquidity in the upswing, but have lost much of their significance since the outset of the financial crisis. Despite progress, most central banks in the Caucasus and Central Asia have had problems projecting government cash flows, which have impeded the reliability of central banks’ liquidity framework that guides their intervention.

**Financial Health of the Central Bank**

There is little evidence that the financial health of the central banks has interfered with the conduct of monetary policy in the selected DMCs. Nonetheless, the financial position of the central bank of Armenia and Tajikistan presents risks for the future. A negative net income position (excluding non-realized revaluation gains and losses) for the central bank is a source of monetary expansion, thus complicating the conduct of monetary policy. Typically, a negative net income position is more likely if nonperforming assets are large, net worth (equity and reserves) is low (or negative), or the other (interest bearing) liabilities are significant. Interest income earned may then not be sufficient to cover interest expenses and operating costs. The structure of the balance sheet and how it evolves usually tells the story (Table 4).

Armenia has had a negative capital and reserves position, essentially because of unrealized foreign exchange losses on a long foreign exchange position. These losses have accumulated because of the steady appreciation of the dram vis-à-vis the US dollar since 2004. As a result, it has become more and more difficult to earn a net interest income sufficient to cover operating expenses. While the problem has apparently not been sufficient to lead to a negative net income position when non-realized revaluation gains and/or losses are excluded, and thus has not yet been a source of monetary expansion, the continued deterioration would be a concern. To some extent, the depreciation of the dram since the end of 2008 has somewhat corrected the imbalance, as the central bank has realized valuation gains. In Tajikistan, the source of the negative net worth has been quite different. First, a large part of the foreign exchange reserves was in fact pledged as collateral for external borrowing by cotton investors. These pledges required reclassification into claims on the cotton investors. Second, the claims on cotton investors were, to a large extent, unrecoverable. Other quasi fiscal expenditures by the central bank also gave rise to money creation. In Afghanistan, cash reserves account for a relatively large share of total assets; however, narrowly defined capital has turned negative.

In Georgia, capital and reserves account for less than 4% of total assets and/or liabilities (and have been declining), suggesting a weak balance sheet. Although the country’s net

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16 Non-realized revaluation gains and/or losses occur when the central bank revalues its net foreign assets position to reflect the appreciation or depreciation of the currency. This operation does not affect reserve money in the period because it only involves offsetting adjustment in other items net. It does, however, affect the structure of the central bank’s balance sheet and as a result its future income stream, which has its counterpart in reserve money.
income position has remained comfortably positive, both excluding and including non-realized revaluation gains and/or losses, it has been declining during the past 3 years. One factor behind the decline in the overall net income has been the weight of non-realized revaluation losses in connection with the steady appreciation of the lari. Another factor has been the increasing interest cost relating to the certificates of deposit issued by the central bank to mop up liquidity, reaching about 15% of total assets and/or liabilities. A similar situation prevailed in the Kyrgyz Republic. Best international practice indicates that the cost of mopping up persistent excess liquidity, or structural liquidity, should be assumed by the government. One way of doing this would be for the government to issue securities to the central bank, deposit the proceeds at the central bank, and then for the central bank to do outright sales auctions of these securities. Generally, however, the rules for the sharing of profits and losses of the central bank are well defined in the legislation (see earlier discussion).

Table 4: Selected Developing Member Countries: Structure of Central Bank’s Balance Sheet, 2008
(% of total assets and liabilities)

<table>
<thead>
<tr>
<th>Item</th>
<th>Afghanistan</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Kyrgyz Republic</th>
<th>Tajikistan</th>
<th>Nepal</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Foreign</td>
<td>95</td>
<td>72</td>
<td>71</td>
<td>48</td>
<td>26</td>
<td>82</td>
<td>78</td>
</tr>
<tr>
<td>Claims on government</td>
<td>–</td>
<td>–</td>
<td>20</td>
<td>49</td>
<td>–</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Advances</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Securities</td>
<td>–</td>
<td>–</td>
<td>20</td>
<td>–</td>
<td>–</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Claims on banks</td>
<td>–</td>
<td>12</td>
<td>6</td>
<td>–</td>
<td>74</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>16</td>
<td>4</td>
<td>2</td>
<td>–</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Liabilities</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Foreign</td>
<td>1</td>
<td>19</td>
<td>28</td>
<td>–</td>
<td>7</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Deposits of banks</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Deposits of government</td>
<td>19</td>
<td>16</td>
<td>24</td>
<td>9</td>
<td>36</td>
<td>–</td>
<td>0</td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>38</td>
<td>52</td>
<td>37</td>
<td>59</td>
<td>60</td>
<td>53</td>
<td>31</td>
</tr>
<tr>
<td>Others</td>
<td>18</td>
<td>6</td>
<td>3</td>
<td>16</td>
<td>–</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Capital and reserves</td>
<td>21</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>(14)</td>
<td>17</td>
<td>24</td>
</tr>
</tbody>
</table>

= not available, ( ) = negative.
Note: Total may not add up because of rounding.
Sources: Annual reports of central banks.

Effectiveness of Central Banks and Their Role in the Global Financial Crisis: Case of Selected Economies
In the case of Nepal and Sri Lanka, capital and cash reserves, in contrast, have accounted for a much larger share of total assets, averaging about 20%. This presumably reflects the much longer record of profits being put to reserves. These profits provide a much larger cushion against increasing interest costs in connection with liquidity mopping up operations. Nepal did post significant revaluation losses in 2007 as a result of the appreciation of the Indian rupee, but the resulting decline in equity was made up in 2008. Sri Lanka also posted significant revaluation losses in 2008, reflecting, in this case, realized revaluation losses as the country sold large amounts of foreign exchange as the rupee depreciated.

## Financial Soundness of the Banking System

The effectiveness of the central bank and the specialized agency acting as regulator and supervisor of the banking system can be judged by examining the financial soundness of commercial banks. The banking systems in the selected countries have generally been able to maintain or improve their financial performance in recent years, but the global financial crisis is creating considerable stress almost everywhere. Capital adequacy ratios (CARs) have been consistently high in the countries of the Caucasus and Central Asia, except for Georgia, and improving in South Asia (Table 5). This has been made possible by retained earnings and capital raising exercises. Nevertheless, the weight of insolvent state banks has continued to negatively impact CARs, especially in Nepal. Nonperforming loans (NPLs) as a proportion of total loans have generally declined, reflecting an improvement in risk management and bank supervision, as well as the contribution of rapid credit growth and the buoyant economic environment until 2008. The NPL ratio, however, rose sharply in Georgia in 2008, partly because of the more stringent loan classification and income recognition standards that were imposed. To a lesser extent, it also rose in Armenia and the Kyrgyz Republic and moved up in Sri Lanka. Provisioning coverage has generally been adequate across the selected countries, except for Tajikistan. In several countries, however, the provisioning coverage has declined during years of exceptionally rapid credit expansion, and now further with the global financial crisis.

Reflecting above-norm interest rate spreads, and the rapid growth of the economy and credit, profitability has been exceptionally high in the selected countries of the Caucasus and Central Asia, and good as well in Nepal and Sri Lanka, although the global financial crisis has severely affected profitability in Georgia in 2008. On the other hand, liquidity indicators have been tight and deteriorating somewhat in the years to 2008, and then abruptly worsened in 2008. In Armenia and Sri Lanka, for instance, the loans/deposits ratios had already risen to above 90% by 2007. There has also been greater reliance on borrowing, including foreign borrowing, in several cases, including Armenia, Georgia, and Sri Lanka, which has presented considerable roll-over risks.

Rapid private sector credit growth presents considerable credit risks. These risks have been heightened by the fact that a significant part of the credit growth has been in new areas, such as home mortgages and consumer loans. In Georgia, for instance, home mortgages
now account for as much as 20% of loans. An abundant liquidity in the years leading to 2008 fueled a rapid rise in home prices in many of the selected countries, especially in Georgia and Nepal. Any decline in these prices as a result of the global financial crisis worsens the domestic financial and economic outlook and could significantly affect the performance of the loan portfolio, directly in the case of mortgages, but also indirectly since real estate has often been used as collateral for other types of loans. In the Caucasus and Central Asia, stringent provisioning requirements were introduced in recent years, with 1%–2% general provisioning for standard loans being required. The regulator has also closely tracked the performance of loans in the various substandard categories. Sri Lanka likewise introduced special prudential rules for consumer loans in addition to a general provisioning requirement of 1% for all currently performing loans. But, generally, more could probably have been done to strengthen the risk management systems as the credit boom took place. The decline in the provisioning coverage also suggests some complacency, as do the lax criteria for loans classification.

**Liquidity risks appear to have been somewhat overlooked, despite the generally high loans and/or deposits ratios going into the crisis.** The fragile nature of the deposits of some of the banks—and, in the case of funding through short-term borrowing—the considerable rollover risks, were not sufficiently recognized. This was most evident in

<table>
<thead>
<tr>
<th>Item</th>
<th>Afghanistan</th>
<th>Armenia</th>
<th>Georgia</th>
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<th>Tajikistan</th>
<th>Nepal</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>32.0</td>
<td>27.5</td>
<td>13.9</td>
<td>30.8</td>
<td>24.2</td>
<td>4.0</td>
<td>13.0</td>
</tr>
<tr>
<td>NPL ratio (gross)</td>
<td>3.7</td>
<td>4.4</td>
<td>13.1</td>
<td>4.1</td>
<td>8.6</td>
<td>6.1</td>
<td>6.0</td>
</tr>
<tr>
<td>Provision coverage</td>
<td>–</td>
<td>38.2</td>
<td>70.2</td>
<td>56.7</td>
<td>26.9</td>
<td>125.0</td>
<td>64.7</td>
</tr>
<tr>
<td>ROA before tax</td>
<td>1.8</td>
<td>3.1</td>
<td>(2.6)</td>
<td>3.8</td>
<td>2.7</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>ROE</td>
<td>–</td>
<td>13.6</td>
<td>(12.6)</td>
<td>20.4</td>
<td>15.0</td>
<td>28.9</td>
<td>14.9</td>
</tr>
<tr>
<td>Liquid assets/total assets</td>
<td>–</td>
<td>–</td>
<td>23.8</td>
<td>30.4</td>
<td>81.0</td>
<td>30.2</td>
<td>–</td>
</tr>
<tr>
<td>advances/total assets ratio</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>64.0</td>
</tr>
<tr>
<td>Loans/deposits ratio</td>
<td>55.6</td>
<td>122.9</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>71.1</td>
<td>93.2</td>
</tr>
<tr>
<td>Borrowing/total funding</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>2.5</td>
<td>18.0</td>
</tr>
</tbody>
</table>

* = not available, ( ) = negative, CAR = capital adequacy ratio, NPL = nonperforming loan, ROA = rate of return on assets, ROE = rate of return on equity.

* Based on 2008 or latest available data.

Sources: Central banks.
the case of short-term foreign borrowing, but also applies to the excessive reliance on the interbank market for funding. Georgia and Sri Lanka were especially exposed to these risks. The liquidity risks have also been heightened by a growing maturity mismatch between assets and liabilities, reflected in a high negative “maturity gap” for the short-term maturities (and the opposite for the longer-term maturities). In Sri Lanka, this has recently prompted the central bank to consider regulatory guidelines on this mismatch.

**Stress tests have generally highlighted the greater vulnerability to credit and asset quality and liquidity risks rather than to exchange rate and interest rate risks in the selected countries.** This was reported by the IMF and World Bank in their Financial the Sector Assessment Program (FSAP) for the Kyrgyz Republic, Nepal, Tajikistan, and Sri Lanka. In the case of Sri Lanka, however, the interest rate risks appear to be relatively high as well, exacerbated by the mismatch in maturities.

**Credit risks might be lurking behind low exchange rate risks.** While the implementation of generally strict limits on open foreign exchange positions has limited the direct foreign exchange risks for the banks, there is no guarantee that the borrowers have hedged their foreign exchange exposure in case their businesses are focused on the domestic market rather than exports. A depreciation of the currency could then severely impact their profitability and ability to repay the loans, creating potentially large credit risks for the banks. Reports of a high and, at times, growing level of dollarization of both deposits and assets with banks only add to these concerns.

**Market participants in several countries also pointed to severe data weaknesses.** The implementation of accounting and auditing standards is frequently weak and expectations are that loan quality is frequently not fully reflected in bank official data. The situation of banks could therefore be weaker than indicated by the above data. In none of the countries were there talks of any systemic crisis, however.
Lessons and Policy Recommendations

The experience of selected developing member countries (DMCs) in the 5-year period leading to the global financial and economic crisis and at the outset of the crisis offer a broad set of lessons for both governments and central banks to ensure more effective policy and implementation coordination between the macroeconomic and monetary policy management, and financial soundness policies.

None of the selected countries’ banking systems had been directly exposed to the financial crisis that started in the banking systems of advanced economies, but the indirect impact has already been felt sharply in most countries, and could be intensified further, except for Nepal. First, the initial and quickest shock has been on the ability to borrow abroad on reasonable, or indeed any, market terms, as sources of external financing for both the government and the private sector have dried up. This has been most dramatic in Armenia, Georgia, and Sri Lanka so far. There are also concerns about the ability of the Kyrgyz Republic to roll over short-term credit lines with Kazakh banks in 2009. Second, most banking systems have experienced a sharp slowdown or even a decline in their deposits base. The reasons appear to have been multiple: slowdown in economic activity, adverse impact of worsening exports values on cash flows, reversal of capital inflows, impact of slowing remittances, as well as lack of confidence. The changing trend in remittances was already observed starting in 2008 in Georgia and Tajikistan, as a result of the deteriorating economic situation in the Russian Federation. In fact, in both countries, remittances were lower in early 2009 than in the previous year. Remittances in Nepal and Sri Lanka have held strong so far, but could also deteriorate in view of the global crisis spreading to the Gulf countries, in particular. Remittances in Sri Lanka were declining in the first quarter of 2009, compared to the same period in 2008. These developments will make it hard to establish appropriate targets for monetary aggregates going forward.

Central banks across the selected countries were found to have generally taken quick and appropriate policy actions and have been vigilant, although the scope and effectiveness of these actions have varied. The National Bank of Tajikistan is an exception, as its involvement in commercial lending has resulted in financial distress to itself and the country. The variances in the scope and effectiveness of the central banks’ policy responses have reflected weaknesses in their monetary policy frameworks and some lingering distortions in the regulatory regime for their banking sector. Generally, the institutional frameworks and capacities of central banks have benefited from internal reforms although across the board, there is a need to invest more heavily in staff skills, both in monetary management and banking supervision systems.
The Legal Framework

Most of the central banks in the sample countries, barring the two in South Asia as well as Tajikistan, have laws that impart legal independence. But the track record of the central banks in asserting their independence in formulating and implementing monetary and banking policies is mixed. In the Caucasus and Central Asia, the key constraints have at times been political interferences. Nevertheless, the central banks in this region, except for that of Tajikistan, can generally be considered as quasi-independent as they have generally enjoyed autonomy in their day-to-day operations and in the regulation and supervision of banks. In these areas, however, the central banks’ effectiveness has often been undermined by bankruptcy legislation and ad hoc court decisions that have often overruled the decisions of central banks.

In Tajikistan, there is a compelling case for a complete overhaul of the law as well as for a comprehensive program of institutional development. It is encouraging that an amended central bank law now includes provisions that augur well for the central bank’s independence. However, the bill has yet to be finalized and passed by the parliament. In any case, the reform of legal frameworks has to be accompanied by strong political will to assign to the central bank the necessary level of autonomy and flexibility and to disassociate it from any commercial lending activities.

Nepal and Sri Lanka need to amend their laws to bring them at par with the best practices. These amendments should include explicit provisions to grant legal independence to the central bank and to strengthen its governance through the induction of board members who are more independent from government.

A common problem that needs to be resolved is the opaqueness of the process of changing the governor. In some cases, changes to the governor have occurred prematurely without the incumbent completing his or her term and without substantive reasons. As this reflects opaque compromises between the government and the central bank, the practice would reintroduce some form of subservience of the central bank.

In most cases, the application of fit and proper criteria in selecting board members needs to be strengthened. The roles and responsibilities of the board and management should also be in line with best practices. More public disclosure and accountability of the boards would also help reinforce their roles.

Macroeconomic Management and Challenges

The macroeconomic policies pursued in good times matter not only for the outcomes in terms of overall economic performance but also for determining how a country is likely to be affected by a global financial crisis.
Growing remittances and capital inflows are good for growth, but might be inflationary and subject to sudden volatility—especially capital inflows. Capital inflows, being largely debt, also contribute to a build up of the countries’ external debt, thus increasing the country’s vulnerabilities particularly to external shocks. Addressing these vulnerabilities proactively through tighter financial policies would put the country in a better position to withstand adverse external shocks.

Tighter fiscal policy would reduce the external current account deficit as well as inflation pressures and make the economy less dependent on foreign financing. It would also lessen the burden on monetary policy and the risk that higher domestic interest rates could create incentives for further destabilizing capital inflows. In addition, relatively low fiscal deficits and government debt levels would leave more room for possible fiscal stimulus if and when private sector demand decline to an unacceptable level.

A flexible exchange rate policy tends to support macroeconomic stabilization, and on balance, better position the country when adverse external shocks occur. In the period of upswing in foreign exchange inflows, letting the exchange rate appreciate to sustained market pressures in this direction facilitates the achievement of the inflation objective and relieves the pressures on monetary policy (for higher policy rates). This should also reduce the incentives for potentially destabilizing capital inflows. The country would find itself less vulnerable to a sudden stop and reversal in capital inflows. Hence, while a partial analysis might suggest a greater exchange rate adjustment in the crisis if before the crisis the exchange rate was allowed to appreciate, a fuller analysis along the lines discussed above might not yield that same conclusion.

The main macroeconomic challenge brought about by the global financial crisis has been adjusting to the declining foreign exchange inflows, which had sustained economic growth for a number of years. In part, the adjustment is likely to be automatic. For instance, the recipients of remittances will simply consume less if these remittances decline. To some extent, however, the adjustment might need to be further supported by appropriate macroeconomic stabilization policies, unless official financing becomes more available. Otherwise, the countries under study would be facing significant losses of international reserves or a sharp depreciation of their currency, as already observed. The currency depreciation could result in renewed price inflation.

The governments of selected countries have been struggling with the implications of adjustment policies for economic growth at a time when exports growth has stalled and the households are facing retrenchments, thus threatening economic activity. Some countries, Sri Lanka for instance, while allowing some depreciation of the currency, seem to have focused more on maintaining growth through a planned fiscal stimulus package financed by donors and a more accommodating monetary policy—as inflation has also fallen rapidly, partly due to the correction in international commodity prices. Georgia had adopted a similar policy approach and had also lowered the policy rate significantly.
Armenia, on the other hand, after initial attempts to maintain an accommodating stance, has let the exchange rate depreciate while trying to stabilize its fall with an increase in the policy interest rate. The Kyrgyz Republic has also allowed more exchange rate flexibility, but has still intervened significantly, fearing the implications of a sharp depreciation on inflation and the soundness of the banking system. Generally, the risks are on the downside in all selected countries of the Caucasus and Central Asia, given the uncertainties of economic developments in the Russian Federation (and Kazakhstan), and the likelihood that remittances might further decline and export prospects worsen. This also applies to Nepal and Sri Lanka.

Monetary Policy Management and Challenges

Both institutional considerations, in particular the level of financial markets development and economic considerations, must bear on the assessment of each country’s monetary policy framework.

- **Where financial markets are weak** (e.g., thin secondary markets for government securities, poorly functioning and shallow interbank markets, and absence of competitive behavior by banks to attract retail deposits), the transmission mechanism from policy rates to other interest rates directly affecting aggregate demand tends to be weak as well.

- The weak dependence of aggregate demand and, thus, prices on market interest rates, and the possibly stronger dependence on monetary aggregates could be understood in the context of a significant credit channel to monetary policy (although interest rates also play a role in this), as well as a significant direct real money wealth effect, especially given the relatively high share of currency in monetary aggregates.

- Both considerations above would support the focus on monetary aggregates rather than interest rates as operational and intermediate targets for monetary policy, although consistent policy interest rates should still serve as a powerful signaling device. The authorities, though, should be concerned with their ability to properly estimate monetary aggregates consistent with the inflation objective, particularly in a rapidly changing macroeconomic environment.

- Policy rate adjustment must be flexible and consistent in areas where better functioning interest rate channels prevail (e.g., in Armenia and Sri Lanka). This is the key to guiding the market rates to the level necessary to meet the inflation objective. Monetary targets might still play a secondary role to that played by the policy and target market interest rates. Otherwise, greater volatility in interbank rates could undermine the signaling of the monetary policy stance through policy rates. In this regard, the renewed emphasis on reserve money as the primary operating target in Sri Lanka may have its risks.
The overshooting of the inflation objective appears to correlate primarily with the overshooting of the monetary targets. The inflation objective has been met in only a few instances when the monetary targets overshot, essentially in cases where re-monetization was much stronger than anticipated. **Liquidity management has thus been a main issue in most countries.** To a large extent, this was correlated to the exchange rate policy pursued, with not enough of the liquidity injected as a result of the interventions on the foreign exchange market being mopped up.

Most selected DMCs appear to have the tools to conduct the necessary open market operations (OMOs), but perhaps not the will to see the required higher interest rates, either because of concerns about their impact on aggregate demand and/or on the income position of the central bank. A clearly articulated budget policy of absorbing the cost of a sustained need for sterilization would increase the probability of correct policies being pursued.

Reform should focus on getting the central bank out of the primary treasury bill (TB) market as a lender of last resort to government in countries where the primary TB market and the conduct of monetary policy is less segregated. To the extent it is needed, liquidity management could operate ahead of TB auctions through repo or reverse repo operations to smoothen out the volatility in market interest rates.

There is little evidence of the financial health of the central bank undermining the conduct of monetary policy, except in Tajikistan. Nevertheless, the negative net worth of the central bank of Armenia and Tajikistan is a concern since this could make it more difficult for the banks to generate profits. The situation needs to be remedied by recapitalization, with the cost of recapitalization borne by the budget. The cost of mopping up excess structural liquidity borne by the central bank in a number of countries is also a concern because of its negative implication for the income position of the central banks. While greater exchange rate flexibility would reduce the need for mopping up liquidity, the budget should, in the future, transparently provide for the cost associated with these operations.

The effect of the sudden stop and reversal of capital inflows on the domestic economy has been similar to that of an exogenous tightening of financial policies, especially where there was an initial attempt to prevent a depreciation of the exchange rate. The macroeconomic challenge for the central banks is to assess to what extent monetary policy needs to support (increase policy interest rates) or counteract (decrease policy interest rates) this tightening up. This extent would depend on the slump in demand on the output gap and the inflation picture, as well as on the international reserves cushion, if any, and on exchange rate pressures. Authorities who view maintaining domestic demand as key and who have loosened monetary policy (e.g., Georgia and Sri Lanka), should be concerned with the possibility that the policy might facilitate capital outflows. Difficulties
Lessons and Policy Recommendations

in assessing the appropriate level of reserve money that ought to be maintained in a post-crisis environment occur if reserve money is the operating target. Fiscal policy should also be adjusted to the availability of external financing on market terms as well as from official sources. External financing from official sources would determine the possible scope for a fiscal stimulus to boost output and employment. The anticipation of significant additional external financial support in Armenia, Georgia, and the Kyrgyz Republic has allowed these countries to envisage fiscal stimulus packages at 2% of gross domestic product (GDP). In all cases, greater exchange rate flexibility is crucially needed to relieve the pressure on monetary policy and assist the adjustment process.

All selected countries, except for Afghanistan and Nepal, have already faced liquidity problems in connection with the observed slowdown in deposits and the non-rollover of certain credit lines. Presumably because of the perceived systemic nature of these problems, the central banks in Georgia, Sri Lanka, and Tajikistan have cut their cash reserves requirement in late 2008 and early 2009 in response to the liquidity crunch.

The central banks’ focus on addressing the liquidity needs of the banking systems in the face of the global financial crisis was appropriate to prevent the collapse of banks. However, their interventions must eventually be consistent with the monetary policy stance required as part of their overall macroeconomic stabilization program. This might be facilitated by more targeted liquidity provision mechanisms, for instance under a lender-of-last-resort (LOLR) facility. This is already being implemented in Georgia and the Kyrgyz Republic, following Armenia.

There is a potential conflict between such cuts in the cash reserves requirement and the needs of macroeconomic stabilization. Unlike liquidity assistance under the LOLR facility, which involves a loan repayable and a penalty interest rate, a cut in the cash reserves ratio could more easily result in the possibility of banks using the freed-up liquidity to support a reversal of capital flows. This could seriously put the international reserves of the central bank at risk. Hence, confronting a severe liquidity crunch in its banking system, the central bank of Armenia provided liquidity support only under its LOLR facility.

The authorities might consider guaranteeing the banks’ foreign borrowing if access to foreign lines of credit for banks is essential to maintain activity. This should only be done after full assessment of the solvency and viability of the banks concerned. Extending deposit insurance schemes would also encourage the depositors to keep funding the banks. Government guarantees and asset swaps could be an option if the interbank markets have frozen.

Maintaining Banking System Soundness

Maintaining the financial soundness of the banks, as the feedback loop from the finance and external sectors to the real sector proceeds, will be especially challenging. Some of the risks have not yet materialized, but may do so in the future. As this study highlighted, liquidity and credit risks are the main concerns. While the immediate
liquidity risks would have been addressed through assistance from the central banks, measures need to be put in place to reduce the possibility of these risks occurring. On the one hand, stress tests should be conducted regularly by central banks to identify the banks facing the greatest liquidity risks, and consider remedial actions, including targeted liquidity support, in particular through last resort facilities. On the other hand, prudential regulations should be introduced to limit maturity mismatches.

**Besides liquidity challenges, the global financial and economic crisis is likely to adversely affect the quality of the banks’ assets.** As the crisis progresses, credit risks are likely to worsen, reflecting the expected further deterioration in the corporate sector’s financial position in the near term. As the growth in loans declines, nonperforming loans are likely to increase. Again, stress tests should be conducted to locate and quantify the greatest credit risks. Provisioning should be intensified, and timely corrective action plans should be formulated for banks viewed as viable if capital adequacy ratios are no longer met. In the case of Nepal and Sri Lanka, there is a strong case for aligning the loan classification and provisioning standards to conform to best practices.

**Given the likely limited scope for mobilizing, externally and on market terms, equity resources for recapitalization, the governments would be called upon to contribute resources, including foreign donor assistance.** Some of the financial support from international institutions could be used for the recapitalization of the banking sector, as needed, since the room for government support with recapitalization is likely to be limited. A strategy for dealing with insolvent banks must also be formulated. Capitalization of deposit insurance funds, already under way in several of the selected countries, should help improve confidence in the banking sector. Given the fragmentation of the banking system in most countries, the global financial crisis and government assistance should be viewed as an opportunity to foster banking sector consolidation through mergers and acquisitions.

**Significant dollarization in the Caucasus and Central Asia is likely to increase credit risks if exchange rate depreciation is part of the necessary macroeconomic adjustment.** The policy answer should not be to put artificial limits to dollarization, but rather to prevent domestically oriented companies to get much dollar denominated loans, for instance, by making their availability a function of the percentage of the companies’ revenue in foreign exchange.

**High levels of dollarization would also continue to complicate the conduct of monetary policy** (Box 4). The likely volatility of the (domestic) money demand and exchange rate needs to be reckoned with, even if the targeted monetary aggregates can be defined to include foreign currencies, which cannot be directly controlled by the central bank. These factors could strengthen the argument for an inflation targeting framework in highly dollarized countries. On the other hand, while the research findings that inflation is more responsive to monetary adjustment in such countries would be a positive factor, similar findings that the exchange rate pass-through into prices is also higher could prove disruptive in an inflation targeting framework. Ultimately, addressing the factors that
Lessons and Policy Recommendations

Box 4: Implications of Dollarization

A widely held view among economists and policy makers is that dollarization makes monetary policy more complex and less effective. It is argued that dollarization generally implies higher volatility of (domestic) money demand and higher exchange rate volatility.

A 2006 Bank of International Settlements (BIS) study is more nuanced: “Both the literature and our own empirical results suggest that partial dollarization does not necessarily help reduce inflation.” It notes that studies based on currency substitution showed that dollarization might increase the volatility of money demand due to the reduced costs of switching from domestic to foreign currency holdings to avoid the effects of inflation. A side effect of this is that currency substitution should also increase exchange rate volatility (if the exchange rate regime allows). It also refers to another strand of the literature that emphasizes the weaker monetary transmission in dollarized economies.

As to the implication for the monetary framework, other studies indicate that a broader monetary aggregate, including foreign currency deposits, is superior in predicting future inflation. It could be argued that dollarization would favor inflation targeting, since inflation targeting does not require a stable relationship between money and inflation. However, the higher exchange rate pass-through on prices and the vulnerability of the economy to balance sheet effects are important disadvantages. The higher exchange rate pass-through will reduce the monetary authorities’ control of inflation, more so under a floating exchange rate, while the vulnerability to balance sheet effects may make the exchange rate flexibility required by inflation targeting disruptive and costly.

The BIS study notes that due to the “fear of floating” phenomenon, dollarized economies often tend to choose the exchange rate as their nominal anchor and this appears implicitly to have been the case of the Caucasus and Central Asian countries. As foreign exchange market interventions of monetary authorities provide implicit insurance against exchange rate risk, market development of exchange rate risk hedging instruments is impeded, leading eventually to higher financial fragility. Moreover, depending on the intensity of foreign exchange market intervention, monetary policy loses influence and the money supply becomes largely endogenous.

The higher pass-through to prices of exchange rate movements alone would indicate the desirability of reducing dollarization. The BIS study recommends a three-pillar approach: (i) ensuring that regulation encourages or, at least, does not penalize intermediation in domestic currency; (ii) promoting the use of local currency, or at least, indexed instruments; and (iii) gearing the institutional set-up of the central bank, as well as its monetary policy strategy, toward reducing uncertainty about the value of the local currency. This obviously implies that price stability should be the central bank’s main objective and independence should be granted so as to facilitate the achievement of this objective.

An earlier 2003 International Monetary Fund study, however, found that “there is little empirical support for the view that dollarization hinders the effectiveness of monetary policy.” In particular, it found no evidence that dollarization would hinder influencing inflation or

continued on next page.
Box 4: continued

**Box. 4 Implications of Dollarization**

add complexity to the monetary transmission mechanism. It does indicate that there may be higher pass-through to prices of exchange rate movements, which may be one of the reasons central banks in emerging markets appear disinclined to tolerate large exchange rate movements (“fear of floating”).


cause dollarization—broadly speaking the lack of confidence—should be the dominant reform agenda for the dollarization issue.

Plans to further strengthen the supervisory capacities of the central bank or specialized agency in a number of countries under review (Afghanistan and the Kyrgyz Republic, for instance) should be encouraged. Strict enforcement of prudential regulations, in particular loans classification and provisioning, legal immunity of supervisors, risk-based supervision, greater transparency, implementation of consolidated supervision, and development of capacities in the area of prompt corrective actions and bank resolution mechanisms are some of the special priorities in the context of the global financial crisis.
Part II

Country Studies
Afghanistan faces enormous economic challenges. The most notable of these are the rebuilding and reform of its institutions, putting its financing onto a sustainable path, and laying the foundation for growth and poverty reduction. These tasks have become increasingly difficult because of the growing insurgency and corruption. Social and economic conditions have improved, but poverty remains widespread, public enterprises pose fiscal risks, weak institutions and enforcement deter investment and deprive the government of resources, and domestic revenues cover only one-third of public spending, including development expenditure.

Afghanistan has attained strong economic growth fueled mainly by inflows of official grants to help rebuild its economy. Real growth averaged 12% a year in the 3 years ending March 2008.17 The fiscal and external accounts are structurally unbalanced, both relying heavily on foreign official inflows. Inflation, after remaining relatively moderate, picked up in the year ending March 2008. In general, performance under economic and financial programs supported by the International Monetary Fund (IMF) Poverty Reduction and Growth Fund (PRGF) has been mixed. Monetary and financial policies have generally been in line with the program, but some structural elements have been delayed.

During the year ending 20 March 2009, Afghanistan's economic, security, and political situation became increasingly challenging. The country experienced a drought and higher commodity prices in 2008, security worsened, governance issues hampered revenue collection, and the political environment has turned uncertain ahead of the presidential elections in August. The drought and higher commodity prices reduced growth and drove up inflation. Economic growth fell to about 3% in 2008/09 compared to 12% in 2007/08, mainly reflecting a sharp decline in agricultural output.18 Outside the formal sector, the United Nations estimates that opium production fell because of low opium prices and efforts to discourage poppy production. The drought, which affected mainly cereals, and the restrictions on wheat exports by regional trading partners added to domestic food price pressures, combined with higher fuel prices, pushed the 12-month inflation rate to a peak of 43% in May 2008. Lower world prices since then allowed inflation to fall to 9% in February 2009. The external current account balance worsened because of emergency wheat imports.

17 Afghanistan follows the solar year. The current year is the year 1388, which ends 20 March 2010. Year 2007/08, for instance, refers to the period between 21 March 2007 and 20 March 2008.
18 Agriculture accounts for about 30% of the formal economy. A large informal sector, including production and exports of opium, is not included in official statistics.
The international financial and economic crisis had little direct or indirect impact. The finance sector is at a very early stage of development, and banks are not integrated into the international financial system. Exports and inflows of transfers and capital have been little affected. It is uncertain, however, whether the deteriorating fiscal situation in donor countries may affect financial flows to Afghanistan.

The Monetary Policy Framework in Theory and Practice

Conceptual Issues

Afghanistan has made limited progress toward introducing a modern monetary policy framework. That it is in the early stage of development, together with statistical difficulties, has until now limited the scope for the further development of the finance sector. The recent expansion of banks and the progress achieved in resolving statistical issues hold out hope for the further development of the monetary policy framework in the not too distant future.19

The maintenance of price stability is established as the primary objective of the Afghani central bank (Da Afghanistan Bank or DAB) in the 2003 Central Bank Law. Operationally, DAB seeks to maintain price stability by controlling growth rate of the currency in circulation. It mainly conducts monetary policy operations through interventions in the foreign exchange market in the form of cash dollar sales. It also conducts weekly auctions of 28-day and 182-day central bank securities, called capital notes. The volume is relatively small, however, in part because of the DAB’s concern over the need to increase the interest rate to secure an increase in volumes.

Significant improvements have been made to the capital note instrument since its inception in late 2004. The 1-day capital note was replaced by a standing facility and the 30-day note was replaced by a 28-day note in March 2006. A 182-day note was introduced in early 2007, at which time capital notes were also transformed to the more typical form of zero-coupon notes. More recently, DAB has allowed capital notes to be used as collateral in interbank transactions. However, interest rate determination is still opaque. DAB announces the volume of capital notes it intends to auction, but it does not let the auction determine at what interest rate the volume will be purchased. Rather, it looks at the bids and then determines the cut-off rate it is willing to accept, and the volume is then adjusted to that rate. In some auctions, none of the bids are accepted. DAB would provide more clarity to the market if it announces the interest rate and then satisfies all bids at this rate.

An overnight deposit facility has been in place since the beginning of 2006/07, replacing a 1-day capital note. The interest rate was initially set at 1.5% below the

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19 The central bank has been unable to produce a monetary survey using a unified time frame, but has recently reached understanding with commercial banks to ensure concordance among key data.
28-day capital note cutoff rate. Banks use this facility frequently, with deposits fluctuating significantly. Recently, the rate was reduced to the 28-day capital note rate minus 3% to encourage banks to use capital notes in their liquidity management.

An overnight credit facility was introduced at the same time. Banks may borrow against collateral in capital notes at an interest rate of 1.5% in excess over the 28-day capital note rate. This facility has been relatively infrequently used, in part because of the low outstanding amount of capital notes.

The basic elements of an interest rate corridor to guide interbank interest rates is thus in place. However, given the low level of interbank activity and the rudimentary stage of the monetary framework, the implied corridor is not operational.

Finally, DAB maintains a reserve requirement for central banks. The requirement is set at 8% for both foreign and domestic currencies. It is not, however, being used actively as a monetary policy instrument.

Estimates show that the degree of dollarization in Afghanistan is significant, both in the form of dollar cash and in foreign currency deposits. Estimates of dollar cash in circulation are not available; foreign currency deposits amount to about 80% of deposits with banks. Confidence in the afghani has increased to the point of indifference between cash foreign currency and afghani, at least for transaction purposes. Currency substitution undermines the effectiveness of foreign exchange auctions as a tool of monetary policy since the auction only changes the composition of the overall stock of money, not its size. Further developing the use of capital notes to affect overall liquidity is needed.

**Performance in Practice**

**Inflation, Growth, Policy Interest Rate, and Monetary Aggregates**

Afghanistan’s inflation performance has been mixed and heavily influenced by climatic conditions and international prices. Except for 2007/08, inflation has been broadly in line with initial targets (Table 6). After falling to 4.8% in 2006/07, inflation picked up sharply in 2007/08 to 20.7%, reflecting mainly the higher prices of imported fuel and foodstuffs. Because of the drought in 2008 and restrictions on wheat exports by regional trade partners, food prices pushed inflation to a peak of 43% in May 2008. Lower world market prices have since then allowed inflation to fall back to 8.5% by March 2009.

Given the limited monetary framework, policy rates have been used infrequently to address inflation. Real policy rates were increased somewhat in late 2007, when inflation started to accelerate, but turned significantly negative in 2008 (Figure 11).

There is also little evidence that the monetary policy stance has been unduly influenced by growth concerns. Under the Taylor rule approach, central banks effect a change in the real policy rate depending on the deviation of the inflation rate from its target, as well as on the deviation of real growth from its long-run equilibrium, with country-specific
Table 6: Afghanistan Target Policy Variable and Outcome, 2004/05–2008/09 (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>2004/05</th>
<th>2005/06</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09</th>
</tr>
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<tbody>
<tr>
<td><strong>Targets and Estimates</strong></td>
<td></td>
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</tr>
<tr>
<td>Growth of currency in circulation</td>
<td>25.7</td>
<td>38.0</td>
<td>18.44</td>
<td>18.7</td>
<td>33.1</td>
</tr>
<tr>
<td>Inflation</td>
<td>10.2</td>
<td>13.0</td>
<td>9.0</td>
<td>12.0</td>
<td>15.6</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>16.0</td>
<td>7.5</td>
<td>8.0</td>
<td>13.5</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth of currency in circulation</td>
<td>34.6</td>
<td>14.6</td>
<td>13.3</td>
<td>17.0</td>
<td>27.3</td>
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<tr>
<td>Inflation</td>
<td>14.9</td>
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<td>4.8</td>
<td>20.7</td>
<td>8.5</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>8.1</td>
<td>16.1</td>
<td>8.2</td>
<td>11.5</td>
<td>3.0</td>
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</tbody>
</table>

GDP = gross domestic product.

Source: Afghan authorities.

Figure 11: Afghanistan Real and Nominal Policy and Inflation Rates (%)
weights attached to the two elements. There is no evidence that real policy rates were high when inflation was unexpectedly high. Nor is there any evidence that real policy rates were reduced in response to low growth (Figure 12). Again, given the current monetary policy framework, these findings are expected.

There are still significant data problems in monetary statistics in Afghanistan. Thus, the IMF does not yet publish a monetary survey, nor does it yet rely on reserve money as an operational target. The following discussion is based on available statistics published by the DAB as supplemented by IMF data.

Reserved money has grown quite rapidly in recent years (Figure 13). The main contributing factor to reserve money has been the large inflows of current official transfers that have not been fully passed through to the market. Net claims on government has, in most years, had a contractionary impact on reserve money as government has built up deposits, and cannot borrow from the DAB according to law. In the first quarter of 2009, a sharp drawdown in government deposits, as government was having difficulty raising revenues, led to monetary expansion.

Available data indicate that broad money has also increased quite rapidly in the last few years (Figure 14; data for earlier years is not available). The increase in net foreign assets was the main contributing factor to this monetary expansion. However, lending to

![Figure 12: Afghanistan Real Policy and GDP Growth Rates (%)](image)

GDP = gross domestic product.
Figure 13: Afghanistan Contributions to Reserve Money Growth
(annual, in % of beginning of period reserve money)

Figure 14: Afghanistan Contributions to Broad Money Growth
(annual, in % of beginning of period of broad money)

Q1 = first quarter, Q3 = third quarter.
the private sector, in part spurred by the creation of new private banks, has also expanded rapidly, albeit from a low base. Private sector credit tripled in 2006/2007 and grew by 83% in 2007/2008. As a result of the rapid growth in the number of new private banks, the share of state-owned banks in the total banking assets has declined from 38.7% in 2005/2006 to 19% in 2007/2008.

**Foreign official transfers have increased significantly over 2003–2008, reflecting donors’ support of the government’s reconstruction efforts** (Figure 15). In 2008/09, current transfers amounted to $6.9 billion, more than 10 times official exports, and equivalent to close to 60% of gross domestic product (GDP).

**Management of Reserve Money Growth and Policy Rate**

Given that the central bank and the financial system in the country are at the early stages of development, the DAB has focused on currency in circulation as its main policy variable. DAB has been quite successful in achieving targets as established under the PRGF facility. In the last 3 years, currency in circulation has consistently been within the agreed parameters. However, questions have been raised on the appropriateness of foreign currency auctions as the best policy instrument to achieve this objective. Given the high degree of substitution between foreign currency cash and afghani, such currency auctions would seem to mainly change the composition of the total amount of currency in circulation, but not change the overall volume. As noted earlier, increased focus should therefore be placed on the capital notes as the principal instrument to regulate liquidity.

![Figure 15: Afghanistan Current Transfers ($ billion)](image-url)
Shifting the policy variable from currency to reserve money should be considered, given the rapid increase in credit growth. Banks are increasingly creating additional broad money through loan expansion. Whereas currency in circulation is estimated to have accounted for 90% of broad money in 2005/06, its share had dropped to less than 50% by 2007/08. It would therefore seem appropriate to start focusing on reserve money rather than currency in circulation as the principal policy variable, since the relationship between reserve money and broad money is likely to be more stable in the changed situation of the Afghani banking system.

Interest rate policy does not seem to have been directed explicitly at influencing monetary aggregates and the level of inflation. After fluctuating from 6% to 8% for most of 2005/06 and 2006/07, the 28-day policy rate rose to 14.9% at the end of 2007/2008 as volumes were increased to some extent. It, however, stayed significantly below the inflation rate in 2007/08. The 28-day policy rate was not allowed to increase significantly in 2008/09 and became increasingly negative when inflation peaked, and has since fallen back to 9.9% by the end of 2008/09, when it was slightly positive as inflation fell even faster. Concern over interest costs appears to be the main motivation for not increasing auction volumes since this would likely lead to higher interest rates.

Monetary Policy Transmission Mechanism

The monetary policy transmission mechanism is not functioning well in Afghanistan. There are problems associated with targeting currency in circulation as the primary operational variable, and these have been noted above. At the same time, it is too early to expect a well-developed interest rate transmission mechanism in Afghanistan. Banks (and the DAB) still have limited experience in liquidity management and there is very little interbank lending. Observing the limited available information, there appears to be an inverted relationship between the policy rate and bank lending rate, as the bank lending rates declined during the period when the policy rate was increased (Figure 16).

It is appropriate to target monetary aggregates rather than market interest rates. As noted above, consideration should be given to broadening the monetary aggregate to include reserve money rather than currency in circulation.

Exchange Rate and Gross International Reserves

DAB takes a central role in the foreign exchange market. Given that the large official foreign exchange inflows are channeled through DAB, there has been little scope for an interbank market to develop.

DAB conducts its intervention in the foreign exchange market through bi-weekly auctions. These auctions have undergone substantial changes in line with the recommendations of successive technical assistance missions. Initially, open outcry cash auctions were held exclusively for foreign exchange dealers in Kabul and the banks would purchase from DAB at a significant spread. Now, the scope of the auctions has been broadened so that foreign exchange dealers in the provinces and the commercial banks
can participate. The auctions, however, continue to be dominated by the foreign exchange dealers, who typically settle transactions in cash. This is inefficient and gives little scope for developing an interbank market. DAB should move to develop a wholesale foreign exchange market dominated by banks that could settle through their accounts at the DAB.

The exchange rate has shown relatively little fluctuation vis-à-vis the US dollar, given the large role of DAB in the foreign exchange market. DAB has formalized a rule whereby it manages the foreign exchange auctions to avoid exchange movements in excess of 5 basis points from the previous auction, when this does not imply unacceptable departures from the target for currency in circulation. The real exchange rate has shown larger fluctuations, given the higher and fluctuating level of inflation in Afghanistan.

The global financial crisis has had little impact on the exchange market. The average exchange rate for March 2009 was AF51.61, but by 25 April, the afghani had appreciated to AF49.86 per US dollar, above the average for 2008/09 (Table 7 and Figure 17). Gross reserves continued to increase through March 2009, and are at a comfortable level of 11 months of imports.

Central Bank Balance Sheet

The accounts of the central bank were given a qualified audit opinion for the year that ended in March 2008. The auditors noted that for previous years, “the accounting information ... was not fully substantiated with appropriate support and documentary
Table 7: Afghanistan Exchange Rates and International Reserves, 2002/03–2008/09

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross international reserves ($ million)</td>
<td>425</td>
<td>820</td>
<td>1,283</td>
<td>1,662</td>
<td>2,040</td>
<td>2,784</td>
<td>3,103</td>
</tr>
<tr>
<td>Import coverage</td>
<td>1.8</td>
<td>1.3</td>
<td>3.1</td>
<td>7.7</td>
<td>9.6</td>
<td>12.7</td>
<td>11.3</td>
</tr>
<tr>
<td>(no. of months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afghani per $</td>
<td>44.8</td>
<td>49.1</td>
<td>47.7</td>
<td>49.7</td>
<td>49.9</td>
<td>49.8</td>
<td>50.9</td>
</tr>
<tr>
<td>(year average)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REER (percent change)</td>
<td>21.0</td>
<td>12.4</td>
<td>(11.2)</td>
<td>2.7</td>
<td>(2.0)</td>
<td>3.1</td>
<td>15.5</td>
</tr>
</tbody>
</table>

( ) = negative, REER = real effective exchange rate.
Source: International Monetary Fund.

Figure 17: Afghanistan Exchange Rate
($ per afghani)
In August 2007, DAB significantly implemented a Core Banking System accounting framework. However, a comprehensive exercise to reconcile records and data fed into the core system was not fully completed. The auditors noted a difference of AF4 billion between data from the accounts and data on foreign exchange deposits with banks abroad.

DAB still provides limited advances to ministries and the Office of the President, although this is prohibited by law. In 2007/08, such lending amounted to AF137 million. Moreover, DAB continued to provide commercial bank services in some locations, in contravention of the law. The auditors also note that internal controls were neither fully implemented nor fully effective.

The auditors note a shortfall in authorized capital. According to the law, the government will recapitalize the central bank if its authorized capital falls below 5% of monetary liabilities, which does not appear to take place in a timely manner. This is a problem of form more than substance as reserves significantly exceed the required amount. Nevertheless, the situation should be corrected.

DAB has been incurring reasonable amounts of profits. However, more than half of these profits is accounted for by unrealized exchange valuation gains.

Financial Soundness and Risk Management

As of the end of March 2008, banks were well capitalized. The average capital adequacy of 32% was well above the statutory minimum requirement of 12%. However, there is considerable variation across individual banks. In particular, some private banks that have recently expanded their loan portfolio at a rapid pace have, on a few occasions, seen their capital adequacy fall below the required minimum. The capital of all banks is well above the minimum requirement of $5 million.

Nonperforming loans (NPLs), at 3.7% at the end of March 2008, are relatively low. However, there are concerns that NPLs may not be properly classified, and that banks are reluctant to provision because of low profitability. Often, credit is provided without collateral to borrowers who lack experience in business relationships with financial institutions and are often unable to provide the financial statements and cash flow forecasts that could enable the banks to monitor their credit worthiness. Moreover, the assets of some banks are highly concentrated in a few industries. Finally, exposure to start-up companies and borrowers whose primary business activities are outside Afghanistan is high.

On-site examinations have revealed considerable violations of prudential regulations and suggest that corporate governance may be a critical problem. Five banks, accounting for more than 60% of assets were given a CAMEL rating of 4 (on a scale of 1-5 with 5 being the worst). Four more banks, accounting for 15% of assets, were given a rating of 3.

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These ratings are very poor, and DAB is taking corrective action, including conducting monthly monitoring and special targeted inspections.

State of Financial Intermediation

Structure of Financial System and Financial Deepening

**Banks dominate the financial system.** While no official estimates are available, banks in Afghanistan may be safely said to account for more than 90% of the assets of the finance sector, which consists of banks, foreign exchange dealers, microfinance institutions, and money service providers. In early 2009, there were 17 licensed banks, compared to 16 banks in 2001. Banks, which include three state-owned banks and six branches of foreign banks, had a total of 171 branches in 20 provinces in 2007. In addition to the formal banking sector, there are 311 foreign exchange dealers, 89 licensed money service providers, and

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Table 8: The National Bank of Afghanistan Balance Sheet, 2005/06–2007/08
(amounts in AF billion)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>96.0</td>
<td>100.0</td>
<td>117.7</td>
<td>100.0</td>
<td>157.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Foreign</td>
<td>76.8</td>
<td>80.0</td>
<td>108.8</td>
<td>92.4</td>
<td>148.8</td>
<td>94.5</td>
</tr>
<tr>
<td>Claims on government</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Claims on banks</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other assets</td>
<td>19.2</td>
<td>20.0</td>
<td>8.9</td>
<td>7.6</td>
<td>8.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Liabilities</td>
<td>96.0</td>
<td>100.0</td>
<td>117.7</td>
<td>100.0</td>
<td>157.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Foreign</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>1.3</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Deposits of resident banks</td>
<td>0.0</td>
<td>0.0</td>
<td>3.6</td>
<td>3.1</td>
<td>5.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>44.1</td>
<td>45.5</td>
<td>50.3</td>
<td>42.7</td>
<td>59.0</td>
<td>37.5</td>
</tr>
<tr>
<td>Capital notes</td>
<td>0.4</td>
<td>0.4</td>
<td>1.2</td>
<td>1.0</td>
<td>4.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Government</td>
<td>19.7</td>
<td>20.3</td>
<td>19.7</td>
<td>16.7</td>
<td>30.4</td>
<td>19.3</td>
</tr>
<tr>
<td>Due to IMF</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>21.8</td>
<td>22.5</td>
<td>24.6</td>
<td>20.9</td>
<td>23.6</td>
<td>15.0</td>
</tr>
<tr>
<td>Capital and reserves</td>
<td>10.0</td>
<td>10.3</td>
<td>16.8</td>
<td>14.3</td>
<td>32.6</td>
<td>20.7</td>
</tr>
<tr>
<td>Of which: Capital</td>
<td>1.5</td>
<td>1.5</td>
<td>(5.9)</td>
<td>(5.0)</td>
<td>(3.8)</td>
<td>(2.4)</td>
</tr>
</tbody>
</table>

( ) = negative, IMF = International Monetary Fund.
Note: Totals may not add up because of rounding.
Source: Da Afghanistan Bank.
### Table 9: National Bank of Afghanistan Income Statement, 2005/06–2007/08 (AF billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2005/06</th>
<th>2006/07</th>
<th>2007/08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net interest income</td>
<td>1.909</td>
<td>3.336</td>
<td>3.748</td>
</tr>
<tr>
<td>Net fee and commission expense</td>
<td>0.175</td>
<td>0.142</td>
<td>0.164</td>
</tr>
<tr>
<td>Income from dealing in foreign currency</td>
<td>(0.215)</td>
<td>0.668</td>
<td>0.335</td>
</tr>
<tr>
<td>Unrealized exchange gain</td>
<td>0.000</td>
<td>2.811</td>
<td>3.240</td>
</tr>
<tr>
<td>General administrative expenses</td>
<td>(0.857)</td>
<td>(1.395)</td>
<td>(1.030)</td>
</tr>
<tr>
<td>Other income (expenses)</td>
<td>0.049</td>
<td>(1.135)</td>
<td>(1.103)</td>
</tr>
<tr>
<td>Net income</td>
<td>1.061</td>
<td>4.427</td>
<td>5.354</td>
</tr>
</tbody>
</table>

( ) = negative.

Source: Da Afghanistan Bank.

### Table 10: Afghanistan Financial Soundness Indicators, March 2006, 2007, and 2008 (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>March 2006</th>
<th>March 2007</th>
<th>March 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital adequacy ratio</td>
<td>37.0</td>
<td>55.0</td>
<td>32.0</td>
</tr>
<tr>
<td>Capital to total assets ratio</td>
<td>–</td>
<td>21.7</td>
<td>18.8</td>
</tr>
<tr>
<td>NPL ratio (gross)</td>
<td>2.4</td>
<td>3.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Provision coverage ratio</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ROA before tax</td>
<td>1.8</td>
<td>(0.3)</td>
<td>1.84</td>
</tr>
<tr>
<td>ROE</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Liquid assets/total assets ratio</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Loans and advances/total assets ratio</td>
<td>26.1</td>
<td>40.7</td>
<td>47.9</td>
</tr>
<tr>
<td>Loans/deposits ratio</td>
<td>37.9</td>
<td>51.5</td>
<td>55.6</td>
</tr>
<tr>
<td>Loans in foreign exchange</td>
<td>–</td>
<td>77.0</td>
<td>77.0</td>
</tr>
<tr>
<td>Deposits in foreign exchange</td>
<td>82.8</td>
<td>80.5</td>
<td>79.0</td>
</tr>
</tbody>
</table>

= not available, ( ) = negative, NPL = nonperforming loan, ROA = rate of return on asset, ROE = rate of return on equity.

Source: Afghani authorities.
14 microfinance institutions. DAB has 75 branches, 14 of which are in Kabul. The vast majority of DAB’s branches offer commercial banking services.

**Afghanistan’s banking system has been growing rapidly over the last few years** (Figure 18). Assets nearly tripled between 2004/05 and 2007/08. Asset expansion was driven by the establishment of new banks and a sharp rise in loan extension, which amounted to 171% in 2006/07 and 83% in 2007/08; and as a share in assets, rose from 15% to 48%. As a result of the establishment of new, more aggressive banks, the share of state banks in total assets has declined from 38.7% in 2005/06 to 19% in 2007/08. Developments have led to some concentration as the two largest banks account for 50% of assets. The bulk of lending (80%) is for trade and other commercial activity, with 77% being in foreign currency.

**Bank lending and deposit developments show a significant deepening, albeit from a low base.** The broad money/GDP ratio, at about 30%, and credit/GDP ratio, at about 10%, remain low (Figure 18).

**Bank Interest Spreads and Profitability**

**Interest rate spreads are wide, in part reflecting significant overhead costs.** In June 2007, the average afghani lending rate was about 20%, while that on afghani deposits was 7%. The wide interest rate spread reflects the high cost of doing business in Afghanistan, the absence of an institutional infrastructure for obtaining credit information, and the lack of competition in the banking sector. It also reflects a weak credit culture, weak credit collection, the lack of collateral, and insufficient bank capacity for proper credit assessment and risk management.

![Figure 18: Afghanistan Indexes of Financial Deepening (%)](image)

GDP = gross domestic product.
**Profitability is relatively weak.** Banks incurred minor losses in 2006/07, and the return on assets ratio in 2007/08 at 1.87% was low compared to those in countries at a comparable stage of development. This is worrisome in the context of aggressive lending, which may well require more significant provisioning. As noted above, some banks require additional capital, but profits appear insufficient to increase capital out of retained earnings.

**Armenia**

**The Macroeconomic Context**

Following a period of strong economic growth, Armenia has been severely impacted by the ongoing worldwide crisis. Under the government’s Poverty Reduction and Growth Facility program for 2005–2008, Armenia achieved double-digit growth in a low inflation environment, which helped secure a marked reduction in poverty. This strong performance was, to a large extent, due to effective macroeconomic policies, large-scale foreign exchange inflows, and a favorable global environment. Monetary and finance sector policies were generally prudent. Fiscal deficits were moderate at about 2% of gross domestic products (GDP), and while the current account deficits widened to 12% of GDP in 2008, capital inflows ensured overall balance of payment surpluses.

**Finance sector infrastructure, regulation, and supervision improved markedly.** Progress was made in money and capital market development and, as a consequence, financial intermediation nearly doubled, supported by a generally healthy banking system. Monetary and financial policy formulation and implementation framework was augmented to the extent that Armenia was able to introduce inflation targeting in 2006. However, Armenia remained as the country with the lowest financial intermediation ratios in the Caucasus and Central Asia.

**The global crisis brought multiple shocks.** Remittances and capital inflows decelerated markedly and falling commodity prices adversely affected mining, a key export sector. GDP growth came to an abrupt halt in the fourth quarter of 2008, declining by 0.2% from the level in the fourth quarter of 2007. Nonetheless, a respectable growth of 7% was achieved for the year as a whole, on the strength of the growth in the first three quarters. Moreover, bank deposits declined in the last quarter of the year and dollarization increased, which brought about liquidity problems for some banks. At the same time, the dram came under pressure and the Central Bank of Republic of Armenia (CBRA) initially tried to support the exchange rate, and in the process started losing reserves fairly rapidly. Under these pressures, the authorities’ inflation targeting framework was de facto temporarily discontinued.

**Prospects for 2009 are grim.** For the first time in a decade, the economy is projected to contract by 0.7% in January. Remittances and capital inflows are likely to decline further by 30% to 40% and commodity prices are not expected to fully recover. The impact of
these developments on the finance sector is uncertain. Rapid credit expansion has come to a stop and it remains to be seen whether the economic slowdown and a fall in real estate prices will impact severely on loan quality and bank profitability.

The authorities have taken strong decisive action. On 3 March 2009, the authorities announced that Armenia would return to a flexible exchange rate regime and that government would only intervene to smoothen out extreme volatility. The announcement was supported by a 1 percentage point increase in the refinancing rate (the policy rate). The authorities have also pledged to provide liquidity support to banks, address bank-restructuring issues, if needed, and further strengthen banking supervision. The dram depreciated by about 20% immediately following this announcement but appears to have stabilized at this level. The authorities are expected to gradually return to their inflation-targeting framework. The authorities’ program was supported by exceptional access to a stand-by arrangement from the International Monetary Fund (IMF) in the amount of 400% of quota.

The Monetary Policy Framework in Theory and Practice

Conceptual Issues

Armenia has made very good progress in introducing a modern monetary policy framework. Significant changes were made to the framework in March 2006, with the objective of moving rapidly to inflation targeting and of focusing on the refinancing rate as the target policy variable. Inflation targeting thus became more explicit starting in 2008. Nevertheless, the CBRA looks at an eclectic mix of indicators in setting its policy. Thus, monetary aggregates still seem to be important, and certainly are used as indicative targets in the context of IMF-supported programs. Notably, the CBRA has, on occasion, paid special attention to the exchange rate.

All the elements of an inflation-targeting framework are in place. Since the beginning of 2008, the CBRA has been publishing quarterly its monetary policy program, examining inflation developments in the previous quarter, and projecting likely developments in the year ahead in the form of a “fan-chart” based on the likely development in monetary policy. Thus, given the downward trend in inflation, the CBRA, in its first quarter 2009 report, points out that the inflation level in the last quarter of 2008 came just within the target band (4 +/- 1½%) and concludes that “the monetary policy adopted by the CBRA will be one of gradually loosening the monetary conditions.”

Monetary policy instruments are aimed at shaping a corridor for the movement of short-term interbank lending. The interest rate policy is signaled by the weekly 7-day repo, which fixes the policy interest rate (the refinancing rate) and accepts all bids at that rate. The refinancing rate is set during a monthly meeting of the CBRA board and communicated in a press release immediately following the meeting. Standing facilities (1 day Lombard

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and deposit facility) set the corridor around the policy rate. Accompanying this move was a significant reduction in the Lombard rate and a statement that the Lombard should no longer be viewed as an exceptional facility at a penal rate. Fine-tuning operations may be undertaken at the discretion of the CBRA using repo or reverse repos, outright sales or purchases in the secondary market, and currency swaps. Structural liquidity management is done through the sale of CBRA bills. A required reserve ratio is also in use, and may be used to address structural liquidity issues. The CBRA’s staff is technically very competent to support these measures.

The authorities intend to discontinue CBRA’s issuance of certificates of deposit (CDs) for mopping up structural liquidity. Instead, agreement has been reached with the Ministry of Finance, under which the latter would issue treasury bills (TBs) for this purpose. The point is somewhat moot at the moment, since banks have liquidity shortages, but it is a good decision in principle to avoid the CBRA having to carry the cost of monetary policy.

Recent developments have influenced the implementation of the monetary policy framework. Toward the end of 2008, the authorities de facto linked the exchange rate as the monetary anchor. The expectations of a significant depreciation rendered the interest rate tool virtually useless. At the same time, monetary aggregates are important within the IMF-supported program. While exchange rate flexibility has been restored, markets will need to settle before the authorities can again rely on the interest rate as their main policy tool. Moreover, monetary policy has been rendered less effective by the strong increase in dollarization, which reportedly has increased further in the first quarter to about 60%. More importantly, for an inflation targeting framework, the CBRA may have lost credibility in its failed defense of the dram.

Performance in Practice

Inflation, Growth, Policy Interest Rate, and Monetary Aggregates

The inflation performance has been quite good over the last 10 years. However, inflation ticked up and slightly exceeded targets after the introduction of the inflation-targeting framework. Despite these setbacks, performance remained better than in neighboring countries. This level of performance resulted initially from the moderating influence of the exchange rate appreciation on import prices, which led to virtual price stability in 2004 and 2005. Higher world market prices, unsterilized intervention, and strong domestic demand gradually led to increased inflationary pressures; and in 2006, inflation, at 5.2%, exceeded the announced target of 3 +/- 1½%. Inflation increased further in 2007 to 6.6% again exceeding the new target of 4 +/- 1½%.

The policy rate was initially raised slowly (perhaps too slowly), because the authorities felt that price increases emanated mostly from world price increases (energy and raw materials)

---

22 Initially, the repos were set at 14 days and the standing facilities at 7 days, but after receiving technical advice, the CBRA moved to shorter maturities.
outside their control. When it became apparent that inflationary pressures were more
durable, and increasing, the authorities took more decisive action, raising policy rates
in steps from 4.75% in July 2007 to 7.75% by September 2008. Inflation accelerated
further through mid-2008, but moderated in the fourth quarter as international prices
slowed down and as the monetary tightening took hold. At year-end, inflation at 5.2% was
(barely) brought back within the target band.

The real policy rate, having been brought down significantly, has fluctuated in recent
years (Figure 19). The rate turned negative in 2004 when prices spiked, and again in
2007–2008. This could indicate an undue lag in tightening the policy rate in response to
inflationary pressures.

There is little evidence that the monetary policy stance has been unduly influenced by
growth concerns. Under the Taylor rule approach, central banks effect a change in the real
policy rate depending on the deviation of inflation from its target as well as the deviation
of real growth from its long-run equilibrium, with country-specific weights attached to
the two elements. There is no evidence that real policy rates were high when inflation
was unexpectedly high. Nor is there any evidence that real policy rates were reduced in
response to low growth (Figure 20). Indeed, real policy rates were exceptionally high at
the end of the 1990s when growth was relatively low, and relatively low in 2004–2007
when real growth was very high. Similarly, in 2007 when the inflation rate was above its
targeted level, real policy interest rates were kept at a negative level through most of the
period.

Table 11: Armenia Target Policy Variable and Outcome, 2004–2008
(%)

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targets and Estimates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve money growth</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Inflation</td>
<td>–</td>
<td>–</td>
<td>3 +/- 1½</td>
<td>4 +/- 1½</td>
<td>4 +/- 1½</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve money growth</td>
<td>11.3</td>
<td>51.9</td>
<td>41.1</td>
<td>50.9</td>
<td>5.3</td>
</tr>
<tr>
<td>Inflation</td>
<td>2.0</td>
<td>(0.2)</td>
<td>5.2</td>
<td>6.6</td>
<td>5.2</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>10.5</td>
<td>14.0</td>
<td>13.3</td>
<td>13.8</td>
<td>6.8</td>
</tr>
</tbody>
</table>

– = not available, GDP = gross domestic product.
Source: Armenian authorities.
Figure 19: Armenia Real and Nominal Policy and Inflation Rates (%)

Figure 20: Armenia Real Policy and GDP Growth Rates (%)

GDP = gross domestic product.
Reserve money growth has evidenced large swings in recent years, with growth being particularly strong in 2005–2007 (Figure 21). This growth was due to unsterilized intervention by the CBRA in the foreign exchange market to prevent a too-rapid appreciation of the dram, as large inflows of capital and remittances had brought strong upward pressure on the currency. The CBRA issued a significant amount of its own short-term securities during 2005–2007 to mop up structural excess liquidity, but allowed a significant increase in reserve money in the belief that the demand for money had increased sufficiently to accommodate such an increase in reserve money. As a result, monetary conditions probably turned a little too lax. Monetary conditions were tightened significantly in 2008, and when the foreign exchange market turned around toward the year-end, reserve money growth was brought down significantly to 5.3% from more than 50% in 2007.

Broad money has also grown strongly, averaging 38% per year in 2006 and 2007 (Figure 22). The expansion was driven by a very sharp increase in loans and advances since the second half of 2007 which, to a large extent, financed imports, consumption, and real estate transactions. The credit expansion was supported by a much improved financial infrastructure and large-scale inflows of foreign bank capital. Net foreign assets also rose somewhat during this period. Government operations had a slightly contractionary impact.
Strong credit growth continued in the first 9 months of 2008, but came to a virtual halt toward the end of the year. This was partly because of liquidity constraints, and partly because banks stopped lending in dram because of the expectation of a significant depreciation.

As noted above, monetary developments have been strongly influenced by large capital inflows. Remittances, in particular from Armenians working in the Russian Federation, started rising rapidly from 2003 and onwards, and in 2007 amounted to $850 million, equivalent to 9.2% of GDP (Figure 23). Capital inflows rose even more rapidly from 2004. This led to strong upward pressure on the exchange rate and complicated monetary management.

Management of Reserve Money Growth and the Policy Rate
After bringing down inflation from very high levels in the early and mid-1990s, Armenia had several years of very low inflation in spite of missing reserve money targets. This caused the CBRA to be concerned that a monetary targeting regime for anchoring inflation was no longer credible. Consequently, the authorities decided to move to inflation targeting. The CBRA announced the move to an implicit inflation-targeting

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23 Remittances from Armenians working in the Russian Federation accounted for about 72% of total remittances, according to a 2006 Central Bank of Republic of Armenia survey.
The inflation-targeting framework is comprehensive and technically well developed, but exchange rate concerns have complicated its implementation. During 2006–2007, the CBRA intervened in the foreign exchange market to prevent a too-rapid appreciation of the dram. These partially sterilized interventions led to excess liquidity which ultimately added to inflationary pressures. These pressures were not fully addressed by a sufficient (and timely) increase in the policy rate and the inflation target was exceeded in 2006 and 2007, albeit modestly so. In the opposite direction, when the foreign exchange market came under pressure at the end of 2008, the authorities tried to resist a deterioration of the dram, de facto linking it for a while to the US dollar. In a situation when the market was expecting a significant correction of the exchange rate, the policy rate became meaningless as a signaling tool, and, de facto, the inflation-targeting framework became inoperative.

The authorities have moved to reassert monetary control. On 3 March 2009, the CBRA announced that the exchange rate would henceforth be determined flexibly by the market, with minimal intervention from the CBRA to smoothen out undue volatility. The refinance rate was also increased by 1 percentage point. Immediately after the adoption of this stance, the foreign exchange rate dropped by about 20%, but appears to have stabilized. Nevertheless, it will likely take a while before the credibility of the inflation-targeting framework to be re-established.
Monetary Policy Transmission Mechanism

A 2006 study found that the monetary policy transmission mechanism in Armenia was weak.24 The study noted that “the interest rate channel remains weak, even though there is some evidence for a transmission of repo changes to CPI inflation.” The study also found that the bank lending channel had little impact, and the exchange rate channel, the most impact.

The monetary policy framework and monetary policy instruments have been refined significantly since the conduct of this study. Figure 24 also indicates that the call money rate has tracked the policy rate well so far. Nevertheless, the limited financial deepening and the recent increase in dollarization, from 36% in the third quarter of 2008 to 60% in the first quarter of 2009, are likely to weaken the transmission mechanism.

Exchange Rate and Gross International Reserves

During the past 6 years until the last quarter of 2008, the dram appreciated significantly (Figure 25). Strong upward pressure was caused mainly by increases in remittances, donor assistance, and foreign direct investment, and, to some extent, by significant de-dollarization that was triggered by increasing confidence in the dram and the expectation of further appreciation. In the period between April 2003 and September

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2008, the dram nearly doubled in value vis-à-vis the US dollar. It also appreciated in nominal and real effective terms, although much less so. Dram appreciation contributed to low inflation and financial deepening as households grew more confident in financial stability and began to reduce cash holdings.

The speed and extent of the appreciation raised concerns about competitiveness, and the authorities intervened in the foreign exchange market to slow down and smoothen out the appreciation. Cumulative intervention was, to a large extent, unsterilized. The CBRA issued its own short-term securities in the cumulative amount of AMD28 billion in 2006 and AMD10 billion in 2007. In those 2 years, net foreign exchange intervention amounted to about AMD95 billion in 2006 and AMD117 billion in 2007. Thus, intervention became the main driver of the strong reserve money growth at a time when the authorities were embarking on a path of gradual monetary tightening through gradual but steady increases in the policy interest rate. As a result of its intervention, the CBRA built up its holdings of foreign reserves, which nearly tripled from the end of 2004 until the end of 2007, when these stood at $1.7 billion, equivalent to 4.3 months of imports.

In 2008, the situation turned around, and the CBRA became a net seller in the foreign exchange market. Pressures in the exchange market became more intense in the fourth quarter of 2008 as a result of the global crisis, and it became clear that expectations of a depreciation would not disappear. As a result, domestic currency deposits dropped rapidly and the rate of dollarization rose again, from 36% at the end of September 2008 to 44% at the

**Figure 25: Armenia Exchange Rate and International Reserves**

NEER = nominal effective exchange rate, REER = real effective exchange rate.
end of December 2008. The authorities were able to stabilize the exchange rate until year-end 2008, but at the cost of a significant loss in reserves, which declined by $250 million during the year, to the equivalent of 3.2 months of imports. Pressures and intervention continued into 2009, and foreign reserves had fallen by a further $260 million by the end of February 2009 to $1.1 billion. On 3 March 2009, the CBRA announced it would allow exchange rate flexibility and only intervene to smooth out extreme volatility. Immediately following the announcement, the dram depreciated by 20% but now appears to have stabilized.

Central Bank Balance Sheet

The CBRA incurred losses from 2004 to 2007, and capital turned negative as a result. Accumulated losses amounted to AMD51.6 billion at the end of 2007, which led to net negative capital of AMD43.5 billion, equivalent to 7.4% of assets. The government, in conformity with existing legislation, recapitalized the CBRA by issuing a non-interest bearing bond with no fixed maturity. This note is carried on the asset side under "marketable assets." The CBRA received a clean audit opinion from their external auditors in 2007, based on international auditing standards.

Preliminary figures for 2008 indicate a modest surplus. In accordance with current regulations, the non-interest bearing bond issued by the Ministry of Finance will be reduced by the amount of the surplus.

The CBRA losses have not been treated as an issue of urgency. The losses were due to revaluation losses on the CBRA’s open foreign exchange position as the dram appreciated. One could indeed argue that the underlying strength of the CBRA has increased with the increased monetization of the economy. The authorities have also argued that other central banks have been operating with negative capital. However, the approach taken by the authorities does not solve the deficit problem. Properly accounted for under International Financial Reporting Standards (IFRS), the non-interest bearing perpetual bond should be valued at zero and the CBRA continues with a de facto capital deficit. The de facto capital deficit will be reduced significantly because of the 3 March 2009 devaluation to about AMD26 billion, equivalent to about 4% of assets.

There are serious disadvantages to allowing negative capital to continue. The CBRA is at an initial stage of implementing inflation targeting. Negative capital and a perception that the Ministry of Finance is not supporting the financial strength of the CBRA could seriously undermine CBRA’s credibility—and credibility is a key factor in establishing a successful inflation-targeting framework. The same argument holds for a situation where the CBRA is the single regulator of the financial system. The CBRA should lead by example, and being itself insolvent weakens its position vis-à-vis banks, as far as restructuring of insolvent banks is concerned.

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25 Because the bond carries no maturity date, the accounting department did not believe it was appropriate to classify the bond under “held to maturity” and the auditors appear to have concurred.

26 Grant Thornton, Armenia branch.
Agreement has been reached in principle to recapitalize the CBRA as part of the government’s IMF program. Under the recapitalization initiative, the bond will be replaced in stages by securities bearing market-related interest over 3–5 years. A concrete timetable has not been announced and should be established without delay. The recent valuation gains should facilitate such an agreement.

Financial Soundness and Risk Management

Armenian banks are, on average, well-capitalized and profitable. Despite recent rapid credit growth, the average capital adequacy ratio (CARs) have not declined appreciably, indicating a high level of retained earnings. The share of nonperforming loans (NPLs) is relatively low and only increased moderately at the end of 2008 to 4.4% of total loans. The Armenian definition includes “watch” loans (overdue 1–90 days) but not fully provisioned “lost” loans.27

The CBRA has made very good progress in strengthening banking supervision. A 2006 IMF study notes: “Armenia has achieved significant progress in bank supervision in recent years. The CBRA conducts a rigorous supervisory process, with enforcement grounded in legislation and prudential regulations.”28 Informed observers concur that the supervision regime is the strongest in the region. A broad-brush review of prudential regulations and interviews with market participants confirm the above observations. Nevertheless, further strengthening is required in some areas, such as consolidated supervision and risk management.

There are clear signs of the impact of the global crisis. The decline in dram deposits at the end of 2008 has led to liquidity difficulties in dram funds for most banks. On average, the liquid asset/total assets ratio dropped by 10 percentage points to 23.8%. Moreover, reflecting the drop in dram deposits, the ratio of loans to deposits rose from 94% at the end of 2007 to 123% at the end of 2008. Banks generally indicate that there is too little dram liquidity and that this hampers the extension of dram loans, forcing most banks to reduce lending and/or to extend loans in foreign currency to borrowers without an income stream in foreign currency, thus transforming a currency risk into a credit risk. The slowdown in credit expansion, however, also indicates a tightening of banks’ risk assessments. While banks have increased the interest differential between dram and foreign currency deposits, they believe that with the current uncertainty in the foreign exchange market, any realistic interest differential will not be sufficient to quickly turn around the current preference for foreign currency deposits.

The CBRA has so far not needed to conduct exceptional liquidity injections or lender-of-last-resort (LOLR) operations. It has shifted to relatively modest liquidity injections through the repo facility of its regular monetary policy framework, and overnight lending

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27 Most international comparisons exclude “watch” loans, but include “lost loans” not yet written off. The CBRA estimates that the two categories are of approximately equal magnitude.

### Table 12: The Central Bank of Republic of Armenia Balance Sheet, 2006–2008
(amounts in AMD billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006 Amount</th>
<th>%</th>
<th>2007 Amount</th>
<th>%</th>
<th>2008 Amount</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>432.0</td>
<td>100.0</td>
<td>587.9</td>
<td>100.0</td>
<td>667.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Foreign</td>
<td>389.0</td>
<td>90.0</td>
<td>505.0</td>
<td>85.9</td>
<td>477.4</td>
<td>71.5</td>
</tr>
<tr>
<td>Available for sale assets</td>
<td>19.2</td>
<td>4.4</td>
<td>49.2</td>
<td>8.4</td>
<td>97.1</td>
<td>14.6</td>
</tr>
<tr>
<td>Claims on government</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Claims on banks</td>
<td>15.3</td>
<td>3.5</td>
<td>24.6</td>
<td>4.2</td>
<td>81.0</td>
<td>12.1</td>
</tr>
<tr>
<td>Other assets</td>
<td>8.5</td>
<td>2.0</td>
<td>9.1</td>
<td>1.5</td>
<td>11.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Liabilities</td>
<td>432.0</td>
<td>100.0</td>
<td>587.9</td>
<td>100.0</td>
<td>667.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Foreign</td>
<td>93.6</td>
<td>21.7</td>
<td>99.1</td>
<td>16.9</td>
<td>124.7</td>
<td>18.7</td>
</tr>
<tr>
<td>Deposits of resident banks</td>
<td>39.3</td>
<td>9.1</td>
<td>38.4</td>
<td>6.5</td>
<td>40.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>226.8</td>
<td>52.5</td>
<td>350.3</td>
<td>59.6</td>
<td>344.5</td>
<td>51.6</td>
</tr>
<tr>
<td>Certificates of deposit</td>
<td>39.0</td>
<td>9.0</td>
<td>49.0</td>
<td>8.3</td>
<td>1.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Ministry of Finance</td>
<td>61.5</td>
<td>14.2</td>
<td>93.6</td>
<td>15.9</td>
<td>104.0</td>
<td>15.6</td>
</tr>
<tr>
<td>Due to IMF</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>43.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>0.9</td>
<td>0.2</td>
<td>1.1</td>
<td>0.2</td>
<td>1.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Capital and reserves</td>
<td>(29.2)</td>
<td>(6.8)</td>
<td>(43.5)</td>
<td>(7.4)</td>
<td>7.7</td>
<td>1.2</td>
</tr>
</tbody>
</table>

-- = not available, () = negative, IMF = International Monetary Fund.

Note: Totals may not add up because of rounding.


(AMD billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net interest income</td>
<td>8.3</td>
<td>1.2</td>
<td>7.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Net fee and commission expense</td>
<td>0.0</td>
<td>(0.1)</td>
<td>(0.1)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Net foreign exchange loss</td>
<td>(16.5)</td>
<td>(37.9)</td>
<td>(53.0)</td>
<td>(6.6)</td>
</tr>
<tr>
<td>General administrative expenses</td>
<td>0.0</td>
<td>(4.6)</td>
<td>(5.2)</td>
<td>(5.9)</td>
</tr>
<tr>
<td>Other income (expenses)</td>
<td>(5.3)</td>
<td>2.5</td>
<td>8.3</td>
<td>19.2</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>(13.5)</td>
<td>(29.0)</td>
<td>(43.8)</td>
<td>7.6</td>
</tr>
</tbody>
</table>

() = negative.

through the Lombard window has increased. The caution of the CBRA appears, at least in part, motivated by concerns over additional liquidity injections being transferred into increased demand in the foreign exchange market.

**The shock facing the banking system is unprecedented and the full impact will only be felt in 2009.** One key issue that needs to be addressed in the face of this situation is how well loan quality holds up in a general downturn, caused by a severe drop in export earnings, a sharp fall in workers’ remittances, and a potential collapse of real property values and the construction market. Another issue is how depositors react. The authorities’ stress tests indicate that banks are well-placed to weather significant further shocks. Moreover, they estimate that even on current projections of a modest decline in real GDP, NPLs are unlikely to increase to more than 10% before gradually declining again, well within the current capital cushion. Nevertheless, they stand ready to extend LOLR assistance to solvent and systematically important banks on the basis of a broadened range of collateral. Market observers believe that a lower tier of four to five relatively poor performers could face difficulties (comparable to the number of CAMEL 3 rated banks). They also believe that the number of banks is too high and that further consolidation would be warranted.

### State of Financial Intermediation

**Structure of Financial System and Financial Deepening**

Banks dominate the financial system, accounting for more than 95% of the financial system. Out of 22 banks operating at the end of 2008, the four largest ones accounted for 45% of assets, and the 10 largest accounted for 77%. The Herfindahl-Hirshman index
at 0.1 indicates that bank concentration is relatively low. Nevertheless, the Panzar and Rosse model indicates that the banking system is characterized by elements of oligopolistic competition.29 The banking sector has consolidated in recent years. A serious banking crisis from 2000 to 2002 and a gradual tightening of prudential regulations contributed to a reduction in the number of banks from 74 in 1994 to 22 currently.

A significant share of capital in the banking industry is owned by nonresidents. The share of nonresident ownership increased from 48% at the end of 2006 to 58% at the end of 2007. Initially, foreign participation was mainly by expatriate Armenians with little banking experience. One major exception was HSBC, which initially took a dominant position in deposit collection (50%) and still has a relatively large share (33%). More recently, regional banks have acquired interests in smaller Armenian banks.

The insurance market is very small. At the end of 2007, insurance sector assets amounted to only 0.3% of GDP. The CBRA is in the process of strengthening its supervision of the sector, and several licenses have been suspended.

The securities market is also very small. In 2008, market capitalization amounted to less than 1% of GDP and market turnover was very low.

Financial intermediation has deepened significantly, particularly over the last 5 years (Figure 26). Reflecting rapid credit expansion financed by remittances and capital inflows,

![Figure 26: Armenia Indexes of Financial Deepening (%)](image)

GDP = gross domestic product.

the share of private sector credit to GDP more than doubled from 6% in 2003 to 14% in 2007. Deposits also rose rapidly, from 15% in 2003 to 22% in 2007. Nevertheless, financial market intermediation remains significantly below that of the other countries of the former Soviet Union.

**Bank Interest Spreads and Profitability**

Lending rates have come down significantly and spreads have narrowed somewhat. (Figure 27). Spreads, at 12%, remain relatively high when compared with 4% average in the Baltic countries but are lower than other countries in the region (Georgia, the Kyrgyz Republic, and Tajikistan). Given the risks involved in lending in these countries, high spreads are understandable.

Lending rates for dram loans are limited to twice that of the average deposit rate (as calculated and published by the CBRA). Currently, this would give a maximum rate of about 12%. However, anecdotal evidence indicates that banks add commissions and fees to increase the effective rate.

As noted above, and reflecting the high spreads, bank profitability has been quite good. Return on assets amounted to 3.1 and return on equity amounted to 13.6 in 2008, which is high by international standards. This has allowed banks to keep up CARs through retained earnings.

**Figure 27: Armenia Bank Interest Rate Spread**

(%)
Georgia

The Macroeconomic Context

Until recently, over several years, Georgia has achieved double-digit economic growth buoyed by large capital inflows. An improved business environment and aggressive privatization were successful in attracting significant foreign direct investment in early 2008. Georgia successfully launched its first Eurobond issue. Broad-based real economic growth, averaging 10% over 2003–2007, was supported by generally sound macroeconomic policies and structural reform as well as a reduction in red tape and corruption.

Deteriorating domestic and external political conditions worsened an already challenging economic environment before the recent global economic slowdown. Amid signs of economic overheating and increasing fiscal and external imbalances, public discontent culminated in a period of civil unrest in late 2007. Political stability was restored after presidential and parliamentary elections were held in 2008, but, not long after, tensions with the Russian Federation over the situation in South Ossetia and Abkhazia increased, leading to armed conflict in August 2008. While international diplomatic efforts helped calm the situation down, and Russian troops have pulled back from undisputed Georgian territory, a meaningful direct dialogue between Georgia and the Russian Federation has not yet been established in early 2009, the political opposition has been gaining strength, in part because of a deteriorating economic condition, exacerbated by the impact of the global economic slowdown on Georgia.

Growth was negative in the second half of 2008 under the double impact of armed conflict and the global slowdown. Consequently, the lari came under pressure. For the year as a whole, real growth was estimated at 2%. The slowdown in economic activity and lower import prices contributed to a reduction in inflationary pressures as the consumer price index rose by 5% for the year. Although narrowing significantly in the second half of the year, because of lower imports (associated with lower foreign direct investment [FDI] and imports, and declining import prices), the current account deficit rose further to a level equivalent of 21% of GDP for the year as a whole. Financing for current account deficit changed drastically, as private capital inflows dropped from $1.7 billion in the first half to $300 million in the second half. The slack was taken up by official inflows following the October donor conference and by year-end 2008, gross official reserves had recovered to the pre-conflict level (3 months of imports) despite significant National Bank of Georgia (NBG) intervention in support of the lari.

The authorities are tightly managing the exchange rate. After allowing a nominal appreciation of 12% through July 2008, a temporary peg at 1.41 lari to the US dollar was introduced during the conflict. NBG intervention in support of this level proved unsustainable as reserves dropped rapidly and in November, the authorities allowed the lari to depreciate by about 17%. Thus far, official foreign inflows have allowed continued intervention in support of the new unofficial peg at GEL1.61 to the US dollar.
Fiscal and monetary policy priorities changed during the year. In the second half, expenditure has focused on repairing conflict-related damage and on responding to social and infrastructure needs, and the overall fiscal deficit was estimated to have increased from the equivalent of 4.5% of GDP in 2007 to 6% in 2008. With a sharp drop in privatization revenues, donor support is now the main fiscal funding source. Earlier in 2008, monetary policy focused on resisting inflationary policies by increasing interest rates and allowing the exchange rate to appreciate. Following the crisis, the NBG has reduced reserve requirements, injected liquidity, and lowered the policy rate by 400 basis points. Nevertheless, banks have essentially stopped new lending and the deposit base has suffered losses as confidence weakened. Moreover, dollarization has increased following the November 2008 depreciation.

The outlook for 2009 is discouraging. The authorities project a rebound of economic activity from the dismal 2008 second-half level to a real growth rate of 2.5%. Private sector observers, however, expect growth to be significantly below the official forecast. Donor financing will allow a modest fiscal stimulus, but this will likely be offset by the sharp slowdown in private sector capital inflows, the fall in export demand and prices, and the virtual stop to new lending by commercial banks. There are significant downside risks from a decline in remittances from the Russian Federation as a result of prolonged downturn in that country. Moreover, the soundness of the finance sector warrants close attention in light of the recent sharp increase in nonperforming loans (NPLs). Uncertainty and weakened confidence in the lari further complicates the picture. Overall, the authorities would be better served by a combination of policy measures, including exchange rate flexibility, to avoid putting too heavy a burden on domestic adjustment.

The NBG is facing crucial exchange rate and monetary policy choices. Should exchange rate pressure continue, and even increase, the policy choice will be sharply curtailed. Unless foreign funding is available to permit continued support for the lari, the NBG will have to consider allowing more exchange rate flexibility accompanied by a tightening of fiscal and monetary policy. There is little scope for monetary policy supporting a stimulus package if it needs to defend the exchange rate.

The Monetary Policy Framework in Theory and Practice

Conceptual Issues
The NBG website contains a great deal of information, but is not quite clear on the de facto execution of monetary policy. In principle, Georgia has moved to an inflation-targeting regime, since the strategy has been enshrined in the NBG Law, which also mandates sanctions should the inflation target not be met (Box 5). In practice, it is premature to talk about full inflation targeting, and no firm deadline or the required steps have been published, although 2010 has been mentioned in official publications as a possible target. As part of the process, the NBG Law was modified to assign main priority to the maintenance of price stability.

The NBG monetary policy states that the central bank use monetary aggregates, specifically reserve money, as its intermediate target. Reserve money has also been the target under successive programs supported by the International Monetary Fund (IMF). The immediate operational target is the liquid reserves of banks held at the NBG. However, in the same policy statement referring to the sensitivity of inflation to the exchange rate, the NBG notes that “the aforementioned parameter is used as the main intermediate target when formulating monetary policy thus raising the possibility of conflict between monetary and foreign exchange rate policy.” Effectively, if there is a firm exchange rate target, monetary policy must be subordinated to that goal.

Since the beginning of 2008, the NBG has been publishing its main policy rate following its monthly monetary policy committee meeting. However, the reserve money target appears to be the operational one and, in principle, the policy rate is set so as to achieve this target. The policy rate, the 1-week certificate of deposit (CD) rate, was increased in early 2008 on successive occasions by a total of 400 basis points to reach 12% by June 2008 as significant capital flows led to signs of overheating. Subsequently, in response to the crisis, the policy rate was shifted to the refinance rate and was lowered in steps to 7% in February 2009. On each occasion, the reduction was justified by lower

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Box 5: Georgia Price Stability

The Parliament of Georgia amended the Organic Law of National Bank of Georgia (NBG) on 14 March 2008, in the process essentially adopting a new law. According to the amendments, maintaining price stability is the main function of the NBG in that if fulfilling this main function is not under threat, the bank may undertake its other functions. The amendments also provide that the NBG is empowered to undertake inflation targeting, a new regime of the monetary policy. Preparations for transitioning to this regime started in 2005 and the transition period is likely to stretch until 2010. The monetary policy committee will be in charge of monetary and exchange rate policy formulation and implementation, although the president of the NBG will make the final decision. Moreover, the president of NBG will maintain price stability. In particular, if the average annual rate of inflation differs from the targeted rate by more than two percentage points during four consecutive quarters, while the state budget has surpluses, the Parliament of Georgia must, if the inflation exceeds 12% during six consecutive quarters, vote for the revocation of the responsibilities of the president of the NBG. In accordance with the new legislation, the NBG will mostly concentrate its efforts on the monetary policy while the supervision of the finance sector will be the responsibility of the Unified Supervisory Service, a legal entity of public law. Overall, the above-mentioned Law is a step forward toward the improvement of the efficiency of the monetary policy in the country.


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31 Earlier empirical studies found little relationship between interest rates and inflation.
inflation, giving the implication that interest rate was the main policy instrument; no mention was made of the monetary target. However, the reductions also appear motivated by concern over the virtual stop in new lending by commercial banks.

The NBG has a range of monetary instruments at its disposal. To manage liquidity in the banking system, the NBG can use (i) foreign exchange interventions; (ii) open market operations (OMOs), which include auctions of NBG deposit certificates and government notes, as well as repo operations; (iii) standing facilities, such as attraction of deposits from commercial banks (no longer in practical use) and issuance of overnight loans with a view of providing a daily interest rate (sparingly used); (iv) refinance loans (new policy rate from September 2008); and (v) minimum reserve requirements on lari and foreign currency-denominated deposits in commercial banks. Earlier, the NBG also intervened directly in the interbank market, but this practice has been discontinued since 2007. Progress in developing the CD market was achieved in the second half of 2007 until the conflict, after which progress has stalled. There appears to be no attempt to define a corridor within which short-term interbank rates should move and to make the short-term interbank rate the key policy rate in the upcoming inflation-targeting regime, which is how most inflation-targeting regimes operate.

**Performance in Practice**

**Inflation, Growth, Policy Interest Rate, and Monetary Aggregates**

As indicated in Table 15, reserve money growth and inflation have deviated significantly from initial targets in some years from 2004 to 2007.

It is noteworthy that the real policy rate turned negative during much of 2007 and 2008 as the policy rate was increased with a significant lag (Figure 28).

Monetary policy appears to have been little influenced by growth concerns. Under the Taylor rule approach, central banks effect a change in the real policy rate depending on the deviation of inflation from its target, as well as the deviation of real growth from its long-run equilibrium, with country specific-weights attached to the two elements. There is no evidence that real policy rates were high when inflation was unexpectedly high. Nor is there any evidence that real policy rates were reduced in response to low growth (Figure 29).

Reserve money growth has indicated large swings in recent years. Except for 2005 and 2006, reserve money has deviated significantly from initial targets mainly because of volatile capital inflows. Figure 30 shows clearly that reserve money growth has been mainly

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Table 15: Georgia Target Policy Variable and Outcome, 2004–2008

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targets and Estimates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve money growth</td>
<td>16–17</td>
<td>18–20</td>
<td>25–27</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Inflation</td>
<td>5–6</td>
<td>5</td>
<td>5–6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>–</td>
<td>7.7</td>
<td>6.4</td>
<td>7.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve money growth</td>
<td>46.9</td>
<td>16.2</td>
<td>26.3</td>
<td>40.1</td>
<td>(7.8)</td>
</tr>
<tr>
<td>Inflation</td>
<td>7.5</td>
<td>6.2</td>
<td>8.8</td>
<td>11.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>5.9</td>
<td>9.6</td>
<td>9.4</td>
<td>12.4</td>
<td>4.0</td>
</tr>
</tbody>
</table>

– = not available, ( ) = negative, GDP = gross domestic product.
Source: The Georgian authorities.

Figure 28: Georgia Real and Nominal Policy and Inflation Rates

Figure 28: Georgia Real and Nominal Policy and Inflation Rates

Graph showing real policy rate, nominal policy rate, and inflation rate from 1996 to 2008.
Figure 29: Georgia Real Policy and GDP Growth Rates
(%)

Figure 30: Georgia Reserve Money Growth and Its Components
(annual, in % of beginning of period reserve money)

GDP = gross domestic product.

Q4 = fourth quarter.
influenced by increases in net foreign assets with no lending to government by the NBG, which is prohibited by law, and little lending to banks.33

**Stabilizing the exchange rate through interventions in the foreign exchange market has, on occasion, resulted in high volatility of liquidity conditions.** In 2004, the NBG did not sterilize its intervention in the foreign exchange market. Consequently, the growth rates of reserve money and broad money accelerated and peaked at close to 50% by the end of 2004. In 2005 and 2006, growth rates subsided but continued to fluctuate, driven by sizeable capital inflows. More recently, the increasingly large amount of capital inflows prompted the NBG to step up its attempts to sterilize its interventions in the foreign exchange market. As the last treasury bills originally issued by the Ministry of Finance had fallen due in June 2006, the NBG introduced a new monetary instrument—CDs—in late 2006 to improve short-term liquidity management. The auction of CDs replaced the deposit auctions and, by the end of 2006, a total of 51 successful CD auctions had been held. Exerting some upward pressure on interest rates, the NBG thus sterilized almost GEL300 million, absorbing about three quarters of its interventions over the same period. There were no repo auctions and no overnight loans in 2006. CD auctions continued as the main policy instrument in 2007 in the face of continued significant liquidity injections through NBG operations in the exchange market. However, liquidity withdrawals were insufficient to prevent another sharp increase in reserve money to 40% or double the initially targeted level. This led to upward pressure on inflation, which accelerated to 11%, for the second year, significantly above the initial target. Overnight loans were used sparingly and interbank credit auctions were discontinued.

**Monetary conditions changed drastically in 2008.** Early in the year, monetary policy continued to be geared toward addressing very high capital inflows, with liquidity being partially mopped up through CD auctions. But because of the military conflict and the international financial crisis, capital flows dried up and the exchange rate came under pressure. The NBG felt compelled to defend the exchange rate and withdrew liquidity through its participation in the exchange market. As a result, there was no longer a market for CD auctions and the NBG instead had to inject liquidity. The NBG temporarily waived the reserve requirement, and after 1 month, restored it at a much reduced level (from 13% to 5%). It also opened an unsecured lending facility under the exceptional circumstance clause of the NBG Law. In addition, it introduced in September 2008 a new instrument, refinancing loans, and the refinance rate became the new policy rate. The refinancing rate was reduced in successive steps so that the policy lending rate (for injecting liquidity) in January 2009 stood at 7%, less than the policy rate for absorbing liquidity at the end of 2007. The Financial Supervisory Authority of Georgia also reduced the minimum liquid asset ratio from 30% to 20% at the end of 2008.

**The 7-day CD policy rate was not used as a floor in a corridor to guide short-term interbank rates.** Instead, the 7-day policy rate was considered the maximum for the CD rate, which could be set lower in the auction. Overnight interbank rates have evidenced

---

33 By contrast, NBG lending to government had been the major expansionary factor in earlier years.
very high volatility, and little attempt appears to have been made to smoothen out their fluctuations within a corridor set by the central bank.

**Broad money has also shown very strong growth in recent years.** The expansion in broad money has been driven by a very sharp increase in loans and advances (Figure 31). Broad money continued increasing rapidly in July 2008 on account of a rapid expansion of lending fueled by capital inflows. The military conflict and the international crisis led to the drying up of foreign funding and the domestic downturn reduced demand so that virtually no new credit was extended in the last 4 months of the year.

**As noted above, monetary developments have been strongly influenced by large capital inflows** (Figure 32). Inflows linked to privatization have been particularly important. Georgia has had the second largest inflows of FDI, in relation to GDP, among transition economies (after Bulgaria). Moreover, short-term credit lines have helped finance credit expansion by foreign-owned banks. Meanwhile, significant workers’ remittances have become relatively less important.

![Figure 31: Georgia Broad Money Growth and Its Components](image-url)

*Figure 31: Georgia Broad Money Growth and Its Components (annual, in % of beginning of period broad money)*

Q4 = fourth quarter.

Effectiveness of Central Banks and Their Role in the Global Financial Crisis: Case of Selected Economies

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Management of Reserve Money Growth and the Policy Rate

Empirical evidence indicates that changes in monetary aggregates and the inflation rate are correlated, but no statistically significant relationship exists between interest rates and inflation. It is therefore appropriate that the NBG continue to focus on monetary aggregates while building up the efficiency of the interest rate mechanism. To move fully to an inflation-targeting regime, it would be desirable, however, to be able to rely on interest rate policy as the main policy instrument. Significant further changes to the monetary policy regime will be needed, including the introduction of an interest rate corridor. This and other similar initiatives could benefit from further technical assistance.

Monetary Policy Transmission Mechanism

The monetary policy transmission mechanism is weakened by several factors. After decreasing in 2007 and the first half of 2008, dollarization of commercial bank deposits and lending has increased again, and at the end of 2008 stood at 75.8%. Domestic lari-denominated credit amounts to only 5% of GDP. The amount of outstanding government securities is negligible and treasury bill (TB) auctions have been discontinued. Credit and interest rate channels are weakened by low financial intermediation and limited interbank activity. At the end of 2006, monetization (average M3/GDP) amounted to 16.6%, whereas private sector credit accounted for about 19% of GDP. Finally, the margin between lending and borrowing rates, although decreasing slowly, still amounts to about 10 percentage points, mainly due to high overhead costs and inefficient bank size, effective

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market segmentation, and weak governance. Commercial bank credit has a low elasticity with respect to interest rates, due to large holdings of excess reserves at the NBG, which corresponded to an average of 33% of total reserves in 2006. As a consequence of the frail monetary transmission mechanism, a change in the short-term interest rate has a limited macroeconomic effect. The connection from the policy stance to deposit rates is weak and the impact on investment, consumption, and aggregate demand, both through the direct interest rate channel and the credit channel, is fragile (Figures 33 and 34).

**Exchange Rate and Gross International Reserves**

**In recent years, the NBG has intervened heavily in the foreign exchange market.** From early 1999, when the NBG was forced to float the lari in the aftermath of the crisis in the Russian Federation, to late 2003, the lari continuously depreciated against the US dollar. During this period, the NBG intervened in the foreign exchange market exclusively on the purchase side to rebuild its stock of foreign exchange reserves, which was severely diminished as it defended the lari in the run-up to the 1999 floating. Strong inflows of capital after the Saakashvili administration took office in early 2004 eased the NBG’s task. The government almost doubled its reserve holdings from December 2003 to September 2004 in an attempt to prevent the lari from appreciating against the US dollar. The NBG’s interventions, however, were not enough to stabilize the exchange rate and the lari started

**Figure 33: Georgia Interbank and Policy Rates**

(%)
to appreciate, gaining about 15% against the US dollar from 2003 to September 2004 (Figure 35). Through much of the period until the end of 2007, the NBG continued to intervene almost exclusively on the purchasing side in an attempt to limit the continued appreciation of the lari in the hope that a broadly stable nominal exchange rate would contribute to attracting foreign investment. At the end of 2007, the NBG’s international reserves stood at $1.36 billion (3 months of imports) and had increased almost fivefold compared to that at the end of 2003.

The situation in the exchange market changed sharply in the second half of 2008. Strong foreign capital inflows during the first half of the year prompted the authorities to allow the lari to appreciate by about 12% through July 2008, in part in an attempt to help moderate inflation. A temporary peg of 1.42 lari to the US dollar was introduced during the conflict with the Russian Federation, but continued pressure in the foreign exchange market and a drop in reserves led the authorities to allow the currency to depreciate by 17% in mid-November. Since then, the NBG has continued to sell foreign exchange at around the new rate of GEL1.65 per US dollar, and has allowed only minimal flexibility. NBG intervention in the market in 2008 since the start of the August conflict totals $750 million, of which $210 million was made after the November 2008 depreciation. Nevertheless, donor inflows permitted some rebuilding of reserves from $1.12 billion immediately following the conflict to $1.48 million at the end of 2008.
Figure 35: Georgia Exchange Rate and International Reserves

(amounts in thousand lari)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th></th>
<th>2007</th>
<th></th>
<th>2008</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
</tr>
<tr>
<td>Assets</td>
<td>2,556,448</td>
<td>100.0</td>
<td>3,143,934</td>
<td>100.0</td>
<td>3,534,943</td>
<td>100.0</td>
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<tr>
<td>Foreign</td>
<td>1,701,240</td>
<td>66.5</td>
<td>2,248,293</td>
<td>71.5</td>
<td>2,505,173</td>
<td>70.9</td>
</tr>
<tr>
<td>Held-to-maturity investments</td>
<td>787,251</td>
<td>30.8</td>
<td>738,782</td>
<td>23.5</td>
<td>690,796</td>
<td>19.5</td>
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<tr>
<td>Claims on government</td>
<td>1,113</td>
<td>0.1</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Claims on banks</td>
<td>20,000</td>
<td>0.8</td>
<td>73,132</td>
<td>2.3</td>
<td>209,412</td>
<td>5.9</td>
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<tr>
<td>Other assets</td>
<td>46,844</td>
<td>1.8</td>
<td>83,727</td>
<td>2.7</td>
<td>129,562</td>
<td>3.7</td>
</tr>
<tr>
<td>Liabilities</td>
<td>2,556,448</td>
<td>100.0</td>
<td>3,143,934</td>
<td>100.0</td>
<td>3,534,943</td>
<td>100.0</td>
</tr>
<tr>
<td>Foreign</td>
<td>610,207</td>
<td>23.9</td>
<td>698,053</td>
<td>22.2</td>
<td>991,762</td>
<td>28.1</td>
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<td>Deposits of resident banks</td>
<td>263,694</td>
<td>10.3</td>
<td>188,113</td>
<td>6.0</td>
<td>141,190</td>
<td>4.0</td>
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<td>Currency in circulation</td>
<td>929,633</td>
<td>36.4</td>
<td>1,310,488</td>
<td>41.7</td>
<td>1,290,703</td>
<td>36.5</td>
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</table>

continued on next page
Table 16: continued

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<thead>
<tr>
<th>Item</th>
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<th>2008</th>
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<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td>Certificates of deposit</td>
<td>274,597</td>
<td>10.7</td>
<td>376,541</td>
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<tr>
<td>Ministry of Finance</td>
<td>357,035</td>
<td>14.0</td>
<td>440,613</td>
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<td>Other liabilities</td>
<td>10,344</td>
<td>0.4</td>
<td>19,876</td>
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<td>Capital and reserves</td>
<td>110,938</td>
<td>4.3</td>
<td>110,250</td>
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</tbody>
</table>

Note: Totals may not add up because of rounding.
Source: The National Bank of Georgia annual reports.

(thousand lari)

<table>
<thead>
<tr>
<th>Item</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
</tr>
<tr>
<td>Net interest income</td>
<td>87,265</td>
<td>100</td>
<td>98,522</td>
<td>100</td>
</tr>
<tr>
<td>Net fee and commission</td>
<td>117</td>
<td></td>
<td>(274)</td>
<td></td>
</tr>
<tr>
<td>income (expense)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net foreign exchange loss</td>
<td>(4,131)</td>
<td></td>
<td>(27,380)</td>
<td></td>
</tr>
<tr>
<td>General administrative</td>
<td>(25,661)</td>
<td></td>
<td>(24,260)</td>
<td></td>
</tr>
<tr>
<td>expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other income</td>
<td>50</td>
<td></td>
<td>(2,579)</td>
<td></td>
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<tr>
<td>Net income</td>
<td>57,640</td>
<td></td>
<td>44,029</td>
<td></td>
</tr>
<tr>
<td>( ) = negative.</td>
<td></td>
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</table>

Source: The National Bank of Georgia annual reports.

Central Bank Balance Sheet

Audits of the accounts of the NBG have indicated no particular problems in recent years. The NBG follows the International Financial Reporting Standards (IFRS) in the preparation of its statements, except for a minor deviation from IFRS 31 that is deemed immaterial by its auditors. Over recent years, it has received clean audit opinions from external auditors, based on international auditing standards.

Capital and reserves as a ratio of total assets are not particularly large, and has been declining. Moreover, net profits appear to be on a declining trend. While not an urgent issue, the situation warrants monitoring, in particular if the NBG were to take on increasing interest expenses on its issue of CDs for monetary policy purposes. This is not a current issue, since the banking system is experiencing liquidity constraints at present. Nevertheless, preparing for the future, it would be desirable if the government resumed
issuing TBs that could be used to mop up structural excess liquidity. It is in this context that an agreement has been reached with the Ministry of Finance whereby the NBG’s holding of government bonds (held to maturity) are gradually converted into marketable securities that can be used for monetary policy purposes. The NBG should continue issuing shorter-term CDs for liquidity fine tuning.

Financial Soundness and Risk Management

Supervisory responsibility was changed beginning 2008. In part to permit the NBG to focus more on its inflation objective, an independent Financial Services Authority was created to be responsible for supervising the banking and insurance industries, as well as the securities markets.

The tightening of the credit market and the weakening of the real economy have exposed vulnerabilities in the banking sector. Liquidity and solvency ratios remain satisfactory, partly due to liquidity support from the NBG. The NBG extended unsecured lender-of-last-resort (LOLR) lending on two occasions, once during the conflict and once in September 2008. However, the level of NPLs increased by more than 10 percentage points in 2008 with the increase being concentrated in the last 4 months of the year. The need for greater loan-loss provisioning (although the provisioning ratio has declined to 70%), together with higher funding costs and lost interest income, have severely impacted profitability. As a result, banks experienced losses in the last 4 months of the year, leading to a negative return on equity of 12.6% for the year as a whole and to a sharp drop in the capital adequacy ratio (CAR). An additional vulnerability is the dependence on external financing. About $600 million (13% of total liabilities) in external liabilities of the banking system will fall due in 2009.

Banks received unsecured liquidity support on two occasions in 2008. In early August 2008, six banks received a total of GEL38 million with a maturity of 1 month (subsequently repaid) at a penal rate of 20%. At the end of September 2008, five banks received unsecured loans in the amount of GEL135.9 million (9% of reserve money) with a 6-month maturity that is automatically renewable. The interest rate of 13% was higher than the policy rate and will increase in case of rollover. The banks are also subject to closer supervisory monitoring.

It is a positive development that the two largest banks have received assistance from the European Bank of Reconstruction and Development (EBRD) and International Finance Corporation (IFC). At the time of the visit, the exact modalities of this assistance were unclear, but it appeared that some funding was to be made available in the form of subordinated debt and that the arrangement permitted the rollover of some credit lines. These two banks (Bank of Georgia and TBC) account for more than 50% of bank lending and reportedly hold a disproportionate share of NPLs. The two banks are foreign owned, but the ownership structure is reportedly somewhat vague. They are exposed to some further risk from the rollover of short-term credit lines in 2009.
The authorities believe that further depreciation may adversely impact on the banks’ highly dollarized balance sheets, but nevertheless have expressed confidence in the resilience of the banking system. Information on the situation in individual banks is not available. However, the following sentence from the 2008 Financial Stability Report of the National Bank of Georgia, referring to the situation before the losses of the last quarter, is not particularly reassuring: “Despite this, the existing situation must not be considered as alarming since the limitations and normative set by the National Bank of Georgia were, except for certain cases, largely complied with by banks.”

The situation warrants close monitoring. Obviously, banks cannot weather the losses of the last 4 months of 2008 on a sustained basis. Bank loans had increased nearly five-fold over the 3 years to December 2007 and continued to increase sharply through July 2008. The likelihood of a resulting increased credit risk was borne out during the last 4 months of the year by the sharp increase in NPLs. Mortgage loans have become increasingly important, amounting to close to 20% of loans, and could become another vulnerability. According to the most recent information available (July 2008) prices of real estate were still growing, having increased by 450% between 2003 and 2008. However, with the economic downturn, it is highly likely that the real estate market will also become negatively affected. On the funding side, external credit lines, which had been very important, have dried up, thereby forcing banks to rely on higher-priced domestic funding sources, and this will also negatively impact on profitability. A sober assessment of individual banks is clearly needed, and the Financial Supervision Authority should urgently conduct stress tests of all major banks, if necessary with foreign technical assistance.

State of Financial intermediation

Structure of Financial System and Financial Deepening

Banks dominate the financial system, accounting for more than 80% of assets. Although the capitalization of stocks listed on the Georgia Stock Exchange is not negligible, accounting for 13.6% of GDP at the end of 2007, the volume of transactions is very small.

There are 20 banks operating in Georgia, 14 of which have majority foreign ownership. Overall, the share of foreign investment in banks amounts to 64% of total bank capital. The largest six banks account for 85% of banking assets.

Developments in both lending and deposits show a significant financial deepening in Georgia (Figure 36). Nevertheless, the broad money/GDP ratio, standing at 24%, remains relatively low and below that of other countries in the region. By contrast, lending has grown more rapidly, and, unusual for the region, exceeds deposits. This has only been possible by drawing on credit lines of mother companies.

Bank Interest Spreads and Profitability

Lending rates have come down significantly and spreads have narrowed somewhat, while remaining high. In 2004, the spread between lending and deposit rates was more than 20%, but narrowed down to 11% in 2007 (Figure 37). This is better than in most
### Table 18: Georgia Financial Soundness Indicators, 2003–2008

<table>
<thead>
<tr>
<th>Item</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital adequacy ratio</td>
<td>20.3</td>
<td>18.8</td>
<td>17.5</td>
<td>20.6</td>
<td>16.0</td>
<td>13.9</td>
</tr>
<tr>
<td>NPL ratio (gross)</td>
<td>7.4</td>
<td>6.2</td>
<td>3.7</td>
<td>2.5</td>
<td>2.6</td>
<td>13.1</td>
</tr>
<tr>
<td>Provision coverage ratio</td>
<td>93.3</td>
<td>105.7</td>
<td>130.9</td>
<td>141.3</td>
<td>136.1</td>
<td>70.2</td>
</tr>
<tr>
<td>ROA before tax</td>
<td>3.9</td>
<td>1.9</td>
<td>3.0</td>
<td>2.7</td>
<td>1.9</td>
<td>(2.6)</td>
</tr>
<tr>
<td>ROE</td>
<td>15.0</td>
<td>7.9</td>
<td>15.1</td>
<td>15.7</td>
<td>9.7</td>
<td>(12.6)</td>
</tr>
<tr>
<td>Liquid assets/total assets ratio</td>
<td>–</td>
<td>45.0</td>
<td>33.3</td>
<td>41.5</td>
<td>37.2</td>
<td>30.4</td>
</tr>
<tr>
<td>Loans and advances/total assets ratio</td>
<td>57.5</td>
<td>54.9</td>
<td>67.2</td>
<td>63.2</td>
<td>63.5</td>
<td>67.5</td>
</tr>
<tr>
<td>Loans/deposits ratio</td>
<td>106.9</td>
<td>95.9</td>
<td>130.8</td>
<td>127.5</td>
<td>142.5</td>
<td>167.7</td>
</tr>
</tbody>
</table>

-- = not available, ( ) = negative, NPL = nonperforming loan, ROA = rate of return on asset, ROE = rate of return on equity.

Source: The Georgian authorities.

### Figure 36: Georgia Indexes of Financial Deepening (%)

GDP = gross domestic product.
other countries in the region, but nevertheless significantly higher than the international median of about 6%. Competition has improved with the participation of several foreign-owned banks and the high spread likely reflects the high cost of doing business in Georgia.

As noted above, profitability has been quite good until very recently. Returns on equity amounted to an average of 13.5% during 2005–2007. However, under the double impact of military conflict and global slowdown, banks incurred losses in 2008.

The Kyrgyz Republic

The Macroeconomic Context

The global crisis will have serious repercussions on the Kyrgyz economy. The main transmission channel is a decline in external demand and remittances spilling over to domestic demand. A surge in the number of returning migrant workers caused by the economic slowdown in the Russian Federation and Kazakhstan, where the great majority of these workers work, may create an additional social burden. Tourism receipts are also expected to fall. An uncertain element is the banking sector’s strong ties with Kazakh banks, with substantial short-term credit lines needing to be rolled over in 2009. These credit lines are estimated at $150 million to $200 million, equivalent to 3%–4% of GDP. The National Bank of the Kyrgyz Republic (NBKR) stressed that talks with Kazakh banks indicate there should be no problems with maintaining short-term exposure, but
market observers were less certain. On a positive note, the Russian Federation has pledged significant support, including short-term budgetary support in the form of a $150 million grant (linked to the closing of the US air base in Bishkek), which, if it comes through quickly, could allow a fiscal stimulus package and close any balance-of-payment gap.

**Overall growth is likely to slow down to 0.5% in 2009 following the 7.5% growth in 2008 and 8% in 2007.** Risks, however, are likely to be on the downside, in particular if a financial crisis should emerge.

**The current account deficit widened in 2008 and is expected to widen further to the equivalent of 7% of GDP in 2009.** The decline in exports and remittances will be somewhat mitigated by lower food and fuel prices (other than gas) and higher gold exports. Capital flows are very uncertain, hinging on donor financing that includes those from the Russian Federation, and on the situation in the Kazakh banking system, which could draw back capital from the Kyrgyz banks.

**After staying at relatively moderate levels for several years, inflation rose sharply in 2007 as a result of higher import prices. Although declining somewhat, it remained uncomfortably high by the end of 2008, at 20%.** Significant moderation is expected in 2009 given the global deflationary environment and continued tight monetary policy, but developments in the exchange system could feed through to prices.

**Fiscal policy has been conservative with the overall fiscal deficit in the last 2 years amounting to around 0.5% of GDP.** The economic slowdown is likely to create a fiscal gap, equivalent to about 1.5% of GDP. However, donor financing is likely to be forthcoming and should the Russian Federation financing come through, there will be room for a sizeable fiscal stimulus of as much as 4%–4.5% of GDP. Funding of the discussed magnitudes should also help alleviate pressures in the foreign exchange market.

**Monetary policy was tightened significantly in 2008, both to combat inflation and to address emerging exchange rate pressures.** Reflecting increased quantities in the regular auctions, the rate of the 28-day NBKR note (the policy rate) rose from 8.4% at the end of 2007 to 14.6% at the end of 2008, before declining slightly to 13.0% in early March 2009. However, demand for money appears to have declined, and although reserve money declined somewhat in the last few months of the year, the som remained under strong pressure. Since the end of August 2008, as the Russian ruble depreciated against the US dollar, the som has depreciated by 20% against the US dollar. Pressures intensified after the recent Kazakh devaluation. Although generally, the NBKR has allowed more exchange rate flexibility than other countries in the region, it has intervened heavily because of the concern that a too-abrupt decline in the exchange rate could lead to a strong feed through to prices and possibly also impact the banking system. The NBKR has sold $145 million since August 2008, including $115 million thus far in 2009, and by early February reserves fell to $1.040 billion (3.6 months of imports). The authorities have reiterated their commitment to let market fundamentals guide the exchange rate and to intervene only to smoothen out excessive volatility.
The Monetary Policy Framework

Conceptual Issues

According to the law and official statements, the main objectives of monetary policy are to attain and maintain price stability and to support long-term growth. The latter phrase was recently introduced as an amendment to the law on the President’s suggestion. The NBKR has autonomy in setting and executing monetary policy. It focuses on reserve money as its operational target and broad money as the intermediate target to ensure price stability. It is clear, however, that it also pays attention to the exchange rate in executing its monetary policy. The NBKR is also responsible for setting, as well as executing, exchange rate policy.

The NBKR board outlines the broad orientation of monetary policy, which is fleshed out in weekly meetings of the monetary policy committee. It meets every quarter to set the general guidelines. Summaries are provided twice a year to Parliament for information. The statement at the beginning of the year includes a non-binding indicative target for inflation. The monetary policy committee is chaired by the first deputy chairman and includes one other board member as well as key NBKR department heads. It has authority to set monetary policy intervention without requiring approval by the chairman of the NBKR.

The NBKR uses a variety of monetary policy instruments:

• NBKR notes offered weekly (Tuesdays) via volume-based auctions with no cut-off rate;
• NBKR repos/reverse repo auctions offered weekly (Wednesdays), with government treasury bills (TBs) as collateral—the NBKR announces a cut-off rate in addition to the volume;
• direct purchases and sales of government TBs in the secondary market;
• discount rate, which is considered the key policy rate and is set at the average of the last four rates determined in the weekly 28-day NBKR note auctions;
• mandatory reserve requirements;
• deposit facility;
• overnight credits with the rate set at 1.2 times the rediscount rate;
• lender-of-last-resort (LOLR) facility;
• intervention in the foreign exchange market; and
• SWAP operations in foreign exchange.
The NBKR note has been the main instrument used to withdraw liquidity. Monthly sales in 2008 averaged Som400 million per month, compared with Som450 million of reverse repo operations for the year as a whole. The NBKR reserves the right to reject outlier bids in its auction, although it uses this power sparingly, using it once every four auctions on average. Although it has not had to inject liquidity since 2005, instruments for such operation are in place (repos). However, significant injections may be hampered by the low availability of TBs as collateral, and their uneven distribution among banks.

A 2007 International Monetary Fund (IMF) technical assistance mission had recommended that agreement be reached with the government to use TBs to withdraw structural liquidity. The proposal was to discontinue the use of NBKR notes, in part because of concern that the cost of sterilization should be borne by government. Agreement has been reached with the Ministry of Finance to expand the issue of TBs to allow the NBKR to discontinue the issuance of longer-maturity NBKR notes. Henceforth, the NBKR will only issue NBKR notes with a maturity of up to 28 days.

Other facilities are used sparingly. The deposit facility has not been used since 2007, in line with the IMF recommendation that the facility be discontinued. Direct sales and purchases in the secondary market have not been conducted in practice, while a Som4-million fund “discount facility” has been established as a pilot project to conduct such operations. While the framework permits daily fine-tuning operations, such operations are not carried out in practice. The overnight facility has been little used. The NBKR is in the process of streamlining procedures for its use, allowing for electronic application by banks, which it believes will make the facility more useable to the banks. Reserve requirements at 10% have not been changed since 2001.

Liquidity forecasting is complicated by the poor quality of input from the Ministry of Finance. Cooperation has improved with now regular contacts at the technical level. Interest rates on TBs still appear to be based partly on cost considerations, although the NBKR noted that a 2008 amendment requiring that at least 25% of the announced volume must be sold in the auction was a step forward. Monetary policy is further impeded by the weak relationship between money growth and inflation. Moreover, the NBKR believes that the interest rate channel is not working.

An LOLR facility is in place but has not yet been used. The NBKR has recently announced the establishment of a rediscount fund of Som4 billion. While procedures have not yet been finalized and established, it appears that the facility is intended to ensure credit expansion to priority sectors, with maturity being as much as 5 years. Banks indicated they were likely to use the facility if the interest rate encourages them to do so.

Overall, the monetary policy framework appears appropriate to the stage of development of the Kyrgyz banking system. The framework nonetheless needs strengthening in some areas. In particular, the cooperation between the NBKR and the Ministry of Finance must be enhanced to permit better liquidity projections. In the
immediate future, the NBKR should continue with a framework targeting reserve money growth. However, in a situation of potential liquidity needs, it may need to give more attention to fine-tuning operations during the week between auctions. Looking further ahead, it should attempt to strengthen the interest rate channel by more explicitly targeting the short interbank rate as a policy rate. Rather than use the discount rate as the key policy rate, it should announce a target range bound by the overnight rate (1.2 times the discount rate) at the upper end, and a new 1-day deposit facility at the lower end, and transition to interest rate targeting should not be done until financial markets have deepened and until a well-functioning interbank market has developed. Instrumental in such efforts will be a deepening of the market for government TBs. Potential conflict between monetary policy and foreign exchange targets must also be addressed.

Performance in Practice

Inflation, Growth, Policy Interest Rate, and Monetary Aggregates

Monetary aggregates have grown rapidly over the last 3 years, thereby contributing to inflationary pressures. Monetary expansion was mainly fueled by an increase in net foreign assets, as NBKR intervention in the foreign exchange market was not fully sterilized. Broad money (M2) significantly exceeded the NBKR’s targets for the years 2006 and 2007. Initially, there seemed to be little impact on inflation, which remained moderate at about 5% in 2006 (Table 19). The authorities explain the sharp increase in inflation in 2007 as having originated from high prices for imported energy and food. However, it is likely that it also represents in part a lagged response to the rapid expansion in liquidity. As a result, inflation rose to 20% in 2007 and 2008, compared to the authorities’ initial target of 5%–6%.

There is little evidence that the monetary policy stance has been unduly influenced by growth concerns. Under the Taylor rule approach, central banks effect a change in the real policy rate depending on the deviation of inflation from its target as well as the deviation of real growth from its long-run equilibrium, with country-specific weights attached to the two elements. There is no evidence that real policy rates were high when inflation was unexpectedly high. It is noteworthy that the real policy rate turned sharply negative during much of 2007 and 2008 as the policy rate was only increased with a significant lag (Figure 38). Nor is there any evidence that real policy rates were reduced in response to low growth (Figure 39).

The growth in reserve money in 2007–2008 was fueled by an expansion in net foreign assets (Figure 40). The NBKR attempted to sterilize some of the liquidity injected through its intervention in the foreign exchange market, but was not willing to effect full sterilization, presumably out of concern that this would drive up interest rates excessively. There was no expansionary impetus from lending to banks or to government. In the last few months of 2008, as conditions in the foreign exchange market changed, reserve money declined slightly.
Table 19: Kyrgyz Republic Target Policy Variable and Outcome, 2004–2008 (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
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<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tr>
<td><strong>Targets and Estimates</strong></td>
<td></td>
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<tr>
<td>Increase in M2</td>
<td>16–18</td>
<td>19.8</td>
<td>14.9</td>
<td>25.9</td>
<td>27</td>
</tr>
<tr>
<td>Inflation</td>
<td>4-5</td>
<td>4</td>
<td>5–7</td>
<td>5–6</td>
<td>12–15</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>4.1</td>
<td>5.0</td>
<td>8.0</td>
<td>5.5</td>
<td>7.0</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in M2</td>
<td>22.4</td>
<td>17.6</td>
<td>51.1</td>
<td>44.2</td>
<td>9.9</td>
</tr>
<tr>
<td>Inflation</td>
<td>2.8</td>
<td>4.9</td>
<td>5.1</td>
<td>20.1</td>
<td>20.0</td>
</tr>
<tr>
<td>Real GDP growth</td>
<td>7.0</td>
<td>(0.2)</td>
<td>3.1</td>
<td>8.2</td>
<td>7.6</td>
</tr>
</tbody>
</table>

( ) = negative. GDP = gross domestic product. M2 = broad money. Source: The Kyrgyz authorities.

Figure 38: Kyrgyz Republic Real and Nominal Policy and Inflation Rates (%)

Effectiveness of Central Banks and Their Role in the Global Financial Crisis: Case of Selected Economies
Figure 39: Kyrgyz Republic Real Policy and GDP Growth Rates
(%)

Figure 40: Kyrgyz Republic Reserve Money Growth and Its Components
(annual, in % of beginning of period reserve money)

GDP = gross domestic product.

Q3 = third quarter.
Broad money grew strongly from 2002–2008 until it was influenced by the crisis at the end of 2008 (Figure 41). Throughout the period, increases in net foreign assets were a major contributing factor, but increasingly, growth in credit to the private sector became a major driver. In 2007, credit to the private sector almost doubled. Private sector growth remained strong during the first three quarters of 2008 but stalled in the fourth quarter. Deposits also declined in the fourth quarter and dollarization rose slightly to 52.7% of deposits. This trend has continued through January 2009, the latest time period for which data is available.

**Monetary developments were influenced by transfers and capital inflows** (Figure 42). Transfers are heavily influenced by workers’ remittances, in particular from the Russian Federation and Kazakhstan. Thus, a weakening of workers’ remittances caused by the international crisis is a potential source of vulnerability. A reversal of short-term capital flows to Kazakh banks is also a potential vulnerability.

**Management of Reserve Money Growth and the Policy Rate**

The setting of the policy rate has not been consistent with bringing reserve money close to its target. In spite of very rapid expansion of reserve money in 2006 and 2007, the policy rate was not increased appreciably until 2008.

The policy rate is the discount rate, which is set at the 28-day NBKR note rate. No transactions are carried out at this rate, but it is used as a basis for calculating the overnight
rate, which is set as 1.2 times the discount rate. The policy (discount) rate fluctuates significantly as it is determined in the weekly NBKR auctions, which could complicate monetary policy signaling. To dampen fluctuations in the policy rate, it was decided in August 2009 to set the policy rate as the average of the last four auctions.

**Over the last 2 years, excess reserves of banks have shown increased volatility.** The NBKR was unable to fully explain the increased volatility, but believed it could be related to intervention in the foreign exchange market.

**Monetary Policy Transmission Mechanism**
Recent research by the NBKR has found little correlation between inflation and policy-related variables such as monetary aggregates, foreign exchange rates, and interest rates. Moreover, a recent IMF study notes that “not only is the relationship between the consumer price index forecast and M2 uncertain, it is unclear how the M2 target is translated into a base money target and ultimately into market operation decisions taken weekly by the Monetary Regulation Committee (MRC).”

The NBKR believes that weakness in the interest rate transmission mechanism (Figure 43) is partly explained by the low level of competition and by the subsidized interest rates by state-owned financial institutions. The mechanism may also have been influenced by the Ministry of Finance influencing the cut-off rate for TBs to control costs,

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although it appears that this practice may have been discontinued as more recently the TB rate has better tracked the NBKR rate.

**Surprisingly, the interbank rate has consistently been fluctuating below the policy rate.** Since the policy rate is the rate at which the NBKR withdraws liquidity on a weekly basis, the interbank rate should, as a general rule, be expected to be higher than the policy rate.

There is no evident relationship between the policy rate and the bank lending rate. The bank lending rate has fluctuated widely but has, in general, come down over recent years. It is remarkable that lending rates do not appear to have reflected the sharp increase in the policy rate in 2008, or the increase in the interbank rate.

**Exchange Rate and Gross International Reserves**

The **NBKR intervenes in both sides of the market to smoothen out exchange rate developments** (Figure 44). In 2006–2007, the NBKR was a net buyer, injecting liquidity through its operations in the foreign exchange market as it only sterilized part of its intervention. In 2007, for example, it purchased net $244 million, which is close to 50% of the beginning reserve money stock.

The situation in the foreign exchange market deteriorated toward the end of 2008. In January and February 2008, the NBKR sold $135 million in support of the som. It was following a policy of allowing the som to gradually adjust to underlying market fundamentals and has depreciated by about 20% against the US dollar. The IMF believes
that the NBKR has showed the most exchange rate flexibility in the region. Nevertheless, the som remains significantly overvalued vis-à-vis the Russian ruble.

Central Bank Balance Sheet

**Audits of the accounts of the NBKR have indicated no particular problems in recent years.** The NBKR has, over recent years, received clean audit opinions from their external auditors, based on international auditing standards.

**Capital and reserves as a ratio of total assets amount to 5.1%.** The NBKR was recapitalized in 2004 as reflected in the entry in its books for “held to maturity instruments,” which amounted to 8.8% in 2007. Net profits appear relatively comfortable and rose in 2007. A significant increase in authorized capital to Som1 billion was included in the 2008 amendments to the NBKR Law. While part of the increase will amount to a transfer from reserve accounts, the Minister of Finance indicated that there would be an increase of Som500 million in NBKR’s total capital and reserves from retained earnings as no profits transfer would take place this year.

Financial Soundness and Risk Management

**Financial soundness indicators are quite strong.** The nonperforming loan (NPL) ratio has come down significantly since the beginning of the decade, capital adequacy and liquidity are relatively high, and profitability is good. However, as observed in other countries in the region, the level of NPLs, as reckoned using a narrow definition that excludes “watch” loans, is increasing again, from 3.5% at the end of 2007 to 5.7% at the end of January 2009.
(amounts in som million)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td>Assets</td>
<td>36,054</td>
<td>100.0</td>
<td>46,648</td>
</tr>
<tr>
<td>Gold and silver</td>
<td>2,013</td>
<td>5.6</td>
<td>2,468</td>
</tr>
<tr>
<td>Claims on banks</td>
<td>20,772</td>
<td>57.6</td>
<td>26,034</td>
</tr>
<tr>
<td>Securities available for sale</td>
<td>8,000</td>
<td>22.2</td>
<td>12,960</td>
</tr>
<tr>
<td>Held to maturity investments</td>
<td>4,302</td>
<td>11.9</td>
<td>4,094</td>
</tr>
<tr>
<td>Other assets</td>
<td>965</td>
<td>2.7</td>
<td>1,093</td>
</tr>
</tbody>
</table>

| Liabilities                          | 36,054   | 100.0    | 46,648   | 100.0    | 52,451   | 100.0    |
| Currency in circulation             | 19,910   | 55.2     | 27,562   | 59.1     | 30,803   | 58.7     |
| Deposits of banks                   | 2,916    | 8.1      | 4,022    | 8.6      | 4,395    | 8.4      |
| Ministry of Finance                 | 4,502    | 12.5     | 5,438    | 11.7     | 4,774    | 9.1      |
| Amounts payable under repo arrangements | 505    | 1.4      | 195      | 0.4      | 0        | 0.0      |
| Debt securities issues              | 64       | 0.2      | 1,427    | 3.1      | 1,642    | 3.1      |
| Other liabilities                   | 6,624    | 18.4     | 5,628    | 12.1     | 6,944    | 13.2     |
| Capital and reserves                | 1,533    | 4.3      | 2,376    | 5.1      | 3,893    | 7.4      |

Note: Totals may not add because of rounding.  
Source: National Bank of the Kyrgyz Republic annual reports.


<table>
<thead>
<tr>
<th>Item</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net interest income</td>
<td>813.4</td>
<td>1,085.0</td>
<td>1,406.1</td>
</tr>
<tr>
<td>Net fee and commission expense</td>
<td>5.1</td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Net foreign exchange gain (loss)</td>
<td>9.1</td>
<td>(309.6)</td>
<td>31.0</td>
</tr>
<tr>
<td>General administrative expenses</td>
<td>(232.0)</td>
<td>(248.0)</td>
<td>(278.4)</td>
</tr>
<tr>
<td>Other expenses</td>
<td>(106.7)</td>
<td>(117.2)</td>
<td>(32.5)</td>
</tr>
<tr>
<td>Net income</td>
<td>488.9</td>
<td>413.2</td>
<td>1,129.4</td>
</tr>
</tbody>
</table>

( ) = negative.  
Source: The National Bank of the Kyrgyz Republic annual reports.
The 2007 IMF Financial Sector Assessment Program (FSAP) Update notes that good progress has been achieved in the supervision of the banking system but that more needs to be done. It also points to the need to strengthen credit culture, ensure greater consistency and predictability in the legal framework, strengthen mortgage and pledge registry, strengthen creditor rights and insolvency procedures, improve corporate governance, and enhance the implementation of International Financial Reporting Standards (IFRS) and international standards on auditing. Finally, it notes that corruption remains an issue.

Stress tests undertaken by the FSAP team indicated that the banking system was resilient enough to moderate shocks but that it was vulnerable to large credit shocks. The team further noted that strength was uneven across banks. Stress tests performed in early 2009 indicate that the banking system was also resilient to quite severe shocks. Thus, a 10 percentage point increase in NPLs will not cause bank to breach the minimum required capital/risk weighted assets ratio of 12%.
Nevertheless, recent credit developments raise some grounds for concern. It is unclear whether the banks’ risk management systems have been able to keep up with the rapid growth of credit, which nearly doubled in 2007. The growth in lending appears to have come to an abrupt halt at the end of 2008 as a result of the global financial crisis. Moreover, there is uncertainty about spillover from the Kazakh banking system and the short-term exposure to Kazakh banks. Thus, the situation warrants close monitoring.

The authorities have prepared contingency plans that envisage emergency liquidity support by the NBKR and possible capital injections by the government for systemic banks. Legislation to advance the date at which the deposit insurance scheme will come into effect has been placed on a fast-track approval process.

State of Financial Intermediation

Structure of Financial System and Financial Deepening
Banks dominate the financial system, accounting for 80% of financial assets at the end of 2006. Meanwhile, equity capitalization is modest, and little trading activity takes place. The insurance sector is also little developed with premiums accounting for 0.13% of GDP in 2006.

There are currently 21 banks operating in the Kyrgyz Republic. A significant part of the banking system is foreign-owned, mainly by Kazakh banks, and accounted for 71% of assets in 2006. All banks are privately owned. Dollarization has declined significantly since 2005. However, following the turnaround in the foreign exchange market at the end of 2008, dollarization is on the rise again, amounting to 65% for loans and 67% for deposits by the end of January 2009.

Financial deepening has increased significantly over the last 7 years, but remains modest. At the end of 2008, the ratio of loans to GDP amounted to 13.8% while that of deposits amounted to 12.5%. These ratios are very low by international standards. Trends in selected financial indicators capture finance sector deepening (Figure 45).

Bank Interest Spreads and Profitability
Interest rate spreads are quite large by international standards (Figure 46). After having increased significantly, spreads have remained relatively stable at about 8.5 percentage points over that in 2006–2008. Several factors may explain the large spread, among which are insufficient competition and high operating costs. But it may, to a significant extent, also reflect the risk of engaging in banking in the Kyrgyz Republic. Banks have earlier gone through several episodes of difficulty because of poor credit quality.

Profitability has been good. Return on assets has held quite steady in recent years at close to 4%, and return on equity has been even better at around 20%. These are very good numbers by international standards. However, it remains to be seen to what extent profitability will be affected by the likely increase in provisioning for NPLs likely to result from the current economic slowdown.
Figure 45: Kyrgyz Republic Indexes of Financial Deepening (%)

GDP = gross domestic product.

Figure 46: Kyrgyz Republic Bank Interest Rate Spread (%)
Tajikistan

The Macroeconomic Context

Tajikistan has experienced relatively rapid growth in recent years (7%–8%) fueled by rapidly rising remittances. It is, however, now facing serious difficulties because of the global crisis. Workers’ remittances, mainly from the Russian Federation, were equivalent to nearly 50% of GDP in 2008 and have, in particular, supported activity, particularly, in the services and construction sectors (Box 6). The cotton sector is also important but export revenues are less than 20% of remittances. Inflation remains relatively high, receding somewhat toward the end of 2008 to 12%.

In spite of the surging remittances, the current account of the balance of payments has registered sizeable deficits, equivalent to 10% of GDP in 2007–2008. Public capital flows and foreign direct investment (FDI) have been broadly sufficient to cover the deficits and the balance of payments incurred a modest surplus in 2008. More recently, the growth in remittances has slowed down (8% year on year in December 2008) and the somoni has started to depreciate.

Fiscal policy has been geared toward securing a modest surplus, when excluding foreign financed public investment projects. Monetary policy has at times been expansionary, mainly because of the quasi-fiscal operations of the National Bank of Tajikistan (NBT) to finance the cotton sector. However, in 2008, the monetary policy was broadly supportive of macroeconomic stability. Reserve money growth was brought down to 30% in 2008, and the NBT built up foreign reserves (adjusted for pledged assets), which nevertheless stands only at the equivalent of 1 month of imports.

Box 6: Tajikistan’s Cotton Sector

About 50% of the active population is employed in the cotton sector. However, with the rapid rise in remittances the sector has lost much of its relative importance, accounting only for an estimated 4% of gross domestic product and 10% of export. Poor regulation and governance, and excessive state interference have plagued the sector and have contributed to declining productivity and profitability.

Debts to cotton farmers have emerged as a major problem. The National Bank of Tajikistan (NBT) provided pledges and guarantees to foreign lenders and to the somoni (Tajik currency) loans of the asset management company Kreditinvest (KI), which, in turn extended loans to domestic middlemen (investors). NBT loans and guarantees to KI amounted to $575 million at the end of 2008 and pledged assets to foreign investors amounted to $240 million. Most of these funds are likely lost. As a result, the NBT has become insolvent; Tajikistan has experienced a large expansion of the monetary base and has virtually depleted its international reserves. Discussions are under way with donors on how to address the debt problem. Recent reforms have discontinued NBT involvement, replacing it with government lending to banks at subsidized rates, but with the latter bearing the credit risk. Given a likely decline in cotton prices, banks’ loan quality may well deteriorate.
Prospects for 2009 are severe, and contain serious downside risks. One million out of a population of 7 million worked outside Tajikistan in 2008, mainly in construction projects in the Russian Federation. A reduction in outside employment, and in workers’ remittances, could have severe repercussions for the Tajik economy. Moreover, Uzbekistan, a key supplier of gas, has recently cut its exports to Tajikistan and will raise the gas price to 65% in 2009. Ongoing electricity rationing could stifle production and exports. Outstanding guarantees amounting to $47 million or 25% of reserves that fall due in 2009 have, however, now been restructured. A severe economic downturn is likely to materialize, although the authorities, and the International Monetary Fund (IMF), are hopeful that modest growth can be maintained. Some banks are being affected by liquidity constraints and the NBT has provided liquidity support.

Tajikistan will need donor support to have any realistic possibility of ameliorating the impending crisis. Unfortunately, past history of misreporting to the IMF has endangered such support. The recent staff-monitored program to re-establish a positive track record has been executed broadly satisfactorily, and the authorities hope that a new IMF Poverty Reduction and Growth Facility (PRGF) program scheduled for consideration by the IMF’s executive board in mid-April 2009 can unlock budgetary support from key donors.

The Monetary Policy Framework in Theory and Practice

Conceptual Issues

The recent Financial Sector Assessment Program (FSAP) found significant governance problems at the NBT, which had led to the bank becoming deeply insolvent. Among the issues identified by the FSAP include lack of autonomy and involvement in commercial activities, particularly those related to the cotton industry. Several recommendations were also made, including fully staffing the executive board as the three non-executive members have never been appointed. Draft amendments to the NBT Law are currently being discussed by Parliament. These amendments reportedly address all the issues raised by the FSAP report.

The overall monetary policy orientation is approved by the executive board of the NBT and transmitted to Parliament for approval. The board is composed of eight members, consisting only of the management and heads of department of the NBT. Broad monetary policy decisions, including the setting of the refinance rate, are made in monthly meetings of the 15-member monetary policy committee, which includes 12 representatives from the NBT (four board members and eight department heads), one representative from the Ministry of Economy, and two from the Ministry of Finance (Tax Department and Customs Department). There is therefore little de jure and de facto independence in implementing monetary policy.

Although some progress has been made, the monetary policy framework is still rudimentary. The NBT’s main monetary policy instruments are unremunerated reserve requirements and outright sales of NBT certificates of deposit (CDs). Its monetary policy rate, the refinancing rate, is used for ad hoc liquidity injections, but there are no standing
facilities. The NBT’s CD auction volume is small and the state-owned bank has, in the past, purchased almost every issue, frequently at a negative real interest rate; thereby raising questions of whether or not there is competitive market pricing. NBT CDs are not tradable, and accordingly there is no secondary market for NBT CDs, nor is there a market-determined interest rate or yield curve. There is very little interbank market activity because of distrust among banks.

The NBT focuses on the level of reserve money as its intermediate target, in compliance with programs agreed with the IMF. The operational target is liquid reserves of the banks at the NBT, which is influenced by the sales of NBT CDs, changes to the minimum reserve requirements, and ad hoc liquidity injections to individual banks.

CD auctions have been stopped since September 2008 because of liquidity difficulties of banks. The required reserves ratios have been reduced gradually in 2008 from 20% to 11% for currency deposits and from 18% to 9% for foreign currency deposits. There are no facilities for liquidity injection, but the NBT has been granting ad hoc liquidity loans to banks at the refinance rate and at its discretion, upon requests from banks.

The limited stock of tradable government and/or NBT securities constrains monetary policy implementation and bank’s liquidity management. The government has not issued securities since 2001 in the absence of domestic financing requirements. The NBT certificates have been issued since 2003, but questions about NBT’s insolvency discouraged larger placements and market-based pricing. Earlier, credit auctions were used as an instrument, but these have been discontinued since 2003. In these circumstances, the required reserve ratio is likely to remain a key tool until financial markets have been deepened, including through the issue of government papers.

Performance in Practice

Inflation, Growth, Policy Interest Rate, and Monetary Aggregates

Reserve money growth has, on several occasions, significantly exceeded targeted levels (Table 23). Although prices of foodstuffs and higher import prices were major factors, monetary expansion is likely to have contributed to the acceleration in inflation in 2006 and 2007, which increased to more than double the targeted level. Monetary expansion also contributed to the decline in foreign reserves. The situation turned around in 2008, when reserve money growth was reduced to 29.6%. The NBT discontinued the practice of undertaking quasi-fiscal activities, and the sharp increase in remittances permitted the NBT to rebuild some of its foreign exchange reserves, which was the main driver of reserve money expansion.

The real policy rates have been negative on several occasions in recent years. There is little evidence that the policy rate has been used in either addressing inflation or growth under the so-called Taylor rule (Figures 47 and 48). The policy rate was raised belatedly following the high inflation of 2000–2001. A slight increase in the policy rate in 2007 was insufficient to
Table 23: Tajikistan Key Targets and Outcomes, 2004–2009

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targets and Estimates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve money growth</td>
<td>14</td>
<td>10</td>
<td>18</td>
<td>15-18</td>
<td>30.4</td>
<td>18</td>
</tr>
<tr>
<td>Inflation</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>6.0</td>
<td>8.0</td>
<td>8.0</td>
<td>7.5</td>
<td>7.0</td>
<td>7.1</td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve money growth</td>
<td>–</td>
<td>29.2</td>
<td>49.2</td>
<td>40.3</td>
<td>29.6</td>
<td>–</td>
</tr>
<tr>
<td>Inflation</td>
<td>–</td>
<td>7.1</td>
<td>12.5</td>
<td>19.8</td>
<td>11.8</td>
<td>–</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>–</td>
<td>6.7</td>
<td>7.0</td>
<td>7.8</td>
<td>7.9</td>
<td>–</td>
</tr>
</tbody>
</table>

= not available, GDP = gross domestic product.
Source: Tajikistan authorities.

Figure 47: Tajikistan Real and Nominal Policy and Inflation Rates

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preventing the real rate from turning negative. As noted above, the monetary policy framework is not at a stage where the interest rates can be used as the main policy instrument.

After a relatively modest growth during 2002–2005, reserve money growth accelerated in 2006 and 2007 (Figure 49). The key factors supporting this growth were loans to commercial banks and direct monetary expansion from the quasi-fiscal operations by the NBT that had been associated with cotton sector financing.
Figure 48: Tajikistan Real Policy and GDP Growth Rates
(\%)
Broad money growth averaged 70% during 2007–2008 before falling back to only 2.5% in 2008 (Figure 50). Throughout 2001–2007, broad money has been influenced most by strong credit growth. Credit to the private sector grew, on an average, by about 50% per year in 2006–2007 and rose by a further 20% in 2008. However, there were signs of slowdown in new lending toward the end of the year. Government operations have mostly had a contractionary impact as the government has built up net deposits.

Private foreign capital inflows and, in particular, remittances have risen very rapidly (Figure 51). However, the resulting increase in demand has leaked out through increased imports, so that changes in net foreign assets have mostly had a negative impact on broad money growth.

Management of Reserve Money Growth and the Policy Rate
The main policy instrument, sales of CDs, has been used sparingly. Weekly decisions on volumes to be auctioned off are made in a small technical committee composed of the deputy chairman and three key department heads, subject to approval of the chairman. Liquidity projections are made with Ministry of Finance input, which is reportedly of adequate quality. In principle, 14-day CDs are sold on Tuesdays, 28-day notes on Thursdays, and 56-day CDs every fourth Thursday. However, on some auction dates, no CDs are offered. The outstanding amount at the end 2006 of about TJS4 million was equivalent to 6% of banks’ excess reserves and the outstanding amount of TJS10 million at the end of 2007 was equivalent to 9% of excess reserves. Volumes of sales were increased...
somewhat in mid-2008, increasing the outstanding stock to TJS36 million in September. However, liquidity difficulties prompted the discontinuation of sales, quickly reducing the outstanding stock to zero. Interest rates in the CD auctions have fluctuated significantly, and during 2006–2007 were significantly below the rate of inflation. Only when volumes were increased in mid-2008 did interest rates increase to about 13% or close to the level of inflation.

**In the absence of an appropriate standing facility, liquidity injections are taken as ad hoc decisions at the request of the applicant bank.** Each application is considered in the technical committee on its merit and may be declined. If the committee recommends approval, all members of the executive board must approve of the loan. Normally, this approval is secured in writing and does not require a meeting of the board. Maturity is normally 2–3 months, and the interest rate on the loan is the refinance rate. At the end of 2008, TJS40 million in liquidity loans were outstanding.

**The monetary policy committee sets the refinance rate in its monthly meetings.** In 2006 and 2007, and most of 2008, the refinance rate was of little relevance as no liquidity loans were extended. Meetings with bankers indicated that they paid little attention to the rate in setting their lending and deposit rates. As noted earlier, the refinance rate was negative in much of 2006–2008. Currently, the rate is set at 12%, compared with the inflation target of 13%.
Monetary Policy Transmission Mechanism

The monetary policy transmission mechanism is very weak. As noted above, the monetary policy framework is still relatively rudimentary. In addition, banking and liquidity management is at an early stage of development. Lack of competition and the high interest rate spreads further complicate monetary policy.

Figure 52 indicates little causal relationship between the policy rate and the bank lending rate. In 2003–2004, the bank lending rate did not react at all to an increase in the policy rate. Subsequently, the bank lending rate rose after the policy rate was cut. Interviews with bankers confirmed that they paid little attention to the policy rate in their interest rate decisions.

Exchange Rate and Gross International Reserves

After a sharp depreciation at the end of the 1990s, the somoni has shown relative stability with a gradually declining trend against the US dollar. In 2008, the somoni appreciated in nominal terms by about 2% against the US dollar as the NBT limited the appreciation through foreign exchange market interventions. Given the large consumer price differential vis-à-vis trading partners, the real effective exchange rate appreciated significantly more. Since the end of 2008, the somoni has depreciated by about 10% against the US dollar. The authorities intervene from time to time to smoothen out the path, but are in principle implementing a flexible managed float. Thus far, the exchange rate has depreciated significantly less than in neighboring countries. Volumes in the interbank

Figure 52: Tajikistan Indicators of Monetary Policy Transmission

(%)
foreign exchange market are very low, with only 20 transactions at a total volume of $8.5 million being consummated in January 2009. Bankers appear to exercise self restraint in accessing the market; as one banker observed, when asked why he did not purchase foreign currency in the market in spite of his bank having a professed liquidity shortfall in foreign exchange, “We do not want to have the somoni depreciate.”

Although Figure 53 indicates a healthy increase in international reserves according to officially published data, the actual situation is quite different. A significant part of foreign assets was pledged as security for NBT guarantees and was not freely usable. Creditors later called in the pledges. At the end of 2008, gross reserves amounted only to $199 million, equivalent to 1 month of imports. Reportedly, reserves have fallen further in the first quarter of 2009.

Central Bank Balance Sheet

Earlier governance problems at the NBT have led to the bank becoming deeply insolvent. These problems included lack of autonomy and involvement in commercial activities, particularly those related to the cotton industry.

The NBT has not published audited accounts for the last several years and audits for 2006 and 2007 have not been finalized. A special audit by Ernst & Young that focused on issues of misreporting to the IMF has been completed, but the results are not
yet available. A regular audit for 2008 still needs to be conducted, and the earlier ones finalized. Detailed balance sheet data and profits and loss data were not provided by the authorities. Table 24 is based on summary data provided to the IMF.

**Once the magnitude of the shortfall is defined, urgent steps will need to be taken to recapitalize the NBT.** Such a recapitalization should go hand in hand with enhanced governance and autonomy from government interference.

**Financial Soundness and Risk Management**

Although published figures indicate banks are well capitalized and have good profitability, **multiple risks raise concern** (Table 25). In the absence of strong credit risk management capacities and weak banking supervision, the rapid growth in lending may well have given rise to problems of loan quality not yet captured in official statistics. In particular, the surge in credit to the agriculture sector must be closely watched given the sector’s poor payment performance. And the shift in credit risk to banks in 2008 for lending to the cotton sector, while appropriate, could give rise to problems unless banks assess these risks correctly. The decline in cotton prices is therefore worrisome, and indeed banks are already incurring delays in repaying cotton advances to the Treasury.

**Table 24: The National Bank of Tajikistan Balance Sheet, 2006–2008**

(TJS million)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>1,792</td>
<td>2,377</td>
<td>2,799</td>
</tr>
<tr>
<td>Foreign</td>
<td>860</td>
<td>1,205</td>
<td>685</td>
</tr>
<tr>
<td>Claims on banks</td>
<td>749</td>
<td>992</td>
<td>1,921</td>
</tr>
<tr>
<td>Of which, cotton related</td>
<td>571</td>
<td>885</td>
<td>1,769</td>
</tr>
<tr>
<td>Nonbank institutions</td>
<td>183</td>
<td>180</td>
<td>193</td>
</tr>
<tr>
<td>Liabilities</td>
<td>1,792</td>
<td>2,377</td>
<td>2,799</td>
</tr>
<tr>
<td>Foreign</td>
<td>187</td>
<td>298</td>
<td>171</td>
</tr>
<tr>
<td>Deposits of resident banks</td>
<td>134</td>
<td>249</td>
<td>278</td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>883</td>
<td>1,123</td>
<td>1,566</td>
</tr>
<tr>
<td>Certificates of deposit</td>
<td>4</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Ministry of Finance (net)</td>
<td>636</td>
<td>774</td>
<td>949</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>(67)</td>
<td>(65)</td>
<td>1,729</td>
</tr>
<tr>
<td>Capital and provisions</td>
<td>15</td>
<td>(12)</td>
<td>(1,894)</td>
</tr>
</tbody>
</table>

( ) = negative.

Source: The National Bank of Tajikistan.
There are indications that the global crisis has begun to affect the Tajik banking system through indirect channels and these problems are likely to intensify in 2009. Some banks have reported funding problems that are mainly due to large corporate clients drawing down deposits as the international price for their outputs (aluminum and cotton) are declining. To a lesser extent, there are also some withdrawals of foreign currency deposits and a drying up of trade credits. It is noteworthy that a shift from foreign- to domestic-denominated currency has not been observed. The drawdown of foreign currency deposits may be peculiar to the Tajik nontransparent circumstances and reflect, in part, that some profits from aluminum exports are kept abroad, but deposited in Tajikistan as nonresident deposits. Should workers’ remittances drop precipitously, deposits will likely be drawn down further.

Nonperforming loans (NPLs) have doubled in 2008, and accounted for 9.5% of loans. Moreover, a drop in domestic demand and a general economic slowdown could quickly lead to further deterioration in credit quality. Indeed, some observers speculate that, already, official data significantly understate the magnitude of the problem. Banks have also raised concern over the possible detrimental impact on loan quality should the somoni depreciate significantly because of uncovered exposure risk of borrowers.

Much work has been done in recent years to enhance banking supervision, but shortcomings remain. In particular, considerable efforts have been made to strengthen the NBT’s supervisory capacity, particularly in the area of on-site examination, the introduction of a robust off-site reporting, and the capacity to analyze the data it received. However, the recent IMF recent FSAP notes: “Laws and regulations require strengthening in several key areas: licensing, remedial actions, AML/CFT, and the NBT autonomy and governance. Of at least equal concern is the ability of the NBT supervisors to effectively address compliance, safety, or soundness problem given the perceived or real position
of power of many bank owners. Until the existing environment changes, supervisory effectiveness will likely remain restricted. The degree of compliance with the Basel Core Principles is low.”

Further areas in bank operations that need the attention of supervisors include corporate governance, ethical standards, internal controls and audit, insider lending, poor application of International Financial Reporting Standards (IFRS), and weak auditing procedures of external auditors. The NBT also needs to strengthen prudential regulations to induce bank to better manage risks.

State of Financial Intermediation

Structure of Financial System and Financial Deepening

The Tajikistan financial system is relatively small and dominated by banks and the Kreditinvest (KI). At the end of 2007, banks accounted for 63% of assets, KIs for 34%, microcredit institutions for 3%, and insurance institutions for less than 1%. Of the nine commercial banks, three account for 80% of assets. Two of these (in particular, the Orion bank) are believed to have strong political connections and the fourth largest bank, Amonat, is state-owned. There is one foreign-owned bank (the Kazakh-owned KKB), which accounts for less than 3% of assets but a large share of interbank lending.

Although financial deepening increased significantly in 2006–2007, it nevertheless remains low by international standards. Broad money amounted to only 16% of GDP at the end of 2008, while financial assets have grown somewhat more rapidly, amounting to 44% of GDP in 2007 (Figure 54). Loans to individuals and small and medium-sized enterprises rose five-fold from the end of 2005 to the end of 2007, outpacing the growth of all other sectors.

The banking system is not yet able to serve the needs of the economy and access outside the main urban areas is very constrained. There is about one branch per 30,000 people, which indicates that by international standards, Tajikistan is under-banked. However, the microfinance sector is growing rapidly, although its loan portfolio is still only about 10% of that of banks.

Bank Interest Spreads and Profitability

Interest spreads are among the highest in the region. At about 20% (compared to a worldwide median of around 6%), such high spreads could contribute to the adverse selection of borrowers since only the most risky projects can afford such high rates. The high spreads are driven by several factors: limited credit risk assessment and mitigation mechanisms, weak competition, high costs, and deficiencies in the tools and infrastructure for liquidity management.

With such high spreads, banks are profitable and the return on equity high by international standards. The resilience of profits to a general downturn, however, is questionable, should the neFed for significantly larger provisioning materialize.
Figure 54: Tajikistan Indexes of Financial Deepening (%)

GDP = gross domestic product.
South Asia

Sri Lanka

The Macroeconomic Context

The global financial crisis has impacted Sri Lanka at a time when it faces significant macroeconomic imbalances. Large budget and growing external current account deficits, and relatively high inflation have characterized the past 3 years in the country. The strong economic growth was financed through growing workers’ remittances and capital inflows, a portion of which was short term. Inflation and the relative stability of the exchange rate had led to significant real appreciation of the Sri Lanka rupee.

The vulnerabilities associated with these imbalances continue to be tested by the unfolding global financial crisis. The reduced appetite for risk has made it more difficult to attract foreign financing, while the worldwide recession is adversely affecting Sri Lankan exports, and, most recently, its remittances as well. There was a sudden stop and reversal in capital inflows in late 2008 and the exchange rate has depreciated by more than 10% since October 2008 despite significant interventions from the Central Bank of Sri Lanka (CBSL) in late-2008. Domestic demand is slowing down, especially in the private sector, with overall GDP growth now projected to decline to no more than 2% in 2009.

The immediate test to macroeconomic management was to deal with a shortage of both foreign and domestic liquidity that threatened financial soundness. Beyond the immediate response, key issues have been to restore macroeconomic stability and to proactively manage the relative de-leveraging of the finance sector, while maintaining financial performance.

So far, the authorities’ response to the crisis has been a mix of accommodation and adjustment measures. The sudden reversal of capital inflows was accommodated through a decline in international reserves, but a modest depreciation of the exchange rate was also allowed. The shortage of rupee liquidity was addressed by a reduction in the statutory reserve requirement (SRR) from 10% to 9.5%, then to 7.75%, and then again to 7%. The limits placed on the reverse repurchase facility were also eased. In addition, the central bank actively purchased treasury bills (TBs) to increase liquidity. Nevertheless, credit to the private sector decelerated markedly to a single-digit growth by the end of 2008, in line with the deceleration in broad money.

The authorities have felt that a slowdown in domestic demand and a rapid deceleration of inflation since the end of 2008, in part reflecting the easing of commodity prices,
have allowed for a reduction in the policy repo and reverse repo interest rates in February 2009 by 25 basis points, to 10.25% and 11.75%, respectively, to encourage money supply and stimulate economic activity. The reverse repo rate has been further reduced to 9% since then, and the penalty rate on reverse repo, to 13%. While these steps appear to be warranted, a concern is the impact of a more lax monetary and fiscal policy stance on the overall balance of payments and drain on foreign exchange reserves, and pressures on the exchange rate. This has motivated the authorities to seek additional foreign financing from official sources, including the International Monetary Fund (IMF).

The soundness of the financial system came under test in a less favorable economic environment. Nonperforming loans (NPLs) increased somewhat in 2008 and are expected to further increase in 2009. Liquidity and portfolio quality concerns are pushing the banks to preserve cash and capital and to tighten considerably their lending standards. Beyond banks, the finance companies are experiencing considerable stress, and the government had to introduce a stimulus package for them to survive and continue to support industrial activity.

The Monetary Policy Framework in Theory and Practice

Responsibility for setting monetary policy is assigned by the law to a monetary policy committee that meets once a month and recommends the monetary policy stance to the Monetary Board.37

Conceptual Issues

Price stability is identified as the primary objective of monetary policy. It is also viewed as a factor in achieving sustainable economic growth.

Broad money is set as the intermediate target of monetary policy, with reserve money as the operating target. Broad money is viewed as the primary causal factor affecting price stability. Institutional factors, mainly the SRR and long-run trends in the deepening of the banking systems accompanied by gradual shift from cash currency, largely explain the relationship between broad and reserve monies.

It is presumed that there is an implicit level of interest rates that is consistent with the reserve money and broad money targets and inflation objective. To bring about this level of interest rate, the CBSL sets a corridor for short-term (overnight) interest rates. This corridor is defined by two policy rates: the repo rate, which is the rate at which the CBSL attracts deposits of banks against providing them temporarily with TBs; and the reverse

36 The Road Map for Monetary and Financial Sector Policies, 2009 envisaged a monetary policy supportive of a government stimulus package to maintain GDP growth at about 6%. A supportive monetary policy was to be made possible by the easing in commodity prices, continued strong remittances promoted by special incentive schemes, and an ambitious effort to mobilize external resources.

37 The Central Bank of Sri Lanka’s website provides a succinct but useful synopsis of its monetary policy framework, based, inter alia, on the Sri Lanka Monetary Law Act. Decisions are conveyed to the public through press releases.
repo rate, which is the rate at which the CBSL provides liquidity to banks against TBs.\textsuperscript{38} Currently, the repo and reserve repo rates are at 9\% and 11.75\%, respectively, down by 150 and 25 basis points from their October 2008 levels. The implicit level of short-term interest rates is expected to be more or less midpoint within the corridor. Standing facilities operate at these policy rates with the central bank lending to banks at the reverse repo rate and borrowing from banks at the repo rate, although limits have been set on access to the lending facility.\textsuperscript{39} Government securities serve as collateral. Thus, in theory, these rates serve both as the instrument for signaling the monetary policy stance and, together with the standing facilities, as the instrument for managing liquidity.\textsuperscript{40}

\textbf{Notwithstanding the standing facilities, daily liquidity management to reach the reserve management path operates through the conduct of open market operations (OMOs).} The OMOs consist of market auctions of repo or reverse repo agreements on government TBs and bonds to absorb or inject overnight liquidity, as well as outright sales or purchases of government securities by the CBSL.

\textbf{While it can be used to affect liquidity, the SRR is no longer viewed as a regular instrument for liquidity management.} This reflects the desire to rely on market mechanisms, and the concern with the associated implicit cost of funds for banks. Notably, the SRR was reduced three times since November 2008, bringing it from 10\% to 7\%, in the wake of a liquidity shortage resulting from capital outflows.

\textbf{Monetary policy will be effective if several assumed relationships hold.} These assumed relationships are that (i) market interest rates properly follow policy rates, in particular that the call money rate moves within the corridor, and other market rates move in line with the call money rate as well; (ii) reserve money growth moves in line with the operating target set for it, and broad money growth with its intermediate target; and (iii) the linkages among broad money, interest rates, and inflation have been properly estimated, so that inflation is in line with the original target.

\textbf{Generally, the interbank and secondary TB markets have functioned relatively well.} Since early 2007, however, the interbank (call money) rate has been very volatile, and, reportedly, banks have become increasingly cautious in the wake of the global financial crisis. Liquidity in the TBs market, whose rate provides a benchmark for short-term loans, deteriorated in late 2008.

\textbf{The annual monetary policy statements generally make only brief references to exchange rate policy.} For instance, the 2008 document only mentions that Sri Lanka continues to follow a floating exchange rate regime, where the demand and supply market forces determine the exchange rate. This is to facilitate the conduct of monetary policy and

\textsuperscript{38} It should be noted that the meaning here of repo and reverse repo is the opposite of standard practices, and needs to be properly understood.

\textsuperscript{39} Through September 2008, banks were allowed to access the reverse repurchase window only three times a month, and with limits on the amounts set by the central bank. Access beyond these limits was at a penalty rate (then 19\%).

\textsuperscript{40} There is also a lender-of-last-resort facility at a penalty interest rate (the bank rate), currently at 15\%.
to respond to external vulnerabilities. Accordingly, the CBSL’s intervention in the foreign exchange market would be limited to building international reserves and smoothening up excessive exchange rate volatility. The 2009 document seems to indicate greater de facto intervention in 2008, with the CBSL resisting upward exchange rate pressures in the first half of the year, and allowing only a limited depreciation in the second half of the year. There has been controversy on whether or not the CBSL has, in practice, followed its stated intention of exchange rate flexibility, with the exchange rate of the rupee against the US dollar moving in a narrow band for quite some time. A de facto peg of the exchange rate reduces the scope for, and effectiveness of, monetary policy, essentially because any steps to reduce money growth and increase interest rates could be defeated by the monetary impact of capital inflows induced by interest rate arbitraging. Sterilized intervention could ultimately only exacerbate the problem. The same difficulties arise, in reverse, in the case of steps to increase money growth.

**Performance in Practice**

**Inflation, Growth, Policy Interest Rate, and Monetary Aggregates**

A comparison of the targeted and actual inflation for 2004–2008 highlights the challenges encountered by the CBSL (Table 25). It raises questions on whether or not other objectives might have weighted on the CBSL’s decisions, such as maintaining high rates of economic growth; on whether or not mostly unexpected external shocks have made the attainment of the inflation objective impossible; or whether or not the monetary policy implementation or design has been lacking, in some ways.

The real policy rate has tended to fluctuate significantly in recent years and has been mostly positive in the early years of the decade, but negative since 2004 (Figure 55). A

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation a</th>
<th>Broad Money</th>
<th>Reserve Money</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Actual</td>
<td>Target</td>
</tr>
<tr>
<td>2004</td>
<td>7.0</td>
<td>9.0</td>
<td>13.5</td>
</tr>
<tr>
<td>2005</td>
<td>5.5</td>
<td>11.0</td>
<td>14.5</td>
</tr>
<tr>
<td>2006</td>
<td>9.5</td>
<td>10.0</td>
<td>15.0</td>
</tr>
<tr>
<td>2007</td>
<td>8.5</td>
<td>15.8</td>
<td>13.2</td>
</tr>
<tr>
<td>2008</td>
<td>10.0</td>
<td>22.6</td>
<td>17.0</td>
</tr>
</tbody>
</table>

* Annual averages.
Source: Central Bank of Sri Lanka and International Monetary Fund (IMF).

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41 Arguments of central bankers for departing from the floating exchange rate regime range from concerns with destabilizing expectations, implications of a depreciation for inflation and economic activity, adverse impact on external debt ratios, and on soundness of the banking system.
negative real policy rate is generally indicative of lax monetary policy, although the 2007 outcome needs to be interpreted carefully.42

A richer approach to the monetary policy stance consists of looking at the significance of a so-called Taylor rule. Under this rule, the central bank effects an increase or decrease in the real policy rate above or below the long-run equilibrium real policy rate when (i) inflation is above or below target, and (ii) output is above or below potential output, with weights attached to these elements. The relative significance of the weights would be indicative of policy priorities. Hence, if the output gap is negative and the weight attached to it is significant, the real policy rate could be lower than the long-run one, even if inflation is above target.

There is little evidence that real policy rates were especially high when inflation was unexpectedly high (an interpretation of the first element of the Taylor rule), except perhaps in 2000 when policy rates were adjusted upward aggressively as inflation was relatively high and rising (Figure 55).

There is also little evidence that real policy rates were especially low when output growth was particularly weak (an interpretation of the second element of the Taylor rule; Figure 56). In fact, real policy rates were relatively high in 2001 even though the

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42 This is because the CBSL has used other means of tightening monetary policy since then; so the signal conveyed by the policy rates might therefore not be the right one. It might be necessary then to look at what has been happening to market interest rates.
This behavior would be consistent with the primacy of the objective of fighting inflation. In 2005, when growth was especially strong, the real policy rate was brought up even though inflation was moderate, which is consistent with a role for output gap, but in this case to alert against overheating.

Although Sri Lanka is a relatively small open economy, studies have shown that external shocks (exchange rate, import prices, and oil prices) can explain only a relatively modest share (about 25%) of the variation in consumer price index (CPI) inflation. Explanations for this appear to range from the significance of administered prices, the relative importance of food in the CPI, and low volatility and persistence in the exchange rate. Food prices are affected by local weather factors, as well as the state of aggregate demand given their “weakly tradable” nature in many developing economies, including presumably in Sri Lanka. All these suggest a significant impact of, and role for, monetary policy in determining inflation.

In assessing monetary policy implementation and design, the following questions need to be answered: (i) have operational targets and intermediate targets not been met, and why; (ii) has the relationship between policy rates and market rates possibly been a problem; and (iii) has the validity of the assumed relationship between monetary aggregates and prices, or policy and market interest rates and prices, possibly been a problem? The

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set of questions under (ii) and (iii) refer specifically to the transmission mechanism of monetary policy.

**Growth in reserve money has been high in Sri Lanka for some time,** averaging about 15% annually during the last 5 years, although reserve money growth was only 1.5% in 2008, reflecting the impact of the global financial crisis (Figure 57).

Net foreign assets (NFA) growth has been the main source of the growth in reserve money for some years in Sri Lanka, with two main exceptions, 2000–2001 and 2004, when the net credit to the government was the dominant factor and NFA contribution to reserve money growth was negative. This was also the case for 2008 as a whole, reflecting the events related to the global financial crisis. Claims on banks were not generally a source of reserve money growth, while “others” contributed negatively for most of the time. From 2008, the CBSL began injecting large amounts of domestic liquidity to offset pressures from a slowdown in deposits as capital outflows intensified.44

44 Note that large fluctuations in the growth of net claims on government did not coincide with significant changes in the overall budget deficit, but in the composition of their financing between central bank, banks, and foreign financing.

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**Figure 57: Sri Lanka Reserve Money Growth and Its Components**

(annual, in % of beginning of period reserve money)

Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter.
As gathered from the road maps, actual reserve money significantly overshot the operational target in 2006, but undershot it in both 2007 and 2008. In 2007 and 2008, the central bank revised its reserve money targets during the year to tighten monetary policy as inflation accelerated. The number for 2008 needs to be interpreted cautiously, taking into account that the SRR was reduced twice in November 2008 in response to liquidity pressures.

Broad money growth has been somewhat higher than reserve money growth in recent years (consistent with the secular upward trend in the money multiplier), although there was a sharp deceleration in late 2008 in the context of the global financial crisis (Figure 58).

The main counterpart of broad money growth since 2003 has been private sector credit, which has grown by some 20% of beginning-of-period broad money annually. Relative exceptions were 2000–2001, 2006–2007, and late 2008, at which times financing of the government was also a significant counterpart. Credit to state-owned enterprises was not a significant factor during most of the period.

Actual broad money growth significantly overshot the indicative target during 2004–2007, but undershot it in 2008, as the reversal in capital flows resulted in a decline in the demand for money, and the demand for credit stalled. The fact that both broad

Figure 58: Sri Lanka Broad Money Growth and Its Components
(annual, in % of beginning of period broad money)
money growth and inflation were higher than their targets in 2006 and 2007 suggests that higher real money demand growth was not the key factor in the apparent overshooting of the broad money intermediate target in these years. Indeed, the velocity of money (the inverse of the broad money/GDP ratio) increased in 2007 and 2008, suggesting that real money demand grew less than real GDP.

Thus, more autonomous external shocks affecting money supply would have mostly been at play. These factors would include central bank financing of the budget deficit, and, especially, not fully anticipated private capital inflows and net private transfers (mostly workers’ remittances), to which the CBSL responded only partially (Figure 59). In early 2008, the opening up of the TB market to foreign investors also resulted in significant additional capital inflows and liquidity.

Evidently, the monetary impact of these inflows was enhanced by the policy of intervention in the foreign exchange market to maintain the exchange rate within a narrow range. The resulting injection of liquidity was only partially sterilized. Banks used the abundant liquidity to expand credit to the private sector. The pace of credit growth has raised concerns about the ability of banks to assess credit risks, and questions about the performance of the loan portfolio under a more difficult economic environment.

As the global financial crisis began to affect Sri Lanka in late 2008, the monetary conditions in the country changed abruptly. A sudden stop and reversal of capital inflows placed immediate pressures on the foreign exchange reserves and the exchange rate.

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If this had been the case, higher money growth could have happened without significantly higher inflation.
Reflecting these developments, the growth in monetary aggregates slowed down abruptly to well below their targets. Inflation also began to decline, reflecting both lower domestic demand and the rapidly correcting international commodity prices. Inflation dipped to 5.3% in March 2009, from 14.4% in December and a peak of 28% in June 2008. While call money rates have eased considerably from their high levels of late-2008, reflecting the accommodating monetary policy stance, lending rates at banks have not declined notably and remain close to 20%.

**Management of Reserve Money Growth and Policy Rates**

Clearly, policy rates have not always been consistent with the attainment of targets for the reserve money aggregate, and beyond, the broad money aggregate and inflation. Even when policy rates were effective signals of the monetary policy stance, it seems that these were at times set too low to meet the reserve money target. Since 2006, the CBSL has been reluctant to increase policy rates when inflation accelerated, for political reasons; instead, it more aggressively used OMOs to reach the reserve money target.

As a result, since early 2007, interest rates on market repo transactions and the call money rate have moved well above the corridor set by the policy repo and reverse repo rates (Figure 60). This has provided an incentive for banks to access the reverse repo standing facility. This should have been a signal that the corridor needed to be adjusted. In fact, had the banks had few difficulties in moving from the repo and/or reverse repo transactions market and call money market to the standing facilities at the CBSL as close substitute, the OMOs would likely have failed to achieve the reserve money target because of being offset by opposite transactions on the standing facilities. This is why administrative
limits on the use of the reverse repo facility had to be introduced. The point of course is that once the interest rate corridor is introduced and the standing facilities at the repo and reverse repo policy rates are allowed to operate effectively, reserve money can no longer be controlled because it is essentially endogenous. Any inconsistency between the policy rates and the implicit rate consistent with bringing reserve money to a desired level (given the inflation target) is “resolved” by adjustments in actual reserve money and inflation. Call money rates mostly remained well above the corridor in early 2009, but moved within the corridor in early April of the same year.

It would seem preferable to recognize the short-term interest rates, call money rate for instance, as the operating target, and reserve money as an intermediate target. The main challenge then would be to find the level of interest rates that is consistent with the inflation objective, given also the state of inflationary expectations. And OMOs would then need to be conducted mainly with the objective of achieving the interest rate operating target. The corridor would then be set around this rate. This would bring the monetary policy framework in Sri Lanka closer to the inflation-targeting framework popular elsewhere.

According to monetary policy makers, reserve money will remain the primary operating target, notwithstanding the corridor approach.

The decomposition of reserve money growth into its components shows that, at times over the years, the financing of the government by the CBSL has been a major source of reserve money expansion. First, the Central Bank Law authorizes the CBSL to provide direct provisional advances to the government to finance expenditures authorized to be incurred out of the consolidated fund, although the total outstanding amount cannot exceed 10% of estimated government revenue. Second, and more importantly, the Law’s prohibition on the CBSL from subscribing to the issue of government securities does not apply in the case of TBs, for which the CBSL may make direct tenders. And the evidence suggests that, at times, the CBSL has been very active on the primary TB market. This arrangement complicates the conduct of monetary policy to achieve a reserve money target because it forces the CBSL to undertake mopping up operations (repos and outright sales). In practice, these operations could often be incomplete, in the process undermining the achievement of the reserve money target. Their cost could be a burden on the central bank’s income position, since the repo rate would presumably have to be relatively more attractive than the TB rate.

Central bank financing of the budget could become an issue in monetary policy in 2009 if the planned access by the budget to external financing does not materialize because of the global financial crisis. Much would depend on the commercial banks’ portfolio

---

46 Also, in December 2007, the central bank imposed a penalty rate for access to the reverse repo facility for banks which borrowed more than four times during the month.

preferences (TBs versus credit to private sector) and on the TB rates the government and central bank are willing to see.

Monetary Policy Transmission Mechanism

The existing monetary policy framework focusing on policy rates had been fairly successful in keeping the call money rate within the corridor until late 2006. From then on, however, the call money rate generally moved well above the corridor, reflecting decisions by the CBSL to tighten monetary conditions through OMOs without adjusting the policy rates. These OMOs were supported by limiting the access of banks to the reverse repo standing facility of the central bank. As a result, the corridor lost its signaling role, and there is evidence that the new approach has contributed to the volatility in short-term interest rates, including the absence of a mechanism to provide a clear signal to anchor inflationary expectations. Another reason for this volatility would have been the CBSL intervention on the foreign exchange market to maintain a relatively stable exchange rate, resulting in frequent large swings in the domestic liquidity of banks.

The volatility of short-term interest rates would have contributed to the weakening of the monetary policy transmission mechanism, from interest rates to prices. This has limited the ability of the CBSL to control inflation. In 2008, however, the CBSL managed to reduce the volatility of the call money rate by providing liquidity through the reverse repurchase facility at the policy and penal rates, and later on, through reductions in the SRR.

The transmission mechanism from policy rates to the whole spectrum of market interest rates worked well, at least until 2006. Figure 60 suggests that the pass-through from policy rates to call money rate, TB rates, and bank lending rates was fairly rapid and complete until 2006 (i.e., when policy rates performed their signaling function). With policy rates no longer performing their signaling role, OMOs were exclusively used to bring the structure of interest rates upward between late 2006 and the advent of the financial crisis. Call money rates moved upward trend-wise, but with great volatility. TB rates steadily moved upward, in response to the OMOs. But bank lending rates, while increasing, moved below the TB rates. This could also explain the weaker transmission from interest rates to prices, observed by others, since domestic demand should be expected to more closely respond to bank lending (and deposit) rates than other interest rates. The reversal in the gap between the TB and bank lending rates in 2008 with bank lending rates becoming significantly higher than the TB, had two causes: early in 2008, it was largely due to the opening of the TB market to foreign investors; and later in 2008, it was due to the flight to safety.  

48 In early 2008, the central bank also issued its own bills to absorb liquidity in the absence of TBs on its books.
49 S.J. Peiris and M. Saxegaard. Monetary Policy Implementation in Sri Lanka. Washington, DC: IMF Working Paper. Forthcoming. The authors found that a 100 basis point rise in the repo interest rate reduces inflation by less than 0.1% after four quarters.
50 Although TB rates rose when the financial crisis hit, because of the reversal in the foreign buying of TBs, bank lending rates rose even more.
The bank lending rate series used in Figure 60 refers to the prime lending rate; the transmission appears to be even more sluggish and incomplete for the average actual lending rates, as suggested by Figure 61 for 1999–2008. 51

Exchange Rate and Gross International Reserves

The exchange rate of the Sri Lanka rupee against the US dollar has moved relatively little since 2002, while gross international reserves have increased significantly trend-wise, at least until mid-2008 (Figure 62).

These developments have reflected both the CBSL’s desire to strengthen international reserves, as well as its intervention in the foreign exchange market to prevent the depreciation or appreciation of the rupee and maintain the relative stability of the rupee to the US dollar exchange rate. Given the high interest rate differential for the rupee versus the US dollar-denominated financial assets, this policy encouraged short-term capital inflows through early 2008. This compounded the challenges of, and increased the vulnerabilities in, conducting monetary policy. Complications are caused by the volatility in the level of international reserves, combined with the tendency for them to decline significantly when the exchange rate is under pressure and the consequent central bank interventions

Figure 61: Sri Lanka Average Prime and Actual Interest Rates (%)

Q1 = first quarter.

51 See also the findings of C. Amaraseka. 2007. Interest Rate Pass-through in Sri Lanka. Staff Studies, Volume 35. Colombo: Central Bank of Sri Lanka.
in the foreign exchange market.\textsuperscript{52} As shown in Table 26, the negative net absorptions were especially large in late-2008.

From July to December 2008, gross international reserves declined from $5 billion to $2.6 billion. From October to December 2008, the rupee was allowed to depreciate by only 5% against the US dollar. Since then, reserves have further declined, and the exchange rate further depreciated.

As a result of the exchange rate policy, the real exchange rate has tended to appreciate, particularly during the 2 years preceding the financial crisis. This development has mostly reflected the large inflation differential between Sri Lanka and its trading partners. This has hurt Sri Lanka's competitiveness, although it should be recognized that the combination of a relatively higher weight for food in its CPI basket, and the fact that food prices internationally have seen the highest inflationary pressures recently might lead to somewhat overstating the competitiveness problem.

Greater exchange rate flexibility would have facilitated the conduct of monetary policy to contain inflation. It would also have reduced the incentives for short-term capital inflows and therefore the vulnerabilities associated with the risks of a stop or reversal in

\textsuperscript{52} Change in international reserves is not the same thing as intervention of the central bank in the foreign exchange market because of transactions conducted by the central bank on behalf of the government. These transactions (such as debt servicing and receipt of proceeds from external debt issuing) affect international reserves, but do not reflect intervention on the foreign exchange market per se.
these flows. The implications of flexibility for external competitiveness also need to be considered. But there would be inconsistency in highlighting, on the one hand, overriding concerns for inflation when justifying resisting downward pressures on the exchange rate, and on the other hand, overriding competitiveness concerns when justifying resisting upward pressures on the exchange rate.

Financial Health of the Central Bank and the Conduct of Monetary Policy

There is no evidence that the financial health of the CBSL has hampered its conduct of monetary policy. Generally, when the structure of a central bank balance sheet makes it difficult to generate profits, control on reserve money expansion gets hampered since losses are a source of monetary expansion. This might happen well before the balance sheet itself shows insolvency.

Table 27 indicates that at the end of 2007, almost 80% of total assets of the CBSL were foreign assets (mostly gross international reserves), 8% was holdings of government securities, and 11% was advances to government. Meanwhile, 28% of total liabilities were foreign liabilities; 47%, deposits of commercial banks and currency in circulation; and 23%, capital and reserves. Residual assets accounted for only 2%, and other liabilities


<table>
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<tr>
<th>Year/Month</th>
<th>Supply</th>
<th>Absorption</th>
<th>Net Absorption</th>
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<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>23.8</td>
<td>136.0</td>
<td>112.2</td>
</tr>
<tr>
<td>February</td>
<td>6.5</td>
<td>159.9</td>
<td>153.4</td>
</tr>
<tr>
<td>March</td>
<td>14.5</td>
<td>95.1</td>
<td>80.6</td>
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<td>April</td>
<td>136.4</td>
<td>57.2</td>
<td>(79.3)</td>
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<td>May</td>
<td>47.3</td>
<td>5.0</td>
<td>(42.3)</td>
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<td>June</td>
<td>50.5</td>
<td>31.0</td>
<td>(19.5)</td>
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<td>July</td>
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<td>124.0</td>
</tr>
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<td>August</td>
<td>35.9</td>
<td>13.5</td>
<td>(22.4)</td>
</tr>
<tr>
<td>September</td>
<td>202.7</td>
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<td>(202.7)</td>
</tr>
<tr>
<td>October</td>
<td>587.7</td>
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<td>(587.7)</td>
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<tr>
<td>November</td>
<td>266.5</td>
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<td>(266.5)</td>
</tr>
<tr>
<td>December</td>
<td>160.2</td>
<td>34.5</td>
<td>(125.7)</td>
</tr>
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<td>2009</td>
<td></td>
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<tr>
<td>January</td>
<td>272.2</td>
<td>20.5</td>
<td>(251.7)</td>
</tr>
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</table>

( ) = negative.

Source: Central Bank of Sri Lanka.
accounted for only 1%. The ratios changed significantly in 2008 in only one regard: the share of foreign assets in total assets fell from 78% to 58%, while the share of claims on government jumped from 19% to 40% in view of the impact of the financial crisis and the central bank’s response to it.

The income statement for 2007 indicates that (net) foreign currency investment income was strongly positive at SLRs17.6 billion, excluding net foreign exchange revaluation gains amounting to SLRs8.8 billion, while (net) income from local currency financial assets was SLRs9.0 billion, both significantly higher than their respective levels in 2006. With operating expenses amounting to some SLRs6 billion, and including some other small sources of income, net profits after tax amounted to SLRs20 billion (excluding the net foreign exchange revaluation gains of SLRs8.8 billion), or 3.6% of total assets. The income statement for 2008 showed net profits after tax of SLRs17.8 billion (excluding net foreign exchange revaluation loss of SLRs22.8 billion), or 3.0% of total assets. However, this coincided with a net loss of SLRs5 billion, including net revaluation losses. Notably, these losses appear to entirely reflect realized, revaluation losses, accrued in the year as the CBSL sold international reserves at a depreciating exchange rate for the Sri Lanka rupee.

(amounts in SLRE billion)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Assets</td>
<td>493</td>
<td>100</td>
<td>561</td>
<td>100</td>
<td>597</td>
<td>100</td>
</tr>
<tr>
<td>Foreign</td>
<td>361</td>
<td>73</td>
<td>440</td>
<td>78</td>
<td>344</td>
<td>58</td>
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<tr>
<td>Claims of government</td>
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<td>24</td>
<td>104</td>
<td>19</td>
<td>236</td>
<td>40</td>
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<td>Advances</td>
<td>49</td>
<td>10</td>
<td>61</td>
<td>11</td>
<td>76</td>
<td>13</td>
</tr>
<tr>
<td>Securities</td>
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<td>14</td>
<td>44</td>
<td>8</td>
<td>160</td>
<td>27</td>
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<td>Claims on banks, etc.</td>
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<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
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<tr>
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<td>2</td>
<td>13</td>
<td>2</td>
<td>13</td>
<td>2</td>
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<tr>
<td>Liabilities</td>
<td>493</td>
<td>100</td>
<td>561</td>
<td>100</td>
<td>597</td>
<td>100</td>
</tr>
<tr>
<td>Foreign</td>
<td>142</td>
<td>29</td>
<td>159</td>
<td>28</td>
<td>188</td>
<td>32</td>
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<tr>
<td>Deposits of banks</td>
<td>83</td>
<td>17</td>
<td>91</td>
<td>16</td>
<td>82</td>
<td>14</td>
</tr>
<tr>
<td>Deposits of government</td>
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<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>157</td>
<td>32</td>
<td>173</td>
<td>31</td>
<td>186</td>
<td>31</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Capital and reserves</td>
<td>103</td>
<td>21</td>
<td>131</td>
<td>23</td>
<td>120</td>
<td>20</td>
</tr>
</tbody>
</table>

0 = % is less than 1.

Note: Totals may not add up because of rounding.

Source: Central Bank of Sri Lanka annual reports.

The income statement for 2007 indicates that (net) foreign currency investment income was strongly positive at SLRs17.6 billion, excluding net foreign exchange revaluation gains amounting to SLRs8.8 billion, while (net) income from local currency financial assets was SLRs9.0 billion, both significantly higher than their respective levels in 2006. With operating expenses amounting to some SLRs6 billion, and including some other small sources of income, net profits after tax amounted to SLRs20 billion (excluding the net foreign exchange revaluation gains of SLRs8.8 billion), or 3.6% of total assets. The income statement for 2008 showed net profits after tax of SLRs17.8 billion (excluding net foreign exchange revaluation loss of SLRs22.8 billion), or 3.0% of total assets. However, this coincided with a net loss of SLRs5 billion, including net revaluation losses. Notably, these losses appear to entirely reflect realized, revaluation losses, accrued in the year as the CBSL sold international reserves at a depreciating exchange rate for the Sri Lanka rupee.
The profitability of the CBSL has been supported by two main characteristics of its balance sheet. First, non-interest yielding assets are small, with the exception of “advances” to government. Second, capital and reserves account for the bulk of total liabilities other than foreign liabilities, bank deposits, and currency in circulation, and represent a relatively large share of total liabilities. However, this ratio weakened somewhat in 2008.

### Financial Soundness and Risk Management

The key financial soundness indicators for the banking system have improved since 2002 (Table 29). The average capital adequacy ratio (CAR) now exceeds the 10% statutory level by some 3 percentage points, although there are significant variations across banks, and one medium-sized private bank having a CAR of only 8.9% has necessitated central bank support. The average gross NPL ratios (excluding interest in suspense) has steadily declined, to 5.0% by 2007, due to a degree of improvement in risk management and supervision. Admittedly, rapid credit expansion has contributed to this decline as well. Profitability has improved significantly, with the average rate of return on assets before tax reaching 2.1% in 2008.

However, some indicators have weakened since 2007. The NPL ratio has risen to more than 6% in 2008 for licensed commercial banks, and provisioning coverage has declined somewhat after peaking at more than 70% in 2006. This has reflected a number of factors, including the size of write-offs, but mostly the exceptionally lax provisioning rules.

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### Table 28: Central Bank of Sri Lanka Income Statement, 2006–2008 (SLRe billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from foreign currency assets</td>
<td>11.7</td>
<td>19.8</td>
<td>20.0</td>
</tr>
<tr>
<td>Expenses on foreign currency liabilities</td>
<td>(2.3)</td>
<td>(2.2)</td>
<td>(1.3)</td>
</tr>
<tr>
<td>Net foreign exchange revaluation gain (loss)</td>
<td>22.4</td>
<td>8.8</td>
<td>(22.8)</td>
</tr>
<tr>
<td>Foreign currency investment income (loss)</td>
<td>31.8</td>
<td>26.4</td>
<td>(4.1)</td>
</tr>
<tr>
<td>Interest income from local currency assets</td>
<td>5.3</td>
<td>9.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Interest expense</td>
<td>(0.4)</td>
<td>(0.6)</td>
<td>(0.6)</td>
</tr>
<tr>
<td>Income from local currency assets</td>
<td>4.9</td>
<td>9.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Other income</td>
<td>0.7</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Net operating income (loss)</td>
<td>37.4</td>
<td>35.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Operating expense</td>
<td>(9.0)</td>
<td>(6.0)</td>
<td>(6.0)</td>
</tr>
<tr>
<td>Profit (loss) before income tax</td>
<td>28.5</td>
<td>29.8</td>
<td>(3.2)</td>
</tr>
<tr>
<td>Income tax</td>
<td>(0.6)</td>
<td>(1.0)</td>
<td>(1.9)</td>
</tr>
<tr>
<td>Net profit (loss) after tax</td>
<td>27.8</td>
<td>28.8</td>
<td>(5.1)</td>
</tr>
</tbody>
</table>

( ) = negative.

Source: Central Bank of Sri Lanka annual reports.
particular, loans become “doubtful” when overdue loans are between 360 and 540 days, and then are provisioned at only 50% (about 40% of NPLs are in this category). Notably, the conditions for reclassification of NPLs into performing loans have been relaxed since the financial crisis, with reclassification allowed even if only two out of three due monthly debt service payments have been settled. Furthermore, the loans/deposits ratio has remained high at around 95% in 2008 with borrowing accounting for, since 2006, a relatively large share of total funding (around 18%), including foreign borrowing (for about 35% of total borrowing), and borrowing from the domestic money markets (mostly securities sold under repurchase agreements).

**The rapid growth in private sector credit has entailed growing credit risks.** Consumer and housing and construction loans contributed significantly to this growth, and now account for 24% (consumer) and 25% (housing and construction) of total loans. The central bank proactively introduced prudential measures in this regard, including a general provisioning requirement of 1% on all performing loans and increases in risk weights for consumer lending, housing finance, and other loans for the computation of the CAR, both of which were put in place in 2007. Pillar I of the Basel II capital adequacy standard based on simpler approaches was also adopted, although more could be done. In particular, a forward-looking supervision of credit risks appears warranted, notwithstanding the more risk-focused examination procedures introduced in 2007. In this context, the CBSL’s intent to implement an appropriate integrated risk management system in 2009 should be noted.

### Table 29: Sri Lanka Financial Soundness Indicators, 2002–2008
(all licensed commercial banks; %)

<table>
<thead>
<tr>
<th>Item</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tbody>
<tr>
<td>CAR</td>
<td>10.3</td>
<td>10.3</td>
<td>10.3</td>
<td>12.8</td>
<td>12.7</td>
<td>13.6</td>
<td>13.0</td>
</tr>
<tr>
<td>NPLs ratio (gross)</td>
<td>14.5</td>
<td>12.5</td>
<td>8.9</td>
<td>6.8</td>
<td>5.5</td>
<td>5.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Provision coverage ratio</td>
<td>50.5</td>
<td>58.7</td>
<td>68.3</td>
<td>72.1</td>
<td>73.4</td>
<td>71.5</td>
<td>64.7</td>
</tr>
<tr>
<td>ROA before tax</td>
<td>1.1</td>
<td>1.4</td>
<td>1.4</td>
<td>1.7</td>
<td>1.9</td>
<td>1.9</td>
<td>2.1</td>
</tr>
<tr>
<td>ROE</td>
<td>20.5</td>
<td>21.1</td>
<td>18.3</td>
<td>16.8</td>
<td>16.2</td>
<td>15.0</td>
<td>14.9</td>
</tr>
<tr>
<td>Liquid assets/total assets</td>
<td>27.7</td>
<td>21.8</td>
<td>26.6</td>
<td>24.2</td>
<td>23.4</td>
<td>25.1</td>
<td>25.2</td>
</tr>
<tr>
<td>total assets ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans and advances/total</td>
<td>60.8</td>
<td>58.7</td>
<td>61.7</td>
<td>61.7</td>
<td>64.5</td>
<td>65.3</td>
<td>64.0</td>
</tr>
<tr>
<td>assets ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans/deposits ratio</td>
<td>81.8</td>
<td>79.4</td>
<td>81.5</td>
<td>86.6</td>
<td>93.2</td>
<td>94.0</td>
<td>93.2</td>
</tr>
<tr>
<td>Borrowing/total funding</td>
<td>13.8</td>
<td>13.8</td>
<td>13.3</td>
<td>16.8</td>
<td>18.6</td>
<td>17.8</td>
<td>18.0</td>
</tr>
<tr>
<td>ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CAR = capital adequacy ratio, NPL = nonperforming loan, ROA = rate of return on asset, ROE = rate of return on equity.
Sources: Central Bank of Sri Lanka.
As a result of the global financial crisis, soundness indicators are expected to continue deteriorating in the near term, in particular NPLs. The Bank Supervision Department at the CBSL expects the NPLs to rise to 8%–9% in the course of 2009. This would follow the deterioration in the business conditions and household income performance. Banks are facing higher funding costs for both domestic and external resources as risk is re-priced. The reversal in capital inflows and slowdown in remittances could also further complicate liquidity management for banks, given the high loans-to-deposits ratio and greater dependence on borrowed funds. The liquidity risks have been heightened by the growing maturity mismatch between assets and liabilities. Indeed, the “maturity gap” worsened significantly in the short-term range in 2007 and likely also in 2008. It is in this context that the CBSL has proposed strengthening of the liquidity risk management in banks in 2009 by issuing guidelines on the compilation of maturity of assets and liabilities, with a view to performing maturity gap analysis.

The concerns about liquidity risks, in particular, were fully validated in late-2008. The immediate impact of the global crisis on the banking system in Sri Lanka was a liquidity shortage. This prompted the CBSL to take the already mentioned decisive actions, to relieve those liquidity pressures. Reportedly, liquidity support was provided in some instance through the state banks. The liquidity shortage was made worse by the greater reliance of banks on borrowing, including on the interbank markets, and by the maturity mismatch of this borrowing relative to that of the loans extended. One large private bank reportedly needs immediate recapitalization. While the banking system as a whole still meets the regulatory CAR, more capital would be needed from a prudential standpoint if loans classification changes with deterioration in credit quality or as the loan classification standards are brought in line with best practices. Raising additional capital from the markets would not be easy in the current environment, and given the relatively low return on equity in Sri Lanka compared to other emerging markets.

Stress tests were conducted under the IMF/World Bank Financial Sector Assessment Program (FSAP) based on balance sheets at the end of 2006, and have been regularly updated by the recently created Financial Stability Department. Specifically, at the end of 2008, the credit risk and concentration sensitivity test examined the changes required in bank provisioning if there is need to reclassify outstanding loans because of the deterioration in their performance. The exposure to exchange rate risk, on the other hand, was minimal, presumably because of the tight management of strict open foreign exchange limits imposed by the CBSL. But the scenario does not consider the possibility of related default risk, e.g., in case a significant depreciation would affect the ability of borrowers whose incomes are in domestic rather than foreign currency to service their loans. The interest rate risk test assessed the impact of an increase in short-term interest rates.

53 The maturity gap measures the difference between assets and liabilities classified in different maturity groups. Typically, at the shorter maturities the gap is negative, while it is positive at the longer maturities.
54 Other bank supervision strengthening measures for implementation in 2009 are (i) draft guidelines on Pillar II of Basel II, (ii) continue work to adopt the new accounting standards, and (iii) formulation of a framework for consolidated supervision.
55 To reduce this mismatch, the banks could have issued their own securities with an appropriate maturity profile, or use derivatives to edge the maturity mismatch.
5% increase in the rates would lead to some 40% of the banks seeing their respective CARs falling below the minimum requirement of 10%, reflecting the maturity mismatches in some important banks. The liquidity risk test, meanwhile, showed that a 20% withdrawal in the total deposits and a 100% withdrawal in nonresident deposits would lead to about 65% of the banks (measured in percent of the system assets) falling below the minimum liquidity requirement ratio of 20%, when account is taken of likely discounts on the sale of liquid assets to meet those withdrawals. Compounding the liquidity risk is the fact that the reliance on short-term foreign currency borrowings by banks still presents significant rollover risks. Interestingly, the above stress test results represent some improvement from those at the end of 2006, which has been attributed to the move to Basel II to assess capital adequacy.

In the wake of the global financial crisis, the CBSL has also taken measures to try shoring up confidence and deposits in the banks. Access to the reverse repo facility has been relaxed, commercial banks are permitted to accept deposits from foreigners, and the government is to pay a bonus interest in rupees on the interest earned on foreign currency deposit accounts. However, no deposit insurance scheme has as yet been introduced.

The State of Financial Intermediation

Structure of the Financial System and Financial Deepening
Banks still dominate the financial system in Sri Lanka. As evident in Table 30, banks account for about 64% of the country’s total financial assets. Moreover, the Employees’ Provident Fund, which is managed by the central bank and invests mostly in government securities, accounts for about half of the remaining one-third of those assets. Among the banks, licensed commercial banks account for 54% of total financial assets, while specialized banks (mainly state-owned) account for 10%.

State-owned banks still represent about 40% of total assets of licensed commercial banks. Private domestic and foreign banks share the remaining 60%, with private domestic banks accounting for 67% of this share. The significance of state-owned banks is a source of stability but also inefficiency.

Indicators of financial deepening have been mixed in recent years (Figure 63). This is despite evident progress in branch banking and ATM penetration.

Broad money accounts for 40% of GDP, and has, in fact, declined somewhat in 2007 and 2008. The money multiplier, on the other hand, has been on an upward trend, reflecting a declining preference for holding currency. Excess reserves of banks have generally been minimal, suggesting both efficiency of individual banks in intermediating funds into loans and investments, and an active interbank market. While credit to the private sector has been growing rapidly, the growth in the credit/GDP ratio has been much more modest. At just above 30%, this is about 1/3 of that in Thailand, significantly lower than in Egypt, India, and Nepal where it is above 40% and only a bit higher than those in Pakistan and the Philippines.
Table 30: Structure of the Sri Lanka Financial System

<table>
<thead>
<tr>
<th>Item</th>
<th>% of Total Financial Assetsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>64</td>
</tr>
<tr>
<td>Licensed commercial banks</td>
<td>54</td>
</tr>
<tr>
<td>Foreign</td>
<td>8</td>
</tr>
<tr>
<td>Private domestic</td>
<td>24</td>
</tr>
<tr>
<td>State-owned</td>
<td>22</td>
</tr>
<tr>
<td>Specialized banks</td>
<td>10</td>
</tr>
<tr>
<td>Others, of which:</td>
<td></td>
</tr>
<tr>
<td>Finance companies</td>
<td>4</td>
</tr>
<tr>
<td>Employees' Provident Fund</td>
<td>16</td>
</tr>
<tr>
<td>Private provident funds</td>
<td>3</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>4</td>
</tr>
</tbody>
</table>

* In 2008, excluding assets of the central bank.
Source: Central Bank of Sri Lanka.

Figure 63: Sri Lanka Indexes of Financial Deepening (%)

GDP = gross domestic product.
Bank Interest Rates Spread and Profitability

Bank spreads in Sri Lanka, in the range of 600–800 basis points, have been somewhat higher than the international median spread (Figure 64). Large spreads are problematic in that low deposit rates do not provide enough incentives for the mobilization of financial savings through the banking sector, while high lending rates discourage economic activity and investment, and bias the allocation of credit to riskier borrowers.

The weight and inefficiency of dominant state banks, with high operating costs and large NPLs, partly explain the relatively large spreads, especially now that these institutions have been asked to operate on a more commercial basis.

But relatively high rates of return for banks suggest that the lack of competition would be a main explanatory factor not so much as a result of concentration, but because of the absence of price competition. First, low spreads do not seem to have been a constraint in the ability of banks to gain market shares. Second, lower operating costs as well as lower NPLs have translated into higher bank profits rather than low spreads.

High spreads may impede the transmission mechanism of monetary policy. This happens when higher policy rates translate to relatively full adjustment in lending rates, without corresponding level of adjustment in deposit rates, implying a widening in the spread. Banks may, in this way, try to compensate for the generally negative impact of higher rates on their financial performance. Then, the effectiveness in monetary policy in

Figure 64: Sri Lanka Bank Interest Rate Spread and Profitability (%)

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Effectiveness of Central Banks and Their Role in the Global Financial Crisis: Case of Selected Economies
moderating credit growth might be partly offset by the discouraging of financial savings in banks, especially if the menu of financial assets is relatively broad. There is some evidence that the period of rising interest rates has been accompanied by larger spreads in Sri Lanka.

**The continued reform of the state-owned banks and the implementation of measures to promote competition should help in bringing down spreads.** Measures to enhance competition should aim at leveling the playing field between more established banks and newer entrants, and include uniform bank licensing requirements and procedures, and increased requirements to disseminate information about financial results of banks and their interest rates. This would reduce the scope for asymmetric information currently benefiting the incumbent banks. Finally, the transaction costs of financial intermediation would be reduced under a centralized registry of moveable property that can be used as collateral until a proper database on borrowers’ credit information is developed.

**Lessons and Recommendations**

Interesting lessons can be inferred from Sri Lanka’s experience with macroeconomic management in the years preceding and succeeding the onset of the current global financial crisis.

**First, the macroeconomic policies pursued in good times matter** not only for the outcomes in terms of overall performance of the economy, but also for determining how a country is likely to be affected by a global financial crisis.

- While counteracting rapidly increasing private foreign exchange inflows with tighter financial policies may take away some of the stimulus to growth emanating from these inflows, such a stance would generally reduce external vulnerabilities. With monetary policy geared toward price stability, tighter fiscal policy should be the preferred instrument.

- Allowing greater exchange rate flexibility would support macroeconomic stabilization and the achievement of the inflation objective, while reducing the incentives for potentially destabilizing capital inflows resulting from large interest rate differentials between the home country and abroad.

**Second, with adequately developed financial markets in Sri Lanka, a transparent monetary policy framework focused on bringing about a level of policy and market interest rates (real and nominal) consistent with the inflation objective would, in principle, be the best approach.** Especially under volatile capital flows, it often proves difficult to determine the appropriate targets for monetary aggregates. The level of real interest rates consistent with relative price stability might be more stable although it could trend downward in an emerging market such as Sri Lanka. To the extent that a surge in capital inflows lowers real interest rates from previously higher levels to below a desirable level from the point of view of price stability, the central bank needs to tighten monetary...
policy. As suggested above, success in this process would depend on maintaining exchange rate flexibility. More specifically:

- **The CBSL appears to have all the tools necessary for implementing this approach.** Interbank money market, secondary government securities market, standing facilities, and OMOs are all in place and operative.

- **The reasons for the volatility of the interbank (call money) rate observed since 2007 need to be better understood.** Is this volatility entirely the result of the abandonment of the “corridor” since early 2007 for signaling monetary policy and the greater focus on targeting of the reserve money aggregate, in addition to central bank interventions on the foreign exchange market to manage the exchange rate? Improvements in the liquidity forecasting model might be needed to guide supportive OMOs.

- **The interest rate transmission mechanism appears to have worked relatively well in the case of Sri Lanka, notwithstanding some apparent weakening in 2007–2008.**

Third, this study takes note, however, of the CBSL’s intention to continue with the targeting of reserve money as the primary operating target, with the corridor playing a supportive role. In principle, the two can be compatible since, except for the impact of random shocks, there should be a direct relationship between the interest rate that is consistent with the inflation objective and the monetary aggregate consistent with the inflation objective. The focus on monetary aggregate as target appears especially legitimate if the presumption is that broad money, or one if its components, such as currency, appears directly and strongly into aggregate demand, which might well be the case in Sri Lanka. On the other hand, it should be recognized that random shocks in the demand and supply of money is likely to continue creating volatility in the interbank interest rate when primacy is given on pre-set short-term reserve money targets.

A possible limitation to the interest rate framework for macroeconomic stabilization, and thus a supportive argument for the targeting of monetary aggregates, is the extent of the transmission mechanism from interest rates to prices. As mentioned earlier, recent empirical findings have found only a weak relationship between interest rate changes and movements in inflation rate. It is unclear to what extent the inclusion of 2006–2008 data, which include highly volatile interbank rates, is a main factor affecting those findings, or whether these reflect a more fundamental long-run weakness. More research is needed on this aspect, including a better integration in the models of other channels of monetary policy that affect prices, especially exchange rate and credit (bank lending and balance sheet) channels, for which interest rate changes are mostly the driving force as well.57

57 Appreciation or depreciation of the exchange rate often results from changes in interest rate differentials. Also, an expansionary monetary policy directly increases reserves and deposits of banks, and thus the availability of credit. But it is the decline in interest rates due to competition that encourages more borrowing to take place. And if credit is rationed, it is the decline in interest rate and favorable impact on the borrowers’ balance sheet that reduce the adverse selection costs and encourage more lending.
In this context, it is also likely that the de facto exchange rate regime has weakened the transmission from interest rates to prices. Moreover, the observed pro-cyclical behavior of the interest rate spread has further weakened this transmission. The first problem would be resolved with a move toward greater flexibility of the exchange rate. The second will require longer-term structural changes, along the lines already indicated.

Fourth, a global financial crisis should not be viewed as a reason to fundamentally depart from the above framework. Specifically:

- **A sudden stop or reversal of capital inflows has a contractionary effect on the domestic economy and its banking system, in addition to its impact on the balance of payments.** The challenge for the CBSL is to assess whether or not policy rates need to support (increase policy interest rates) or counteract (decrease policy interest rates) this effect, and/or finding the level of monetary aggregates consistent with this stance. This will of course depend on the extent to which the exogenous shock impacts on domestic demand, the output gap, inflation, and on the conditions prevailing in the foreign exchange market. The scope of any fiscal stimulus should be assessed in this context, with proper consideration to fiscal solvency issues and availability of official balance of payments financing.

- **It must be recognized, however, that a financial crisis may temporarily break the normal relationship among the policy rates, the interbank market rate, and eventual bank lending rates.** Such disruptions occur, for instance, because of higher perceived counterparty risks. As a result, the transmission mechanism would be weakened or even broken. This might be addressed through the central bank becoming involved in term lending, the provision of guarantees, or assets swaps.

- **Gearing monetary policy to the immediate liquidity needs of the banking system might be risky, although the Sri Lankan authorities have stressed that the rapid decline in inflation since the end of 2008 justifies a loosening up of monetary policy.** For instance, large reductions in the cash reserve requirement (CRR) could encourage some banks to use the liquidity released to pay off foreign liabilities, at the expense of the CBSL's international reserves. The eventual impact on market interest rates of cuts in the CRR might not also be consistent with target interest rates viewed as desirable for the inflation objective. In any case, a reduction in this blunt instrument weakens prudential norms and the ability of the CBSL and the commercial banks to address future shocks. Thus, it is not clear why addressing immediate liquidity needs could not be done mostly through the lender-of-last-resort (LOLR) window.

Fifth, the initial impact of the global financial crisis has highlighted the importance of containing liquidity risks. The statutory liquidity ratio (SLR) of not less than 20% of total liabilities might not have been effective enough. Banks should not have been allowed to run such large negative maturity gaps between their (short-term) assets and liabilities, as they seem to have done. The work currently undertaken by the CBSL on guidelines in
this area should be a priority for the future, and yield specific rules for integration in the regulatory framework (India for instance has a limit of 20% for the 1–7, 1–14 and 15–28 days bucket). Commercial banks should also be made aware of options to issue their own securities with maturities matching that of assets to be expanded, and/or of ways to use derivatives to hedge maturity mismatches of this kind.

**Sixth, it is still too early to predict how the global financial crisis will eventually affect the quality of the banks’ assets.** International experience has shown that transition from high credit growth to low credit growth, as seen recently, is usually accompanied by an increase in NPLs. Indeed, the CBSL is projecting an increase in NPLs to 8%–9%. Thus, the banks would do well to strengthen their balance sheets before the quality of some of their assets further deteriorates. This would apply especially to consumer loans and home mortgages. Moreover, the problem of the lax classification and provisioning of NPLs should be addressed through the tightening of regulatory measures. Any resulting shortfall in capital adequacy should trigger prompt corrective actions in the framework of a transparent crisis resolution mechanism, to be further developed. The ongoing implementation of the integrated risk management framework will better prepare the banks to address new risks and shocks, as will the implementation of Pillar 1 and eventually Pillar 2 of Basel II.

**Nepal**

**The Macroeconomic Context**

Despite major political changes in 2007–2008 and internal conflicts, Nepal has managed to maintain relative macroeconomic stability. It has benefited from its extensive economic relations with India. However, its economic growth has been relatively low, though steady.

Remittances, accounting for almost 20% of GDP and more than twice as large as exports, helped limit the external current account deficit to about 1% of GDP. These inflows brought some attendant risks, and their slowdown, while not immediately evident, could pose challenges. Remittances to Nepal mostly originate from the Middle East58 in addition to India and increasingly from other booming economies in Asia where there are large construction projects, in particular Malaysia. As of the end of 2008, there were no signs of slowdown in these remittances, but this may not last. There were reports in early 2009 of unemployed workers coming back from various places, including Malaysia. One interpretation of the continued high level of remittances at the end of 2008 would be that workers transferred their savings before coming back home. The liquidity generated from remittances could only be partially mopped up and has contributed to a rapid development of the finance sector and a sharp rise in assets prices (real estate, equity). These pressures manifested in a bubble that has begun to somewhat correct itself in the past year.

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58 The United Arab Emirates, Qatar, and Saudi Arabia, in particular.
The unfolding global crisis could adversely affect Nepal in several ways. First, exports could further suffer, as could the receipts from tourism, as has already been observed. Second, and most important, remittances could stall and even decline. Clearly, much would depend on the severity of the economic crisis in the countries of these remittances’ origin. Depressed crude oil prices and de-leveraging of the finance sector worldwide are leading to a downturn in the construction sector in the Gulf, with potentially significant adverse consequences on remittances.

Under the current regime that is characterized by the currency peg to the Indian rupee, fiscal policy assumes a key responsibility of maintaining macroeconomic stability and external sustainability. This would continue to be the case under a crisis scenario, providing little room for any domestically financed stimulus package. Otherwise, Nepal's comfortable international reserves position (now equivalent to 9 months of imports) would suffer.

With the fuel for the asset price inflation of recent years missing, asset prices could deflate, thereby exposing weaknesses in the finance sector. Besides credit and market risks, a reduction in external inflows would likely create a liquidity shortage, at least in some banks. The Nepal Rastra Bank (NRB), the country’s central bank, should prepare itself for addressing the implications of such shock on monetary and finance sector policies.

The peace process and political changes, if properly exploited, could dramatically improve business confidence and offer the possibility of the economy moving onto a higher growth path.

The Monetary Policy Framework in Theory and Practice

Conceptual Issues

Two Nepal-specific features constrain the NRB’s monetary policy framework, and limit the impact of monetary policy.

First, the Nepalese rupee is pegged to the Indian rupee. Hence, although the central bank might have an “objective” of accumulating international reserves, in practice, the change in its international reserves is endogenously determined. And the NRB can only affect the outcome through its management of domestic liquidity.

Second, Nepal appears to be a textbook case of a small open dependent economy. It has free and extensive economic relations with India, with goods and services, labor, and even to a limited extent capital, flowing freely between the two countries.

As a result of these features, monetary policy can affect domestic inflation only to a limited extent. A recent comprehensive study done at the NRB concluded that inflation in Nepal is mainly determined by inflation in India, with money only having an effect in the short run (less than 1 year).
It is worth noting, however, that India’s inflation appears to have been less volatile and slightly lower in recent years (Figure 65). Furthermore, since late 2008, India’s inflation has been decelerating at a somewhat faster pace than Nepal’s, apparently because of greater price flexibility in India, and also reportedly due to supply constraints and disruptions associated with the political developments and uncertainties.

The pegging of the exchange rate with the Indian rupee places the burden of maintaining macroeconomic stability mostly on fiscal policy. The Nepalese authorities have, over the years, generally kept the fiscal deficit to a relatively low level.

Limiting the domestic inflation of goods and services over which monetary and fiscal policies have some control, in particular non-traded goods, must be a key objective. It ought to be more so at a time when productivity in India appears to be rising faster than productivity in Nepal. This is because the “equilibrium” (for India but not necessarily for Nepal) real appreciation of the Indian rupee, if carried through to Nepal, would make Nepalese goods less competitive. There is, in fact, an argument for aiming at a lower non-traded goods inflation to make up for the productivity growth differential.

**Figure 65: Inflation in Nepal and India**

(%)
Given all of the above, it is not surprising that the yearly monetary policy statements have referred to multiple objectives: price stability, of course, but also maintaining adequate international reserves, and stabilizing the real exchange rate of the Nepalese rupee to maintain a sustainable balance of payments position.59

Although broad money is identified as the intermediate target for the monetary policy framework, the operating target is the excess reserves of banks.60 A reason mentioned for the choice of this operating target, which is only a small part of reserve money, is that currency in circulation is very volatile and hard to control. Of course, broader monetary aggregates matter for inflation. If the focus was mainly on the overall balance of payments position and international reserves, then net domestic assets of the central bank would seemingly be a preferable target.

Given the currency peg, monetary policy can only be effective if capital mobility is limited. The capital controls in effect in Nepal and India suggest that this is a reasonable assumption to make and is supported by the observation that the relative stability of the overall balance of payments in Nepal has coincided with substantial interest rate differentials between India and Nepal (Figure 66). Notably, however, there are reports that the growing gap between deposit rates in India and Nepal has led to some capital flight out of Nepal (see further below). In late 2008, as India loosened monetary policy, these interest rates differentials narrowed somewhat.

The NRB disposes of various instruments to affect excess liquidity of banks. These instruments include (i) the open market operations (OMOs) through outright sale auction, reverse repo auction,61 outright purchase auction, and repo auction at the NRB’s initiative; and (ii) a short-term standing liquidity facility (SLF) at which the banks can borrow from the NRB at a maximum of 5 days of maturity against the collateral of treasury bills (TBs) and development bonds. The interest rate for the SLF is based on the TB or repo rate, whichever is higher plus a penal rate spread, which is currently 300 basis points, raised from 200 basis points in the 2008/09 monetary policy statement. The facility is not really supposed to be used for liquidity management, but rather to address risks to the payment system. The instruments available to the NRB to affect the excess liquidity of banks also include a discount and last resort facility (maximum period of 6 months), fully collateralized at a rate set by the NRB, which is the policy bank rate. The policy bank rate is currently at 6.5%, up from 6.25%, with the increase announced in the 2008/09 monetary policy statement to signal a monetary policy tightening. In reality, the SLF

59 See for instance NRB’s Monetary Policy for Fiscal Years 2007/08 and 2008/09. Note that in Nepal, the fiscal year starts on 16 July and ends on 15 July of the following year. Hence, for instance, the year 2007/08 refers to the period between 16 July 2007 and 15 July 2008.

60 The idea being that the banks want to keep a “normal” level of excess reserves beyond required reserves in some proportion to broad money. When actual excess reserves are higher, the central bank must mop up liquidity in order to be consistent with the broad money target, and conversely when excess reserves are lower than normal.

61 Under which the central bank sells temporarily government securities to banks to absorb liquidity. The reverse applies in the case of repo auctions.
has often been used as a first resort facility by the commercial banks. There is also a cash reserve requirement (CRR) against total domestic liabilities of banks, currently at 5.5% of deposits, up from 5% under the 2008/2009 monetary policy statement.

While the bank rate is meant to signal the general stance of monetary policy, the NRB also signals its intention in the very short run through the quantities for sale or purchase at its OMOs auctions. Provided that the quantities auctioned are properly calibrated to meet the operating target for excess reserves, the market interest rates on these OMOs would indicate whether there is consistency between the policy rate and the operating excess reserves target, and beyond, the broad money target and inflation objective.

The institutional framework for monetary policy formulation appears to be weak. The management committee, comprising the governor and two deputy governors, submits to the board the proposed monetary policy stance, there being no separate monetary policy committee. The OMO committee runs all the OMOs, in addition to the primary TB market. A representative from the Ministry of Finance also sits on this committee, which decides on cut-off rates, which must also be viewed as signaling the monetary policy stance, perhaps more so than the bank rate.
**Performance in Practice**

**Inflation, Interest Rates, and Monetary Aggregates**

A comparison between the targeted and actual inflation rates in the past 6 years highlights the challenges encountered by the NRB in meeting its inflation objective. In 5 of the past 6 years, inflation overshot, twice by significant amounts (Table 31). In part, this appears to be due to a poor correlation between excess liquidity and reserves money, given the hard-to-predict developments in the currency in circulation.

This raises further questions: whether or not other objectives such as maintaining reasonable rates of economic growth might have weighted the NRB’s decisions; whether or not mostly unexpected external shocks made the attainment of the inflation objective impossible; or whether or not the monetary policy implementation or design was lacking, in some ways.

**The real policy rate has tended to fluctuate significantly since the mid-1990s.** It was positive during 2000–2002, and then again in 2004, but has turned mostly negative since 2006. A negative real policy rate is generally indicative of lax monetary policy.

**A richer approach to the monetary policy stance consists of looking at the significance of a so-called “Taylor rule.”** Under this rule, the central bank effects an increase or decrease in the real policy rate above or below the long-run equilibrium real policy rate when (i) inflation is above or below target; and (ii) output is above or below potential output, with weights attached to these elements. The relative significance of the weights would be indicative of policy priorities. Hence, if the output gap is negative and the weight attached to it is significant, the real policy rate could be lower than the long-run one, even if inflation is above target.

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**Table 31: Nepal Inflation and Broad Money Target and Actual, 2002–2008 (%)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation</th>
<th></th>
<th>Broad Money</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Actual</td>
<td>Target</td>
<td>Actual</td>
</tr>
<tr>
<td>2002</td>
<td>4.0</td>
<td>4.8</td>
<td>12.0</td>
<td>9.8</td>
</tr>
<tr>
<td>2003</td>
<td>4.3</td>
<td>4.0</td>
<td>11.2</td>
<td>13.5</td>
</tr>
<tr>
<td>2004</td>
<td>4.0</td>
<td>4.5</td>
<td>12.5</td>
<td>12.0</td>
</tr>
<tr>
<td>2005</td>
<td>5.0</td>
<td>8.0</td>
<td>13.0</td>
<td>16.3</td>
</tr>
<tr>
<td>2006</td>
<td>6.0</td>
<td>6.4</td>
<td>16.1</td>
<td>15.0</td>
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<tr>
<td>2007</td>
<td>5.5</td>
<td>7.7</td>
<td>15.6</td>
<td>25.2</td>
</tr>
<tr>
<td>2008</td>
<td>7.5</td>
<td>–</td>
<td>18.5</td>
<td>–</td>
</tr>
</tbody>
</table>

-- = not available.

Source: Nepal Rastra Bank.
There is no evidence that real policy rates were especially high when inflation was unexpectedly high (an interpretation of the first element of the Taylor rule). Even when the policy rate was successively raised during 2006–2007, it only prevented more negative real rates (Figure 67).

There is some evidence that real policy rates were at times especially low when output growth was particularly weak (an interpretation of the second element of the Taylor rule) (Figure 68). This happened in 1998–1999 and again in 2002–2003. If growth during 2006–2007 was below potential or trend, as it seems to have been the case, a reason for the especially low (negative) real interest rates could be the application of the second element of the Taylor rule. Thus, maintaining economic growth might well have been an important objective of monetary policy as well.

Turning to monetary policy implementation and design, the excess reserves target is derived from the projected cash flow of banks under the Liquidity Monitoring and Forecasting Framework (LMFF). It is based on weekly projections for deposits, loans, and advances, and the government’s Treasury operations and yields values for required and excess reserves of banks. Then, the open market operation committee decides whether to mop up or inject liquidity.

Growth in broad money has been rather high in Nepal for some time, averaging more than 15% annually over the last 3 years (Figure 69). The main counterpart and source for this growth has been a varying mix of net foreign assets (NFA) and private sector credit growth, with financing of government contributing only occasionally and modestly.

![Figure 67: Nepal Real and Nominal Policy and Inflation Rates (\text{%})](image)
**Figure 68: Nepal Real Policy and GDP Growth Rates**

>GDP = gross domestic product.

**Figure 69: Nepal Broad Money Growth and Its Components**

Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter.
Actual broad money growth overshot the intermediate target set in the monetary policy statement in 3 of the past 6 years to 2008, with the overshooting generally small, except in fiscal year 2007/08. In 2007/08, actual broad money grew by more than 25%, substantially higher than the target of only 15.6%. This was mostly associated with higher-than-expected increases in both the NFA and private sector credit, and contrasted with the developments in 2006/07, when the counterpart to broad money growth was mostly private sector credit growth. In the first 7 months of 2008/09, broad money growth has remained high, in line with the continued high growth in remittances, and the growth in private sector credit has remained high, with only a slight deceleration. Hence, there has been no sign so far of any liquidity squeeze as a result of the global financial crisis.

Reserve money growth averaged more than 10% annually in 2006–2008, with growth picking up to more than 20% in 2007/08, and remaining high in the first 7 months of 2008/09. The NFA has generally been a main source of reserve money growth in Nepal (Figure 70). The year 2006/07 was an exception, when reserve money growth was mostly the result of the NRB financing of the government. In fact the NFA contributed negatively to reserve money expansion in that year. In 2007/08, NFA has again been the main contributor to reserve money growth, and the same holds true for the first 6 months of 2008/09.

Workers’ remittances have been, by far, the most important and growing source of private foreign exchange inflows in the country and have fueled the growth in the NRB’s NFA (Figure 71). These inflows reached $2.2 billion in 2007/08, and already $1.6 billion in the first 7 months of 2008/09. In contrast, net private capital inflows have been insignificant and in fact negative in most recent years, consistent with the view that growing interest rate differentials with India has encouraged some capital flight. Foreign liabilities of banks have been small and stagnant.

Those inflows have had a full monetary impact under the currency peg, which has been only partially sterilized. Banks have used the abundant liquidity to expand credit to the private sector.

The financial crisis that originated in the advanced economies has not significantly impacted Nepal so far. Banks in Nepal have had very little direct exposure to the developments in the international financial markets, and have borrowed little abroad. Nevertheless, indirect repercussions of the global financial crisis on the Nepalese economy and banking system could be significant.

A key issue is the possibility that workers’ remittances will not only cease to grow but actually decline, as foreign guest workers are likely to be the first hit by deteriorating macroeconomic conditions in the Middle East and Asia. In part, the adjustment would be automatic, with the consumers’ demand adjusting to the lower level of national income. But how would the central bank manage the residual shock? Would there be pressures to use other domestic sources of reserve money creation to fill the gap? Or would the central bank be in a position to contain domestic liquidity expansion as needed to maintain...
Figure 70: Nepal Reserve Money Growth and Its Components
(annual, in % of beginning of period reserve money)

Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter.

Figure 71: Nepal Private Foreign Exchange Inflows
($ billion)
international reserves at their currently comfortable level, keeping in mind that it is the sole available tool under the currency peg? As far as financial soundness is concerned, a key issue would be to proactively manage the risks posed by the recent rapid expansion in domestic credit under a deteriorating economic and liquidity situation, with adverse implications for asset prices as well.

Management of Banks Excess Reserves and Interest Rates

The LMFF is used to forecast excess liquidity and, accordingly, plan the interventions of the central bank. As far as known, the NRB does not publicly announce its operating excess reserves target, raising questions about its role, if any, in signaling the monetary policy stance. And aggregate data on actual excess reserves have to be compiled by the individual researcher (Figure 72).

But the announced volumes of sales or purchase auctions would, to some extent, convey the policy stance. Presumably, the excess reserves target is in line with reserve and broad money targets viewed as consistent with the inflation objective, recognizing that NFA would in fact be endogenous. There would, however, be no guarantee that the inflation objective is consistent with any desired level of NFA. This is why the fiscal policy stance also needs to be considered, taking into account the available foreign financing.\textsuperscript{62}

\textbf{Figure 72: Excess Liquidity (Reserves) of Nepal Commercial Banks (NRe million)}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure72}
\caption{Excess Liquidity (Reserves) of Nepal Commercial Banks (NRe million)}
\end{figure}

Source: International Monetary Fund.

\textsuperscript{62} Under the peg, the monetary policy stance cannot chase two objectives; hence, a key role must be assigned to fiscal policy.
OMOs constitute the main instrument in monetary policy, but there are questions about their effectiveness. OMOs are conducted at the initiative of the NRB every day as and when required. Table 32 summarizes the types and amounts of OMOs undertaken in 2005–2009. OMOs have mostly been used to mop up liquidity, and have mostly taken the form of outright sales. Table 32 also shows that disbursements under the SLF grew rapidly during 2005–2008, raising the question as to whether or not they weakened the impact of net mopping up operations.63 Monthly data on OMOs also show that they were not undertaken as regularly as could be expected.64

Table 32: Nepal Open Market Operations, 2005/06–2008/09
(NRe billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2005/06</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09 a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MP</td>
<td>INJ</td>
<td>Net MP</td>
<td>MP</td>
</tr>
<tr>
<td>Outright sale auctions</td>
<td>13.5</td>
<td>18.4</td>
<td>14.9</td>
<td>7.5</td>
</tr>
<tr>
<td>Reverse repo auctions</td>
<td>6.5</td>
<td>14.3</td>
<td>6.6</td>
<td>13.3</td>
</tr>
<tr>
<td>Outright purchase auctions</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Repo auctions</td>
<td>0.5</td>
<td>2.0</td>
<td>9.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>20.0</td>
<td>1.3</td>
<td>32.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Standing Liquidity Facility</td>
<td>9.8</td>
<td>47.0</td>
<td>103.8</td>
<td>38.0</td>
</tr>
</tbody>
</table>

INJ = injections, MP = mopping, Net MP = net mopping after deducting injections.
Note: Totals may not add up because of rounding.

63 First 7 months.
Source: Nepal Rastra Bank.

A striking feature of monthly time series on market interest rates in Nepal is the great volatility of these rates, suggesting that either the assessment of “normal” excess reserves under the LMFF, or the willingness to absorb/inject reserves, has been lacking (Figure 73).65 Alternatively, the underlying demand for money and the determinants of normal excess reserves could have been volatile as well. Whatever the explanation is, this volatility complicated macroeconomic management.

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63 Numbers on drawings under the SLF and on OMOs in any given year cannot be compared because these instruments are of different maturities (drawings under the SLF are for a maximum of 5 days).
64 For instance, there were no outright sales during August through October 2007, or during January and February 2008.
65 In Figure 73, the (estimated) SLF rate coincides with the repo rate plus the applicable penalty premium. In reality, the SLF rate is the maximum between this estimated rate and the bank rate, whichever is the higher. Until 2008, this maximum was in fact the bank rate.
The other peculiarities of the market interest rate trends are (i) their lack of conformity with the trend observed in the bank rate, that has changed little while it is evident from its OMOs that the NRB has been in a more aggressive tightening mode; and hence, the bank rate has not really signaled the monetary policy stance either; and (ii) the fact that the interest rates series does not seem to strongly co-integrate in the short run, which raises questions about the level of integration among the various markets, and their efficiency.

One possible explanation for both the liquidity management difficulties and the poor co-integration between rates could be the role played by the NRB in the running of the primary TB market. In this market, the average rates depend on the cut-off rates chosen, with the NRB acting as the buyer of last resort for the TBs. Hence, the TB rate may not fully reflect at times the overall market and liquidity conditions. In addition, the NRB loses control over reserve money growth, especially if it is unable or unwilling to fully use the reverse repo market to absorb the liquidity created on the primary TB market.

The other explanations are the apparent shallowness of the interbank market and the fact that the SLF seems to have been increasingly used as first resort, which was not the intention of the NRB. Not only does the latter complicate the NRB’s task in controlling reserve money growth, it also discourages the development and deepening of the domestic interbank market. Recourse to SLF in recent times appears to have enhanced this tendency as the spread between the interbank rate and the SLF rate narrowed recently and disappeared altogether in early 2008, reducing the incentives for banks to use the

Figure 73: Nepal Indicators of Monetary Policy Transmission (%)

SLF = standing liquidity facility, TB = treasury bill.
interbank market rather than the SLF. The recent increase in the penalty premium from 200 to 300 basis points above the TB rate will help discourage use of the SLF. Reportedly, the shallowness of the interbank market is the result of the few large banks that have systematically excess liquidity being reluctant to lend to the less established new and smaller banks that are systematically short in liquidity.

The two recent episodes of inflation significantly overshooting the objective correlated with the actual broad money significantly overshooting its target. These episodes support the view that insufficient control on monetary aggregates was a key factor. During 2002–2008, when broad money was close to target, inflation was also close to target. But naturally, the role of external shocks, particularly in commodity prices, must also be recognized. Also, one explanatory factor for the overshooting in monetary aggregates at times has been the unpredictable developments in currency in circulation as it relates to remittances.

Monetary Policy Transmission Mechanism

There is little evidence of a consistent transmission mechanism from the policy rate or OMOs auctions rates onto lending rates. This is despite the fact that, trend-wise, outright sale auction, SLF, call money, and TB rates have all moved in the same direction. It is as if the liquidity of banks has no real impact on lending rates, although actual average lending rates, instead of prime lending rates, could possibly show a greater correlation with those money market rates. Banks appear to apply a quantitative rather than price adjustment mechanism to adjust credit, if they do at all, when liquidity is being absorbed more aggressively by the NRB through OMOs.

In this environment, the transmission mechanism of monetary policy to prices works via the direct effect of liquidity reduction on available credit. There is, however, evidence that it has not always worked. This is because the LMFF has at times been less than fully adequate as evident from the gyrations in the interbank and/or call money rate, which cannot be otherwise explained. Sudden drops or spikes in the interbank rate must result from difficulties in assessing the liquidity situation, and hence insufficient or excessive amounts of OMOs, or a passive response to changes in the liquidity situation. Therefore, improving LMFF and/or a less passive response to liquidity developments appears key to strengthening the conduct of monetary policy in the current framework.

There is little evidence that central bank financing of the budget has been a significant source of reserve money expansion in recent years, except for fiscal year 2006/07. Nevertheless, the working arrangements for the primary TB market undermines the

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66 The spread between the interbank rate and SLF rate used to be significant, some 200 basis points above the interbank market rate. The behavior of the TB rates, on which the SLF is based, is also a factor.

67 The lending rate series is based on the midpoint in the range for the prime lending rate charged by banks for commercial loans.

68 Data on actual weighted average lending rates are not readily available.

69 The alternative, i.e., that the gyrations in the market interest rates are consistent with the macroeconomic objectives because of the result of an unstable money demand function, does not seem realistic.
Implementation of monetary policy, as already detailed above. Then, the cut-off rates may send an ambiguous signal on the monetary policy stance, thus reducing its effectiveness. The issue of direct government financing could become important if the global financial crisis results in reduced access to external sources of financing for the government and/or puts pressures on the fiscal deficit itself. Any liquidity created by the NRB when picking up significant residual amounts of TBs at the primary auctions will have to be mopped up through OMOs. The NRB will have to be willing to see higher interest rates at their OMOs, with possibly adverse implications on its income position.

**Exchange Rate and Gross International Reserves**

With the exchange rate for the Nepalese rupee pegged to the Indian rupee, foreign exchange interventions by the NRB takes place at the initiative of commercial banks. They have been mostly one-way (purchase) for some years. As a result, international reserves had grown to about $2.5 billion by the end of 2008 (Figure 74a). Even during the first 7 months of 2008/09, net interventions amounted to some $1 billion, reflecting the continued strength of remittances (Table 33).

The trade-weighted real effective exchange rate appreciated during 2006–2008 by some 20%, but this trend has reverted somewhat recently (Figure 74b). The real appreciation resulted mostly from the appreciation of the Indian rupee vis-à-vis the US dollar. But the Indian and Nepalese rupee had depreciated by 11% against the US dollar between mid-July and mid-December 2008.

The bilateral real exchange rate with India has moved little over the years, reflecting both the exchange rate peg and the absence of significant inflation differential between the two countries. Nevertheless, the minimal real appreciation of the Nepalese rupee against the Indian rupee is in the wrong direction, given the likely higher pace of productivity growth in India than Nepal.

**Table 33: Nepal Foreign Exchange Intervention and Gross International Reserves, 2005/06–2008/09 ($ million)**

<table>
<thead>
<tr>
<th>Item</th>
<th>2005/06</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchases</td>
<td>770</td>
<td>923</td>
<td>1,589</td>
<td>1,135</td>
</tr>
<tr>
<td>Sales</td>
<td>9</td>
<td>7</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Net purchases</td>
<td>761</td>
<td>916</td>
<td>1,571</td>
<td>1,119</td>
</tr>
<tr>
<td><strong>Memorandum item:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross international reserves in US dollars, end of period</td>
<td>1,675</td>
<td>1,908</td>
<td>2,085</td>
<td>2,303</td>
</tr>
</tbody>
</table>

* First 7 months.

Source: Nepal Rastra Bank.
Figure 74a: Nepal Exchange Rate and International Reserves

Figure 74b: Nepal Real Exchange Rate, 2000–2008
(Index: August 1997 = 100)
Policy makers in Nepal and other observers agree that the peg to the Indian rupee has served Nepal well during difficult times. In assessing this view, it must be recognized that the trade imbalance is only a partial indicator of external viability in Nepal because of the overwhelming significance of workers’ remittances. Their size has allowed converting very large trade deficits into very small external current account deficits. Nevertheless, the real appreciation of the currency has hurt exports, and encouraged imports from third countries. Depreciation would probably help restore trade competitiveness but the effect of such depreciation on remittances is unclear. Depreciation might encourage workers in Nepal to send more Indian rupees or US dollars if they look at how many Nepalese rupee these currencies buy. But if their goal is to provide for the purchase of a given bundle of essential commodities in Nepal, this objective could then be reached while sending fewer dollars.

Addressing the challenge posed by the exchange rate peg and the productivity differential between Nepal and India places special responsibility on tight fiscal and monetary policies for the strict control of inflation, and on structural reform policies to promote productivity gains. In this context, the apparent more lax monetary policy stance in Nepal as compared to that in India, particularly in most recent years, is a concern. However, the recent depreciation of the Indian rupee vis-à-vis the US dollar in the context of the global financial crisis has already improved somewhat the competitiveness of Nepalese exports to third countries. The authorities and other observers view addressing the supply constraints and improving the business climate as most important to restore competitiveness.

Monetary Policy and the Financial Health of the NRB

There is no evidence that the financial health of the NRB has hampered the conduct of monetary policy. Generally, the structure of a central bank’s balance sheet makes it difficult to generate profits. Since losses are a source of monetary expansion they tend to weaken control over reserve money. This might well happen before the balance sheet itself shows insolvency.

Table 34 indicates that during 2006–2008, about 80% of the total assets of the central bank was foreign assets, mostly international reserves, and 10% holdings of government securities, with the remainder mostly claims on banks and other assets. Only 3% of the total liabilities was foreign liabilities, mostly borrowings under the International Monetary Fund (IMF) Poverty Reduction and Growth Facility (PRGF) (at a very low interest rate), more than 70% was deposits of commercial banks and currency in circulation, and 15%–20% capital and reserves. Other assets and liabilities accounted for only about 5%.

Profit before revaluation gains/loss has been about NRs5 billion, or about 2.5% of total assets. Only in 2007 did revaluation lead to a significant loss, entirely reflecting the long foreign exchange position of the NRB and the appreciation of the Indian rupee and Nepalese rupee vis-à-vis the US dollar.
Table 34: Nepal Rastra Bank Balance Sheet Position, 2006–2008  
(amounts in NRe billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>135.7</td>
<td>82</td>
<td>133.1</td>
</tr>
<tr>
<td>Claims of the Government</td>
<td>16.8</td>
<td>10</td>
<td>20.1</td>
</tr>
<tr>
<td>Advances</td>
<td>1.1</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>Securities</td>
<td>15.8</td>
<td>9</td>
<td>17.4</td>
</tr>
<tr>
<td>Claims of the bank</td>
<td>3.6</td>
<td>2</td>
<td>4.4</td>
</tr>
<tr>
<td>Other assets</td>
<td>10.3</td>
<td>6</td>
<td>14.0</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td>166.4</td>
<td>100</td>
<td>171.6</td>
</tr>
<tr>
<td>Foreign</td>
<td>2.7</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>Deposits of banks, etc.</td>
<td>35.0</td>
<td>21</td>
<td>37.6</td>
</tr>
<tr>
<td>Deposits of government</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>84.6</td>
<td>51</td>
<td>91.3</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>8.6</td>
<td>5</td>
<td>12.6</td>
</tr>
<tr>
<td>Capital and reserves</td>
<td>35.4</td>
<td>21</td>
<td>25.2</td>
</tr>
</tbody>
</table>

= not available.

Note: Totals may not add up because of rounding.
Source: Nepal Rastra Bank annual reports.

(NRe billion)

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from foreign currency assets</td>
<td>4.7</td>
<td>6.6</td>
<td>5.7</td>
</tr>
<tr>
<td>Expenses on foreign currency</td>
<td>0.0</td>
<td>(0.1)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Income from local currency assets</td>
<td>1.1</td>
<td>1.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Expenses on local currency assets</td>
<td>(0.5)</td>
<td>(0.6)</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Other operating income</td>
<td>1.3</td>
<td>0.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Net operating Income</td>
<td>6.5</td>
<td>7.9</td>
<td>6.4</td>
</tr>
<tr>
<td>General operating income</td>
<td>(2.0)</td>
<td>(2.3)</td>
<td>(2.5)</td>
</tr>
<tr>
<td>Profits before revaluation gains (losses)</td>
<td>4.5</td>
<td>5.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Revaluation gain (loss)</td>
<td>7.1</td>
<td>(13.1)</td>
<td>9.7</td>
</tr>
<tr>
<td>Net profit (loss) after revaluation gains and losses</td>
<td>11.6</td>
<td>(7.5)</td>
<td>13.6</td>
</tr>
</tbody>
</table>

() = negative.
Note: Totals may not add up because of rounding.
Source: Nepal Rastra Bank annual reports.
The profitability of the NRB has been supported by three main characteristics of its balance sheet. First, non-interest yielding assets are small. Second, foreign liabilities are small and at a low interest rate. Third, capital and reserves account for the bulk of liabilities other than foreign liabilities, deposits of banks, and currency in circulation.

Financial Soundness and Risk Management

The financial performance of the banking system in Nepal has improved, but the rapid growth of the financial system poses challenges to maintaining financial stability. Key financial soundness indicators for banks show a positive trend in recent years (Table 36).

The average capital adequacy ratio (CAR) for the whole banking system has turned positive, reflecting both the growth and strong capital base of private banks, and the capital-raising effort of some older banks. But the two large public banks, Nepal Bank Limited (NBL) and Rastriya Banijya Bank (RBB), and one private bank remain undercapitalized, with the net worth of NBL and RBB still strongly negative. Most other banks reportedly meet the minimum prescribed 11% CAR.

The nonperforming loan (NPL) ratio has steadily declined over recent years, to 6.1% in 2008, due to write-downs of bad loans and improved supervision, although rapid credit expansion in recent years has also contributed. The NPL ratio has declined further to 5.4% in early 2009. Excluding the three main state-owned banks, this ratio would only be 2%. The provision coverage ratio is reportedly quite good, reaching 125% of NPLs in early 2009.

Table 36: Nepal Financial Soundness Indicators, 2002–2008 (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>(9.9)</td>
<td>(12.0)</td>
<td>(9.1)</td>
<td>(6.3)</td>
<td>(5.3)</td>
<td>(1.7)</td>
<td>4.0</td>
</tr>
<tr>
<td>NPL</td>
<td>–</td>
<td>28.7</td>
<td>22.8</td>
<td>18.1</td>
<td>13.6</td>
<td>10.6</td>
<td>6.1</td>
</tr>
<tr>
<td>Provision coverage ratio</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>125.0</td>
</tr>
<tr>
<td>ROA</td>
<td>–</td>
<td>–</td>
<td>1.1</td>
<td>1.3</td>
<td>1.9</td>
<td>1.8</td>
<td>2.1</td>
</tr>
<tr>
<td>ROE</td>
<td>–</td>
<td>–</td>
<td>25.0</td>
<td>34.3</td>
<td>48.2</td>
<td>30.7</td>
<td>28.9</td>
</tr>
<tr>
<td>Liquid assets/deposits ratio</td>
<td>–</td>
<td>–</td>
<td>35.0</td>
<td>36.0</td>
<td>32.0</td>
<td>32.0</td>
<td>–</td>
</tr>
<tr>
<td>Loans/deposits ratio</td>
<td>–</td>
<td>61.1</td>
<td>59.9</td>
<td>64.7</td>
<td>60.7</td>
<td>68.7</td>
<td>71.1</td>
</tr>
<tr>
<td>Borrowing/total funding ratio</td>
<td>–</td>
<td>1.0</td>
<td>0.9</td>
<td>1.7</td>
<td>2.2</td>
<td>2.6</td>
<td>2.5</td>
</tr>
</tbody>
</table>

- = not available, () = negative, CAR = capital adequacy ratio, NPL = nonperforming loan, ROA = rate of return on asset, ROE = rate of return on equity.

Note: Covers all licensed commercial banks.

Source: Nepal Rastra Bank.
Profitability has increased significantly. The rate of return on assets rose further in 2008, to 2.1%, while the rate of return on equity was still close to 30% despite increased competition. Both these measures are high by international standards, notwithstanding the need to consider the associated risks. However, liquidity indicators have worsened in recent years, with the loans/deposits ratio rising above 70% in 2008. While increasing, the share of borrowing to total funding remains quite small.

The rapid growth of private sector credit in recent years suggests growing credit risks, especially since this growth has, in part, resulted from the growth in the number of commercial banks itself. The number of commercial banks now stands at 26, compared with only 13 in 2000, and the number of other financial institutions, including development banks, exploded in the same period in response to the financial liberalization program. There have been comments that Nepal is now “over-banked.” The growth has been very taxing on the supervisory capacities of the NRB, and weak supervision has only re-enforced the perceptions on credit risks. Direct exposure to the real estate sector (including housing loans) and the stock market is 19.7% and 2.6% of total loans, respectively. Indirect exposure is also significant since, reportedly, 60% of loans are secured by real estate assets. And banks can provide loans against stocks as collateral. Hence, the quality of the loans portfolio would be dependent on asset prices, and thus vulnerable if the global financial crisis led to significant declines in those prices. Conscious of this vulnerability, the NRB issued a directive regarding margin lending that requires that loan amounts not exceed 50% of the value of shares, based on the average closing price of the last 180 days.

Liquidity risks are a concern. Not only has the average loans/deposits ratio risen rapidly to above 70% by 2008, but the distribution of this ratio across banks is reportedly quite unequal, with the ratio hovering around 90% for small private banks, which account for 25% of assets of the banking system as a whole. This would make the system especially vulnerable to any decline in deposits.

The global economic crisis could eventually weigh on the performance of the finance sector. First, credit risks could increase with a deterioration in the economy’s performance and in assets prices. Second, any slowdown and possible reversal in the flow of remittances could create significant liquidity management challenges. However, there has been no real sign of this happening.

Stress tests\(^{70}\) have shown that banks are more vulnerable to asset quality and liquidity shocks, rather than exchange rate and interest rate shocks.\(^{71}\) Reportedly, the default of the banks’ single largest borrowers would result in all banks ceasing to meet their minimum CAR, with a significant number of institutions becoming insolvent if their largest three to five borrowers defaulted. The tests further showed that the banks’ liquidity positions would

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\(^{70}\) Performed with assistance of IMF in early 2008. The central bank is not currently equipped to perform regularly stress tests but is developing in-house capacities to do so in the future.

not be able to stand standard shocks to deposits (such as 15% of demand deposits being withdrawn a day) under standard assumptions for market discounts on liquid assets.

**In addition to continuing with the World Bank reform program for the two largest public banks, strengthening its own supervision capacities has been high on the NRB’s agenda. However, effectively implementing the improved legal framework is a main challenge.** Addressing the capital deficiency of the two large public banks is necessary to put the overall banking system on a stronger footing and ensuring a level-playing field. Another public bank, the Agricultural Development Bank, has recently received a capital injection of $58 million from the Asian Development Bank, which would have allowed it to move closer to the minimum CAR of 11%. The NRB is working on moving toward a more risk-based supervision, and adopting a system of prompt corrective action to address capital adequacy problems. It also seeks to strengthen the functions of the Debt Recovery Tribunal and Credit Information Bureau, including the enforcement of more stringent actions against the willful defaulters. However, the legislation that would provide the legal framework for these reforms appears stalled. Since the self-assessment of the Basel Core Principles was completed in early 2007, a new Banking Institutions Act has been approved by the cabinet and is under consideration by the Parliament. The bank licensing policy has also been tightened. Finally, the NRB is strictly implementing the Basel II simplified framework for capital adequacy in 2008/09, with prompt corrective actions for banks not meeting the minimum capital ratio.

**The State of Financial Intermediation**

**Structure of the Financial System and Financial Deepening**

Despite the rapid growth in the number of development banks and finance companies, commercial banks continue to dominate the finance sector, accounting for about 80% of total financial assets in 2008. Public banks, mainly three large banks, the NBL, RBB, and Agricultural Development Bank, still account for more than 30% of total assets. Foreign banks account for about 6% of total financial assets, and private banks 44%.

Most indicators of financial deepening have displayed an upward trend since the mid-1990s. By 2008, the deposit/GDP ratio had risen to 80% and private sector credit/GDP ratio to 50% of GDP (Figure 75).

The broad money multiplier has also inched up to 3.5 with the rapid development of branch banking. However, some banks still prefer holding a significant amount of excess reserves with the NRB and is visible in the large variance in the distribution of liquidity among banks, and a still fairly underdeveloped interbank market, despite the growth in the volume of transactions in recent years. Lack of trust and collateral appears to be a problem. The design of a repo agreement for transactions between banks has only recently been standardized.
Table 37: Structure of the Nepal Financial System, 2008
(% of financial assets)

<table>
<thead>
<tr>
<th>Item</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>80%</td>
</tr>
<tr>
<td>Foreign</td>
<td>6%</td>
</tr>
<tr>
<td>Public</td>
<td>30%</td>
</tr>
<tr>
<td>Private</td>
<td>44%</td>
</tr>
<tr>
<td>Others</td>
<td>20%</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
</tr>
<tr>
<td>Finance companies</td>
<td>11%</td>
</tr>
<tr>
<td>Development banks</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Nepal Rastra Bank.

Figure 75: Nepal Indexes of Financial Deepening
(%)

GDP = gross domestic product.
Bank Interest Rates Spread and Profitability

There has been some reduction in the spread between bank lending and deposit rates in most recent years (Figure 76). In 2008, the spread was about 6 percentage points, close to the world’s median. Large spreads between bank deposit and lending rates are problematic in that they generally imply that low deposit rates do not provide enough incentives for the mobilization of financial savings through the banking sector, while high lending rates would discourage economic activity and investment. The lack of competition might be part of the problem, with banks taking advantage on both the deposit and lending sides. Relatively high operating costs and provisioning can also be factors, especially given the relative importance of the state banks.

The narrowing of the spread in Nepal is the result of the greater competition that has accompanied the multiplication of private banks. However, this narrowing of the spread has not affected profitability, which has been on the rise, as already noted. Noteworthy is the fact that the rate has most recently risen well above the deposit rates in banks, with possibly adverse implications on the mobilization of deposits in the banking system.

Lessons and Recommendations

So far, Nepal has escaped much of the impact of the global financial and economic crisis. The main reason for this has been the relative absence of external borrowing as source

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72 The interest rate series in Figure 76 was estimated by taking averages between minimum and maximum rates in published ranges.
of funding, and the stability and strong growth of workers’ remittances. The continuation of this trend cannot be taken for granted, and the NRB should develop contingency plans in the event of a significant decline because of the global economic slowdown.

**The institutional and legal framework for the activities and independence of the NRB and monetary policy needs to be strengthened.** The exceptions to the prohibition of direct government borrowing from the NRB make that prohibition ineffective. The NRB remains the lender of last resort (LOLR) for the government, which potentially undermines monetary policy, especially given the representation of the Ministry of Finance on the OMO committee.

The NRB has been relatively successful in containing the growth of the net domestic assets of the banking system to a level consistent with both maintaining a healthy level of international reserves and containing inflation of non-traded goods. Lately, however, inflationary pressures have not been sufficiently addressed, and as a result, Nepal experienced somewhat higher inflation than in India and is threatening the stability of the bilateral real exchange rate. The latter has tended to appreciate precisely at a time when it should probably move in the opposite direction to offset the likely differential in productivity growth.

The NRB has the appropriate monetary policy instruments to control liquidity. It could, however, be more aggressive in mopping up excess liquidity through OMOs, even if this entails higher interest rates. Doing so would have avoided the overshooting in broad money. In this context, the NRB might consider moving to the overall reserve money aggregate as operating target rather than the current narrower focus on the banks’ excess reserves.

**Weaknesses in the interest rate transmission mechanism need to be addressed.** To ensure the proper signaling of the monetary policy stance, there is need for a more flexible use of the main policy rate (bank rate), to bring more consistency between movement in this rate and that of market interest rates on OMOs. The SLF rate could then be based on the bank rate rather than the TB rate. In this regard, steps to improve the functioning of the interbank market would be welcome, as the interbank rate should be viewed as the key operational rate guiding the whole spectrum of interest rates. The observed volatility in the interbank and other market interest rates also suggests that the Liquidity Monitoring and Forecasting Framework needs to be strengthened.

**Monetary policy implementation will be facilitated by a clearer separation between interest rate and liquidity management policy and the running of the primary TB market.** This requires the NRB to no longer act as the lender of last resort for the government, and to set the cut-off rates at the level required by the financing needs of the Ministry of Finance. This would allow the OMOs to become proactive rather than reactive. Finally, the NRB should be congratulated for rapidly rebuilding its capital and reserves following revaluation losses in 2007 because of the appreciation of the rupee vis-à-vis the US dollar. As a result, the bank has maintained a strong financial position, facilitating its conduct of monetary policy.
Liquidity and credit risks in the banking system have to be managed proactively. The recent experience elsewhere has shown that deposits, not just foreign lines of credit, can be a casualty of the global financial crisis. This is a concern for Nepal given the high loans/deposits ratio, especially in some banks. In this context, maturity mismatches also need to be monitored. Credit risks associated with the possibility of an economic downturn appear high, given the rapid growth in credit in the context of a multiplication of banking institutions, the dependency of the quality of collaterals on real estate prices, and apparently overburdened supervision capacities. The provisioning rules might thus need to be further strengthened. The central bank should also develop contingency plans to deal with liquidity problems, whether localized or systemic, and the impact of a sharp rise in NPLs, with likely implications for the public confidence in banks in addition to capital adequacy.
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**Nepal**


**Sri Lanka**


Effectiveness of Central Banks and their Role in the Global Financial Crisis: Case of Selected Economies


Effectiveness of Central Banks and Their Role in the Global Financial Crisis: Case of Selected Economies

This study examines the role and performance of central banks in low-income countries that have faced a range of domestic and external fragilities, aggravated by the global financial crisis that started in the United States and other advanced economies. It focuses on a select group of developing member countries of the Asian Development Bank in the Caucasus, Central Asia, and South Asia that have been and will continue to be vulnerable to adverse external developments.

About the Asian Development Bank

ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries substantially reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to two-thirds of the world’s poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration. Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.