Over the past two decades, the Philippines has been transformed from an economy that performed substantially below its potential to a dynamic emerging-market economy. Most recently, the economy has been able to weather the Asian crisis better than many other countries in the region, and has emerged from the crisis with strengthened institutions and a track record of successful crisis management.

A key feature underlying the transformation and the favorable recent experience has been the evolution of monetary policy institutions and decision making, from a controlled and only partially effective system in the early 1980s to an independent, well-functioning system at the end of the 1990s. In the early 1980s, monetary policy was far from independent and lacked a coherent focus, contributing to a loss of monetary control, spiraling inflation, and a full-blown external payments crisis. At the end of the 1990s, the situation is dramatically different, with an independent, modern central bank that has a clear mandate to control inflation and an established reputation for sound macroeconomic management.

A crucial element underlying the improvement in monetary policy implementation has been the establishment of a new central bank, the Bangko Sentral ng Pilipinas. The old Central Bank of the Philippines became insolvent, largely as a result of its bailing out of domestic banks that had run into financial difficulties during the 1980s, and was closed down in 1993. In the same year, the new Bangko Sentral ng Pilipinas was established with a fresh balance sheet, recapitalized by the national government, and given a clear mandate under the revised Central Bank Act to pursue price stability conducive to sustained growth. Since its establishment, the Bangko Sentral ng Pilipinas has faced new challenges, including a surge in capital inflows (1994–96) and their sharp reversal in the wake of the Asian crisis (1997–98). The Bangko Sentral ng Pilipinas has met these challenges successfully, although at times a certain lack of clarity in the monetary framework has hampered policy implementation (for example, in resolving the tensions between external and domestic targets). Overall, however, monetary policy under the Bangko Sentral ng Pilipinas has consistently been marked by a clear focus on macroeconomic stability.

A signal achievement of the Bangko Sentral ng Pilipinas has been successful monetary management during the Asian crisis. The crisis management strategy centered around the floating of the peso accompanied by a relatively tight interest rate policy. Exchange market intervention was limited to what was needed for building up reserves to programmed levels and for “smoothing” operations (providing liquidity during periods of severe market pressure). Interest rates were used to “lean against the wind” of exchange market pressure—without, however, using interest rates aggressively to defend a particular level of the peso. Nonmarket measures (for example, a volatility band on daily fluctuations) were sometimes used to support the exchange rate when exchange market pressures were especially severe, but their use was only temporary. Since late 1998, with the peso stabilizing and inflation well under control, monetary policy has shifted toward supporting the recovery. Credit growth has remained weak, however, notwithstanding the decline of interest rates below precrisis levels. Reviving credit growth without undermining the hard-won stabilization gains has become an important policy concern.

In the period ahead, the main challenges for the Bangko Sentral ng Pilipinas are to control inflation and sustain confidence in the peso on a lasting basis. Consistent with its legal mandate, the Bangko Sentral ng Pilipinas will need to consolidate its independence in pursuing the goal of price stability. As key requirements to this end, the Bangko Sentral ng Pilipinas needs to maintain a strong financial position and implement monetary policy in a consistent and transparent framework that is well understood by the public.

Early Experience: 1980–93

Crisis, Reforms, and Renewed Pressures

Monetary developments during the 1980s and early 1990s were marked by two “watersheds”—the
debt crisis in 1983 and the demise of the old central bank in 1993. Throughout the period, monetary policy was conducted in a difficult environment, characterized by conflicting demands on the central bank as well as political and economic instability. Monetary policy lacked a coherent focus because the central bank had limited autonomy and no clear mandate on the basis of which to resolve these conflicting demands. The central bank was expected to play its traditional monetary role, but in addition was burdened with financing the fiscal deficit, bailing out troubled commercial banks, and channeling resources to priority sectors. The effectiveness of bank supervision was hampered by government interference in the banking system, which also featured large-scale lending by government financial institutions to nonviable borrowers, often at controlled interest rates.1

In the early 1980s, a combination of elements contributed to a buildup of financial pressures. The external position weakened as expansionary fiscal policies were financed by accumulation of external debt and monetary policy accommodated rapid credit expansion by domestic banks. The imbalances became unsustainable in the face of a series of external and domestic shocks. In 1983, massive capital flight triggered off a full-blown financial crisis, including default on external debt service and widespread insolvency of domestic banks and enterprises. A deep and protracted recession followed, with four years of economic contraction and aftereffects of the crisis that continued to affect the economy for a decade.2

The response to the crisis entailed an important change in the monetary regime, featuring a floating exchange rate system and a shifting of monetary policy implementation away from controls and toward more indirect instruments. After large devaluations in 1983–84, and a sharp rise in inflation, the central bank in 1984 switched to a floating exchange rate system and adopted base money as the chief intermediate monetary target. Interest rate controls and credit ceilings were phased out and replaced by open-market instruments and reserve requirements as main tools of monetary control. The new focus on base money facilitated the restoration of monetary control, and inflation was brought down relatively quickly—albeit in an environment of high real interest rates and contracting economic activity.

The second half of the 1980s saw further progress in improving monetary operations, although the legacy of the crisis continued to weigh heavily on the economy. The period saw important reforms in bank supervision, development of monetary policy instruments, and major reforms in public enterprises and banks. These reforms were supported by the accession of a new government (led by Corazon Aquino) in 1986 that oversaw an improvement in public governance and a new, market-oriented, and outward-looking approach to economic policies. Commercial banks, however, continued to suffer from weak balance sheets and high intermediation costs (the latter in part resulting from the weak financial position of the central bank), while the unresolved external debt situation cut off the country from foreign credit and, more generally, undermined confidence. As a result, domestic interest rates remained high throughout the period. Toward the end of the decade, fiscal and monetary policies slipped again, partly under the pressure of political instability. While formally floating, the exchange rate of the peso was “managed” to a significant extent during this period (including through moral suasion by the central bank). The rising imbalances were exacerbated by external and domestic shocks, leading to a near-crisis in 1990–91 that again necessitated a sharp adjustment of macroeconomic policies. In the ensuing slowdown of growth, banks’ balance sheet problems arose again, triggering renewed emergency assistance by the central bank.

Years of Change: 1993–97

A Reformed Central Bank and New Challenges for Monetary Policy

Starting in 1993, economic policies were given a renewed focus on macroeconomic stability and market-oriented reforms under the new administration of President Fidel Ramos elected the previous year. Political stability was regained and reforms initiated in key sectors, including banking. Macroeconomic policies were focused more clearly on stability—a key measure in this regard being the establishment of a new central bank.

A Reformed Central Bank

The new Bangko Sentral ng Pilipinas was established in 1993 as an independent monetary authority with full administrative autonomy (Box 4.1).3 With a strengthened balance sheet and the legal autonomy provided to it by the new Central Bank Act, the Bangko Sentral ng Pilipinas was well placed to implement monetary policy effectively and to facilitate

---

1 On the macroeconomic setting in the 1980s, see Templo (1998) for a brief but lucid summary; and Dohner and Intal (1988) and World Bank (1987) for more detailed discussions.

2 See World Bank (1987) for a fuller discussion of the episode.

3 The old central bank was declared insolvent and its assets and liabilities transferred to the Central Bank-Board of Liquidators.
Box 4.1. The Bangko Sentral ng Pilipinas

Establishment. The Bangko Sentral ng Pilipinas was established in 1993 to replace the former Central Bank of the Philippines.

The Central Bank of the Philippines suffered extensive losses as a result of its rescues of domestic banks in the 1980s and eventually became insolvent. The bad assets of the Central Bank of the Philippines were taken over by a new body, the Central Bank-Board of Liquidators, and the Bangko Sentral ng Pilipinas was established as the new central bank.

Establishment of the Bangko Sentral ng Pilipinas entailed an extensive restructuring of its administrative setup and operating procedures as well as a recapitalization program. The balance sheet of the Bangko Sentral ng Pilipinas was fortified by new capital from the budget, treasury bills for open-market operations, and a large amount (P220 billion) of deposits from the national government. In addition, the Bangko Sentral ng Pilipinas was exempted from all taxes for a five-year period. The new Central Bank Charter clarified that the primary objective of monetary policy was to "maintain price stability conducive to the balanced and sustained growth of the economy."

Institutional setting. The policymaking body of the Bangko Sentral ng Pilipinas is the Monetary Board, which is appointed by the President for six-year terms.

The board is a seven-member body, comprising the Governor of the Bangko Sentral ng Pilipinas (as its chairman), a cabinet member, and five members from the private sector. The board decides on an inflation objective after close coordination by the Bangko Sentral ng Pilipinas with other key agencies (including the National Economic Development Authority, the Department of Finance, the Department of Budget Management, and the Bureau of the Treasury) through interagency committees (the Committee on the Philippine Financial Program and the Development Budget Coordinating Committee), and approves a monthly monetary program consistent with the inflation objective.

Intermediate targets. Monetary policy implementation is formally based on quantitative targets for the stock of base money.

Base money targets replaced credit targets in 1984. The switch was intended to place greater emphasis on reducing inflation, which had risen to more than 50 percent. The idea was that by controlling base money, the Bangko Sentral ng Pilipinas would have greater control over broad money, which was closely related to inflation. On account of the uncertainties surrounding money demand, base money targets have typically been raised to allow for unexpected increases in money demand reflected in higher-than-targeted international reserves. Starting in 1994, when capital inflows surged and there was a need to guard against the inflationary risks of capital inflows, such increases in base money targets have been made only if inflation has been on track.

In late 1995, the Bangko Sentral ng Pilipinas switched to a de facto fixed exchange rate regime, seeking to maintain the peso at a value of P26 per $1. The Bangko Sentral ng Pilipinas continued to set base money targets, notwithstanding the currency peg that eliminated scope for an independent monetary policy. The floating of the peso on July 11, 1997, restored the consistency of the monetary and exchange rate framework.

Instruments. The main instruments of monetary policy are open-market operations, reserve requirements, and a "special deposit facility" for banks. On a day-to-day basis, the Bangko Sentral ng Pilipinas adjusts the level of base money through open-market operations, mainly comprising short-term repurchase and reverse repurchase agreements. The interest rates on short-term repurchases and reverse repurchases are the key "policy" interest rates determined by the Bangko Sentral ng Pilipinas. The policy rates form the reference rates around which other short-term interbank rates fluctuate. The Bangko Sentral ng Pilipinas also engages in outright purchases and sales of government securities.

Reserve requirements. The Bangko Sentral ng Pilipinas from time to time adjusts reserve requirements, which consist of a statutory reserve requirement and a liquidity reserve requirement. Reserve requirements apply only to peso deposits (not foreign currency deposits). The statutory reserve requirement is partially remunerated—40 percent of it earns interest, albeit at a below-market rate (of 4 percent, effective July 2, 1999)—while the liquidity reserve requirement, being held in the form of government securities, is remunerated at 100 basis points below the 91-day T-bill rate (a market rate). The statutory reserve requirement, although it has been lowered since the early 1990s (when it was 21–23 percent), remains high relative to other countries. Traditionally, the high statutory reserve requirement reflected the need for central bank financing of the budget and the central bank's weak net income position. The income position has once again become an issue with expiry of the Bangko Sentral ng Pilipinas' five-year tax exempt status in mid-1998 (discussed below). The statutory reserve requirement was reduced from 13 percent in 1997 to 10 percent in 1998. The liquidity reserve requirement, initially only 2 percent, was raised in mid-1997 to 8 percent as part of the effort to tighten policies; during 1999, the liquidity reserve requirement was gradually lowered during January–July.

Special deposit facility. Since December 1998, the Bangko Sentral ng Pilipinas has provided a "special deposit facility" for banks. The facility, which carries a small markup over the 91-day T-bill rate, serves as an alternative to reverse repurchases for withdrawing liquidity from the system and does not incur the documentary stamp tax. While little used at first, since March 1999, the stock of special deposits has increased substantially (to P41 billion in early August, compared with reverse repurchases of P105 billion).

1 The Bangko Sentral ng Pilipinas was also charged with supervising the financial system, which is discussed in Section VI on the banking sector. This box focuses on the Bangko Sentral ng Pilipinas' role in monetary policy.
Box 4.2. Key Monetary Aggregates and Interest Rates

<table>
<thead>
<tr>
<th>Measure of money</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserve money</td>
<td>Currency plus deposit money banks' reserve deposits.</td>
</tr>
<tr>
<td>Base money</td>
<td>Reserve money plus deposit money banks' reserves held as government securities, reserve-eligible securities, and the reserve deficiency.</td>
</tr>
<tr>
<td>Broad money (M3)</td>
<td>Narrow money plus quasi money; where narrow money comprises currency plus domestic currency demand deposits, and quasimoney comprises domestic currency time and saving deposits.</td>
</tr>
<tr>
<td>M4</td>
<td>M3 plus foreign currency deposits of residents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interest rates</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP and RRP rates</td>
<td>Policy rates. Preannounced by the Bangko Sentral ng Pilipinas.</td>
</tr>
<tr>
<td>T-bill rates</td>
<td>Market rates. Determined at weekly auction every Monday. The three-month T-bill rate is the bellwether market rate.</td>
</tr>
<tr>
<td>Interbank rates</td>
<td>Market rates.</td>
</tr>
<tr>
<td>Interbank call loan rate</td>
<td>Short-term interbank rate.</td>
</tr>
<tr>
<td>Prime lending rate</td>
<td>Rate charged by banks to prime borrowers. Falls within a margin (currently 1–6 percentage points) above the three-month T-bill rate, the margin being based on an informal agreement of banks with the Bankers' Association of the Philippines.</td>
</tr>
<tr>
<td>Deposit rates</td>
<td>Determined by banks.</td>
</tr>
</tbody>
</table>

Financial intermediation. Fiscal adjustment and reforms, privatization of government-owned and -controlled corporations, and banking sector reforms also lightened the burden that had been felt by the old central bank. Finally, the Bangko Sentral ng Pilipinas started with a clean balance sheet, with capitalization from the national government.4

New Challenges for Monetary Policy

Monetary Framework and the Demand for Money.5 Monetary policy has responded flexibly, and with a clear focus on macroeconomic stability, to the challenges that have arisen in recent years, although at times the framework of targets and instruments has not been fully clear. As noted, since 1984, monetary policy has been formally based on a floating exchange rate and base money targets in pursuit of an inflation objective. At times, however, the Bangko Sentral ng Pilipinas has appeared to follow multiple objectives—for example, during 1995–97, the peso was de facto pegged to the U.S. dollar while base money targets were retained—which may have complicated the implementation of monetary policy.6 At the same time, the Bangko Sentral ng Pilipinas has been successful in meeting its overriding objective of a low and stable inflation rate, which it has accomplished principally through use of a monetary targeting framework. In recent years, the exchange rate has been market-determined, with foreign exchange market intervention limited to smoothing sharp fluctuations in the exchange rate.

Monetary policy has been complicated by instability in the demand for money, which has limited the usefulness of monetary targets. Demand for base money has been difficult to predict against the background of unstable broad money demand and significant unforeseen shifts in the money multiplier. The instability of money demand is not surprising given the major dislocations (as well as innovations) experienced by the financial system, other domestic shocks, as well as external shocks in recent years. It should be noted that the Bangko Sentral ng Pilipinas recognizes the instability in money demand and the complications such instability imposes on the monetary targeting framework. In response, the Bangko Sentral ng Pilipinas has tended to act on the side of caution, keeping base money well below its targeted

---

4 The national government issued to the Bangko Sentral ng Pilipinas ₱70 billion in treasury bills and ₱50 billion in treasury bonds, together equivalent to about 15 percent of GNP, or 125 percent of base money. These transfers (of ₱220 billion) have been dedicated to servicing the liabilities of the old central bank (handled by the Central Bank-Board of Liquidators). In addition, the national government committed to subscribe fully to the authorized capitalization of the Bangko Sentral ng Pilipinas in the amount of ₱50 billion (of which ₱10 billion has been transferred to date).

5 Box 4.2 summarizes the key monetary aggregates and interest rates.

6 See Debelle and Lim (1998) for a discussion.
ceilings. In addition, because of the difficulty of predicting money demand, the Bangko Sentral ng Pilipinas has relied on a broader set of indicators to guide monetary policy.

As one would expect for a developing country with a growing economy and increasing financial intermediation, the demand for money in the Philippines has increased significantly over the past two decades. The recurrent macroeconomic cycles and financial crises have, however, created instability and unpredictability in the demand for money in the short term. The income velocity of money has correspondingly shown a trend decline, but has been characterized by marked short-run volatility (Figure 4.1).

The increase in the demand for money has been reflected in a substantial increase in the ratio of money to GNP. The share of the broadest monetary aggregate, M4, in GNP nearly doubled from 31 percent in 1980 to 58 percent in 1998 (Figure 4.2). In part, the increase reflected a growing demand for foreign currency deposits of residents, which increased from close to zero in 1980 to 17 percent of GNP in 1998. But it also reflected growing demand for peso deposits, as M3 increased from below 30
percent of GNP in 1980 to 41 percent of GNP in 1998. Reserve money, on the other hand, increased only modestly, from 7 percent of GNP in 1980 to 9 percent of GNP in 1998 (see Table 4.1).7

The modest increase in reserve money relative to the broader aggregates reflects that the increase in the broader aggregates owed to a growth in savings deposits (associated with development of the banking system) rather than in currency. In part, it also reflects the lowering of reserve requirements on peso deposits over time, as the Bangko Sentral ng Pilipinas has been on a much sounder financial footing than the old central bank, as well as the rise of (nonreservable) foreign currency deposits.

The trend decline in the income velocity of money is consistent with the standard pattern for developing countries with ongoing financial deepening.8 The standard pattern is a U-shaped curve: velocity declines in the early stages of financial development, as growing monetization contributes to an increase in the demand for money; subsequently, velocity increases with increasing financial sophistication, as the growth of money substitutes (for example, credit cards) contributes to a reduction in the demand for

---

7The modest increase in reserve money relative to the broader aggregates reflects that the increase in the broader aggregates owed to a growth in savings deposits (associated with development of the banking system) rather than in currency. In part, it also reflects the lowering of reserve requirements on peso deposits over time, as the Bangko Sentral ng Pilipinas has been on a much sounder financial footing than the old central bank, as well as the rise of (nonreservable) foreign currency deposits.

8See, for example, Bordo and Jonung (1987).
money. The process appears still to have some way to go in the Philippines, as the ratio of M3 to GNP, at 41 percent, is low by Asian standards (Table 4.2). The short-run volatility in velocity can be traced to the macroeconomic cycles and financial crises that the Philippine economy has faced. The periods of sharp increases in velocity (mainly the mid-1980s and 1990) were also periods of overheating and/or financial crises (Figure 4.1).

An empirical analysis of the demand for broad money indicates a long-run, equilibrium (cointegrating) relationship between money demand and nominal income (Appendix 4.1). The relationship appears, however, to have become less stable in recent years. The demand for M3 is positively influenced by real income and negatively influenced by expected inflation. However, it was not possible to find a satisfactory short-run dynamic (error-correction) equation. The failure to find a satisfactory error-correction model implies that the short-run predictability of money demand is low, limiting the usefulness of monetary targeting.

In the 1990s, a pickup in the pace of financial development has been accompanied by an increase in the volatility of money demand. The analysis in Appendix 4.1 indicated structural breaks in the relationship between money demand and its determinants in the mid-1980s and in 1990. This suggests that the (long-run) relationship between broad money and inflation may be becoming less close than previously.

### Capital Inflows and Monetary Expansion

During 1994–96, monetary management was complicated by a surge in capital inflows. The monetary
policy approach shifted several times, in search of a way to deal with the inflows, resulting in rapid monetary expansion in 1994–95, followed by policy tightening in 1996–97. The exchange rate was allowed to appreciate in 1993–94, but subsequently increasing concern over the exchange rate first led to some stop-go cycles in the monetary stance and then, from late 1995, to a de facto peg to the U.S. dollar. The experience with sterilization was mixed: on the one hand, sterilization was accompanied by higher interest rates, which in turn attracted further inflows and resulted in rising fiscal costs; on the other hand, monetary expansion in 1996 was contained by a large contraction in net domestic assets of the Bangko Sentral ng Pilipinas (offsetting the expansion from rising net foreign assets; see Figure 4.3).

In late 1994, a first wave of capital inflows (including remittances) put pressure on base money; the authorities responded by attempting to keep base money within the program ceilings. Their initial policy response to the inflows was to allow the exchange rate to appreciate, while using sterilized intervention to smooth the trend.

As inflation gradually receded, the policy stance was changed, but the change did not prove sustainable. The authorities became concerned that the strong exchange rate might endanger the nascent export-led recovery and signal that monetary policy was too tight. Net domestic assets of the Bangko Sentral ng Pilipinas were increased, raising base money well above the program ceiling until the exchange rate stabilized at end-1994 (some 13 percent stronger than its 1993 level). This policy, however, proved not to be sustainable. Reserves began to fall almost immediately. In addition, interest rates declined initially but began to rise sharply as inflationary expectations increased.

Following the experience in 1994, the authorities shifted to a strategy involving elements of inflation targeting. Although they continued to formulate base money targets, policy implementation was to depend on whether inflation was on track (consistent with a projected monthly path).11 As long as this was the case, the operating target was the net domestic assets of the Bangko Sentral ng Pilipinas. Targeting net domestic assets was intended to allow the Bangko Sentral ng Pilipinas to accommodate unexpected capital inflows, which would likely reflect higher-than-expected demand for money. (Base money targets could be increased for any excess of foreign reserves over the targeted level.) If the Bangko Sentral ng Pilipinas felt, however, that the inflows might be inflationary, they could choose not to intervene and instead allow the exchange rate to appreciate. If inflation turned out higher than targeted, the operating target was base money (as before). In these circumstances, the authorities would respond to unexpected capital inflows either by allowing the exchange rate to appreciate or by sterilized intervention.

The approach was felt to have several important advantages. It established the reduction of inflation as the clear objective of monetary policy. It put less weight on intermediate targets, which may have been sending misleading signals, and more on the final objective (inflation). And it allowed the authorities flexibility in how to respond to capital inflows, depending not on the nature of the underlying shock (difficult to identify), but on its impact on prices.

Performance under this approach was mixed. This was mainly because, in addition to inflation control, monetary policy continued to follow other objectives (such as the level of the exchange rate). Policy cycles emerged under which interest rates were pushed down until foreign reserves began to decline, forcing the monetary stance to be tightened again (Table 4.3). A notable example occurred in early 1995. Soon after the new monetary strategy was adopted, it became clear that money demand was weaker than expected. The authorities responded by keeping the operating targets (base money/net domestic assets) well below projected ceilings. By midyear, the policy had started to generate large capital inflows, and the authorities started to relax the monetary stance. Interest

---

11The judgment of whether inflation was on track was on a backwards rather than a forward-looking basis, since it was based on whether inflation in any particular month was higher or lower than projected for that month at the time the monetary targets were formulated.
rates started to decline, but market confidence fell steadily and culminated in September–November in a speculative attack on the peso.

The overall experience with sterilized intervention also was mixed. On the one hand, sterilization preserved a large interest differential in favor of the peso, while the signals sent by exchange market intervention suggested to market participants that if the exchange rate were to move, it would move only in an upward direction. The result was effectively a one-way bet for speculators, resulting in a flood of additional inflows. At the same time, it is clear that the Bangko Sentral ng Pilipinas, even if unable to stem the inflows through exchange market intervention, did manage to tighten domestic monetary operations sufficiently to prevent a surge in reserve money (Figure 4.3).

**Fixed Exchange Rates and an Externally Financed Credit Boom**

The period from 1996 to mid-1997 was characterized by a fixed exchange rate and an externally financed credit boom, which placed new pressures on monetary policy. As noted, in late 1995, the Bangko Sentral ng Pilipinas switched to a de facto fixed exchange rate regime, pegging the peso to the U.S. dollar. The action was followed by a period of rapid...
credit growth, fueled by large-scale external borrowing (much of it short term), a boom in asset prices, and a widening of the external current account deficit. A strong bias in incentives toward borrowing and lending in U.S. dollars rather than in pesos (reserve requirements and taxation were higher for peso transactions, see Table 4.4) contributed to a buildup in foreign exchange exposure and the attendant vulnerabilities.

The rapid expansion in credit was entirely in private sector credit, which grew by 44 percent in 1995 and more than 50 percent in 1996. Credit to the real estate and construction sectors accounted for a large part of the increase, even though their shares still remained relatively modest (at mid-1997, real estate accounted for about 11 percent of outstanding bank loans, and construction for less than 4 percent). A significant part of the increase was financed by foreign inflows, with banks' net foreign liabilities and foreign currency deposits rising sharply in 1996. Although banks were subject to overall limits on foreign exchange exposure, they met the limits in part by lending domestically in foreign exchange and by holding forward positions (mostly with exporters). Faced with these developments, the Bangko Sentral ng Pilipinas, starting in 1996, progressively tightened prudential limits (including by placing a limit on the share of real estate loans in a bank’s portfolio, and by imposing a liquid-asset cover requirement on foreign currency deposits—see Section VI).

The Crisis and Its Aftermath: 1997–99

In common with other Asian countries, the Philippines came under severe financial pressure in mid-1997. On July 11, a few days after the floating of the Thai baht, the peso was floated, and the focus of monetary policy in the subsequent period was on

---

12See, for example, Bangko Sentral ng Pilipinas (1999), Table 31.
restoring confidence in the peso and containing inflation. More recently, as the peso has strengthened and inflation remained well under control, attention has shifted toward supporting a recovery in the real economy.

**The Crisis Management Strategy**

The Bangko Sentral ng Pilipinas has been broadly successful in managing the currency turmoil. It reacted promptly to the onset of the crisis in July 1997, floating the peso and tightening monetary policy through higher interest rates. For about a year, the external position remained vulnerable, and the Bangko Sentral ng Pilipinas used interest rates to “lean against” pressures on the peso—but without raising rates aggressively in an attempt to defend any particular level of the peso. In recent months, interest rates have gradually come down and are now below their precrisis levels. Credit growth has remained weak, however, reflecting weakness in credit demand (consistent with the output gap and uncertainty regarding the strength of the recovery) as well as banks’ desire to strengthen their balance sheets.

While the monetary framework has continued to be formally based on base money targets, interest rates have become the driving variable. In implementing monetary policy, the Bangko Sentral ng Pilipinas typically forms a judgment about the appropriate level of policy interest rates based mainly on market signals about underlying monetary conditions (such as the exchange rate and market interest rates). In the period since the crisis, the use of a de facto interest rate target, oriented initially mainly to conditions in the exchange market, was appropriate given the uncertainties about money demand (exacerbated as a result of the crisis). As a result, monetary targets have typically been missed (undershot) by large margins.

While open market operations are the principal monetary policy instrument, the Bangko Sentral ng Pilipinas has also made significant use of reserve requirements. During the height of exchange market pressures in 1997, total reserve requirements (on peso deposits) were raised to 21 percent, comprising an 8 percent “liquidity reserve” (remunerated at close to market rates) and a 13 percent statutory reserve (largely unremunerated—Box 4.1). The use of reserve requirements was partly to effect a rapid tightening of liquidity conditions when necessary (without an up-front rise in Bangko Sentral ng Pilipinas’ “headline” policy rates); considerations over the Bangko Sentral ng Pilipinas’ net income position have also played a role in the choice of policy instruments (as explained below).

The peso has continued to float, with exchange market intervention limited to what was needed for meeting the reserve targets under the current IMF program and for smoothing operations. Nonmarket intervention measures have sometimes been used to restore orderly market conditions during periods of severe pressure; such measures have typically been used on a temporary basis. One such measure has been a “volatility band” that entailed a suspension of...
foreign exchange trading whenever the exchange rate moved outside a specified range. Another measure has been the use of non-deliverable forward contracts, under which the Bangko Sentral ng Pilipinas provided forward cover to eligible borrowers (for example, companies with unhedged foreign liabilities, selected banks). Despite the recent pressures experienced from volatile capital flows—first the surge in inflows in 1994–97, then the outflows in 1997–98—the authorities have remained steadfast in their opposition to capital controls.

The Bangko Sentral ng Pilipinas lost its tax-exempt status in July 1998, with the expiration of a five-year transition period granted at its creation in 1993. It has since paid taxes, mainly a documentary stamp tax, on the sale of government securities. In addition, the Bangko Sentral ng Pilipinas has been required since 1993 to transfer part of its earnings to the national government (Box 4.3). A draft bill is pending in congress that would restore the Bangko Sentral ng Pilipinas’ tax exemption; at the same time, Bangko Sentral ng Pilipinas’ transfers to the government would be increased. Under a...
proposed financial sector tax reform package, the documentary stamp tax on secondary issues would in any case be eliminated. In the meantime, the Bangko Sentral ng Pilipinas has shifted monetary operations partly to instruments that do not incur tax, such as reserve requirements, a special deposit facility for banks, and paperless open-market operations.

Future Challenges

Looking ahead, continued success of monetary policy will require a consistent and transparent policy framework, appropriate operational arrangements, and independence for the Bangko Sentral ng Pilipinas to use its instruments to achieve its statutory goal of controlling inflation. As the crisis subsides, the Bangko Sentral ng Pilipinas needs to clarify the monetary framework, including the choice of an intermediate target, if any (the alternative being adoption of an inflation-targeting framework). A particular challenge for monetary policy will be managing potentially volatile capital flows—suggesting continuation of the floating exchange rate regime. While a clear and consistent monetary framework is necessary, success on this front will likely require active support from fiscal policies. The Bangko Sentral ng Pilipinas should remain both operationally and financially independent. Independence in this context refers to the Bangko Sentral ng Pilipinas retaining full discretion over the use of its instruments of monetary control, with a view to achieving the inflation objective (set in collaboration with other government agencies). The monetary operations of the Bangko Sentral ng Pilipinas should remain free of taxes, and the government should fulfill its outstanding obligation to complete capitalization of the Bangko Sentral ng Pilipinas, so that income considerations do not influence the choice of monetary instruments. To complement its independence, the Bangko Sentral ng Pilipinas needs to ensure that its actions are transparent and well understood by the public.

Appendix 4.1. Analysis of Demand for Broad Money in the Philippines

The specification of the demand function for money follows the traditional practice of describing real money balances as a function of a scale variable and an opportunity-cost variable. The scale variable is represented by real GNP, to represent real income, and the opportunity-cost variable by expected inflation, to represent the value of the goods that are forgone when money is held instead. The money-demand equation is specified as:

\[
\frac{M}{P} = \alpha_0 + \alpha_1 \left( \frac{Y}{P} \right) + \alpha_2 \pi^e + \varepsilon. \tag{1}
\]

In the equation, \( \frac{M}{P} \) and \( \frac{Y}{P} \) represent the logarithms of real money balances and real GNP, respectively; \( \pi^e \) represents expected inflation (measured as the first difference of the logarithm of the price level (CPI)); and \( \varepsilon \) represents the error term. The coefficients on real income and inflation would be expected to be positive and negative, respectively.

It is common when estimating money-demand functions to use the methodology of cointegration. An important reason that the methodology is attractive is that a cointegrating relationship among variables can be interpreted as the long-run equilibrium relationship among them. A cointegrating relationship among real money balances, real income, and expected inflation, for example, would indicate that even if these variables experience a shock that drives them out of equilibrium, they will eventually return to the equilibrium relationship.

As a preliminary exercise, in order for it to be legitimate to include the above series together in a regression, it was necessary to test that the time series were of a similar order of integration. Unit-root tests indicated that the variables were integrated of order 1: the levels were nonstationary but their first differences were stationary (Table 4A1). For inflation, this was true only around a trend.

\[1^a\] The above equation imposes homogeneity of degree one in prices.

©International Monetary Fund. Not for Redistribution
A Johansen cointegration test on equation (1) indicated that a cointegrating relationship could not be rejected (Table 4A2). The number of cointegrating equations was one. The coefficients on real GNP and inflation had the expected signs (positive and negative, respectively) and were significant. The short-run error correction model, however, was not satisfactory: the error correction coefficient, while it had the right sign, was small (0.02). (In addition, the income variable was not significant.) The failure to find a satisfactory error correction model implies that the short-run predictability of monetary developments is poor. This result is consistent with the expected effect of financial liberalization on developments in the monetary aggregates, as well as with the monetary and real shocks that the economy has experienced.

A Chow test was used to test for structural breaks in the relationship and found that a structural break in 1983 and another in 1990 could not be rejected. (The F-statistics were 4.3 and 3.7 respectively, with 2.7 being the critical level.) This coincides with the financial crisis of 1983 in the first instance, and the acceleration of financial development in the 1990s in the second.

### References

Aghevli, Bijan, Mohsin Khan, P.R. Narvekar, and Brock Short, 1979, “Monetary Policy in Selected Asian Countries,” *IMF Staff Papers*, International Monetary Fund, Vol. 26 (December), pp. 775-824.


