



IMF Working Paper

Balance Sheet Vulnerabilities of Mauritius During a Decade of Shocks

Patrick Imam and Rainer Köhler

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African Department

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Prepared by Patrick Imam and Rainer Köhler¹

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Abstract

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After reviewing the economic reform strategy of Mauritius for the past 10 years in the face of several external shocks, we apply a balance sheet analysis (BSA) focusing on currency, maturity, and intersectoral mismatches. In reviewing developments over this decade, we find that the currency and maturity mismatches have fallen across various sectors, and the intersectoral risks to each analyzed sector's balance sheet appear controllable. The government has implemented reforms in recent years that have contributed to general improvement in the balance sheet of the Mauritian economy and its subsectors. We conclude that from a BSA perspective, the macroeconomic vulnerabilities of Mauritius seem manageable, though vulnerabilities remain, and data gaps mean that more work will be needed to support these findings.

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Author's E-Mail Address: pimam@imf.org; rkoehler@imf.org

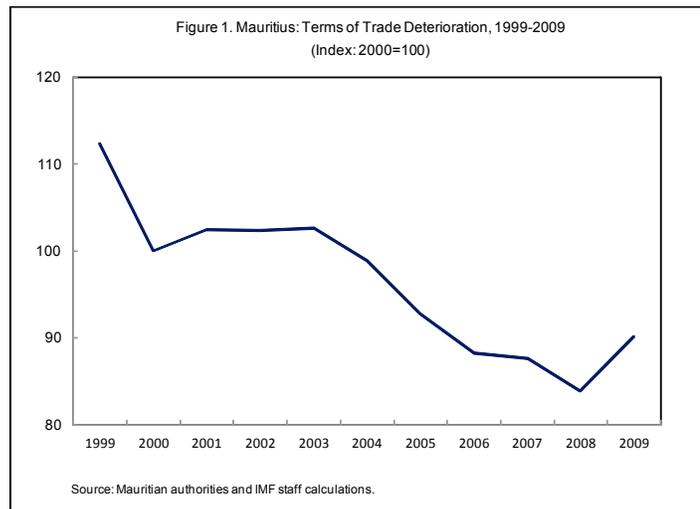
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I. INTRODUCTION

Mauritius has achieved remarkable success since its independence in 1968, with per capita GDP among the highest in Africa. The economy was diversified from complete dependence on sugar into textiles, then tourism, and recently information and communication services and financial services. Contributing to this impressive performance have been economic stability, solid institutions, political stability, an efficient administration, and market friendly regulations (Sacerdoti, El-Masry, Khandelwel, and Yao, 2005).

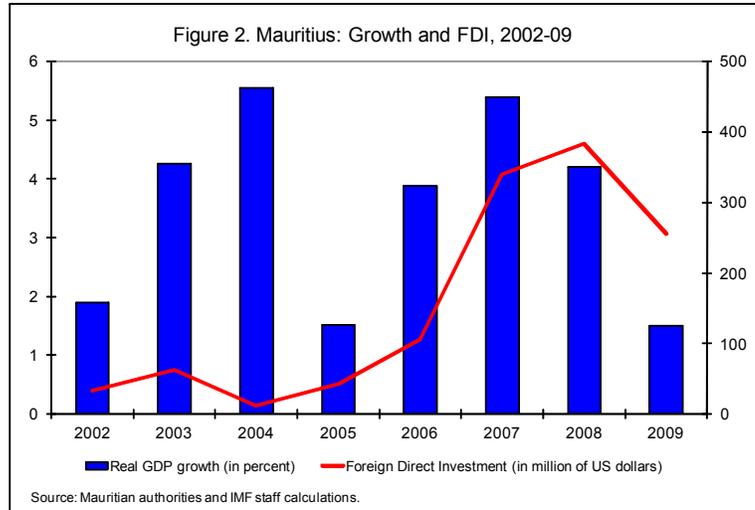
Since 2000, however, Mauritius has suffered a series of external shocks. The phasing-out of the Multi-Fiber Agreement (MFA) for textiles in December 2004; drastic reductions in the European Union’s sugar protocol prices (by 36 percent for 2006–09); and rising prices for imports of petroleum and other commodities caused a cumulative terms of trade shock of nearly 20 percent between 1999 and 2009 (Figure 1). At the same time, economic growth declined from an average of 5 percent in the 1990s to just 3 percent in the first half of the 2000s. The global credit crisis in 2008/09 was only the latest shock; it hit tourism and textiles particularly hard.



In response to these shocks that threatened the competitiveness of the pillars of the economy, the government in 2005 launched a wide-ranging reform strategy. Trade was liberalized, various price controls were lifted, and business regulations were simplified, earning Mauritius the title “best place to do business in Africa” from the World Bank in 2008 and 2009. These structural measures were complemented by fiscal policy reforms. The government initiated far-reaching tax reform featuring a 15 percent flat tax and established a central revenue authority. It also adopted a fiscal consolidation strategy anchored in a new public debt law that stipulates that public debt is to be reduced to 50 percent of GDP by 2013, from a high of 80 percent in 2002. The appointment of a Monetary Policy Committee in 2007 was an important step in reinforcing monetary policy.

The economy responded strongly to the reforms. In 2007, growth recovered to 5½ percent and foreign direct investment (FDI) rose to unprecedented levels (Figure 2) before being hit by the global crisis. The increase in foreign investment complemented far-reaching

restructuring of the sugar and textile industries, with plantation land being converted to tourism facilities and rapid growth in the offshore financial sector. The latter was driven by the activities of global business companies (GBCs) that funnel investments into other countries, primarily India. Mauritius has also sought to position itself as a platform for China and India to invest in East Africa (Mathieu and Imam, 2008).



Like other emerging market (EM) economies, Mauritius is now contending with the fallout of the global financial crisis, especially the decline in demand for tourism and textile exports. As with previous shocks, the government responded by enacting policies to absorb the impact of the shocks and to position the economy for a rebound by implementing bold policy reforms. This explains why Mauritius was able to maintain positive growth in 2009. Its comprehensive and exemplary policy response included fiscal stimulus, monetary easing, ensuring foreign exchange (FX) liquidity, strengthening the social safety net, and facilitating workouts of private sector debt and preservation of jobs.

It is difficult to predict when the current crisis will end. Given the risks to the economy, the vigilant policies the authorities have put in place should help lessen some fiscal and balance of payments pressures. But while Mauritius has taken the immediate steps necessary to minimize vulnerabilities, reducing less visible risks—to the balance sheets of the government, private companies, banks, and households—will also be necessary. Given the current credit crisis, analyzing sectoral vulnerabilities in Mauritius becomes more urgent because linkages between sectors can spill over to other sectors if a given sector comes under pressure. In recent years, for instance, household debt has increased and public debt has fallen, which suggests that a look at sectors other than the government would be useful.

In this paper, we explore intersectoral vulnerabilities in Mauritius. For its discussions with the Mauritian authorities during Article IV consultations, the IMF prepared assessments of the vulnerability of, for instance, the exchange rate (Imam and Minoiu, 2008, illustrated that the Mauritian rupee was fairly valued) and the public sector, in particular the stock of debt. The vulnerabilities of the banking sector were dealt with in the Financial Sector Assessment Program (FSAP) (IMF, 2007). The household and corporate sectors have been little analyzed, in part because of data limitations. And even when sectors have been analyzed individually, intersectoral linkages have been ignored. This paper, using the Balance Sheet Approach (BSA), intends to rectify that.

Section II describes the balance sheet approach; Section III explains the policy implications of a balance sheet crisis; Section IV illustrates our findings for Mauritius; and Section V presents conclusions.

II. INTRODUCING THE BALANCE SHEET APPROACH

A. What Is the Balance Sheet Approach?

While the current international financial crisis started as a liquidity crisis, it rapidly evolved into a solvency crisis for many financial institutions, with spillover effects on governments (loss of tax revenues, nationalization costs, higher risk premiums reflecting more risk aversion, etc.), nonfinancial corporations (higher borrowing costs, inability of customers to borrow to purchase goods, and so forth), and households (higher unemployment, falling net worth, etc.). The BSA is a tool that allows us to analyze the vulnerabilities that might arise from linkages between sectoral balance sheets.

The BSA approach is a relatively new tool made possible by improvements in statistical methodologies and data collection since the Asian crisis (see Mathisen and Pellechio, 2007, for a detailed description of the BSA and its application for surveillance). It provides useful information that is netted out in a consolidated country balance sheet. The matrix of intersectoral positions can reveal significant vulnerabilities and problems that would otherwise remain hidden between sectors.

The BSA approach is stock- rather than flow-based and is closely related to the traditional flow-of-funds matrix, which aggregates sectoral assets, liabilities, and net positions. However, it differs by also estimating intersectoral assets and liabilities, that is, each sector's position in terms of other domestic sectors and of nonresidents. The BSA cannot easily quantify the vulnerability of an economy compared to other economies; it must be applied case by case, taking into account characteristics unique to a country. Therefore, conclusions about balance sheet vulnerabilities require a large dose of value judgment. When looking at a country, export openness, international reserve position, and the overall international investment position (IIP) must all be factored in to see how vulnerable a country really is.²

² BSA is largely based on financial statistics and not intended to reflect the "true" position of an economy or sector, only its macroeconomic vulnerability. For example, real assets, such as real estate, which is a major component of public assets, are not included, because they are not liquid enough to be usable in a crisis. The concept of net financial position (financial assets minus financial liabilities) is therefore different from the net worth (or implied capital) often used to assess whether the operations of the entity or sector can be sustained over the medium to long term.

Typical risks identified in BSA that could lead to lower asset values or higher liabilities are as follows (see Allen et al., 2002):

- **Currency risk:** A mismatch between borrowers' liabilities denominated in a foreign currency and assets denominated in the domestic currency creates exchange rate risk. If the exchange rate depreciates, repayment of foreign currency debt becomes more expensive.
- **Maturity risk:** A mismatch between short-term liabilities and long-term assets creates rollover and interest rate risk. If market conditions worsen, borrowers might find it difficult to acquire enough liquid assets to cover short-term (foreign currency) debt or might have to borrow at high interest rates.
- **Capital structure risk:** A mismatch could occur if a country finances investment projects mainly with debt, as opposed to equity. Because equity is state-contingent, it does not require payments in bad times, but debt instruments require payment regardless of market conditions. For instance, financing a current account deficit with debt rather than FDI is likely to heighten vulnerabilities.

The focus in this paper is on currency and maturity risks, which are more quantifiable, though where possible capital structure risk will also be assessed.

B. Sectoral Breakdown of the BSA

BSA groups institutional units into sectors of the economy based on the similarity of their objectives, principal functions, and the behavior of the types of units controlling them (see Appendix I). Examination of the following individual sectoral balance sheets can provide information on vulnerabilities that may spill over to other sectors:

- **Public sector:** The public sector balance sheet, given its size and interconnection with the rest of the economy, has often been at the center of crises. A potential source of vulnerability to the economy may arise from high sovereign debt and weaknesses in the structure of government balance sheets. Similarly, a mismatch between short-term public liabilities and short-term public assets could create rollover and interest rate risks.
- **Financial sector:** The balance sheets of the central bank, the Bank of Mauritius (BoM), and the financial sector are significant in assessing the country's main risks and general resilience to shocks. Maturity transformation—taking in short-term deposits to extend longer-term loans—is fundamental to financial intermediation, exposing banks to rollover risks. Commercial bank balance sheets, being highly interconnected with the rest of the economy, can easily spill over to other sectors.

Banking is therefore deemed a contingent liability to the public sector, thereby potentially impacting the balance sheet position of the government.³

- **Nonfinancial corporate sector:** Private company balance sheets can be a source of vulnerability to the financial system if a significant amount of corporate debt is owed by corporations that have inadequate capital, liquidity, profitability, or foreign exchange to cover their liabilities. Appendix III illustrates intersectoral asset and liability positions for Mauritius as of December 2009. A sector's liabilities to other sectors (debtor positions) are shown along the horizontal axis, with the liability structure presented by currency, maturity, and creditor. Claims (creditor positions) on other sectors are shown on the vertical axis, presenting the corresponding assets, that is, the holdings of the liabilities of other sectors.

C. Data Problems in Mauritius

Data provided by Mauritius are generally adequate for surveillance. Mauritius started participating in the IMF's General Data Dissemination System (GDDS) in September 2000. In July 2008 a Report on the Observance of Standards and Codes—Data Module (IMF, 2008) was finalized to assess the quality of macroeconomic statistics. The report found their quality had improved significantly since the previous assessment in 2001. Data for the public sector (including the central bank) and the banking sector are highly reliable in Mauritius. The sectorization applied in the BoM monetary statistics is fully consistent with the guidelines of the IMF's *Monetary and Financial Statistics Manual 2000 (MFSM)*. Mauritius has comprehensive financial statistics, especially for deposit-taking financial corporations that lend themselves to flow-of-funds analysis. Since the data used to compile these statistics are sufficiently detailed to estimate intersectoral positions by currency and maturity, they are the logical choice to compile BSA matrices for each month (IMF, 2000). Based on data obtained from financial corporations—compiled using Standardized Report Forms (SRFs), the key data source for BSA matrices⁴—data for Mauritius's nonfinancial sectors are compiled using the same categories as financial corporations. An advantage of this sectorization is that it is compatible with the SRFs for monetary and financial statistics, which the BoM uses for source data. The only exception is the National Pension Fund, which

³ Another important feature of the BSA is its detailed breakdown of financial instruments in accordance with international statistical methodology. The detailed data make it possible to identify the currencies in which all assets and liabilities are denominated. The BSA is grounded in the methodology of the *1993 SNA* for defining transactions, institutions, economic sectors, classifications of assets and liabilities, and accounting rules (see Appendix II).

⁴ SRFs for Mauritius present monthly, up-to-date, and detailed data. They are source data used to complete the “central bank,” “other depository corporations” (that is, commercial banks), and to some extent the “other financial corporations” sections of the BSA. Currency and instrument breakdowns in SRFs help identify currency and capital structure (debt versus equity) mismatches with some indirect information on maturity structure.

has been treated in the Depository Corporations Survey (DCS; the consolidated balance sheet of the BoM and the banking system) as a financial corporation rather than a component of the central government. Thus, in line with the *MFSM*, the economy is split into the following sectors: central government; state and local governments (which include the island dependencies of Rodriguez, Agalega, and St. Brandon); public nonfinancial corporations (parastatals); financial corporations; the financial and nonfinancial private sector (enterprises); and the rest of the world (nonresidents).

Lack of corporate data is a major problem, however, as the nonfinancial sector is not fully and regularly surveyed. Because a few large corporations dominate, having a better knowledge of the risks their balance sheets may pose to the economy is needed. The proper coverage of balance of payments (BoP) and external debt statistics is another problem, which the authorities are starting to address. The problems are related primarily to the growth of GBC activities, the incompleteness of coverage of which has resulted in major errors, omissions, and inconsistencies between BoP and debt statistics (Appendix IV).

Nevertheless, the BSA can still be applied without a full set of data for all sectors. This is because to the extent possible, data used in the BSA are produced according to internationally accepted methodologies based on the *1993 SNA* to minimize inconsistencies (see Mathisen and Pellechio, 2007). This lack of data will, however, create “blind spots” for the BSA, meaning that some potential risk is not detectable and unquantifiable at this stage.

D. Gaps in BSA

Our findings should be interpreted with care because of the above mentioned data deficiencies. Moreover, the BSA methodology does not capture all risks to the balance sheet:

- The BSA by definition does not look at **off-balance-sheet items**, which have been a major cause of the current credit crisis. We do not have, for instance, data on government guarantees, which could increase the risk from contingent liabilities.
- Balance sheet positions are often recorded at **book, not market value**, which could hide much of the reality, particularly if the value of assets has fallen substantially, as they have during the current global crisis. In Mauritius, the valuation of financial assets and liabilities is based on market prices or, for financial assets and liabilities traded infrequently or not at all, on market-price equivalents (fair values). Loans and deposits, however, are recorded at book value, which consists of the principal plus accrued interest (this practice is consistent with the *MFSM*). Where market values have been swinging widely, as in recent years, book value might give an outdated indication of true sectoral positions.
- Moreover, the BSA does not account for **derivative positions**, which might put an economy on either a better or a worse footing than the simple BSA would suggest.

These risks came to the surface with the costly hedging of oil prices by Air Mauritius and State Trading Corporation in 2008. The derivative exposure of the various sectors is not known, meaning an undetectable risk is not being analyzed in the study.

- Because the BSA is a **static analysis** (a snapshot) of assets and liabilities at a single point (the end of the period), it does not reflect ability to generate cash flows over time. As asset and liability positions are aggregated by sector, they will hide significant differences in the position of individual entities that the authorities need to be aware of. Underlying weakness in balance sheets can go unnoticed for years when the international environment is very benign, as was the case during the “Great Moderation” of 2002 to 2007. Shocks, however, like the current credit crisis can easily undermine confidence in sectors such as textiles and tourism, hitting the rest of the economy hard.
- Because the BSA subdivides the economy into four sectors (government, central bank, financial, non-financial private sector), it does not explicitly look at **concentration risks** within these sectors. Concentration risks in a country the size of Mauritius, which is strongly dependent on key export sectors, such as tourism, textile and sugar, is important, however. If one of these industries faces problems, due to low foreign demand or a rupee appreciation for instance, it could negatively affect the balance sheets of other economic players. As an example, losses in the textile industry could negatively impact households’ balance sheet because of higher unemployment, government’s balance sheet because of lower tax revenues and banks’ balance sheets because of higher credit risks. Even the central bank’s balance sheet could be affected if interventions in the foreign exchange market are called for.

Despite these flaws and limitations, given that financial sector data in Mauritius are of reasonable quality, the BSA can still provide useful insights.

III. WHY BALANCE SHEET IMBALANCES CAN BECOME DESTRUCTIVE

There is no unified economic theory that models how the balance sheets of different sectors of the economy interact. What is clear from the Asian crisis and the current credit crisis is that vulnerabilities stemming from a variety of balance sheets tend to amplify macroeconomic shocks; they threaten the stability of all sectors, especially the financial one, and reduce the effectiveness of policies (see Allen et al., 2002). Balance sheets of corporations, households, government, and the financial sector can be affected by a rapid deterioration of assets like stocks or houses or a rapid rise in liabilities like loans in foreign currency after a devaluation. These balance sheet changes undermine numerous macroeconomic aggregates (counter-party risks), which may call for large adjustments in external imbalances. As the current crisis illustrates, both advanced and EM countries can suffer from balance sheet problems. Historically, though, EMs were deemed to be more exposed to such problems.

Eichengreen and Hausmann (2002) have illustrated the (historical) difficulties of EM entities, such as governments and corporations, in borrowing domestically in their own currencies, forcing them to borrow in foreign currencies instead, thereby leading to currency mismatches in balance sheets. Increased exchange rate exposure, however, leads to a rise in debt servicing costs in adverse circumstances, such as devaluation.⁵

A related problem is procyclical access to international capital markets. EMs can often borrow in world capital markets only asymmetrically: although access in good times is possible, in bad times they suffer from foreign credit constraints and reversals of capital flows. This means they have little ability to smooth consumption and share global risks during temporary adverse shocks. If external borrowing is primarily for consumption (for example, import of consumer goods) the balance sheet imbalances are accentuated because the growth-enhancing effects will be limited, and the loan will be difficult to repay. Therefore, because EMs are deemed riskier borrowers than advanced economies, lenders will offer them only short-term loans, producing maturity mismatches, and only during calm periods, not when they are most needed as during a crisis period.

With exchange rate and maturity mismatches, the impact of fluctuations in macroeconomic variables on the balance sheet occurs through several channels. A currency mismatch in the capital structure following a devaluation or a maturity mismatch resulting from a sudden liquidity problem will reduce the asset side or raise the liability side (or both) of the balance sheets of various economic agents. Falling asset prices and rising liabilities both tend to directly affect domestic output through their impact on consumption. As individual net worth declines, economic agents feel poorer and consume less. Moreover, as the collateral against which they can borrow diminishes, they have less ability to borrow. Similarly, companies will invest less when net asset values fall. If its assets, and thus its potential collateral, are worth less, a company will find it more expensive to borrow. Also, lower asset prices suggest that expected growth is lower, further dampening investment. Faltering asset prices and rising liabilities of private individuals and corporations cause banks and financial intermediaries to lend less, further suppressing asset prices, as changes in asset prices make borrowing riskier both by affecting the solvency of households, companies, and the state and by raising nonperforming loans (NPLs). Rising NPLs in turn, by affecting the capital position of banks, further dampen credit growth (“financial decelerator”). Government tax revenues decline and spending rises when private sector balance sheets deteriorate, so the government balance sheet deteriorates as well. When the balance sheets of major economic actors like banks and major companies deteriorate, contingent liabilities often move to the government balance sheet, accentuating public balance sheet risks further.

⁵ We will illustrate below that Mauritius is an exception among EM economies and does not suffer as much from this “original sin” as other EMs, because it has relatively sophisticated and deep domestic capital markets that allow the government and companies to borrow in Mauritian rupees.

When balance sheet mismatches are large enough to cause a crisis, policy-makers in EMs often cannot easily use fiscal policies (for example, higher spending, lower taxes) or monetary tools (for example, lower interest rates) because both tend to be at best impotent and at worst counterproductive during a crisis. This imposes an immediate and costly adjustment on the economy.

A. Monetary Policy Ineffectiveness During a Balance Sheet Crisis

During an economic crisis, monetary policy should in principle be accommodating. Lowering interest rates reduces the debt burden on households and companies, and allowing the exchange rate to depreciate stimulates exports and discourages imports. This is in fact the policies pursued by the United States and other advanced economies in the current crisis.

For EMs, using monetary policy is not as simple, even when balance sheet mismatches are not present. This is because EMs monetary policy tends to be inherently procyclical and cannot easily be used to smooth the business cycle or for stabilization (Calvo and Reinhart, 2002). When external financing is abundant, capital inflows surge, stimulating growth and leading to exchange rate appreciation. Interest rates cannot be raised to cool the economy because they would lead to further capital inflows. During crises, with capital flowing out and economic activity faltering, the heavy pressure on the exchange rate to depreciate pushes up inflation. To stem depreciation, interest rates have to increase, which harms growth. Procyclical capital flows tend to generate booms with low inflation, followed by recessions that push up inflation. As long as interest rate changes are procyclical, central banks have little capacity to manage rates countercyclically and may actually reinforce the procyclicality of capital flows and generate exchange rate volatility.

During a balance sheet crisis, monetary policy ineffectiveness is accentuated and becomes counterproductive for EMs. If a crisis hits an EM economy with balance sheet imbalances (for example, high foreign currency–denominated debt or maturity mismatch), policymakers face a dilemma: If monetary policy is loosened, the currency will depreciate, raising the debt level of companies and banks with foreign debt exposure perhaps to the point of bankruptcy. Moreover, because EM policymakers often lack the credibility of their counterparts in developed countries (DCs), their decisions to inject liquidity into the domestic economy can be counterproductive, particularly if confidence in the local currency as a store of value is weak, and cause a run on the currency. On the other hand, if interest rates are raised to support the currency, domestic demand will fall and the export sector will suffer, depressing growth and increasing the domestic debt interest bill, though foreign debt will be easier to repay in local currency. Similarly for maturity mismatches, during a crisis, rising interest rates will raise the cost of rolling over debt, while looser monetary policy does not necessarily lead to cheaper borrowing, as banks limit credit to protect their own balance sheets.

Thus, no matter which direction they choose, the authorities are prone to harm the economy and the policy decision will have to be based on doing the least harm.⁶

B. Fiscal Policy Ineffectiveness During a Balance Sheet Crisis

During a crisis, to make up for a deficit in aggregate demand, fiscal expansion is in general desirable. Though DCs like the United Kingdom have been able to run large budget deficits during the current crisis without much negative effect on their ability to find debt financing, EMs often have little room to run countercyclical budgets without seriously jeopardizing their credit rating.

During balance sheet crisis, this limited tolerance to debt is accentuated by factors specific to EMs. Spending, at least on a large scale, is mostly not an option for EMs during a balance sheet crisis because capital markets shut down to these borrowers. Because a widening credit spread and a deteriorating exchange rate go hand in hand, “cheap” foreign currency debt becomes expensive. In fact, during a crisis the government’s own net worth is likely to fall because automatic stabilizers mean that expenditure rises while tax revenues fall—which eventually lead governments to cut spending to repay debt. Often, governments also have to bail out the banking system and large corporations deemed too important to fail, which again leads to deterioration in their balance sheets. Cutting spending or raising taxes, while very harmful for an economy in recession, as it worsens the crisis by damping economic activity, is often the only option available in EMs.

Therefore, like monetary policy, fiscal policy becomes procyclical during a balance sheet crisis in EMs because their governments typically have no room to use expansionary fiscal policy. Fiscal and monetary impotence explains why balance sheet crises are particularly severe in EMs.

IV. BALANCE SHEET MISMATCHES IN MAURITIUS

We will analyze sectoral balance sheets since July 2003, the date when Mauritius began to compile data using the SRF. For December 2001 through June 2003, data in the SRF format have been compiled from pre-SRF data but are not included in our analysis because they do not comply with *MFSM* methodology and are incomplete compared with later data.

Let us now analyze the currency mismatch first at the national level (Section A), and then by sector (Section B). The currency forward market could in principle offer corporations an

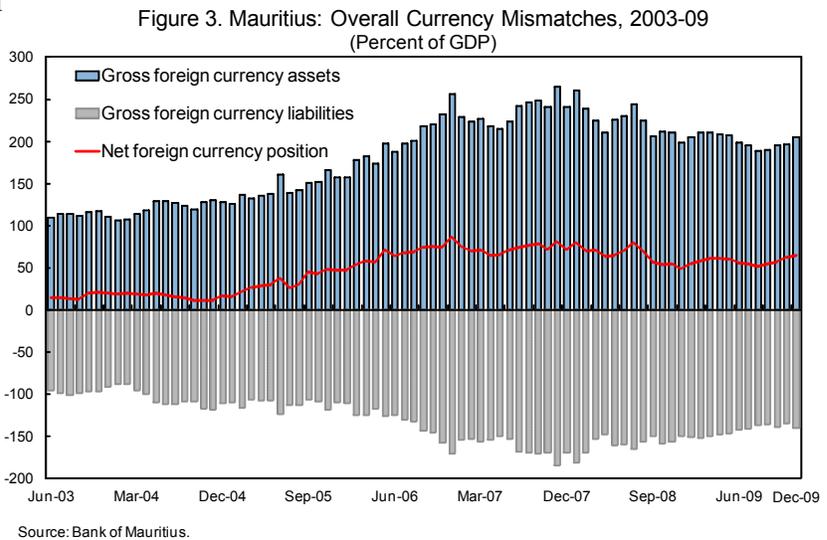
⁶ In this situation, the government has to take into account whether companies are more exposed to foreign or to domestic debt. If most firms have foreign debt, it might be better to raise interest rates; if most have domestic debt, cutting the rates might be more advisable.

opportunity to hedge their currency risk, but the forward market between Mauritius rupees and other currencies is relatively illiquid and is limited to no more than 12 months on demand. Swap transactions likewise are infrequent, and there is as yet no options market. This means that the FX numbers used below are unlikely to be largely biased by derivative activities.

A. Aggregate Mismatch

The consolidated currency position⁷ in the Mauritian economy—measured for all sectors as the difference between assets and liabilities denominated in foreign currency—has been positive over the whole period 2003–09 and has markedly improved since 2004, thanks to strong export performance and large FDI and portfolio inflows (Figure 3). More recently, Mauritius’s buildup of foreign

currency has been stable despite the global financial crisis and the downturn in global demand that affected key export products (tourism and textiles). This reflects lower value of imports, notably commodities like oil and food whose prices have declined. Mauritius as a whole, therefore, appears to have limited risk arising from exchange rate depreciation.



B. Sectoral Currency Mismatches

In what follows, we analyze sectoral balance sheets separately, to distinguish risks by sector and balance sheet changes in the past few years. We will also investigate intersectoral linkages.

⁷ Currency mismatches arise when assets are denominated in domestic currency and liabilities in foreign ones, or vice versa. The net foreign currency position, which is calculated by subtracting foreign currency assets from foreign currency liabilities, indicates vulnerability to a change in the exchange rate: A sector with a large negative position is vulnerable to exchange rate depreciation, and one with a positive position is vulnerable to appreciation. In line with the *MFSM 2000*, foreign currency is recorded at nominal value and then converted to national currency on the basis of the market exchange rate prevailing on the transaction or balance sheet date. Foreign currency-denominated assets and liabilities may be claims on and liabilities to either residents or nonresidents. All foreign currency-denominated claims on nonresidents are classified as foreign assets and liabilities to them as foreign liabilities.

The General Government

As part of its wide-ranging reform program starting in 2005, the government implemented a major tax reform to broaden the base and shift tax incentives to higher-income earners. The government cut the maximum personal income tax rate from 30 percent to a flat 15 percent and established a central revenue authority. It also adopted a fiscal consolidation strategy anchored in budgetary reforms, successfully implemented program-based budgeting within a medium-term expenditure framework, and passed a new public debt law that stipulates a reduction in public debt to 50 percent of GDP by 2013.

Due to these and other structural reforms, the government has managed to lower tax rates while cutting the budget deficit and bringing public debt (including parastatals) below 60 percent of GDP in 2009 compared to its peak of 80 percent in 2002. Having one of the lowest tax rates in the world has been a powerful competitive edge to attract business, investment, and talent to Mauritius.

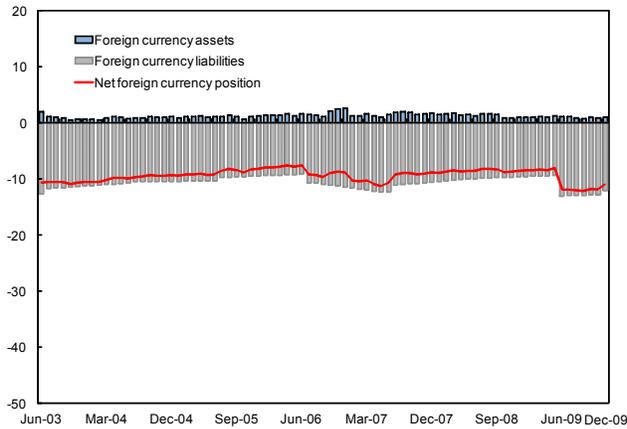
The government's *foreign currency position* improved between 2003 and end-2008 before deteriorating during the crisis year 2009. Foreign currency liabilities have fallen gradually from 13 percent of GDP in 2003 to about 8 percent in December 2008 (left chart, Figure 4). This reflects in part recent rapid GDP growth, which led to a reduction in public external debt as a share of GDP. Exchange rate appreciation from 2005 through 2008 also helped to reduce foreign currency liabilities as measured in domestic currency. During 2009, however, foreign currency liabilities increased, reflecting the government's efforts to secure external financing. Moreover, the exchange rate appreciation reversed, leading government foreign currency liabilities, as measured in domestic currency, to rise. Foreign currency loans are concessional in nature and come solely from multilateral institutions (53 percent of total government external debt as of June 2009) and official bilateral creditors (47 percent). It is also noteworthy that despite higher external borrowing in 2009, the government's foreign borrowing amounted to about 10 percent of GDP. As foreign debt is low by international standards, concessional and long-term in nature, liquidity and rollover risks are low.

The government's net *domestic currency position* (right chart, Figure 4) is also negative, but higher than the foreign currency position, mainly reflecting government liabilities to the domestic banking system and nonbank financial institutions (including the National Pension Fund). After having risen dramatically in early 2000s, public debt is now on a steady downward path. Fiscal consolidation, which began in earnest in 2005, led public debt to fall from a peak of over 80 percent in 2003 to 61 percent by 2007 and an estimated 59 percent at the end of 2009. The main contributor to debt reduction is buoyant tax revenue driven by the 2006–07 tax reform, which broadened the tax base and improved compliance. The government also rationalized current spending. Nominal interest rates have also declined significantly, further allowing for debt reduction. However, since 2008 the trend of downsizing public debt has been reversed, reflecting the considerable fiscal stimulus package

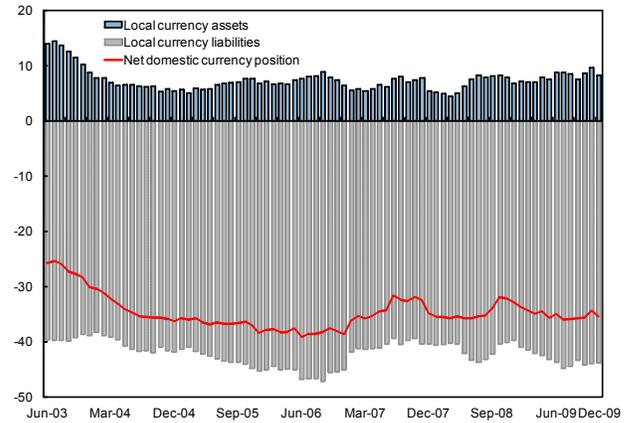
adopted to buffer the local economy against the global credit crisis. The new Public Debt Management Act further assures that the debt trajectory is on a downward trend in the medium-term (IMF, 2009).

Figure 4. Mauritius: General Government Currency Mismatch, June 2003–December 2009¹
(Percent of GDP)

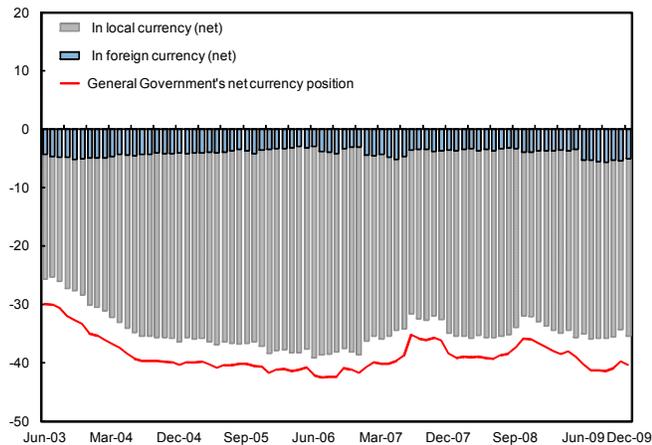
Rapid GDP growth and rationalization of spending has reduced public external debt ...



... and domestic debt, which remains high by emerging market standards.



Mauritius's public debt vulnerability is limited because it is issued mostly in domestic currency.



¹ Note that the 60 percent of total public sector debt to GDP, as shown in the 2009 Article IV consultation for end-2009, includes the debt of public nonfinancial corporations (parastatals), which amounts to about 9 percent of GDP; this is not included in the BSA as parastatal debt is excluded from total government debt as reported in the monetary statistics, the source for compiling the BSA.

Source: Mauritian authorities.

Large domestic currency–denominated debt reflects both the sophistication of domestic capital markets and the confidence investors have in government capacity to repay. Mauritius, unlike most other EM countries, does not suffer from “original sin” syndrome (see Eichengreen and Hausmann, 2003), the inability to borrow in local currency. As a result, the government has always been able to borrow locally rather than having to borrow abroad in foreign currency. Of Mauritius’s public debt, 90 percent is in domestic currency or owned by residents. And although about a third of domestic debt is still short-term, its composition has improved significantly in recent years. Rollover risks are further contained by the large holdings of government debt by the National Pension Fund, which has few other investment options (by law the fund can invest only 20 percent of its portfolio abroad). Much of the rest is held by local banks.

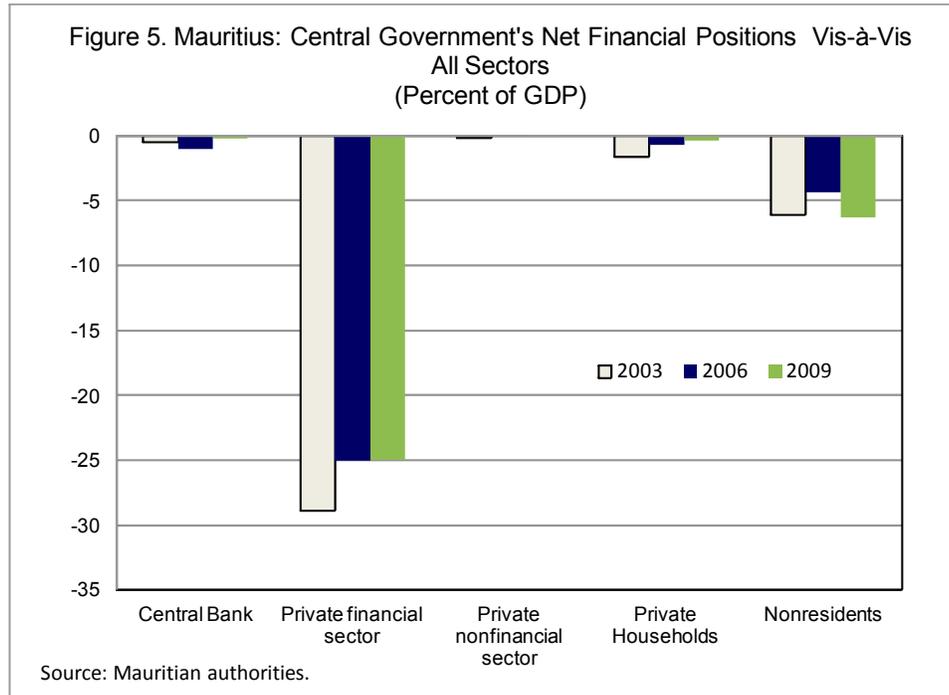
In light of the government’s negative *net currency position*, public sector debt is potentially subject to liquidity or interest rate risks. With regard to the *net domestic currency position*, the government has considerable domestic debt, but given current orthodox fiscal policies and improving economic environment, it appears sustainable and unlikely to be affected by minor shocks. Overall, the central government balance sheet seems to be on a sound footing, though the government should aim to bring down the domestic debt ratio. Further reducing public debt will create fiscal space for meeting contingencies and the eventual costs of an aging population.

The intersectoral relationship between central government balance sheet and other sectors (Figure 5) can be summarized as follows (intersectoral data were available only for the central government):

- Borrowing directly from the central bank, the private nonfinancial sector, and households has been relatively insignificant over time.
- The government borrows mainly in local currency from private financial corporations, usually by selling short-term T-bills and other government securities to banks, and in foreign currency through direct loan agreements with nonresidents (multilateral institutions abroad).
- Banks are willing to lend to the government because they have few investment alternatives domestically, especially for short-term funds. Hence bank appetite for treasury bills remains strong. Traditionally, banks do not bid significantly for long-term government securities, particularly those beyond five years maturity. The only major investors in long-term Mauritian instruments are the National Pension Fund and some insurance companies.⁸

⁸ To smooth the maturity profile (lengthening the maturity profile of the domestic debt portfolio to minimize rollover and refinancing debt) the government’s new debt management strategy is to limit treasury bills to 20 percent of the portfolio by 2013 (it is currently about 34 percent).

- After a decline of gross public debt to 4 percent of GDP in 2006 from about 6 percent in 2003, the government's borrowings from nonresidents had again risen above 6 percent by the end of 2009. This latest trend reflects the government's efforts to secure external financing, mainly from the African Development Bank and the World Bank.



Although Mauritius's public debt at close to 60 percent of GDP is higher than that of many EMs (average is 50 percent for nonfuel-exporting EMs), public finances appear sound, and public debt is sustainable over the medium term. However, given the large share of short-term domestic debt, public sector debt is potentially subject to liquidity and interest rate risks. Exchange rate vulnerability appears contained because it is nearly all held domestically and in local currency, notably by the National Pension Fund and commercial banks. Even though its debt is mainly in domestic currency, Mauritius must continue to be fiscally prudent to minimize risks. Its ability to finance itself locally during a crisis depends on policy credibility, the availability of domestic savings, and the participation of residents. If, as is currently the case, few nonresident investors participate, and if the government's credibility were to deteriorate, local bond markets might request higher premiums.

The Central Bank (Bank of Mauritius)

The BoM, which is responsible for monetary policy, and whose mandate is to achieve low inflation and promote growth, has a solid balance sheet. Unlike central banks in DC, the BoM did not have to use unconventional monetary policy tools in responding to the credit

crisis (though reserve requirements were reduced and the policy rate was lowered). What is noteworthy, however, is that the BoM did not have to expand its balance sheet and use quantitative easing as the situation did not warrant it.

The BoM's *net foreign currency position* has been stable since June 2003 at 21–28 percent of GDP. After improving gradually through 2004 to 29 percent (about 8 percent in months of imports of goods), the position gradually declined to 24 percent by December 2009 (roughly 7 percent in months of goods imports). The BoM has only negligible foreign currency liabilities (left chart, Figure 6). In recent years, the BoM has made large FX purchases in response to increased capital inflows and pressure on the rupee to appreciate. One-off factors, such as the buildup of foreign currency deposits from special drawing rights with the IMF (SDRs)⁹ and the purchase of gold, explain why in 2009, BoMs foreign assets have increased.¹⁰ Due to changes in the BoM exchange rate policy toward a free float since April 2009, away from intervention in the FX market (largely owing to the success of recent economic reforms), foreign assets due to FX intervention have not changed, and reflect valuation changes. Because of its net asset position in foreign currency and its almost nonexistent foreign liabilities, the BoM has no balance sheet risk from an exchange rate depreciation.

Whereas the net foreign currency position has always been in the high positive numbers, the *net domestic currency position* (right chart, Figure 6) is negative, given the BoM function as the issuer of currency and the deposit-taker for the government and commercial banks. Domestic currency loans to both government and other sectors of the economy have been low compared to liabilities.¹¹ While domestic currency assets have been low and relatively stable, domestic currency liabilities have been much larger as a share of GDP—and also more volatile. *Net domestic currency liabilities* fell from 11 percent of GDP in 2003 to about 1 percent in 2006 before rising since to about 6 percent. This is explained both by changes in BoM reserve requirements and, more importantly, the country's economic recovery over the last decade. When the economy was performing poorly, banks left more money in the central bank because there were few investment possibilities. As economic activity picked up, lending became more attractive. Since the global credit crisis began in 2007, risk appetite has reversed, with domestic liabilities rising as commercial banks again became more risk-averse.

⁹ The SDR is an international reserve asset, created by the IMF to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies. A general SDR allocation took effect on August 28, 2009 worth SDR 75.3 million and a special allocation on September 9, 2009 worth SDR 5.7 million (total of US\$ 126.5 million).

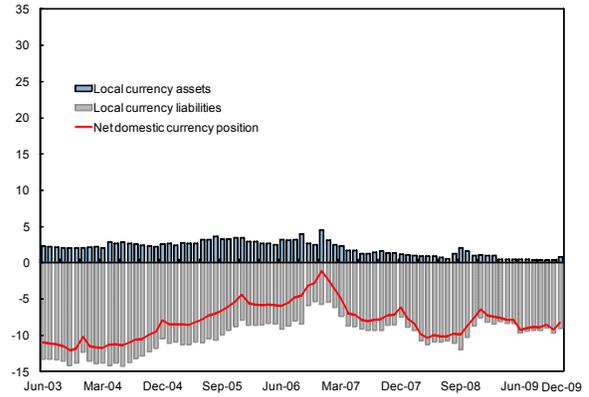
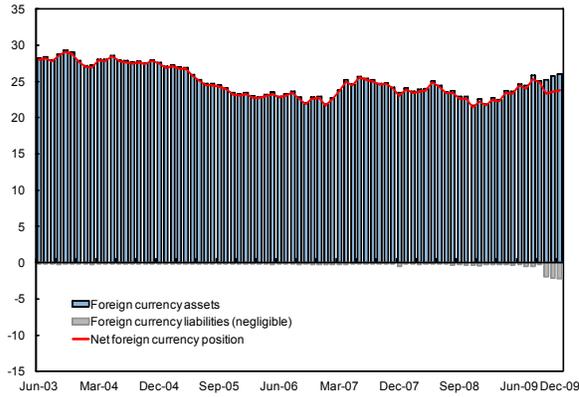
¹⁰In November 2009, the BoM bought two metric tons of gold from the IMF for the equivalent of US\$71.7 million.

¹¹ According to the Bank of Mauritius Act 2004, the BoM may grant advances to the government, but the total amount of advances outstanding for the current fiscal year should not exceed 10 percent of government's revenue excluding grants and receipts of a capital nature.

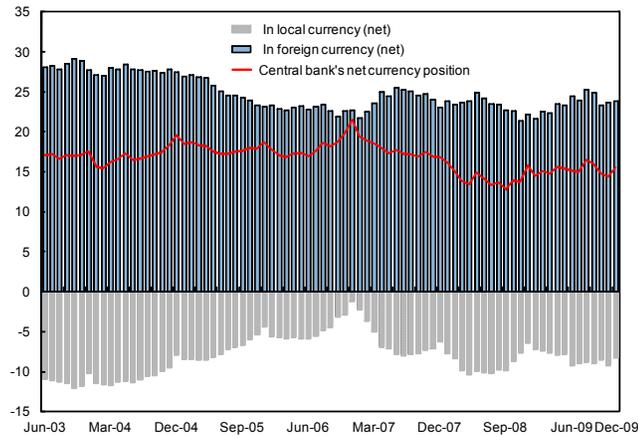
Figure 6. Mauritius: Central Bank Currency Mismatch, June 2003–December 2009
(Percent of GDP)

A strong FX net asset position shields the BoM from the risks of exchange rate depreciation.

BoM's net domestic currency position reflects low lending activities and its role as a deposit-taker.



Given a highly positive net currency position, rollover and exchange rate risks are contained.

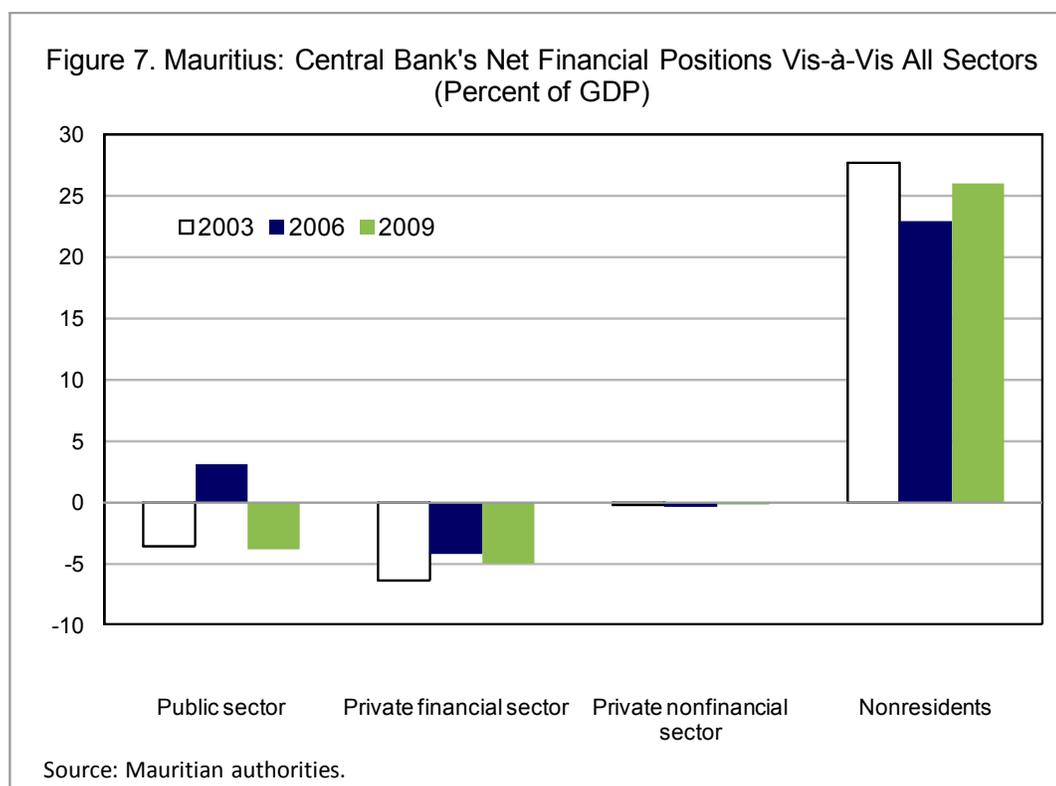


Source: Mauritian authorities.

The bottom chart of Figure 6 summarizes the overall BoM *net currency position* (aggregating foreign and domestic currency assets and liabilities), which is highly positive because of large net international reserves throughout the observation period, few foreign currency obligations, and domestic liabilities that are relatively small as a share of GDP. Thus, from a balance sheet perspective, the BoM faces little rollover and exchange rate risk depreciation on the currency front appears well capitalized. What about risks from intersectoral linkages?

Looking at balance sheet linkages to different sectors, the BoM's net financial positions can be summarized as follows (Figure 7):

- Unlike 2006, when the BoM granted advances to government on a fairly large scale, the government was not a net borrower in the early and late part of our observation period, and has kept high local currency deposits within the central bank. Thus, the net BoM financial position vis-à-vis the government was positive in 2006 and negative in 2003 and 2009. The government's restraint in 2009 reflects its efforts to secure external financing after the global growth shock, the counter-entry of which is reflected in higher government deposits at the BoM.
- Throughout the observation period, 2003–09, banks in Mauritius have been very liquid, so their refinancing needs were low. Deposits with the central bank, while low in relative terms, have been variable across time, reflecting changes in the reserve requirement and economic activity.
- The BoM's position toward the rest of the world, always strong, has even been improving over time. This reflects primarily purchases of foreign currencies from the domestic FX market. The central bank's net financial position vis-à-vis the private nonfinancial sector is, as expected, insignificant, because there is little direct interaction.



Overall, the BoM's balance sheet appears sound and is neither subject to exchange rate depreciation, nor liquidity risk. The intersectoral risks to BoM's balance sheet appear limited, and even its exposure to the nonresident sector does not pose a risk because it is largely in the form of hard currency, gold, and foreign (US) Treasury bills. There is a risk that over time, as

economic development progresses, further exchange rate appreciation (for example, owing to the Balassa-Samuelson effect) might lead to the value of foreign assets falling in rupee terms, though this is a long term, not an imminent, risk.

Financial Sector

The health of the financial sector matters. Interaction between its balance sheet and those of other players in the economy is crucial to preventing crises. The financial sector pools and mobilizes savings to efficiently allocate capital among households, enterprises, and governments. If bank balance sheets are weak, they will not lend, stalling growth and affecting the balance sheet of private enterprises (in extreme cases, banks become a contingent liability of the government if their position deteriorates too much).

Leveraging on a long history of political stability, free market economy, and good governance, Mauritius has successfully convinced investors to move their businesses to the country. It is now the most important offshore investment hub in the region. At present, the financial sector contributes 12 percent of the country's GDP. Financial corporations comprise 18 banks, 13 nonbank deposit-taking institutions, the Development Bank of Mauritius (DBM), seven money-changers, and five FX dealers, in addition to mutual funds, investment companies, insurance and reinsurance companies, asset management companies, a venture capital fund, and other providers of financial services. The Mauritian banking system is dominated by two long-established domestic groups (Mauritius Commercial Bank and the State Bank of Mauritius) and two international groups (Barclays and HSBC). Of the 18 commercial banks, these 4 banks serve both the domestic and foreign market, 3 large foreign banks serve almost exclusively nonresidents, 5 small and medium banks serve nonresidents but are paying increasing attention to the domestic market, and the rest mainly serve residents. Although the banks were exposed to the slowdown in domestic and international activity, the financial system shows no indication of solvency problems.¹²

Direct spillovers from the global crisis onto the financial sector have been few, and financial soundness indicators still reveal high capital adequacy ratios, low NPLs, and sound liquidity positions (see IMF, 2009). Adding to stability is the ongoing plan to set up a deposit insurance scheme to reduce risks of bank runs, as mandated by the BoM 2004 Act and the Banking Act. This would give small resident retail depositors more explicit assurance while

¹² From June 2003 to December 2009 commercial bank balance sheets expanded by 167 percent, owing mainly to high foreign currency accumulation (during this time net foreign assets grew by 480 percent) and private sector credit growth (by 104 percent). Both drivers of balance sheet growth reflect capital inflow into the banking system and expansion of the private sector after the country launched its wide-ranging reform in 2006. The expansion in commercial bank liabilities was fueled by higher deposits and borrowing from abroad. From June 2003 to December 2009 bank foreign liabilities grew by 150 percent, total deposits in commercial banks by 115 percent, and the proportion of foreign currency deposits to rupee deposits in banks expanded from about 15 percent to 20 percent.

clarifying that the government would not be responsible for large offshore nonresident deposits.

One peculiarity of Mauritius is the role of GBCs, which form an important growth driver of the financial system (Appendix V describes in more detail the contribution of GBCs to the aggregate balance sheet of Mauritian banks). It is noteworthy that proper coverage of BoP and external debt statistics in Mauritius pose challenges. The difficulties are related primarily to the growth of GBC activities, whose incomplete coverage has resulted in large errors and omissions and inconsistencies between BoP and debt statistics. The authorities have undertaken the necessary steps to compile statistics that capture the transactions of GBCs managed by 12 major management companies in Mauritius, and should be ready in the near future with a comprehensive survey.

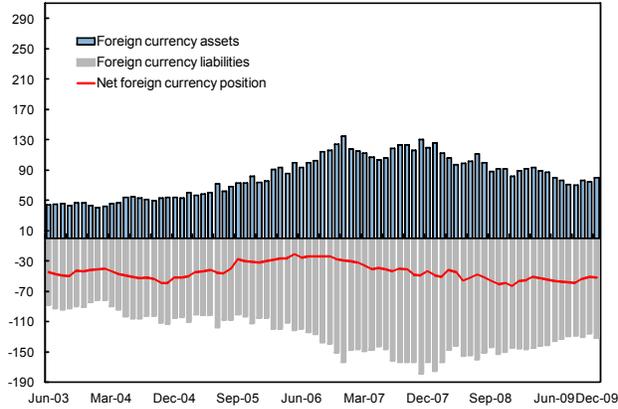
On a *net foreign currency* basis, bank foreign currency liabilities exceeded their assets in foreign currencies, though the growth of both foreign currency assets and liabilities has stagnated since the global crisis began (left chart, Figure 8). This mirrors marginally the recent overseas expansion of domestic players. More importantly, however, it reflects GBCs's parking large amounts of foreign currency in the banking system for relatively short periods until the funds are transferred for investment purposes to other countries (mainly India). These amounts clearly outnumber the banks' foreign currency claims on other sectors (GBC deposits account for roughly 65 percent of foreign currency deposits and 30 percent of total bank deposits). GBC activities provide a reliable float of foreign currency–denominated deposits for banks to operate with and to invest in short-term instruments abroad, thus reducing, though not eliminating, rollover risks.

In the short run, the risks to the banking system are of a sudden withdrawal of GBC funds. While GBCs play mainly the role of a conduit of funds, there are “leakages” to the domestic economy and financial sector, exposing the domestic economy to contagion risk. Typically, GBC deposits are temporarily parked by banks in short-term foreign assets, which in the case of a sudden withdrawal of funds could cause liquidity problems. Moreover, as emphasized by the 2007 FSAP update, it is not clear whether supervision has been strengthened enough to clearly identify risks of GBCs to the financial system. Supervision is hampered by the lack of data on GBCs, which, however, the ongoing GBC survey should address. While the success of GBCs was initially built on the double-taxation avoidance treaty with India, there is always a risk to an eventual end to the tax-treatment (especially with India), which would negatively affect the financial sector. While GBCs have expanded their investments to other countries in Africa and Asia, these new markets are still small in comparison, though they would help cushion the blow. Infrastructure and skill-set are just some of the comparative advantages of Mauritius that go beyond the simple tax benefits. Moreover, with a global recovery, the sector is expected to expand further. As a transparent, cooperative, and compliant jurisdiction, Mauritius has also been explicitly excluded from the OECD list of

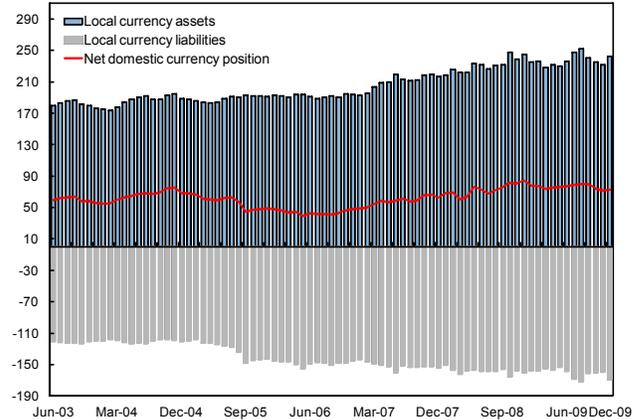
“uncooperative tax havens.” All these advantages should help the GBC sector to grow further in the future.

Figure 8. Mauritius: Commercial Bank Currency Mismatch, June 2003–December 2009
(Percent of GDP)

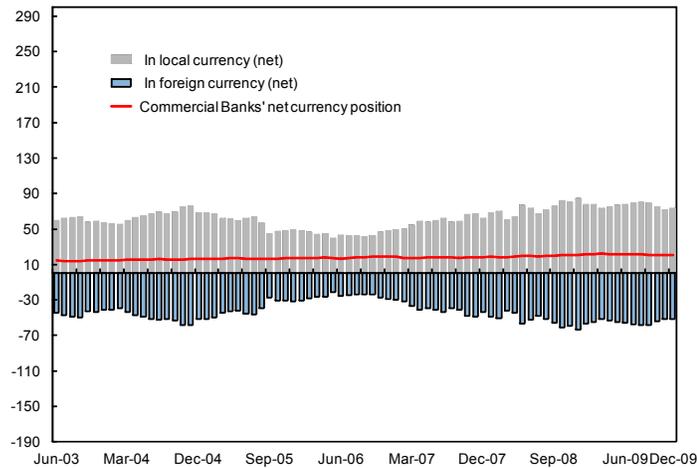
FX deposits in the banking system outpace FX assets though data is distorted by BoP lacunas.



Banks' well-diversified local currency assets outweigh deposits in local currency.



The overall net currency position is positive. With no toxic assets on their books and solid domestic fundamentals, the banking system appears to be sound, though subject to exchange rate and liquidity risks.



Source: Mauritian authorities.

The commercial bank *net domestic currency position* (right chart, Figure 8) has been positive since 2003 because it has net positive claims on all sectors of the economy (primarily in the form of loans and advances, which outweigh deposits in local currency). The stability of the banking system is helped by the funding model, which does not rely on short-term

commercial paper. The principal source of funding are deposits. Bank balance sheets are thus also not weighed down by the toxic assets that were at the root of the latest international financial crises. Though short-term liquidity does pose a risk (as it does for any banking system), the banks' funding model helps mitigate rollover risks.

Though banks in Mauritius have a diversified loan portfolio, they are exposed to credit risk from an abrupt slowdown in tourism, textiles, and construction, which account for about 45 percent of the aggregate loan portfolio. The government has preempted credit risk in the textile and tourism sectors from spreading to other sectors through the launch of the "Mauritius approach," which provides temporary financial relief to firms hit hard by the crisis if they have credible restructuring plans.¹³ The costs are shared by the banks, the government, and firm shareholders. This approach, which has already been applied to a few firms, intends to save jobs, contain a rise in NPLs, and facilitate rapid recovery once global conditions improve. Another factor that alleviates the NPL problem is the leverage ratio of private companies, which is relatively low by international standards. Also, the top 50 companies have largely avoided foreign loans, and companies in general prefer to finance themselves out of profits.

Given the banking system's relatively low NPL ratio, its funding of operations mainly through domestic deposits, and its sound capital adequacy, liquidity, and profitability, vulnerabilities appear contained. Banks have adequate buffers against a range of shocks to their credit portfolios. Only under unusual stress would individual institutions face difficulties. Nonetheless, the December 2007 FSAP update report (IMF, 2007) points to shortcomings in the use of advanced risk-assessment methods and a shortage of qualified and experienced staff in both the BoM (responsible for banks) and the Financial Services Commission (responsible for nonbanks).

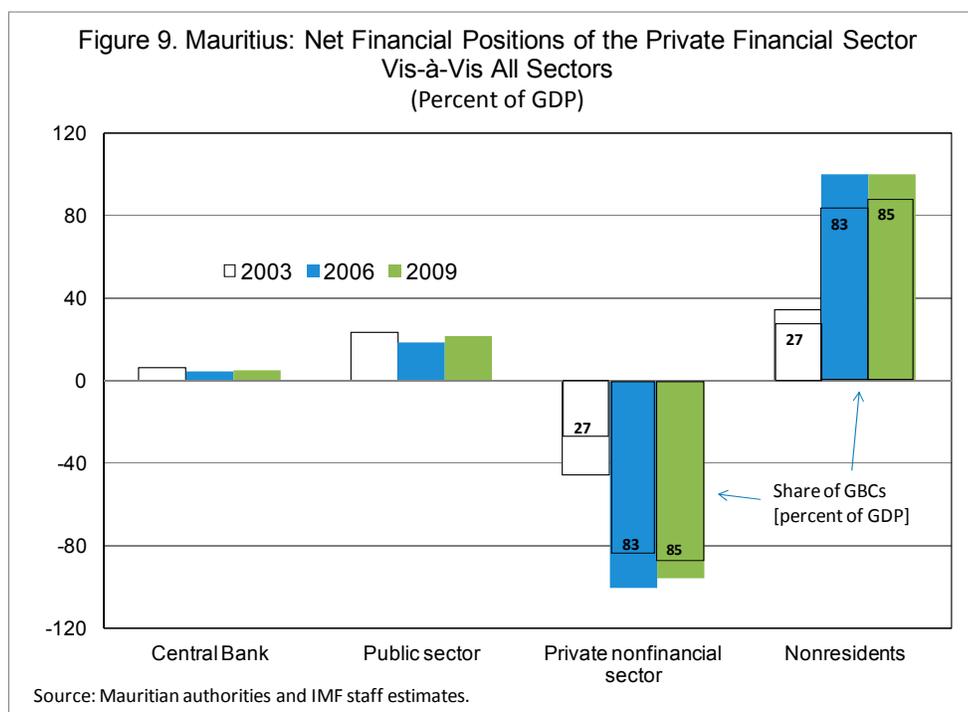
The overall *net currency position* of the banking system (bottom chart, Figure 8) is positive, suggesting that balance sheet problems for the system as a whole are limited (note though that this does not exclude an individual bank's collapse). Exchange rate depreciation poses potential risks and banks could be affected indirectly. If, for instance, the private sector were badly affected by a currency depreciation, that might have an indirect impact on bank balance sheets. The vulnerability of the financial system is therefore often not directly

¹³ This "Mauritius approach"—also known as *Mauritian Transitional Support to the Private Sector* (MTSP)—is based on burden-sharing among shareholders, management, creditors, and government. By end-2009, 11 companies have received MTSP assistance, to which the government has contributed Rs140 million (36 percent of total MTSP support; the rest has been provided by banks and share holder equity) in the form of debentures at 5 percent interest. Until the MTSP loans are repaid, company management may be subject to cuts in salary and benefits, and no dividends are paid. Regarding the fiscal cost of the program, the authorities estimate that the net present value (NPV) should be zero; only if some assisted companies fail would the NPV be negative. All firms assisted so far are doing well. Tight monitoring by the banks and authorities is reducing risks to the government budget.

measurable, and dependent on what happens to other sectors. We explore this below through the intersectoral analysis.

Looking at balance sheet linkages to different sectors, commercial banks net financial positions can be summarized as follows (Figure 9):

- Net claims on the BoM are stable at a low level, reflecting bank deposits with the BoM. Because they are highly liquid, they face negligible refinancing needs.
- During the observation period, net credit to the government from the banking system increased. The notable rise in net bank lending to the public sector in 2009 reflects a significant issuance of government securities (mainly T-bills and T-notes) to finance the stimulus package. Investments in T-bills and other government securities are the most easily convertible noncash liquid assets of banks, and therefore reduce liquidity risk to banks.
- The private nonfinancial sector reaps the fruits of the country's globalized economy, which has been very successful in transforming itself from a low-skill sugar and apparel exporter to an innovative and skill-based services economy. Therefore, as a reflection of the wealth increase, private enterprises and households were able to build up deposits steadily in local banks. Recently, however, the increased negative bank net financial position in 2009 also reflects a contraction of domestic credit to the private sector, especially in the second half of the year. The decline in annual growth in private sector credit demonstrates a lower level of economic activity prevailing in the past year.
- As can be seen in the chart below, GBCs' deposits held with banks amounted to 85 percent of GDP in December 2009 (compared to the total of the private nonfinancial sector's deposits with banks, which amounted to 96 percent of GDP). While the share of GBCs in the financial system is large, the risk they pose to financial stability appears limited. This is because GBCs are only a "middle-man" between the investment abroad (mainly India) and the foreign investors. Banks' profits and losses are affected by in- and out-flows into GBCs and the related "float," which GBCs usually hold with banks, but not by GBCs' gains or losses. From a balance sheet perspective, the ultimate bearer of gains and losses of GBCs are foreign investors. Nonetheless, massive outflows from GBCs could still spill over to domestic banks and lead to liquidity risks.
- The financial sector's net financial positions vis-à-vis the rest of the world reflects a steady increase of commercial bank placements with financial institutions abroad. Banks held large amounts in foreign currency deposits abroad and were also heavily engaged in lending and other financing transactions in foreign currency with nonresidents of Mauritius.



To recap, the overall net position of the banking system is positive, which suggests that on an aggregated level, balance sheet risks appear limited. The net negative foreign asset position of banks implies that exchange rate risks are present, though these are mitigated by the large proportion of FX assets held as highly liquid bank deposits abroad; and limited FX lending to residents (only 19 percent of GDP). Like all banking systems, the Mauritian banks are at risk of interest and liquidity shocks, given the structure of the balance sheet, with a predominance of long-term assets and short-term liability. The funding model of relying on deposits helps reduce the probability of rollover risks. Credit risks from key domestic sectors, given the high dependency of the economy on a few sectors (e.g. tourism, textile), pose a real risk to banks, which cannot easily be diversified away. The lack of adequate data on GBCs warrants vigilance that some of the risks cannot be assessed by the balance sheet analysis.

Nonfinancial Sector

The economic diversification of Mauritius over the last decade has been enviable. Until the global crises spilled over to Mauritian businesses in late 2008, all sectors of the economy were expanding, with tourism, banking, construction, and real estate showing boom-like performance. Because of the government-driven diversification policy, new pillars have been emerging. This includes the information-communication-technology (ICT), which has grown by 40.8 percent between 2005 and 2007 and expanded by 16.2 percent in 2009; it now contributes 5.8 percent to GDP, up from less than 1 percent in 2005, and employs 12,000 persons. Seafood sectors, real estate (especially related to the government-initiated *Integrated*

*Resort Scheme (IRS)*¹⁴), health and knowledge hubs are other growing industries. As a sign of rapid transformation, in September 2009 the Chinese Jin Fei project was inaugurated; with investment of US\$780 million (about 9 percent of GDP) over eight years, the single largest FDI in the country's history is projected to create some 40,000 jobs, directly and indirectly.

Most key sectors were impacted by the global crises. Textiles and clothing, which was just recovering from the end of the multifiber agreement, stagnated in 2008 and its output shrank by 4 percent in 2009. Tourism, which was booming before the global crises, showed negative 7.6 percent growth in 2009. The slowdown in real estate and IRS activities negatively affected the construction industry, but public investment in infrastructure enabled it to maintain positive growth rate of 2.5 percent. The financial industry has come out relatively unscathed from the global turmoil and is projected to have grown by some 6 percent in 2009, though is bound to be affected by the ailing sectors with a lag.

Besides large investments in the domestic economy, between 2003 and 2009 private nonfinancial corporations nearly tripled their assets abroad, particularly hotel and banking groups operating in the Indian Ocean. The depreciation of the rupee in 2009 has also helped to increase the value of the *net foreign currency position* measured in rupees. Figure 10 (left chart) reveals that nonfinancial private borrowing in foreign currency has been almost nonexistent since 2003, which suggests that this sector does not borrow much in foreign currency. Like the public sector, the private sector has been able to borrow domestically at little cost as it was also not subject to the original sin problem. The risks to private sector balance sheets of exchange rate depreciation appear contained.¹⁵

The private nonfinancial sector's *net domestic currency position* is negative because of its large domestic currency-denominated borrowing requirements from the banking sector to finance expansion both domestically and overseas (right chart, Figure 10). With rapid growth in recent years, the cash flow position of private nonfinancial corporations has improved. Local conglomerates, like banks, have posted record profits. This allows them to invest without having to increase borrowing levels significantly. As a result, domestic currency liabilities as a share of GDP have remained relatively constant.

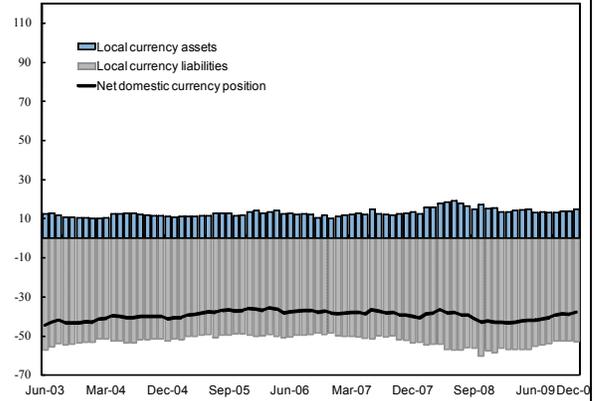
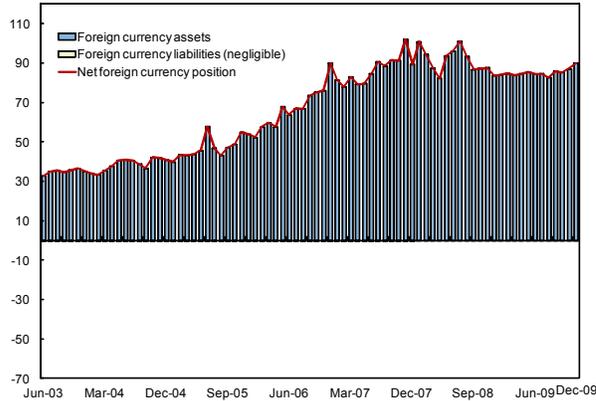
¹⁴ The IRS is a project for the construction and sale of luxury villas to (high net worth) foreigners in the coastal region of Mauritius. The acquisition of a villa for residential purposes under the IRS allows foreigners and their families to reside in Mauritius as long as they hold the property.

¹⁵ In Mauritius, as in most other countries, regulators have been more concerned about the balance sheet mismatches of banks than of nonfinancial corporations, on the theory that the failure of a large bank is likely to have more systemic effects than the failure of a large corporation. While this might be true for a large country, it is less likely to be true for a country the size of Mauritius, which is dominated by a few large corporations. Should one of them fail, given the large exposure to banks, it might have systemic effects on the economy and force the government to decide the company is too big to fail.

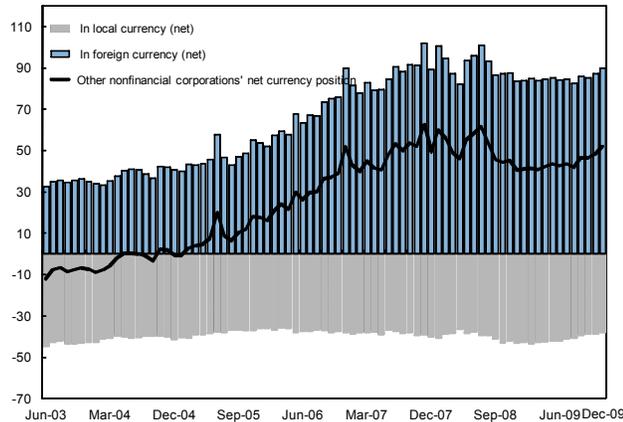
Figure 10. Mauritius: Private Nonfinancial Corporations' Currency Mismatch, June 2003–December 2009
(Percent of GDP)

Nonfinancial private enterprises are investing overseas.

Acquisitions of foreign assets as well as domestic investment are largely financed by borrowing in local currency.

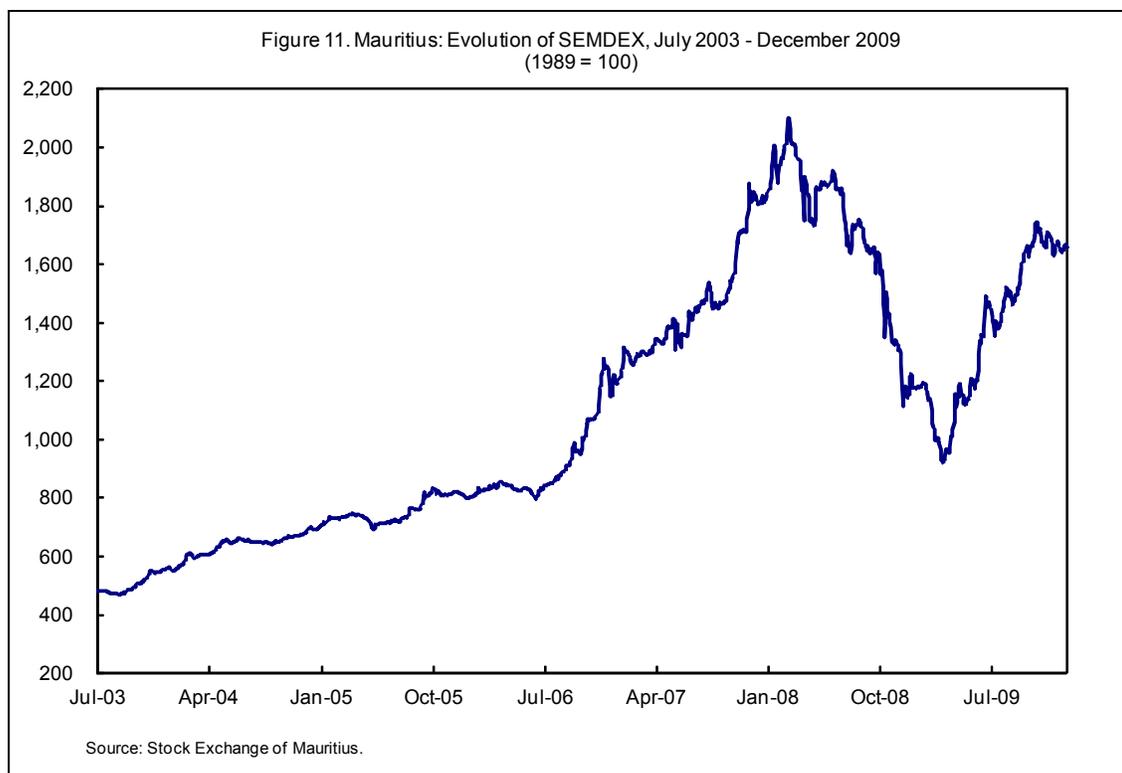


Rising profitability of private enterprises has helped improve their balance sheet position since 2003.



Source: Mauritian authorities.

Do negative net domestic currency positions pose balance sheet risks for enterprises? Probably not. By international standards, the net domestic currency position of the private sector is not particularly high. Until the global crises began in August 2007, the value of the assets of large private companies and banks—proxied by the SEMDEX index—grew rapidly, allowing them to take on more loans at low interest. With the stock market having fallen substantially since 2007 (Figure 11), the share of corporate liabilities in proportion to equity rose—but the recent recovery in share prices suggests that the economic situation of the private sector is improving rapidly again.

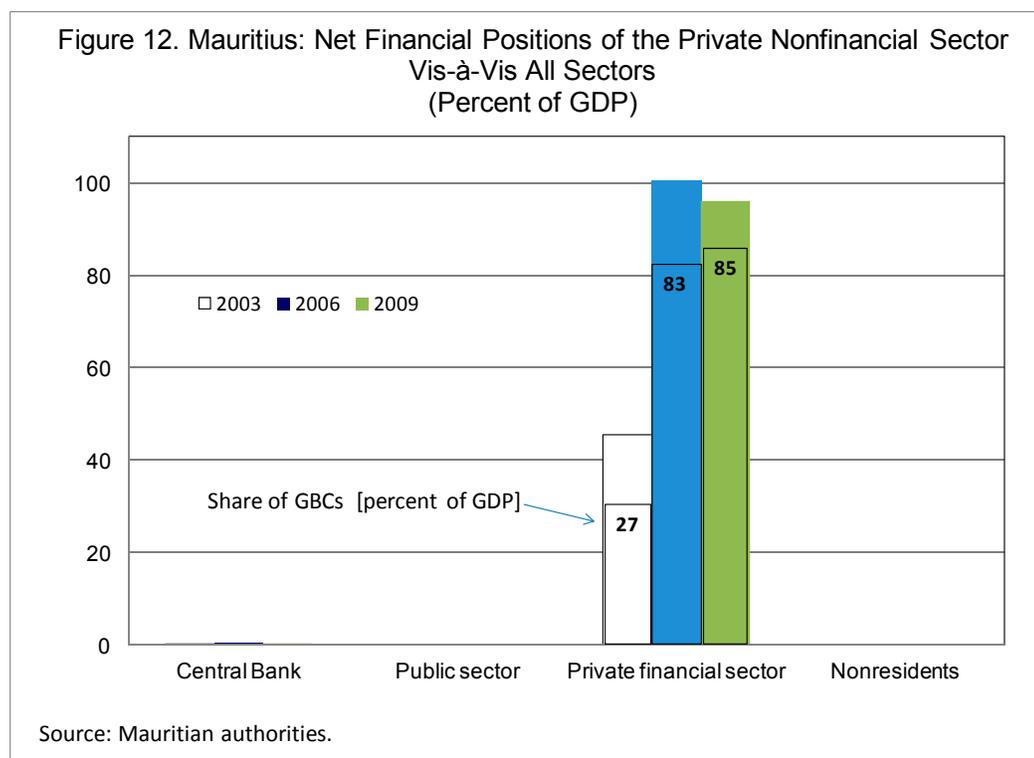


Finally, the overall *net currency position* of the nonfinancial sector (consolidating foreign and domestic assets and liabilities) has been positive since the beginning of 2005 (bottom chart, Figure 10). Because of the profitability levels of private enterprises, the sector has also been able to steadily accumulate foreign currency in the vaults of commercial banks. The trend of showing large net foreign currency positions over the years reflects the strong growth of the economy, which was the result primarily of the country's reform agenda but also of the investment boom until the global downturn. Some caveats need to be highlighted, however. Short-term private inflows into the BoP have been sizable in recent years, as have BoP errors and omissions, which suggests that we may be understating the risks of debt to private balance sheets. Note that more information on derivative positions and off-balance sheet items might also affect this positive assessment.

Looking at balance sheet links against each sector separately, we find the following (see Figure 12):

- The nonfinancial sector's net financial positions vis-à-vis other sectors (Figure 12) shows a strong asset position vis-à-vis commercial banks. The nonfinancial private sector apparently does not borrow from other sources, including overseas. This reflects heavy reliance on the local banking system.
- This picture, though, is also driven by GBCs' deposits held with two big foreign banks, Barclays and HSBC. The net financial position of the private nonfinancial sector is overwhelmingly influenced by the importance of GBCs. Though GBCs' importance is

overwhelming, the risk they pose to financial stability appears limited. The reason for this assumption is that GBCs mainly invest funds overseas provided by nonresidents, meaning that both gains and losses are born by non-Mauritian entities. The private nonfinancial sector's profitability (for example, earning management fees) is mainly dependent on flows into and out of GBCs and is not directly affected by gains and losses of GBC investments.



Overall the private sector appears to be rather dynamic. Given that its net asset position is positive and rising, credit risk is limited. Foreign exchange risks appear limited, as the private sector is long in foreign exchange and sources itself domestically in Mauritian rupees. Rollover risks are probably contained, given the apparent profitability of the private sector, which generates strong cash flows. Nonetheless, the private sector in Mauritius is subject to risks, notably concentration risks. Any major shocks to a key pillar of the economy, such as textile or tourism, could easily spill over into households and the banking system, and from there to the government's balance sheet.

C. Maturity Mismatches

Thus far, our analysis focused on stock imbalances and exchange rate risk. The maturities of assets and liabilities are, however, an important aspect of a country's balance sheet vulnerabilities. Maturity mismatch risk arises typically when assets are long-term and

liabilities are short-term (for a general discussion of mismatch risks, see Allen et al., 2002).¹⁶ These mismatches create rollover and interest rate risks.

- **Rollover risk** arises when maturing debt is not refinanced, and the debtor has to pay the obligation when due.
- **Interest rate risk** occurs when the level of interest rates the debtor has to pay on its outstanding stock changes. Interest rate risk can also arise if longer-maturity liabilities carry a floating interest rate, particularly one linked to the interest rate on short-term debt.

While all sectors of the economy are subject to maturity mismatch, we will focus on the banking system for two reasons. First, from a conceptual point of view, a maturity mismatch is mostly transmitted through banks. Banks' primary role is to take short-term deposits and lend long term (i.e. maturity transformation), and they are therefore potentially subject to deposit runs and losses of confidence. Moreover, because banks are highly leveraged they are inherently risky, adverse shocks can lead first to liquidity problems and, if not dealt with rapidly, to solvency problems. Second, we have data only on the maturity mismatches of the banking system, not of the other sectors.

Does the banking system face any severe problems? The domestic currency liquidity position (cash reserves above reserve requirements) of domestic banks in Mauritius is comfortable, and has been throughout the current global crisis. Excess bank liquidity could be a result of limited investment opportunities in the Mauritian economy or of a prudent liquidity stance. This reduces, though does not eliminate, a major vulnerability in the financial sector, namely rollover risk. In Mauritius, short-term bank lending minus short-term bank liabilities (bank customers' deposits) is negative (comprising both domestic and foreign currency lending and deposits; left chart, Figure 13). The negative net position indicates some vulnerability to rollover risk and interest rate increases. The higher share of short-term deposits is related to the float of GBCs, which park their investment funds in these deposits at short notice.

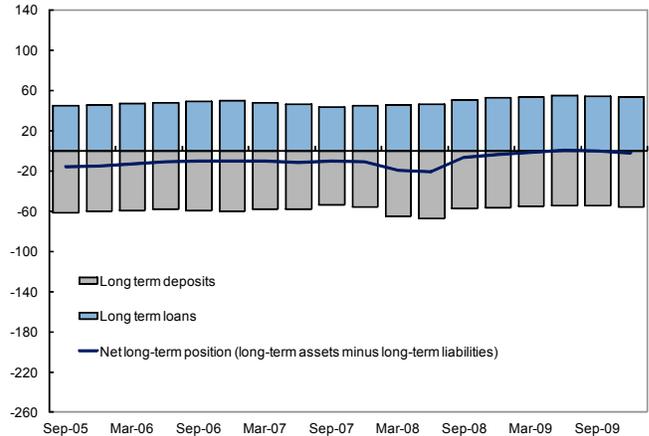
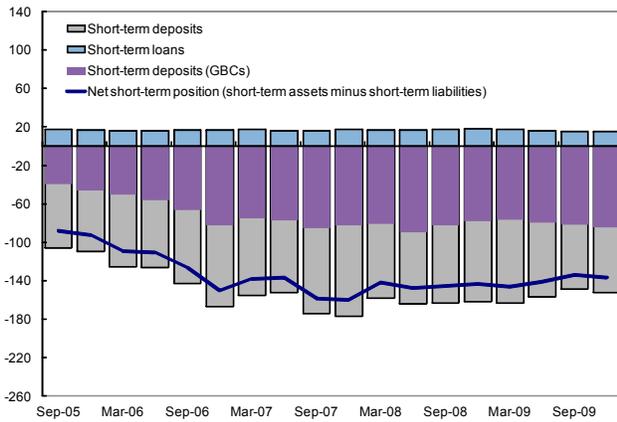
When comparing bank long-term assets and long-term liabilities, there is limited maturity mismatch, suggesting that asset–liability are well matched at the long end (right chart, Figure 13). In terms of the net aggregate short-term and long-term positions of banks (bottom chart, Figure 13), total deposits outweigh assets by a substantial margin, which suggests that banks face exposure to interest rate risks and rollover risks.

¹⁶ Maturity mismatches can arise in either domestic or foreign currency. For example, a debtor may have short-term foreign currency debts that exceed its liquid foreign currency assets, even if its aggregate foreign currency debts match foreign currency assets.

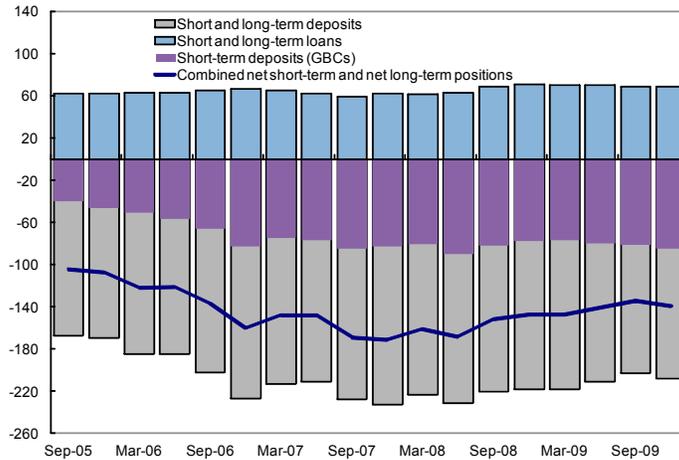
Figure 13. Mauritius: Loans Versus Deposits—Maturity Mismatches, June 2003–December 2009¹
(Percent of GDP)

Liquidity risk is present, as short-term deposits outweigh short-term loans.

Maturity mismatch on long-term liabilities of banks is low as long-term loans tend to be financed by long-term deposits.



As a result of the short- and long-term maturity positions of deposits and loans, maturity mismatches in the banking system appear at the short end.



¹ Comprising both domestic and foreign currency loans and deposits.

Source: Mauritius authorities.

To recap, Mauritius’ short-term foreign-currency liquidity position (maturity mismatch) has continued to improve gradually despite a small global crisis–related “dent” in the last quarter of 2008 and the first quarter of 2009. Certainly, commercial bank liquid foreign currency assets are improving steadily as a share of official reserves. Although the economy’s foreign

currency liabilities have also grown, the overall external debt stock is quite low (estimated at about 13 percent of GDP in 2009) and does not pose any immediate vulnerability risks.

V. CONCLUSION

Mauritius remains vulnerable to global developments—but the private sector is dynamic, economic fundamentals are strong, institutions are robust, and the authorities have not only implemented far-reaching reforms in an environment of continued macroeconomic stability, they have also established a track record of strong policy responses to unexpected shocks. Some further reduction in public debt levels, monetary policy refinements, financial sector and structural reforms, and data improvements will improve the economy's resilience further and reduce further balance sheets risks of the Mauritian economy and its subsectors.

The BSA—subject to the caveat that better BoP data are needed to get a more complete picture of the Mauritius economy and that derivative and off-balance sheet positions have not been taken into account—suggests that balance sheet risks arising from exposure to foreign currency, mismatches between foreign and domestic currency, and liquidity mismatches appear manageable. The aggregate gross currency mismatch in Mauritius has fallen in recent years, thanks to an increase in foreign currency assets, especially by the private sector. Sound government debt management has meant that public debt is not much exposed to currency risk, and raising the duration is also reducing the rollover risk. Other policies, such as helping to build the domestic bond market, have reduced incentives for private agents to borrow abroad, reducing in part currency mismatches of the private sector. The exchange rate regime, having recently moved from a managed to a free float, has also limited exposure to currency risk by discouraging foreign borrowing without hedging. For lack of data our analysis did not look into concentrations risk, which would add another dimension to the analysis. It is possible, for instance, that credit risks from a section of the private sector such as tourism or textiles might spill over to the banking sector and then into the economy as a whole.

Mauritius' GBC sector provides important economic benefits, but the sector is vulnerable to changes in tax treaties (especially with India) and sudden changes in capital flows. Because Mauritius has established itself as an investment platform into Asia and Africa, and thereby diversified both its source of funding and investment destinations, the growth rate is unlikely to fall substantially in the near term. Moreover, the risk of a sudden withdrawal of GBC funds from the banking system—and thus a possible negative contagion effect on the banking system, resulting in a deteriorating liquidity position of the financial sector—appears contained. This is a reflection of the way GBCs operate—as investment conduits—with gains and losses accruing to the foreign provider of funds. Nevertheless, given the sheer magnitudes of GBC deposits within the banking system, close vigilance is warranted. Note, however, that the analysis is overshadowed by the lack of adequate data on GBCs, which might distort these positive findings and can only be addressed once the GBC survey has been completed by the FSC and BoM.

Specific risks according to sectors can be summarized as follows:

- **Public debt:** The net foreign currency position is negative, though small as a share of GDP with most of it is on concessional terms to multilateral organization. Domestic debt is large by EM standards, and thus potentially subject to liquidity and interest rate risks, given the still large share of short-term domestic debt. Given a credible track record, and the improving debt profile, the risks from public debt appear to be sustainable.
- **Central bank:** The net foreign currency position is highly positive and not subject to major risks. The net domestic currency position is negative because the BoM is a deposit-taker for both government and banks. Overall, the net position is positive, with few interest rate risks, and exchange rate depreciation does not pose a danger either.
- **Financial sector:** The overall net position of the banking system is positive, which suggests it is well capitalized. Businesses in this sector appear to be managing their balance sheets carefully to minimize risks to themselves and thereby to the economy at large. The net foreign exchange position is negative, reflecting the large deposits from GBCs. Like all banking systems, the Mauritian banking system is at risk of interest and liquidity shocks, given the structure of the balance sheet, with a predominance of long-term assets and short-term liabilities.
- **Nonfinancial sector:** This sector has a large net foreign currency position that is a result of the recent overseas investment boom and the predominance of borrowing domestically. However, the net domestic currency position is negative because of large domestic borrowing. The overall net position is positive and rising because of the sector's profitability. As leverage appears limited, interest rate and liquidity risks are contained. Nonetheless, the lack of full comprehensive data of the private nonfinancial sector suggests the potential of hidden risks. Moreover, concentration risks abound, with problems in an important sector, such as textiles for instance, that could spill over to the rest of the balance sheet of other sectors.

From a BSA perspective, the macroeconomic vulnerabilities of Mauritius seem manageable, though data gaps mean that future work will be needed to confirm this. Achieving Special Data Dissemination Standard (SDDS) requirements (for example, by compiling balance sheet information on GBCs) will help to close the statistical gaps and improve the dissemination of data and metadata on public and external debt, foreign currency, the international investment position, and the analytical accounts of the banking system. Going forward, this will help refine the BSA and provide the authorities with more accurate findings from which to extract clearer policy implications.

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Appendix I. Definitions of Sectors

Central bank in most countries is a separate institution subject to varying degrees of government control that engages in different activities and is designated by various names (for example, central bank, reserve bank, national bank, or state bank).

General government consists of institutional units that, in addition to fulfilling political responsibilities and regulating the economy, produce principally nonmarket services (possibly goods) for individual or collective consumption and redistribute income and wealth.

Other depository corporations are all resident financial corporations (except the central bank) and quasi corporations mainly engaged in financial intermediation and issuance of liabilities included in the national definition of broad money (for example, commercial banks, merchant banks, savings banks, savings and loan associations, building societies and mortgage banks, credit unions and credit cooperatives, rural and agricultural banks, and travelers' check companies that engage mainly in financial corporation activities).

Other financial corporations are all remaining resident corporations or quasi corporations undertaking financial activities, including nonprofit institutions (a) mainly engaged in the production of financial services (such as insurance) or (b) financed by subscriptions from financial enterprises and whose objective is promoting or otherwise serving the interests of those enterprises.

Nonfinancial corporations are institutional units principally engaged in the production of market goods and nonfinancial services.

Other resident sector consists of households (all physical persons in the economy) that have as their principal functions the supply of labor, final consumption, and, as entrepreneurs, the production of market goods and mainly nonfinancial services. This sector also comprises nonprofit institutions that are legal entities principally engaged in the production of nonmarket services for households and whose main resources are voluntary contributions by households.

Nonresidents consist of all institutional units outside the country that enter into transactions with resident units or have other economic links with resident units.

Appendix II. Definitions of Financial Instruments¹⁷

Financial assets are commonly defined as a subset of economic assets—entities over which ownership rights are enforced, individually or collectively, by institutional units and from which economic benefits can be derived by holding or using the assets over a period of time. Financial assets are usually classified according to two criteria: the liquidity of the asset and the legal characteristics that describe the form of the underlying creditor/debtor relationship. For vulnerability purposes, financial instruments can be categorized as follows:

Currency is notes and coins of fixed nominal values issued by central banks or governments. **Monetary gold** (if under the effective control of the central bank) **and SDRs** can also be considered currency.

Deposits include all claims on the central bank, other depository corporations, government units, or other institutional units represented by evidence of deposit.

Transferable deposits comprise all deposits that are exchangeable on demand at par and without penalty or restriction and directly usable for making payments by check, draft, giro order, direct debit/credit, or other direct payment facility.

Other deposits comprise all claims other than transferable deposits that are represented by evidence of deposit (for example, savings and fixed-term deposits, foreign currency nontransferable deposits).

Debt securities are negotiable instruments serving as evidence that units have obligations to settle by providing cash, a financial instrument, or some other item of economic value (for example, treasury bills, government bonds, corporate bonds and debentures).

Loans are financial assets created when a creditor lends funds directly to a debtor. They are shown by nonnegotiable documents (including leases).

Shares and other equity comprise all instruments and records acknowledging, after the claims of all creditors have been met, claims on the residual value of a corporation.

Insurance technical reserves are net equity of households in life insurance reserves and pension funds and prepayments of premiums.

A **financial derivatives** contract is a financial instrument linked to a specific financial instrument, indicator, or commodity, and through which specific financial risks (such as interest rate risk; currency, equity and commodity price risk; or credit risk) can be traded in their own right in financial markets.

Other accounts receivable/payable include trade credit and advances and similar accounts.

Trade credit and advances comprise trade credit extended directly to corporations, governments, nonprofit institutions, households, and the rest of the world and advances for work in progress or to be undertaken and prepayment for goods and services.

¹⁷ See *MFSM 2000* (Section IV).

Appendix III. Net Intersectoral Asset and Liability Matrix

Table 2. Mauritius: Net Intersectoral Asset and Liability Matrix (In Millions of Rupees; December 2009)

| Issuer of Liability (debtor) | Table 2. Mauritius: Net Intersectoral Asset and Liability Matrix (In Millions of Rupees; December 2009) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|-------------|----------|--------------------|-------------|----------|----------------------------|-------------|----------|----------------------------------|-------------|----------|-------------------------------|-------------|----------|------------------------------|-------------|----------|-----------------------------|-------------|----------|------------------------|-------------|----------|-------------------|-------------|----------|
| | Public Sector | | | | | | | | | Financial Sector | | | | | | | | | Nonfinancial Private Sector | | | | | | Rest of the World | | |
| | Central Bank | | | Central Government | | | State and Local Government | | | Public Nonfinancial Corporations | | | Other Depository Corporations | | | Other Financial Corporations | | | Nonfinancial Corporations | | | Other Resident Sectors | | | Nonresidents | | |
| Holder of Liability | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. |
| Central Bank | 10,832 | 543 | 10,289 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14,729 | 1,427 | 13,302 | 192 | 71 | 121 | 0 | 0 | 0 | 504 | 91 | 413 | 63 | 69,779 | -69,716 |
| In domestic currency | 10,832 | 543 | 10,289 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,882 | 1,427 | 11,455 | 117 | 71 | 46 | 0 | 0 | 0 | 504 | 91 | 413 | 20 | 0 | 20 |
| Currency and deposits | 10,832 | ... | 10,832 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 12,882 | 0 | 12,882 | 117 | 0 | 117 | 0 | ... | 0 | 5 | ... | 5 | 19 | 0 | 19 |
| Securities other than shares | 0 | 530 | -530 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Loans | 0 | 13 | -13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,413 | -1,413 | 0 | 71 | -71 | 0 | 0 | 0 | 0 | 72 | -72 | 0 | 0 | 0 |
| Shares and Other Equity | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 |
| Financial derivatives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other accounts receivable 1/ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | -14 | 0 | 0 | 0 | 0 | 0 | 0 | 498 | 19 | 480 | 1 | 0 | 1 |
| In foreign currency | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,847 | 0 | 1,847 | 75 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 69,779 | -69,736 |
| Monetary Gold & SDRs | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Currency and deposits | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 1,847 | 0 | 1,847 | 75 | 0 | 75 | 0 | ... | 0 | 0 | ... | 0 | 43 | 8,528 | -8,528 |
| Securities other than shares | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shares and Other Equity | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 0 | 0 | ... | 160 | -160 |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 |
| Financial derivatives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other accounts receivable 1/ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Government | 543 | 10,832 | -10,289 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 61,031 | 894 | 60,137 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 |
| In domestic currency | 543 | 10,832 | -10,289 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 61,031 | 886 | 60,146 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 |
| Currency and deposits | ... | 10,832 | -10,832 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 846 | -846 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Securities other than shares | 530 | 0 | 530 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 61,026 | 1 | 61,025 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Loans | 13 | 0 | 13 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 36 | -31 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 2 | -2 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| In foreign currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 8 | -8 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 8 | -8 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | 0 | 0 |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| State and Local Government | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 773 | -768 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| In domestic currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 773 | -768 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 771 | -771 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 1 | -1 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 0 | 5 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| In foreign currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |

| Issuer of Liability (debtor) | Public sector | | | | | | | | | Financial Sector | | | | | | Nonfinancial Private Sector | | | | | | Rest of the World | | | | | |
|-------------------------------|---------------|-------------|----------|--------------------|-------------|----------|----------------------------|-------------|----------|----------------------------------|-------------|----------|-------------------------------|-------------|----------|------------------------------|-------------|----------|---------------------------|-------------|----------|------------------------|-------------|----------|--------------|-------------|----------|
| | Central Bank | | | Central Government | | | State and Local Government | | | Public Nonfinancial Corporations | | | Other Depository Corporations | | | Other financial corporations | | | Nonfinancial corporations | | | Other resident sectors | | | Nonresidents | | |
| | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. |
| Public Nonfinancial Corps. | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11,346 | 12,662 | -1,315 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| In domestic currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11,346 | 9,889 | 1,457 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9,402 | -9,402 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8,406 | 72 | 8,333 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,527 | ... | 2,527 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 414 | 414 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| In foreign currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 2,773 | -2,773 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,759 | -2,759 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 13 | -13 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other Depository Corporations | 1,427 | 14,729 | -13,302 | 894 | 61,031 | -60,137 | 773 | 5 | 768 | 12,662 | 11,346 | 1,315 | ... | ... | ... | 35,879 | 6,271 | 29,608 | 280,842 | 141,395 | 139,447 | 210,190 | 92,143 | 118,047 | 265,514 | 533,079 | -267,565 |
| In domestic currency | 1,427 | 12,882 | -11,455 | 886 | 61,031 | -60,146 | 773 | 5 | 768 | 9,889 | 11,346 | -1,457 | ... | ... | ... | 17,401 | 6,271 | 11,130 | 39,538 | 141,395 | -101,858 | 188,876 | 92,143 | 96,732 | 196,336 | 320,600 | -124,264 |
| Currency and deposits | 0 | 12,882 | -12,882 | 846 | ... | 846 | 771 | ... | 771 | 9,402 | ... | 9,402 | ... | ... | ... | 16,623 | 120 | 16,503 | 29,814 | ... | 29,814 | 165,808 | ... | 165,808 | 11,033 | 1,327 | 9,706 |
| Securities other than shares | 0 | 0 | 0 | 1 | 61,026 | -61,025 | 1 | 0 | 1 | 0 | 0 | 0 | ... | ... | ... | 23 | 214 | -191 | 95 | 4,472 | -4,377 | 1,036 | 1,044 | -8 | 0 | 45,823 | -45,823 |
| Loans | 1,413 | 0 | 1,413 | 36 | 5 | 31 | 0 | 5 | -5 | 72 | 8,406 | -8,333 | ... | ... | ... | 755 | 2,177 | -1,422 | 15 | 126,621 | -126,606 | 0 | 82,107 | -82,107 | 91,208 | 177,824 | -86,616 |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | 2,527 | -2,527 | ... | ... | ... | ... | 3,757 | -3,757 | 709 | ... | -709 | 0 | ... | 0 | ... | 3,599 | -3,599 |
| Insurance technical reserves | 0 | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Financial derivatives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 414 | 414 | 0 | ... | ... | ... | 0 | 0 | 0 | 8,325 | 6,763 | 1,562 | 92 | 92 | 0 | 90,833 | 91,452 | -619 |
| Other accounts receivable 1/ | 14 | 0 | 14 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | 2 | -2 | 1,289 | 2,830 | -1,541 | 21,939 | 8,900 | 13,039 | 3,261 | 574 | 2,687 |
| In foreign currency | 0 | 1,847 | -1,847 | 8 | 0 | 8 | 0 | 0 | 0 | 2,773 | 0 | 2,773 | ... | ... | ... | 18,477 | 0 | 18,477 | 241,304 | 0 | 241,304 | 21,315 | 0 | 21,315 | 69,178 | 212,479 | -143,301 |
| Currency and deposits | 0 | 1,847 | -1,847 | 0 | ... | 0 | 0 | ... | 0 | 2,759 | ... | 2,759 | ... | ... | ... | 18,477 | 0 | 18,477 | 240,972 | ... | 240,972 | 21,308 | ... | 21,308 | 69,006 | 212,479 | -143,473 |
| Securities other than shares | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 13 | 0 | 13 | ... | ... | ... | 0 | 0 | 0 | 332 | 0 | 332 | 6 | 0 | 6 | 172 | 0 | 172 |
| Loans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | ... | ... | ... | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | 0 | 0 |
| Insurance technical reserves | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Financial derivatives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other accounts receivable 1/ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Financial Corporations | 71 | 192 | -121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,271 | 35,879 | -29,608 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In domestic currency | 71 | 117 | -46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,271 | 17,401 | -11,130 | ... | ... | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Currency and deposits | 0 | 117 | -117 | n.a. | ... | n.a. | n.a. | ... | n.a. | n.a. | ... | n.a. | ... | ... | ... | 120 | 16,623 | -16,503 | n.a. | ... | n.a. | n.a. | ... | n.a. | n.a. | n.a. | n.a. |
| Securities other than shares | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 214 | 23 | 191 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Loans | 71 | 0 | 71 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 2,177 | 755 | 1,422 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | n.a. | ... | ... | ... | ... | 3,757 | ... | 3,757 | ... | n.a. | ... | ... | ... | ... | ... | n.a. | ... |
| Insurance technical reserves | 0 | ... | 0 | n.a. | ... | n.a. | n.a. | ... | n.a. | n.a. | ... | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Financial derivatives | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Other accounts receivable 1/ | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 2 | 0 | 2 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| In foreign currency | 0 | 75 | -75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | 18,477 | -18,477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Currency and deposits | 0 | 75 | -75 | n.a. | ... | n.a. | n.a. | ... | n.a. | n.a. | ... | n.a. | ... | ... | ... | 0 | 18,477 | -18,477 | n.a. | ... | n.a. | n.a. | ... | n.a. | n.a. | n.a. | n.a. |
| Securities other than shares | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Loans | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | n.a. | ... | ... | ... | ... | 0 | ... | 0 | ... | n.a. | ... | ... | ... | ... | ... | n.a. | ... |
| Insurance technical reserves | 0 | ... | 0 | n.a. | ... | n.a. | n.a. | ... | n.a. | n.a. | ... | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Financial derivatives | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Other accounts receivable 1/ | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |

| Issuer of liability (debtor) | Public Sector | | | | | | | | | | | | | | | | | | | | | Financial Sector | | | | | | | | | Nonfinancial Private Sector | | | | | | | | | Rest of the World | | |
|------------------------------|---------------|-------------|----------|--------------------|-------------|----------|----------------------------|-------------|----------|----------------------------------|-------------|----------|-------------------------------|-------------|----------|------------------------------|-------------|----------|---------------------------|-------------|----------|------------------------|-------------|----------|--------------|-------------|----------|--|--|--|-----------------------------|--|--|--|--|--|--|--|--|-------------------|--|--|
| | Central Bank | | | Central Government | | | State and Local Government | | | Public Nonfinancial Corporations | | | Other Depository Corporations | | | Other Financial Corporations | | | Nonfinancial Corporations | | | Other Resident Sectors | | | Nonresidents | | | | | | | | | | | | | | | | | |
| | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | Claims | Liabilities | Net pos. | | | | | | | | | | | | | | | |
| Nonfinancial Corporations | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 141,395 | 280,842 | -139,447 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| In domestic currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 141,395 | 39,538 | 101,858 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 29,814 | -29,814 | ... | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 4,472 | 95 | 4,377 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 126,621 | 15 | 126,606 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 709 | ... | 709 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | ... | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 6,763 | 8,325 | -1,562 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 2,830 | 1,289 | 1,541 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| In foreign currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 241,304 | -241,304 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 240,972 | -240,972 | ... | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 332 | -332 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | ... | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other Resident Sectors | 91 | 504 | -413 | ... | ... | ... | ... | ... | ... | ... | ... | 92,143 | 210,190 | -118,047 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| In domestic currency | 91 | 504 | -413 | ... | ... | ... | ... | ... | ... | ... | ... | 92,143 | 188,876 | -96,732 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Currency and deposits | ... | 5 | -5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 165,808 | -165,808 | ... | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Securities other than shares | 0 | 1 | -1 | ... | ... | ... | ... | ... | ... | ... | ... | 1,044 | 1,036 | 8 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Loans | 72 | 0 | 72 | ... | ... | ... | ... | ... | ... | ... | ... | 82,107 | 0 | 82,107 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Shares and Other Equity | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | ... | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 92 | 92 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other accounts receivable 1/ | 19 | 498 | -480 | ... | ... | ... | ... | ... | ... | ... | ... | 8,900 | 21,939 | -13,039 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| In foreign currency | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 21,315 | -21,315 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Currency and deposits | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 21,308 | -21,308 | ... | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 6 | -6 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Shares and Other Equity | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Insurance technical reserves | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | ... | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Nonresidents | 69,779 | 63 | 69,716 | 0 | 0 | 0 | ... | ... | ... | ... | ... | 533,079 | 265,514 | 267,565 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| In domestic currency | 0 | 20 | -20 | 0 | 0 | 0 | ... | ... | ... | ... | ... | 320,600 | 196,336 | 124,264 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Currency and deposits | 0 | 19 | -19 | ... | ... | ... | ... | ... | ... | ... | ... | 1,327 | 11,033 | -9,706 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Securities other than shares | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 45,823 | 0 | 45,823 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 177,824 | 91,208 | 86,616 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Shares and Other Equity | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 3,599 | ... | 3,599 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Insurance technical reserves | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 91,452 | 90,833 | 619 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other accounts receivable 1/ | 0 | 1 | -1 | ... | ... | ... | ... | ... | ... | ... | ... | 574 | 3,261 | -2,687 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| In foreign currency | 69,779 | 43 | 69,736 | 0 | 0 | 0 | ... | ... | ... | ... | ... | 212,479 | 69,178 | 143,301 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Monetary Gold & SDRs | 8,528 | ... | 8,528 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Currency and deposits | 49,319 | 43 | 49,276 | ... | ... | ... | ... | ... | ... | ... | ... | 212,479 | 69,006 | 143,473 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Securities other than shares | 11,772 | 0 | 11,772 | 0 | 0 | 0 | ... | ... | ... | ... | ... | 0 | 172 | -172 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Loans | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| Shares and Other Equity | 160 | ... | 160 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | ... | 0 | n.a. | ... | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Insurance technical reserves | 0 | ... | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Financial derivatives | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |
| Other accounts receivable 1/ | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | n.a. | n.a. | n.a. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | | | | | | | | | | | |

Source: Bank of Mauritius.

Appendix IV. Financial Accounts and Errors and Omissions in the Balance of Payments

Mauritius is an effective offshore jurisdiction, building on its 34 double-taxation avoidance treaties (DTAs). The Financial Services Act adopted in July 2007 distinguishes between Mauritian companies conducting business in Mauritius and those conducting business elsewhere. Companies whose ultimate purpose is to make investments abroad may opt to be considered global business companies (GBCs), which are regulated by the Financial Services Commission (FSC). GBCs offer investors vehicles for tax restructuring and planning. They are controlled in Mauritius by management companies (MCs) and are required to have “substance” in the country. There are two types of GBCs based on the category of license:

- A GBC1 is considered a tax resident in Mauritius and enjoys the benefits of its extensive DTA network. It is generally used when income from overseas is predominantly in the form of dividends, royalties, interest, and capital gains for which DTA benefits are needed. The maximum effective income tax rate is 3 percent. Business activities may include asset management, credit finance, factoring, leasing, and pension fund administration. All GBC1s must use the services of MCs in Mauritius, which must provide reports to the authorities, including financial statements to the FSC.
- A GBC2 can carry out most business activities except financial services, holding or managing a collective investment fund or scheme, otherwise dealing with a collective investment fund as a professional functionary, and providing registered office facilities and other services for corporations. A GBC2 is not a tax-resident in Mauritius and cannot benefit from the DTA network but is completely exempt from taxation in Mauritius. Typically companies engaged in invoicing, marketing, and international trading use a GBC2 structure. The information available for GBC2s is currently much more limited than for GBC1s.

Rapidly growing financial flows into and through Mauritius in recent years pose a challenge for statistical systems. For balance of payments (BoP) and international investment position (IIP) purposes, both types of GBC are considered residents of Mauritius, even though most have no physical presence on the island. Currently, however, because GBCs are excluded, its BoP and IIP data do not show that Mauritius is an international financial center. Moreover, the coverage of external debt and balance of payments (BoP) statistics excludes the activities of GBCs (incoming and outgoing investment flows, mainly for investment in India and income). Rising errors and omissions (2.7 percent of GDP in 2008) are mainly linked to GBC activities. Although GBCs are largely pass-through enterprises, they do have an important impact on the local economy. For example, they use local MCs and registration fees and have accounts with local banks. MC activities account for at least 3 percent of GDP, much of which may be attributable to the services they provide GBCs. The actual impact could be much larger, however, because many of their activities and connections with the local economy are not well known.

FSC information on GBCs is incomplete and currently not suitable for the central bank to compile BoP and IIP statistics. The Bank of Mauritius (BoM) collects only partial GBC data but excludes them from BoP payments data. Official statistics capture only the foreign assets of commercial banks, primarily from the deposits made by GBCs from funds raised abroad (the “float,” which represents the difference between inflows to the GBCs from their owners and outflows to their investment destinations in other countries). To get a more accurate picture of Mauritius's external position, a joint committee comprising the BoM, FSC, Central Statistical Office, and Ministry of Finance and Economic Development has been established to conduct a BoP survey of resident GBCs managed by 12 major management companies. Although meeting SDDS requirements calls for quarterly BoP and external debt data, the initial survey, scheduled for March/April 2010, will at first be annual. It will capture balance sheet information and transactions data for calendar year 2009. Similarly, the IIP omits GBC assets and liabilities but includes foreign assets of commercial banks from GBCs. To improve IIP statistics, an annual survey of positions data is needed. As part of this exercise, the IIP should incorporate the results of the Coordinated Portfolio Investment Survey (CPIS), the overwhelming part of which are assets held by GBCs.

Appendix V: The Contribution of Global Business Corporations to the Aggregate Balance Sheet of Mauritian Banks

Structure of the banking system. The Mauritius banking system is dominated by two long-established domestic (Mauritius Commercial Bank and State Bank of Mauritius) and two international banking groups (Barclays and HSBC). Of the 18 commercial banks, 4 large banks serve both the domestic and foreign market, 3 large foreign banks serve almost exclusively nonresidents, 5 small and medium banks are focused on nonresidents, but pay increasing attention to the domestic market; the remainder largely serve the domestic market.

Foreign exchange (FX) versus foreign assets and liabilities. FX liabilities are about 130 percent of GDP and FX assets are 182 percent. Of the latter, 163 percent of GDP represent claims on nonresidents (of which 58 percent—equivalent to almost one-half of FX liabilities— simply are held as balances in banks abroad). FX lending to residents is only 19 percent of GDP (of which 6 percent of GDP is to the GBCs), and many residents have foreign currency earnings (for example, the tourist sector). Foreign liabilities are much smaller than FX liabilities because the GBCs are considered residents in the monetary statistics. Liabilities to (the deposits of) the GBCs are funds that originate from foreign investors (who wish to invest, for example, in India) and are temporarily parked in Mauritian banks before transfer abroad. These deposit floats, though flowing through Mauritian banks, are quite stable in aggregate, amounting to some 85 percent of GDP, virtually all in FX, and providing useful short-term FX liquidity to the banking system. FX liabilities to other residents (29 percent of GDP) likely reflect retail deposits of foreign currency earners (for example, the tourist trade), and nonresident liabilities likely include regional depositors seeking to benefit from the country's financial and political stability.

Risks. The large net foreign asset position (equal to 116 percent of GDP, or 31 percent of GDP if the GBCs are considered nonresidents), the long FX position, the large proportion of FX assets held as highly liquid bank deposits abroad, and the limited FX lending to residents all give comfort that the risks should be manageable. Nevertheless, given the sheer magnitudes, close vigilance is warranted.

Mauritius: Banks' Balance Sheet, end-December 2009

| | Rupees (billion) | | | Share (percent) ¹ | | Percent of GDP | |
|-----------------------------|------------------|------------------|-------------------|------------------------------|-----------------|----------------|----------------|
| | Total | Foreign currency | Domestic currency | Total of which | Total of which | Total of which | Total of which |
| | | | | FC ² | FC ² | | |
| Assets | 751.1 | 489.0 | 262.1 | 100.0 | 65.1 | 280.1 | 182.3 |
| Claim on residents | 313.8 | 51.7 | 262.1 | 41.8 | 6.9 | 117.0 | 19.3 |
| GBCs | 17.0 | 16.8 | 0.2 | 2.3 | 2.2 | 6.3 | 6.3 |
| Other residents | 296.8 | 34.9 | 261.9 | 39.5 | 4.6 | 110.7 | 13.0 |
| Claim on nonresidents | 437.3 | 437.3 | 0.0 | 58.2 | 58.2 | 163.1 | 163.1 |
| Liabilities | 751.1 | 352.1 | 399.0 | 100.0 | 46.9 | 280.1 | 131.3 |
| Liabilities on residents | 624.6 | 304.9 | 319.7 | 83.2 | 40.6 | 232.9 | 113.7 |
| GBCs | 227.6 | 227.5 | 0.1 | 30.3 | 30.3 | 84.9 | 84.8 |
| Other residents | 397.0 | 77.4 | 319.6 | 52.9 | 10.3 | 148.1 | 28.9 |
| Liabilities on nonresidents | 126.5 | 47.2 | 79.3 | 16.8 | 6.3 | 47.2 | 17.6 |

Sources: Bank of Mauritius (*Monthly Statistical Bulletin, January 2010*).

¹ Percent of total assets.

² Foreign currency.