

Reserves management and FX intervention

By Maria Ramona Santiago¹

Abstract

In line with this year's topic for the Annual Meeting of the Emerging Market Deputy Governors, the Bangko Sentral ng Pilipinas shared its views and insights on three interrelated issues: (1) drivers of reserve accumulation from a policy perspective; (2) strategies, tactics and motivations of FX intervention; and (3) FX reserve management practices.

Specific to the first issue, reserves are held for four main reasons, according to the IMF: transaction, insurance, precautionary and investment. In the case of the Philippines, one of the reasons why the BSP accumulates reserves is to maintain the international stability and convertibility of the Philippine peso (Section 65 of Republic Act 7653). During periods of exchange market pressure or when the local currency is under attack, the BSP normally provides liquidity to the market settled via spot or non-deliverable forwards (NDFs). However, the build-up of reserves comes at a price, which includes sterilisation costs, actual or potential exchange rate valuation losses, the opportunity cost of foregone consumption or investment, and the costs arising from the maturity mismatches between reserves and sovereign liabilities. It is, therefore, a challenge for the authorities to manage reserves carefully in order to balance the costs incurred with the benefits.

The BSP's participation in the foreign exchange market is limited to smoothing out volatility, or tempering sharp fluctuations in the exchange rate. When such movements are excessive, the BSP enters the market mainly to maintain order and stability. When warranted, the BSP also stands ready to provide liquidity and ensure that legitimate demands for foreign currency are satisfied. It is important to underscore that the overall strategy of the BSP is to allow the exchange rate to be market-determined.

On reserve management, the BSP tranches its reserves so that investment management can be aligned with the various objectives of reserve management, ie ensuring the availability of sufficient foreign exchange liquidity for day-to-day operations; generating income over the medium to long term and diversifying while maintaining acceptable risk exposures. Since the financial crisis, there has been an increased effort to further strengthen the risk management framework, which includes intensifying market surveillance, promoting investment compliance monitoring and conducting periodic stress testing and scenario analysis on the reserves portfolio.

Keywords: Bangko Sentral ng Pilipinas, motives for holding reserves, FX intervention, tranching of reserves.

JEL classification: E58, F31.

¹ Senior Assistant Governor, Bangko Sentral ng Pilipinas.

1. Overview

The purpose of this meeting on reserves management and FX intervention is to take a broad perspective in discussing three interrelated issues:

- Drivers of reserve accumulation from a policy perspective;
- Strategies, tactics and motivations of FX intervention; and
- FX reserve management practices.

The aim is to compare the experiences of central banks from major EMEs and explore policy options.

2. Drivers of reserve accumulation from a policy perspective

What have been the determinants of reserve levels in the past decade? To what extent have FX reserves been accumulated for precautionary reasons and as a by-product of other policies (eg maintaining competitiveness, limiting exchange rate overshooting, maintaining financial stability, supporting market liquidity)? Has there been peer pressure to increase reserves? What are the costs of reserve holdings? To what extent have low returns on reserves influenced their accumulation?

Countries accumulate reserves primarily for the following reasons:

- *Transactions motive.* Adequate reserves would promote international stability and convertibility of the local currency, and satisfy any foreseeable demand for FX (servicing central bank liabilities and national government demands for foreign currency).
- *Precautionary motive.* Adequate reserves would satisfy foreign exchange requirements in the case of insufficient domestic foreign exchange supply and difficulty in obtaining external finance for crisis mitigation purposes (war chest against future crises); that is, reserves reduce the cost of a crisis, once it has occurred – ex post.²
- *Prevention motive.* Having adequate reserves reduces the probability of occurrence of a crisis because adequate reserves underpin investor confidence in the country's ability to meet its external obligations.
- *Intervention motive.* Economies hold foreign exchange reserves as a tool for influencing exchange rates. Foreign exchange market intervention is driven mainly by the following macroeconomic objectives: to control inflation or maintain internal balance; to maintain external balance and prevent resource misallocation; and to prevent or deal with disorderly markets or crises.³

For the Philippines, one of the reasons why the BSP accumulates reserves is to maintain the international stability and convertibility of the Philippine peso (Section 65 of RA 7653). During periods of exchange market pressure or when the local currency is under attack, the BSP normally provides liquidity to the market settled via spot or NDFs.

² IMF, "Issues in reserve adequacy and management", Policy Paper, 2001.

³ R Moreno, "Motives for intervention", in *Foreign exchange market intervention in emerging markets: motives, techniques and implications*, BIS Papers, no 24, pp 4–18.

Meanwhile, the increase of reserves seen in the past decade can be traced to strong inflows from the net foreign exchange operations of the BSP, investment income from abroad, as well as revaluation gains on the BSP's gold holdings. In particular, reserve accumulation was unprecedentedly high for the period 2009–11. Strong structural inflows of foreign exchange from overseas via Filipino remittances, business process outsourcing and tourism receipts, and foreign direct investments have been significant contributors to the country's external payments position. Moreover, it was not a coincidence that the fastest pace of reserve accumulation in Philippine history happened during this period. Unconventional monetary policies in the United States resulted in inflows that could have driven an excessive appreciation of the peso. It was anticipated that normalisation of US monetary policy would later result in large outflows that would cause a large depreciation of the peso, unanchoring inflationary expectations away from the BSP's inflation target. In other words, when the BSP borrowed heavily to buy dollars, the expectation was that some of the accumulated reserves would be sold as US monetary policy began to normalise.

The build-up of reserves also involves sterilisation costs, which are subject to diminishing returns (emerging markets gain little additional benefit for building reserves in excess of the sum of short-term debt and current account deficit) and have the potential to be harmful to both the domestic (foregone consumption and investments) and global economies (imbalances between surplus and deficit countries). The costs attributed to reserves building include sterilisation costs, actual or potential exchange rate valuation losses, the opportunity cost of foregone consumption or investment, and the costs arising from the maturity mismatches between reserves and sovereign liabilities. It is, therefore, a challenge for authorities to manage reserves carefully in order to balance the costs incurred with the benefits.

As the level of reserves is also a by-product of intervention, it has an inherent cost which is approximately represented by the domestic policy rate. To address the cost of holding reserves (negative carry), reserves are tranching by objectives, and the Bank seeks to maximise the returns of each tranche subject to the risk tolerance set by the Board.

2.1 How does the cost-benefit trade-off for reserves depend on structural features of the economy (eg exposure to terms of trade shocks, degree of dollarisation)?

There are two ways in which reserves can help to mitigate the impact of a balance of payments (BOP) crisis on domestic welfare. First, the reserves can be used to mitigate the fall in domestic output. Second, the reserves can be used to buffer the impact of the BOP shocks on domestic absorption. The authorities can reduce the output cost of a crisis by using international reserves through various channels. Foreign exchange interventions can mitigate the depreciation of the domestic currency, and thus the disruption induced by currency mismatches in balance sheets. Reserves help the monetary authorities to provide liquidity to the domestic financial markets, the banking sector and even exporters; this is especially valuable if there is significant dollarisation of bank deposits and other domestic liabilities.

Currently, the Bank tranches its reserves where the currency composition and size of fund per tranche take into consideration the fundamental requirements including, among other factors, the terms of trade, external debt and even the exchange rate policies of the country. Given this structure, the Bank ensures that reserves are used according to the objectives and risk constraints set for each tranche.

2.2 What is the best way to assess reserve adequacy? Are the best measures country-specific? Is it better to consider several measures simultaneously?

According to the report of the IMF's Independent Evaluation Office (IEO), no single indicator or model can capture the complex set of factors that determine the adequacy of reserves in an individual country, and, therefore, reserve adequacy indicators should be applied flexibly and take into account the multiple trade-offs involved in decisions on reserve accumulation and reserve adequacy. The IEO report noted that IMF reserve adequacy assessments and advice in the context of bilateral surveillance seemed often to have been pro forma, highlighting traditional indicators and hardly incorporating country-specific circumstances. However, tailoring the reserve assessment too specifically to any particular member would undermine its usefulness for cross-country comparison.

Reserve adequacy assessments should be attuned to the different types of economy. Reserves play different roles in advanced, emerging, and low-income countries. In EMEs, they are associated with lower risks of a currency crisis, although the marginal benefits decline at high levels. In advanced economies, reserve buffers are associated with a lower risk of banking crises and market dysfunction. In low-income countries, reserves are associated with the ability to smooth domestic absorption to current account shocks. These differences largely reflect these economies' varying exposures to and tolerance of external risks. Countries' tolerance depends on their market depth and the robustness of market liquidity, as well as their economic flexibility. The depth of market liquidity could limit the impact of external pressures, while economic flexibility makes adjustment to external shocks easier.

Assessing the adequacy of reserves for precautionary purposes provides a useful starting point for the discussion on reserve issues. While there is no universally accepted framework for discussing reserve adequacy for precautionary purposes, several metrics have been widely used for reserve adequacy assessments. The advantage of these metrics is that they are simple guides to the strength (or vulnerability) of a country's reserves position relative to particular risk factors and can be applied uniformly across economies. However, some metrics may be more appropriate than others depending on a country's circumstances. In this regard, metrics can provide a practical starting point beyond which analysis of country specific risk factors could complement the discussion.

There may not be a best way to assess reserve adequacy, as the definition of best in the context of reserve adequacy may vary. Assessing adequacy by considering numerous measures may be prudent, but at the end of the day, the adequate level of reserves that we determine will always be theoretical and never truly tested, and perhaps we should not let it be tested. What does adequacy even mean? Does it mean the economy can zero out its reserves when a big shock occurs, and everything should be all right as reserves were "adequate?" What happens to confidence and the economy as the "adequate" level of reserves slowly diminish? What happens afterwards? All these seem to suggest that more than what is perceived as adequate will always be better, unless the central bank holds the view that the cost of holding reserves is too high compared with the investment income. The investment income from reserves is only one of the many benefits of having reserves. It would be good to know if other countries are adjusting their reserve holdings to be in line with what they perceive as an adequate level of reserves.

John Nugee and Gary Smith⁴ have noted that one of the most difficult issues for policymakers has been to define the optimum size for the national foreign exchange reserves. This is comparable to the challenge commercial banks face in determining the correct proportion of the balance sheet that should be held as reserves against creditors. In both cases, the dilemma is that to hold too much can be expensive but to hold too little can be disastrous. In relation to this, the IMF has attempted to bring rigour to the topic with the publication of a methodology called “Assessing Reserve Adequacy (ARA)” and associated calculations for their member countries. The authors noted that it can be misleading to assume that the complex topic of whether a given level of reserves is sufficient can be boiled down to single figure. They argue that the IMF itself wrote in October 2017 that assessing the appropriate level of reserves to hold is challenging – not just because of the multiple roles played by reserves, but also because of the complexity of quantifying external risks and vulnerabilities, and the opportunity costs each country faces. It highlighted that ARA suffers from several drawbacks – first, the output statement is capable of two interpretations and can lead to false assumptions of security; and second, the ARA methodology has the benefit of being neutral and consistent across countries, although this comes at the cost of over-simplicity and rigidity. The weights in the calculation may be the most appropriate average weights, but their rigidity is a weakness. Although the calculation is designed to reflect multiple potential channels of market pressures, all EMEs are not equally vulnerable to the four indicators: imports, money supply, short-term external debt and other external liabilities, in the same proportions. The main concern was that the weights in the equation were static. Furthermore, the authors highlighted a better approach to ARA is to follow the style of rating agencies and offer a qualitative assessment, albeit backed by quantitative analysis. They noted that there are seven factors that probably weigh on a country’s reserves adequacy and vulnerability to market pressure:

- Political stability
- Government finances
- Banking system depth and stability
- Current account balance
- Exchange rate history
- Credit rating
- Size of reserves

The authors also emphasised that by avoiding “over-precision”, such a method would capture more of the influences on the complex question of reserves adequacy and better reflect differences among countries.

That said, the Bank still looks into the traditional metrics of reserve adequacy, and continuously finds way to further enhance its internally developed measurement of the optimal level of reserves specific to the Philippine’s case. These approaches, whether standalone or used collectively have provided important information in terms of gauging the country’s resiliency against external shocks or vulnerability.

⁴ J Nugee and G Smith, “The changing importance of foreign exchange reserves”, Official Monetary and Financial Institutions Forum, September 2018.

2.3 What are the alternatives to reserve accumulation? To what extent can macroprudential tools or capital flow measures help? How have changes in the global financial safety net and regional arrangements influenced the optimal level of reserves?

The alternative to continued reserve accumulation, in several cases to levels far beyond any reasonable measure of adequacy, is economic policy aimed at significantly reduced global imbalances and a potentially large IMF, able to provide financing on a large scale when needed. Whether or not policies are agreed that reduce the demand for reserves, the creation of reserves will be discussed in the period ahead as large reserve holders have become concerned about the predominant role of the US dollar as a reserve currency and the supply of reserve currencies in general.

Swap lines can substitute for reserves since they serve the same basic purpose – they provide international liquidity that can be called upon in case of an unexpected shortage. Yet there are clear limits to the substitutability of swaps and reserves. The credibility of reserves in the eyes of financial markets is ultimately determined by the credibility of the central bank holding the reserves while the credibility of swap lines is determined by the credibility of the central bank providing the liquidity support.

Reserves matter because they are a key determinant of a country's ability to avoid economic and financial crisis. This is true of all countries, but especially of EMEs open to volatile international capital flows. The availability of capital flows to offset current account shocks should reduce the amount of reserves a country needs. However, access to private capital is often uncertain and inflows are subject to rapid reversals, as seen all too often in recent years. It was also seen in recent crises that countries that had ample reserves did better, by and large, in withstanding contagion than those with smaller reserves.

Empirical evidence shows that countries with exchange rate regimes that lie between the two extremes of a pure float and a completely fixed exchange rate have become more exposed to exchange rate pressures, particularly in the presence of increased capital mobility. Thus, an adequate level of external reserves is an important factor in support of a fixed exchange rate arrangement.

Moreover, the Asian financial crisis in the late 1990s taught the region's countries several lessons, which called for further strengthening of regional cooperation efforts, particularly in the area of short-term liquidity support. In 2008, in order to ensure regional market stability, the ASEAN+3 countries agreed to accelerate the establishment of an advance framework for regional liquidity support arrangement in the form of the Chiang-Mai Initiative Multilateralization (CMIM). The CMIM is a pooled fund within the Asian region that aims to address balance of payments and short-term liquidity difficulties in the region, and to supplement the existing financial arrangements by providing financial support through currency swap transactions among CMIM participants.

The CMIM has proven to be a commendable initiative in the aftermath of the Asian financial crisis. It provided the region with its own liquidity arrangement that can be called upon when the need arises. However, the size of the swaps is still limited compared with the foreign exchange reserves held by the ASEAN+3 countries. In addition, the swaps are bilateral in nature, and linked to an IMF programme.

In addition, the BSP has existing swap lines with other central banks to help mitigate the impact of a BOP crisis. Apart from these, the BSP may also consider

tapping the flexible credit line facility of the IMF, which assures qualified countries large and immediate access to IMF resources with no ongoing conditions.

2.4 Have there been any unintended consequences of reserve accumulation? Does reserve accumulation support or weaken monetary policy or financial stability objectives? For instance, has reserve accumulation helped to “lean against” capital inflows or has it reinforced them by being perceived as a form of insurance? Do these implications vary with the time horizon?

Foreign exchange reserves exhibit both advantages and disadvantages compared with other forms of asset holdings. The chief disadvantage is that they pay a relatively low rate of return because they consist almost entirely of very safe sovereign debt. On the other hand, foreign exchange reserves are very liquid and the government has direct control over them, allowing them to be used at its discretion, in case of sudden need, such as in response to a natural disaster or a domestic financial crisis. These characteristics allow the authorities to use the foreign exchange reserves to defend the domestic currency against speculative attack or to recapitalise the domestic banking system in the case of a financial crisis.

Results from a paper by Andreas Steiner⁵ suggest that the Global Financial Crisis is an example of a crisis that was a by-product of EME central banks’ appetite for reserves. By this account, the reserve-accumulating EMEs impose a negative externality on the advanced economies because their behaviour increases the probability of a global crisis. While past experience indicates that central banks were usually able to sterilise the expansionary impact of foreign exchange purchases on base money, interventions have been larger and more prolonged in recent years. When specific features of today’s reserve-accumulating EMs, such as their underdeveloped financial systems, are taken into account, some risks and costs may materialise as a result of the process of accumulation. The most significant ones include inflationary pressure, overinvestment, asset bubbles, complications in the management of monetary policy, segmentation of the public debt market, potentially sizeable capital losses on monetary authorities’ balance sheets, sterilisation costs, and misallocation of domestic bank lending. At the same time, the risks and costs may vary significantly from country to country and, over time, within each country. Hence, the balance of incentives and disincentives to accumulate reserves may also change. Looking forward, if net disincentives were to materialise in a number of countries, accumulation would probably decrease overall but it might also become further concentrated in a smaller group of economies.

As reserves have grown, there may be a view that reserves are already sufficient. On the impact of reserves on capital flows, it may be more positive (inward flows) than negative (capital flight). While, recently, reserves have declined amid outflows, the outflows are related to the nation’s capital requirements and the Federal Reserve’s normalisation rather than to testing the resolve of the central bank.

⁵ A Steiner, “Reserve accumulation and financial crises: From individual protection to systemic risk,” *European Economic Review*, vol 70(C), 2014, pp 126–44.

3. FX interventions: motivations, strategies and tactics

3.1 How important are different motivations for intervening in FX markets (eg smoothing out volatility, acting as a circuit breaker, provide liquidity, leaning against capital flows, containing excessive credit growth)?

The BSP's participation in the foreign exchange market is limited to smoothing out volatility, or tempering sharp fluctuations in the exchange rate. When movements are excessive, the BSP enters the market mainly to maintain order and stability. When warranted, the BSP also stands ready to provide liquidity and ensure that legitimate demands for foreign currency are satisfied.

Other factors, such as capital flows, form part of the BSP's assessment on whether or not to intervene in the market, but these may not be the major motivations. Economic reasons (eg credit growth) are not considered in the central bank's day-to-day decisions on whether to intervene, but are looked at in the BSP's monitoring of markets.

3.2 What factors, including objectives or circumstances (eg nature of the shocks, appreciation or depreciation pressures), influence the choice of (i) instruments and markets; (ii) timing, market conditions and size; (iii) counterparty choice or platform; (iv) rules vs discretion; and (v) the degree of transparency (ex-ante and ex post)?

In deciding whether to intervene in the market, the BSP takes into account various factors which affect the volatility of the PHP. Among others, the BSP looks at regional movements, market expectations, expected and actual dollar inflows/outflows, and local players' trading behaviour, among others. These affect the timing and size of intervention.

On the choice of instrument, market, counterparty and platform, the BSP's interventions are conducted mainly via purchases and sales in the USD/PHP spot market. There have also been occasions when moral suasion was used to discourage speculative spot market transactions.

On whether transactions are based on rules or discretion, it is mostly discretionary. There is no specific list of factors, circumstances or rules that dictate intervention, as the BSP considers intervention as a balancing act.

On the degree of transparency, statistics on intervention are considered to be confidential and are not released to the public before or after the operations.

3.3 To what extent are interventions influenced by the operation of other public sector entities (eg sovereign wealth funds, commodity stabilisation funds)?

The BSP's interventions are independent from the actions of other public sector entities.

3.4 To what extent have the modalities of intervention changed? If so, why?

Since the BSP's intervention activities are not conducted on a regular basis, this question may not be directly applicable to the BSP.

It can be noted, however, that given the bouts of global market volatility this year that have weighed on EME currencies, including the Philippine peso, the BSP has been present in the market to temper sharp fluctuations in the exchange rate.

While the thrust remains geared towards managing the volatility of the USD/PHP rate (without targeting any specific level), the day-to-day tactical strategies or styles have differed to some extent compared with previous years.

3.5 How effective have interventions been? Why? How do the tactics used affect effectiveness? Does it matter whether the exchange rate is appreciating or depreciating? What are the main economic mechanisms through which intervention operates?

We believe the BSP's presence in the spot market has been one of its most effective tools in managing USD/PHP volatility. In the year to date (as of end-October), the USD/PHP volatility has been the lowest among comparable regional currencies (PHP 2.08%, THB 2.26%, IDR 3.93%, MYR 2.41%, KRW 2.41%, TWD 2.20%, INR 4.69%). In 2017, the peso was the second least volatile currency (IDR 0.74%, PHP 1.19%, TWD 1.64%, INR 1.93%, KRW 2.17%, THB 2.66%, MYR 2.70%).

Nonetheless, the BSP's participation in the foreign exchange market is limited to tempering sharp fluctuations, or smoothing volatility, in the exchange rate. It is important to underscore that the overall strategy of the BSP is still to let the market determine the exchange rate.

3.6 To what extent has FX intervention hampered or supported the day-to-day implementation of monetary policy (eg sterilisation operations, control of the interest rate)? How does this depend on the context (eg normal times vs crises)?

FX intervention has generally complemented the BSP's day-to-day implementation of monetary policy. In particular, our forecasts/expectations on FX intervention figures form part of our local currency liquidity forecasting and are factored into our Term Deposit Facility (TDF)⁶ offerings. For instance, if we are projecting sizeable dollar sales for a given week or month, we may reduce the volume of our TDF offerings, as we would already be siphoning off pesos through our dollar sales. Consequently, if we are projecting dollar purchases, we may increase the volume of our TDF offering, as we would be injecting peso liquidity through our dollar purchases. These hold true in both normal times and crises.

There have been occasions, nonetheless, when the BSP implemented seemingly opposite FX and monetary policies, although these were implemented to address certain risk factors such as slowing economic growth or increasing peso volatility. During the global financial crisis in 2008, for instance, the BSP sold dollars to temper the sharp depreciation in the local currency. The dollar sales resulted in a siphoning of peso liquidity away from the system. At the same time, in the wake of slowing

⁶ The TDF is a liquidity absorption facility used by the BSP for liquidity management. Counterparties are asked to submit bids (volume and rate) for term placements with the BSP. The BSP offers three tenors—seven days, 14 days and 28 days—in its term deposit auction.

global and local economic activity following the crisis, the BSP started cutting its policy rate,⁷ which eased peso liquidity.

Recently, some market players also reportedly received mixed signals from the BSP early in the year (February to May) after it hiked its policy rate⁸ (tightened peso liquidity) but cut the reserve requirement (RR) ratio⁹ (released peso liquidity). At the same time, due to depreciation pressure on the local currency this year, the BSP has been a net seller of dollars (siphoning off peso liquidity). This RR cut was an operational adjustment, as the BSP's RR is the highest in the region and may require adjustments to help reduce intermediation cost.

4. Reserves management

4.1 Which overall motivations guide the composition of reserves portfolios? How can the various motivations best be balanced? How does the strategic asset allocation reflect that balance? Is there any link between the portfolio composition and intervention strategies?

The Bank tranches its reserves so that the currency composition and size of fund per tranche take into account fundamental requirements including, among others, the terms of trade, external debt as well as the exchange rate policies of the country. The management of each tranche is guided by specific objectives, which broadly reflect the risk tolerance of the Monetary Board. As such, we ensure that we allocate a portion for intervention and liquidity needs, investments and long-term fund for yield enhancement and reserves diversification.

4.2 What have been the most important shifts in the composition of reserves over the past decade (eg expansion into new asset classes, shifts in currency composition)? Along which dimensions, such as market, liquidity, or credit risk, has risk-taking changed? In prompting these shifts, what has been the role of changes in mandates/laws, in risk preferences, in the macro-financial environment, and in other factors? Has the search for yield been a significant consideration?

In past years, the significant changes in the composition of the reserves that were implemented include the following:

- Exclusion of EUR-denominated assets from the strategic investment tranche's benchmark after the euro markets went into negative interest rate territory;

⁷ On 18 Dec 2008, the BSP cut its policy rate by 50 basis points to 5.5% from 6.0%.

⁸ On 10 May 2018, the BSP hiked its policy rate by 25 basis points to 3.25% from 3.00%. The BSP further hiked its policy rate by 25 basis points on 20 June 2018 (to 3.50% from 3.25%), 50 basis points on 9 Aug 2018 (4.00% from 3.50%) and another 50 basis points on 27 Sep 2018 (4.50% from 4.00%).

⁹ On 15 February 2018, the BSP announced that it would cut the RR by 100 basis points, from 20% to 19%, effective 2 March. On 25 May 2018, the BSP announced another cut in RR by 100 basis points from 19% to 18%, effective 1 June.

- Modification of the investment tranche's benchmark to include the up-to-one-year sector which also led to the shortening of the duration of the strategic portfolio;
- Creation of the hold-to-maturity portfolios in anticipation of a rising interest rate environment;
- Creation of the long-term tranche, which led to the expansion of the investment universe to include new asset classes such as inflation-linked bonds, Asian local currencies and US dollar-denominated government bonds and Chinese government bonds. This long-term tranche, with a risk profile higher than that of other tranches, was established in order to bridge the gap between the cost of holding reserves and reserves income. That said, investments remain in very high-quality government bond issues.
- On the credit risk front, the lowering of the minimum credit rating threshold, still within the investment grade space, for all counterparties in money market, foreign exchange and gold transactions, was adopted as a spate of ratings downgrades was seen in 2008–12 resulting from the financial crisis in the United States and Europe.

Importantly, the BSP shifted the composition of its reserves in response to financial market developments and to further diversify its investments, with a focus not merely on returns but on better risk management.

4.3 Have there been important changes in risk management, remuneration, or the degree of outsourcing? If so, why? Can governance arrangements, including remuneration policies, help to limit procyclical investment behaviour, in particular when selling into a stressed market?

Since the financial crisis, there has been an increased effort in further strengthening the risk management framework, which includes among others, the intensifying market surveillance, promotion of investment compliance monitoring and the conduct of periodic stress and scenario analysis on the reserves portfolio. Furthermore, the Bank's move towards adopting more market-based risk measures such as value-at-risk and tracking error will help improve the way the internal fund managers view risk-taking in the portfolio.

The BSP has been outsourcing a portion of its reserves to external fund managers since the late 1990s. Outsourcing was considered mainly as a way of tapping the specialised skills of external fund managers for the new asset classes that the Bank was considering for its investments. Currently, most of the long-term tranche is outsourced to external fund managers.

On the issue of remuneration, although there was a bank-wide job evaluation that led to higher entry level positions, the level of remuneration for internal portfolio managers is still limited in terms of providing incentives consistent with favourable results.

4.4 Have there been important changes to disclosures (eg their granularity and frequency) over the past decade? If so, why, and what have been the trade-offs? What effect have they had?

Reserve management disclosures are at a minimum. At present, disclosures of information on the reserve management operations are limited to the Investment

Management Committee and the Monetary Board. After the Bank's recent reorganisation, the Treasury Department, now known as the Financial Market Operations Sub-Sector, also reports to the Deputy Governor of the Monetary and Economics Sector.

Reserve management-specific activities are not disclosed to the public – only the results of the actions are published (ie the GIR level, which in part is determined by the intervention actions/policy and the actions of portfolio managers).

4.5 How far are reserve management practices constrained by political economy considerations (eg impact of losses on the central bank's reputation, equity or profit distribution)? What arrangements or practices can help manage these risks (eg communication vis-à-vis the Treasury or the general public; involvement of loss-sharing arrangements)?

As mandated by our existing Charter (Republic Act No 7653 of 1993), the central bank has to remit 75% of its net income to the national government.¹⁰ Currently, the BSP is working on an amendment of the Charter that puts forward a recommendation to increase the capitalisation of the Bank from the national government and the flexibility to establish a reserve fund, whenever it has income or a surplus, to mitigate future risks such as the impact of FX and price fluctuations, and to address other contingencies inherent in carrying out the Bank's mandated functions as the central monetary authority.¹¹

¹⁰ Under the Republic Act No. 7656 – The Government Owned and Controlled Corporations (GOCC) Dividend Law of 2016, the minimum dividend rate may be raised to more than 50% in cases of excess cash or windfall of revenues, provided that the viability and purposes for which the GOCC has been established are not impaired.

¹¹ It may be noted that under the current BSP Charter, the Bank is allowed to make adequate allowance for or establish adequate reserves for bad and doubtful accounts.