



Financial Stability Report

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List of Acronyms

BCS	Bulk Clearing System
CAMEL	Capital, Asset, Management, Earnings and
	Liquidity
CAR	Capital Adequacy Ratio
CPSS	Committee on Payment and Settlement
	Systems
CTS	Cheque Truncation System
ECB	European Central Bank
EFSF	European Financial Stability Facility
ESM	European Stability Mechanism
EU	European Union
HHI	Herfindahl-Hirschmann Index
IMF	International Monetary Fund
MACSS	Mauritius Automated Clearing and
	Settlement System
MERI	Mauritius Exchange Rate Index

MICR	Magnetic Ink Character Recognition
MSCI	Morgan Stanley Capital International
NBDTIs	Non-Bank Deposit Taking-Institutions
NPLs	Non-Performing Loans
PDMA	Public Debt Management Act
PLL	Precautionary and Liquidity Line
ROA	Return on Equity
ROE	Return on Assets
SEM	Stock Exchange of Mauritius
SIPS	Systemically Important Payment Systems
SMEs	Small and Medium Enterprises
SWIFT	Society for Worldwide Interbank Financial
	Telecommunication
WEO	World Economic Outlook
Ү-о-у	Year-on-year

1. Overview

The second semester of 2011 has been characterised by deteriorating global economic conditions as the sovereign debt crisis in the euro area intensified. Significant contagion fears through banks' exposure to troubled countries have led to increased risk aversion and heightened financial markets volatility. As liquidity in the euro area dried out, the ECB stepped up liquidity-injecting operations to stabilise and reassure markets and engaged into a concerted intervention with other major central banks. As concerns mounted about sovereign debt sustainability and the implementation of fiscal austerity measures, consumer and business confidence have been adversely affected and the downside risks to the global growth outlook have increased. In its January 2012 World Economic Outlook Update, the International Monetary Fund has revised downwards its global growth projection for 2012 to 3.3 per cent, with growth in advanced and emerging and developing economies forecast at 1.2 per cent and 5.4 per cent, respectively.

The domestic economy has performed relatively well in 2011, with growth estimated at 4.1 per cent and driven by the *Real Estate, Renting and Business Activities, Financial Intermediation, Manufacturing and Transport and Communications sectors.* Export-led sectors have been partly supported by restructuring and market diversification efforts. Household consumption expenditure has grown by 2.6 per cent while Government consumption expenditure has expanded by 3.4 per cent. However, gross domestic fixed capital formation has stagnated, somewhat as a result of increased uncertainty with regard to the global economy. Going forward, risks to the domestic growth outlook have increased given the fallouts from the euro area debt crisis.

Growth in tourist arrivals in 2011 has been lower than in 2010, with a deceleration in the growth of tourist arrivals from the European market. Efforts to attract tourists from non-traditional markets have shown encouraging results and growth from such markets may compensate, to some extent, the slackening in arrivals from Europe. Despite the slowdown in tourist arrivals, the growth in tourist earnings has remained broadly unchanged in 2011 compared to 2010.

The current account deficit has widened in the third quarter of 2011 compared to a year earlier although financial flows to the capital and financial account have been sustained. On current trends, the current account deficit is not seen as representing a major risk to financial stability.

Gross official international reserves have continued to provide a comfortable buffer against external shocks. As a ratio to the imports of goods and services, gross official international reserves have represented around 4.6 months of import cover as at end-September 2011.

The overall budget deficit of the budgetary central government stood at 3.2 per cent of GDP in 2011, unchanged from 2010, and is expected to increase in 2012 and 2013. Public sector debt stood at 57.2 per cent of GDP as at end-December 2011, below the 60 per cent threshold. The country's gross external debt has risen by 12.7 per cent as at end-September 2011, driven by an increase in central government external debt. It represented 12.6 per cent of GDP as at end-September 2011.

Domestic financial markets have reflected the volatile developments in international markets although they have not faced significant dysfunctions. The large excess reserves that used to prevail on the money market have been significantly reduced while the rupee exchange rate has tended to move in line with international developments and domestic supply and demand conditions. The Bank has intervened on the domestic foreign exchange market on several occasions to reduce excess volatility in the market. On the Stock Exchange of Mauritius, the SEMDEX and SEM-7 have fallen as investor confidence suffered from the uncertainty prevailing in major markets.

The banking sector, where concentration has remained broadly unchanged in 2011, has stayed sound and well-capitalised, with a capital adequacy ratio comfortably above the 10 per cent minimum requirement. The

growth in banks' asset has slowed from 13.4 per cent as at end-September 2010 to 4.0 per cent as at end-September 2011, mainly due to a deceleration in global banking activities. Banks' profits have remained at elevated levels, underpinned by relatively high net interest income and fees and commission income. High earnings have contributed to boost banks' return on equity and maintain a roughly similar return on assets.

The growth in banks' credit has fluctuated around 15 per cent during most of 2011. Household sector credit has grown by 16.4 per cent, driven mainly by housing loans expansion, while corporate sector credit growth has tended to decline. The overall quality of banks' credit portfolio does not appear to have suffered any major setback although close monitoring would need to be exercised at the sectoral level. A stress test on banks' capacity to absorb shocks causing a substantial increase in non-performing loans in their credit portfolio has indicated that banks would generally be able to withstand such shocks.

The banking sector is not overly exposed to Europe, its main exposure being to Asia, and principally India. Non-performing cross-border loans have been relatively low and have not posed undue risks to banks' balance sheets. Market risks have also remained moderate while credit concentration ratio has been well below the prudential aggregate limit of 800 per cent.

Banks' funding structure has not changed much, with continued greater reliance on deposits from customers rather than short-term wholesale funding. A reverse stress test conducted as at end-September 2011 has indicated that most banks would be able to sustain a drawdown in demand and savings deposits of more than 15 per cent without falling below the minimum statutory cash ratio requirement and without having recourse to the Bank's liquidity-providing operations.

The number of non-bank deposit-taking institutions has been reduced to nine after the surrender of the licence of one institution and the merger of another with its parent company, a branch of a foreign bank. Following a contraction as at end-September 2010, total assets of the sector have registered growth of 11.8 per cent as at end-September 2011. The sector's capital adequacy ratio has stood well above the minimum 10 per cent while indicators of asset quality have continued to be reasonable.

With regard to the financial system infrastructure, an important milestone has been the introduction of the Bulk Clearing System in September 2011. The new system, which clears both low value payments and cheques, enables the matching of payment values with the appropriate payment stream. It is expected that the Bulk Clearing System will help enhance the resilience of the Mauritius Automated Clearing and Settlement System. The latter has operated without any notable downtime in 2011.

Although the domestic economy and financial markets have fared rather well in 2011, risks to financial stability have increased, particularly from the macro-financial perspective, in the wake of the deepening of euro area debt crisis. However, the major financial soundness indicators show that the banking sector has been resilient and remains well-equipped to face downside challenges.

2. The International Environment

The euro area sovereign debt crisis has intensified in the second half of 2011 as markets mulled the significant contagion risks from a possible Greek debt default and focussed on the vulnerabilities of the European banking system. Money market funding has been squeezed while financial markets volatility has increased substantially and the sovereign debt rating of several euro area countries has been downgraded. As risk aversion mounted amid fiscal austerity measures in advanced economies, consumer and business confidence have plunged, reducing global growth prospects and raising the risks to financial stability.

2.1 Macro-Financial Developments

2.1.1 The Global Economy

Global economic and financial conditions have deteriorated significantly since the publication of the August 2011 Financial Stability Report as the euro area sovereign debt crisis intensified and concerns about the European banking system and debt markets swelled. Uncertainty has risen rapidly amid fears of a possible Greek debt default and the realisation that it could have substantial contagion effects on a number of countries in the periphery and core regions. These worries, together with fiscal austerity programs and debt sustainability concerns in the US, have contributed to a decrease in consumer and business confidence and higher risk aversion and volatility in financial markets. Global growth prospects have, as a result, declined considerably, with downward revisions to growth in advanced and emerging and developing economies. Euro area output has been particularly affected by the increase in uncertainty whereas growth in the US has tended to stay lacklustre despite the release of some positive macroeconomic data that pushed back the threat of a recession. In emerging and developing economies, although growth generally remains supported by accommodative fiscal and monetary policies, surpluses on the current account and sufficient foreign exchange reserves, real activity has lost momentum owing to the deteriorating external environment, weakening domestic demand and the lagged effect of past monetary policy tightening.

Despite the implementation of several policy measures by international authorities and the European Central Bank to curb the euro area debt crisis (see Box I), the lack of sustainable and credible resolutions continue to have negative repercussions on euro area growth, which is now projected to go into a mild recession in 2012, and on the global growth outlook. According to the latest IMF World Economic Outlook Update, the euro area is expected to contract by 0.5 per cent in 2012 while the global growth forecast has been revised downwards by 0.7 percentage point to 3.3 per cent. Growth projections for advanced and emerging and developing economies have also been adjusted downwards to 1.2 per cent and 5.4 per cent, respectively (Table 2.1).

The euro zone crisis has increased the downside risks to the global growth outlook, and given the close interconnections between the European economies and other advanced economies' financial systems, has also raised the risks to global financial stability. Higher

Table 2.1: Global Growth Projections							
		Year-on-year pe	rcentage change		Percent	age point	
		Projec	tions		nce from projections		
	2010 2011 2012 20					2013	
World output	5.2	3.8	3.3	3.9	-0.7	-0.6	
Advanced economies	3.2	1.6	1.2	1.9	-0.7	-0.5	
of which							
US	3.0	1.8	1.8	2.2	0.0	-0.3	
Euro Area	1.9	1.6	-0.5	0.8	-1.6	-0.7	
Emerging market and developing economies	7.3	6.2	5.4	5.9	-0.7	-0.6	

Source: IMF World Economic Outlook Update, January 2012

uncertainty, the impact of deleveraging by banks on the real sector, and the implementation of fiscal austerity measures are expected to continue to weigh on global private sector investment and consumer demand while sustained geopolitical tensions in the Middle East and upcoming general elections in France and the US may also influence investor behaviour during 2012. Some advanced economies additionally face the challenge of properly addressing the political hindrance for achieving an appropriate pace of fiscal consolidation. Key emerging economies look able to weather financial contagion from Europe's debt crisis. However, they remain exposed to the risk of a hard landing caused by worsening conditions in advanced economies and loss in domestic confidence. They also continue to be vulnerable to the risks of surges and sudden stops as a result of volatile capital flows while excessive exchange rate volatility persists as a serious stability risks.





Source: IMF and Reuters

2.1.2 Global Financial Markets

The intensification of the euro area debt crisis and the ensuing uncertainty created in financial markets have been reflected in a broad-based increase in market volatility during most of the second half of 2011. Markets have been particularly concerned about the negative impact of a possible Greek debt default on the European banking system, with some of the core countries, such as Italy and France, holding the largest exposures to Greek debt. Credit rating downgrades of several euro area sovereigns in September 2011 as well as apparent political deadlock in formulating credible policy solutions and reported slowdown in global economic activity sparked several rounds of risk aversion in financial markets. Volatility thus rose to levels not seen since the first semester of 2010 but subsided in the last quarter of 2011 as European leaders stepped up negotiations and implemented a host of measures that helped to comfort markets (Chart 2.2). The rise in optimism about the US economic recovery following a string of strong US economic data releases also contributed to the decline in volatility. Looking ahead, however, it is expected that the uncertain environment will continue to generate a fair amount of market volatility throughout 2012.

Ratings and Spreads

The severe debt problems in advanced economies and rising threats of contagion in the euro area have driven credit rating agencies to downgrade several countries, of which some major ones, while a number of others have been placed under credit watch for potential downgrades. In August 2011, S&P's cut the long-term US credit rating by one notch, from AAA to AA+, on concerns that measures taken to address the government's budget deficit and rising debt burden were not adequate while Moody's downgraded Japan's sovereign credit rating to Aa3 given the significant build-up of debt. In mid-September 2011, the three largest credit rating agencies downgraded Italy's credit rating, in part due to increased political uncertainty and weaker economic growth prospects, while Spain was downgraded due to the large deficit in its public finances. S&P's further placed the long-term sovereign ratings of 15 euro zone members on negative credit watch in December 2011 and effectively downgraded the credit ratings of nine of them in January 2012 on the view that policy initiatives by European policymakers may be inadequate to deal with systemic problems in the euro zone (Table 2.2). France and Austria were as such deprived of their coveted triple-A status. Consequently,

Box I: Initiatives to Address the Euro Area Crisis

The intensification of the euro area crisis prompted a number of initiatives by European and other international instituitions to help in its resolution. The most important ones are summarised below.

Actions by Major Central Banks

As market stress intensified during the second half of 2011, major central banks put in place some exceptional measures. The ECB extended purchases under its Securities Market Programme to government bonds of Italy and Spain and increased its term liquidity provision. The US Federal Reserve Bank conditionally pledged to keep interest rates low and signaled readiness to employ a range of tools. The Swiss and Japanese monetary authorities intervened quite heavily in the foreign exchange market to prevent appreciation of their currencies. Regulators instituted short-selling bans on selected European equities. The US Federal Reserve Bank and other major central banks engaged in US dollar swaps to make up for US dollar shortages in Europe.

Bank Recapitalisation

Following the EU October 2011 summit, European banks were required to raise their Tier 1 capital ratios to 9 per cent, which means that they would need about EUR106 billion in new capital by June 2012. The objective is to help shield them against losses resulting from any government defaults and protect larger economies - like Italy and Spain - from the market turmoil. Given the current prevailing market conditions in Europe, however, raising new capital may be quite challenging.

G-20

At the G-20 meeting in November 2011, member countries agreed to strengthen global financial safety nets and support the IMF in putting forward a Precautionary and Liquidity Line to provide on a case by case basis increased and more flexible short-term liquidity to countries with strong policies and fundamentals facing exogenous shocks. Member countries also affirmed their support to the stabilisation plan agreed by the EU October 2011 summit.

Greek Debt Write-off

After intensive negotiations, private banks holding Greek debt accepted a write-off of 50 per cent of the money owed to them. The move is expected to cut the nation's debt load to 120 per cent of GDP in 2020. Under current conditions, it would have grown to 180 per cent of GDP.

European Stability Mechanism

EU leaders agreed, in February 2012, to create a EUR500 billion European Stability Mechanism (ESM) which is to come into force in July this year. The ESM will replace the current EUR440 billion European Financial Stability Facility (EFSF), which was designed to last until 2013. In contrast to the EFSF, which was created as a private limited company, the ESM is an intergovernmental institution established under public international law by a treaty signed by the euro area countries. China has announced that it was investigating ways in which it can contribute to the ESM since it believes that stability in Europe, its biggest export market, is vital for stability at home.

New Fiscal Treaty

Except the Czech Republic and the UK, twenty-five of the EU's 27 member states have agreed to join a fiscal treaty to enforce budget discipline. The treaty will empower the European Court of Justice to monitor compliance and impose fines on rule-breakers. The treaty also spells out the enhanced role of the European Commission in scrutinising national budgets. The EU will also help to fund schemes to get young people into work or training in member states with the highest youth unemployment levels. They pledged to speed up measures to develop the EU single market, including: (i) agreement on a common EU patent system by July 2012; (ii) better targeting of EU funds towards SMEs; and (iii) national legislation to create a functioning single market in services and energy.

S&P's downgraded the European Financial Stability Facility (EFSF) to AA+, from AAA, since there were not enough triple-A rated guarantors for the fund to maintain its top rating. Fourteen eurozone states



were put on a negative outlook for a possible further downgrade. Germany was the only country to escape this raft of downgrades, maintaining its triple-A rating and a stable outlook.

Market turmoil accentuated tensions in government debt markets, which saw an increase in sovereign yields for most euro area countries. Borrowing costs surged to levels widely deemed to be unsustainably expensive in Italy and Spain while France also faced rising yields (Chart 2.3). Yields on Greek bonds continued to rise, surpassing 35 per cent despite a second aid package from the IMF and the EU, as Greek authorities entertained a certain amount of market uncertainty with confusing policy announcements. German bonds were one of the very few exceptions as demand for high-rated and liquid government bonds generally maintained yields at a relatively low level although there were occasions when Germany failed to draw bids, stoking concerns that the region's debt crisis was infecting even the safest sovereign securities.

The ECB has provided support to the European sovereign debt market by supplying much-needed funding through the purchase of securities under the Securities Markets Programme. Furthermore, in order to increase collateral availability, the ECB relaxed the credit criteria with regard to certain assetbacked securities and performing credit claims that national central banks accept as collateral. Following other initiatives across Europe to find a credible solution to the debt problem, funding costs for euro area governments, with the exception of Greece and Italy, fell appreciably towards the end of 2011.

Table 2.2: Sovereign Credit Ratings							
June 2011 January 2012							
	MOODY'S	S&P's	FITCH	MOODY'S	S&P's	FITCH	
Euro area							
Germany	Aaa	AAA	AAA	Aaa	AAA	AAA	
France	Aaa	AAA	AAA	Aaa	AA+	AAA	
Spain	Aa2	AA	AA+	A1	А	А	
Italy	Aa2	A+	AA-	A2	BBB+	A-	
Portugal	Baa1	BBB-	BBB-	Ba2	BB	BB+	
Greece	Caa1	CCC	CCC	Ca	CC	CCC	
US	Aaa	AAA	AAA	Aaa	AA+	AAA	
Japan	Aa2	AA	AA-	Aa3	AA-	AA-	

Source: Reuters

Banking Sector Vulnerabilities

Concerns about the health of the European banking system have escalated, mainly reflecting the direct exposure of European banks to troubled euro area sovereigns. Exposed banks' balance sheets have weakened, increasing their riskiness as counterparties and making access to funding more difficult and expensive. The LIBOR-OIS spread – which indicates major banks' willingness to lend and is generally considered as a measure of the health of the banking system – widened to its highest level since mid-2009 (Chart 2.4).

As the crisis intensified and banks became reluctant to lend to each other on the short-term markets, liquidity in interbank markets dried up and it became particularly difficult for European banks to obtain





US dollar funding as lenders, including US money market funds, became increasingly concerned about the size of European banks' holdings of sovereign debt. Euribor rates surged to record highs early in the second semester of 2011 while the three-month LIBOR on US dollar borrowings also increased dramatically. Credit rating agencies have downgraded or put a large number of banks on credit watch for a possible downgrade, exacerbating their funding problems in the volatile market environment. This has been reflected in equity markets where share price indices of banks and other financials have fallen (Chart 2.5).

In its efforts to calm markets and resolve the liquidity crunch, the ECB has started to provide cheap longterm loans to banks and initiated a program to purchase covered bonds. It has introduced threemonth US dollar liquidity operations and extended 1-week US dollar liquidity operations. In addition, in a concerted action with the US Federal Reserve and the central banks of the United Kingdom, Japan, Switzerland and Canada, the ECB has contributed to enhance the capacity for financial institutions outside the US to borrow US dollars in emergencies, thus easing the funding squeeze on European banks.

The short-term funding strains have pushed banks to deleverage, that is, sell assets to increase cash holdings and reduce reliance on short-term borrowings but significant bank's funding challenges in the mediumterm have underscored the need to strengthen the banking sector further. Thus, under the terms of the announced deal to resolve the European sovereign debt crisis, European banks have been requested to increase their Tier 1 capital ratios to 9 per cent by June 2012, which would require them to inject additional capital of about EUR106 billion. While this may also involve recapitalisation through public funds for some banks, it may also imply more deleveraging. However, the latter may have a negative impact not only on growth but also on financial stability through a possible decline in asset prices, which would raise investors' funding liquidity risk.

Global Stock Markets

Rising market fears have led to large investment flows away from riskier assets to perceived safe-havens like gold and government bonds. Between end-June and end-September 2011, equities fell sharply by around 15 per cent in advanced markets and 20 per cent in emerging markets. Thereafter, equities gyrated over developments in the euro area sovereign debt crisis and



Source: Reuters





Source: Reuters



Source: IMF

economic data releases (Chart 2.6). US stocks recovered somewhat in the last quarter of 2011, benefiting from the relatively better performance of the US economy as well as the decision to extend the payroll tax cut and unemployment benefits, which temporarily lifted some domestic political uncertainty. Asian equities, however, remained weak as muted external demand hit business confidence. Though affected by continued sovereign debt worries and skepticism about the proposed policy packages, European equities managed to recoup some of their losses in the last quarter of 2011 as investor anxiety subsided to some extent following more upbeat than expected growth data in the US.

Currencies

The evolution of major currencies has broadly reflected market developments in the second semester of 2011. The rise in risk aversion, which prompted a flight towards safe haven currencies, mainly benefited the US dollar turning it into one of the best performing currencies in the G20 (Chart 2.7). The euro was heavily weighed down by fears that Greece could possibly leave the euro zone, and lead to an eventual break-up of the common currency, and by interest rate cuts by the ECB to shore up bank lending and fight off the crisis. Adding to the woes of the ailing euro were the rating downgrades of several euro area countries and the spread of the bond market turmoil across Europe. The Pound sterling has closely tracked the euro against the US dollar as it has suffered from heightened uncertainty over the UK economic outlook and the extension of quantitative easing measures by the Bank of England to boost credit. Though measures taken by European leaders have helped to allay fears about the debt crisis, the euro is projected to remain under pressure against the US dollar while the Pound sterling may face strong headwinds from the fragile UK economy at risk of being stripped of its AAA rating.

2.2 Global Imbalances

The recent economic and financial developments are, to a large extent, due to the persistence of global imbalances. In 2011, global imbalances widened slightly and are expected to remain large in the future as a result of asymmetric adjustments on the part of current account surplus and deficit countries and the lack of flexible exchange rates (Chart 2.8).

One factor underlying global imbalances has been the disparity in savings between surplus and deficit countries (Table 2.3). In 2011, for instance, China's gross savings rate as a percentage of GDP was 53.8 per cent while that of US was only 12.8 per cent. While China has been adopting measures to raise domestic consumption and the US has been raising savings mainly through household deleveraging, adjustments remain largely inadequate over the short to mediumterm to reduce imbalances.

On the fiscal side, recent austerity measures in troubled advanced economies aim among others, to reduce fiscal deficits in the medium term (Chart 2.9) but debt as a percentage of GDP is expected to stay high (Chart 2.10). The cost of servicing such high debts will therefore continue to raise sustainability issues over the foreseeable future and represent a risk to financial stability although sustained and credible policies may contribute to lower market fears and keep yields at reasonable levels.



Source: IMF



Source: IMF

Table 2.3: Total Investment and Gross Savings						
	2006	2007	2008	2009	2010	2011
	Total Investment as a percentage of GDP					
Advanced economies	21.7	21.7	21.0	17.8	18.6	19.1
Emerging and developing economies	27.9	29.1	30.1	30.4	31.1	31.7
US	20.6	19.6	18.1	14.7	15.8	15.8
China	43.0	41.7	44.0	48.2	48.2	48.7
		Gross Natio	onal Savings	as a percent	age of GDP	
Advanced economies	20.9	20.7	19.8	17.2	18.2	18.6
Emerging and developing economies	32.8	33.0	33.6	31.9	33.0	34.0
US	16.4	14.6	13.4	11.5	12.5	12.8
China	51.6	51.9	53.2	53.5	53.4	53.8
Source: IMF						

3. Domestic Macroprudential Assessment

The domestic economy has fared relatively well in 2011, with a growth rate of 4.1 per cent. The deterioration in the global growth outlook for 2012 has, however, increased the downside risks to domestic economic growth. The low level of private investment continues to represent a source of concern. External vulnerabilities also remain important although financial flows have been sufficient to finance the widening current account deficit and reserves have so far been amply adequate. While domestic financial markets have been quite volatile, reflecting global markets developments, they appear to have functioned without any major problems. The banking sector has performed well, with high profit levels and suitable funding. Financial Soundness Indicators have, moreover, pointed to robust capitalisation and satisfactory asset quality and liquidity. Banks' exposure to market risk has remained moderate.

3.1 The Domestic Economy

In 2011, the domestic economy has withstood the impact of global economic slowdown and growing uncertainty on international markets relatively well, expanding by an estimated 4.1 per cent compared to 4.2 per cent in 2010. The economy has been mainly driven by Real Estate, Renting and Business Activities, Financial Intermediation, Manufacturing and Transport and Communications (Chart 3.1). Export-led sectors have been partly supported by restructuring and market diversification efforts. Final consumption expenditure grew by a mild 2.7 per cent in 2011, with growth of 2.6 per cent in household consumption and 3.4 per cent in Government consumption expenditure. As a result of the uncertainty created by developments in the global economy, gross domestic fixed capital formation has, however, stagnated. While Government has initiated some major public sector infrastructure projects leading to a growth of 0.6 per cent in public sector investment, private investment has contracted by 0.5 per cent.



*Forecast as at December 2011 Source: Statistics Mauritius

3.1.1 External Vulnerabilities

For a small open economy like Mauritius, external vulnerabilities are important considerations in assessing the potential impact of external shocks on the macro economy and financial stability.

In 2012, the outlook for domestic growth remains fraught with uncertainty as the economy is expected to face the headwinds from the euro zone debt crisis. While sectors like Real Estate, Renting and Business Activities, Transport and Communications and, to a lesser extent, Financial Intermediation, may continue to post reasonable growth, export-led sectors notably the textile and tourism sectors appear likely to be affected by the decrease in consumer confidence and demand in the main export markets. According to latest data, Textile has been showing burgeoning signs of difficulties although growth in this sector remains positive and may be buoyed by diversification of exports into the region. Tourist arrivals and tourist earnings have progressed by 3.2 per cent and 10.0 per cent, respectively, in 2011 compared to 7.3 per cent and 10.5 per cent in 2010. The growth of arrivals from the traditional European market has slowed and, given the poor economic outlook and weak consumer confidence in this region, appears at significant risk of slowing further into 2012. However, diversification efforts to attract tourists from non-traditional markets are reaping results and may compensate to a certain extent slackening arrivals from Europe.

On the expenditure side, the uncertain outlook in Europe also seems likely to continue impacting on private investment growth, which is expected to remain muted in 2012 and weigh on domestic growth. While the measures proposed to boost public sector investment may counterbalance poor private sector investment, their effectiveness will be heavily dependent on timely implementation. The current account deficit for the third quarter of 2011 has widened considerably to Rs10.5 billion, or 13.2 per cent of GDP, compared to a deficit of Rs6.3 billion, or 8.5 per cent of GDP, in the corresponding period of 2010. This deterioration may be explained by a worsening merchandise trade deficit and lower net inflows in the invisibles account. The merchandise trade deficit worsened by 7.9 per cent to Rs14.9 billion despite the growth of exports (13.7 per cent) outpacing that of imports f.o.b. (11.2 per cent), amidst continued deterioration of the terms of trade. Domestic exports which exclude 'ships stores and bunkers' and 're-exports' - have increased by 5.6 per cent year-on-year in the third quarter but in volume terms, its growth has slowed to 1.9 per cent. The deterioration in the invisibles account has been mostly attributable to the large decline in the current transfers surplus (both of government and private sector), from Rs1.8 billion in the third quarter of 2010 to Rs0.05 billion in the corresponding quarter of 2011. The surplus on the services account decreased by 8.7 per cent to Rs2.8 billion due to the mild growth in tourist earnings relative to the much higher rise in net outflows from net transportation payment and net imports of 'Other services' while the surplus in the income account decreased to Rs1.5 billion, mainly as a result of lower investment income earned by banks.

As the current account deficit widened, financial flows made up of net direct investment, portfolio investment and other investment flows have been sustained (Chart 3.2). In aggregate, financial flows amounted to Rs13.2 billion compared to Rs9.4 billion in the third quarter 2010 mainly as a result of net 'Portfolio investment' inflows of Rs2.2 billion as against net outflows of Rs1.6 billion in the corresponding period of 2010. Direct investment net inflows totalled Rs1.4 billion while other investment net inflows decreased to Rs9.4 billion following lower external loan disbursement for government and lower banks' net financial inflows.

Commodity Prices

With around 40 per cent of the import bill made up of 'Food and Live Animals' and 'Mineral Fuels' imports, the country continues to be heavily exposed to international commodity price volatility. In recent times, surging oil prices have been one of the key drivers of the worsening of the current account deficit. Due to the current economic slowdown and reduced demand from emerging countries, oil prices appear to have stabilised though they may continue to trade at above US\$100 per barrel. However, there remains a risk that geopolitical developments may cause oil prices to increase again and affect adversely the current account deficit.

External Debt

The gross external debt of the country has risen by 12.7 per cent to Rs40,020 million as at end-September 2011, driven by an increase in central government external debt. Solvency indicators with regard to gross external debt have remained broadly unchanged and do not indicate any major cause for concerns (see Box II).

Government external debt as a percentage of GDP has increased from 7.4 per cent as at end-December 2010 to 8.3 per cent as at end-December 2011 and is projected to grow steadily to reach 10.3 per cent, 11.5 per cent and 12.4 per cent, respectively as at end-December 2012, 2013 and 2014. The majority of Government external debt is on floating interest rates (67.6 per cent) while fixed-interest rate and interest rate



free external debt represent 27.5 per cent and 4.9 per cent, respectively. The debt-service ratio for the country is forecast to hover in the range of 3.5 per cent to 4.0 per cent between 2012 and 2014.

Besides lower cost, the move towards external financing, which is usually long-term (Chart 3.3), to finance Government's budget deficit has aimed to increase the redemption profile of total Government debt and thus reduce refinancing risks. Government external debt is mainly denominated in US dollars and euros (Chart 3.4).

As the country's external debt increases, interest rate and foreign exchange risks go up as well. However, the current low interest rate environment and appreciating rupee have so far contributed to mitigate those risks but should the situation reverse, the risks posed by



Source: Bank of Mauritius and Ministry of Finance and Economic Development





Source: Bank of Mauritius and Ministry of Finance and Economic Development

an increase in external debt would become important issues to consider.

Reserve Adequacy

Gross official international reserves, which may be used as the first line of defense against external shocks and undue reduction in financing flows, rose by 3.1 per cent to Rs81.5 billion as at end-December 2011, from Rs79.0 billion as at end-December 2010. Indicators for reserve adequacy as at end-September 2011, show that gross official reserves provide a comfortable cushion to mitigate external shocks (see Box II). As a ratio of imports of goods and services, they represented 4.6 months of import cover, and constituted 200.0 per cent of gross external debt and 24.7 per cent of broad money liabilities compared to IMF's benchmark of 20 per cent.

3.1.2 Public Sector Debt

The budget deficit, which stood at 3.2 per cent of GDP in 2010, remained unchanged in 2011 and is expected to increase to 3.8 per cent in both 2012 and 2013, owing to higher net capital investment by government, before declining to 3.4 per cent in 2014. The primary balance, which was in surplus in 2010 and represented 0.2 per cent of GDP, shifted to a deficit of 0.2 per cent of GDP in 2011 and is thereafter expected to fluctuate between -0.4 per cent and -0.8 per cent in the following three years.

Public sector debt, comprising debt of General Government and public enterprises, fell to 57.2 per cent of GDP as at end-December 2011, still below the 60 per cent threshold stipulated in the Public Debt Management Act (2008). The debt to GDP ratio is expected to increase slightly to 57.7 per cent as at end-December 2012 before coming down to 56.3 per cent as at end-December 2013 and 55.7 per cent as at end-December 2014.

As a result of the various measures taken to lengthen the maturity profile of Government debt and reduce the risks and costs associated with debt management, long-term domestic debt (by original maturity) as a proportion of total domestic government debt has increased from 39.4 per cent as at end-December 2010 to 42.6 per cent as at end-December 2011.

Despite a planned increase in budget deficit, public sector debt can be viewed as broadly sustainable. Government funding has not been a problem and this situation is not expected to change in the foreseeable future.

Box II: External Indicators					
		Sep-10	Sep-11		
		Rs m	illion		
Gross External Debt ¹	as at end	35,496	40,020		
External Debt Service	year ended	7,036	9,007		
Export of Goods	year ended	65,649	76,718		
Export of Goods and Services	year ended	144,595	168,868		
Import of Goods and Services	year ended	182,607	207,997		
Gross Official International Reserves ²	as at end	74,329	80,060		
GDP at market prices	year ended	293,763	317,848		
Broad Money Liabilities	as at end	300,567	323,565		
Indicators					
I. Solvency					
Gross External Debt/GDP		12.1 %	12.6 %		
Gross External Debt/Export		54.1 %	52.2 %		
Gross External Debt/Export of Goods and Services		24.5 %	23.7 %		
External Debt Service/Export		10.7 %	11.7 %		
External Debt Service/Export of Goods and Services		4.9 %	5.3 %		
II. Reserve Adequacy					
Reserves/Import of Goods and Services		40.7 %	38.5 %		
Reserves/ Broad Money Liabilities		24.7 %	24.7 %		
Reserves/Gross External Debt		209.4 %	200.0 %		

¹ Gross External Debt outstanding as at end of period comprises central government, public corporations, monetary authorities and private sector.

² Gross Official International Reserves as at end of period comprises gross foreign assets of the Bank of Mauritius, reserve position in the IMF

and the foreign assets of Government.

3.2 Financial Markets

3.2.1 The Money Market

Banks' excess reserves have maintained a downward trend throughout 2011 as the Bank stepped up operations to remove liquidity from the money market. During the second semester of 2011, the Bank issued instruments of maturities longer than those normally issued for liquidity management, notably Bank of Mauritius Bills for tenors ranging between 91 and 273 days and Bank of Mauritius Notes of 2-Year and 3-Year maturities, for a total amount of Rs2.7 billion. Total excess reserves have thus averaged Rs2.0 billion in the second half of the year (Chart 3.5).

The reduction in excess liquidity has impacted on both the volume of transactions and the interest rates prevailing on the interbank money market. Compared to Rs137 billion in the first half of the year, total interbank transactions amounted to Rs188 billion in the second semester of 2011. Overnight transactions made up 81 per cent of total transactions. On a bankwise basis, it would appear that domestic banks have been the major lenders on the interbank market while foreign-owned banks have had a tendency to borrow the most. Overall, however, the interbank market seems to have functioned well. Although this market constitutes only a small part of banks' total funding, banks have faced no apparent difficulty in raising funding there despite tighter liquidity.

The overnight interbank interest rate has ranged between 1.65 per cent and 3.85 per cent during the period under review while interest rates on short notice and term transactions have hovered within a range of 2.00 per cent and 4.15 per cent. The weighted average interbank interest rate has ranged between 1.73 per cent and 3.80 per cent compared to a range of 1.20 per cent to 2.98 per cent during the first semester of 2011.

Yields on Government securities, especially at the shorter end of the maturity spectrum, have also moved upwards as a result of tighter excess reserves. The weighted yield on 91-Day and 182-Day Treasury Bills increased from 2.02 per cent and 3.04 per cent, respectively, as at end-December 2010 to 4.03 per cent and 4.39 per cent, respectively, as at end-December 2011. The weighted yield on the 364-day Treasury Bill increased by 124 basis points to 4.73 per cent while the weighted yield on the new instrument of 273-day maturity stood at 4.60 per cent as at end-December 2011. These developments have shaped a smoother yield curve as at end-December 2011 compared to a year earlier (Chart 3.6).

3.2.2 The Stock Market

Volatility in the domestic stock market has increased significantly over the period August to October 2011 although it was much lower than during 2009. The rise in volatility reflected the sharp rise in risk aversion in global equities as the euro area crisis intensified and growth prospects dimmed. In line with a timid return to risk appetite in global markets, volatility on the SEM fell thereafter. The SEMDEX posted a negative performance during the second half, falling by 10.0 per cent and hitting its lowest level since October 2010 (Chart 3.7). Comparatively, the SEM-7 has fallen by 11.2 per cent. The decline in both indices was largely driven by decreases in banks and hotels stocks, with the shares of the two quoted banks, MCB and SBM, dropping by 11.2 per cent and 12.5 per cent, respectively. Hotel stocks registered losses of 22.6 per cent on average while the insurance sector performance was largely unaffected (Chart 3.7).

As share prices fell, the market price-earnings (PE) ratio came down significantly from 15.43 in June 2011 to 11.29 in December 2011. Reductions were broad-based, with the sugar sector recording the most significant drop in the last quarter of 2011. Nonetheless, the market and most of the sectoral PE ratios remained in line with pre-crisis levels.

The domestic stock market has recorded net foreign outflows though the latter were more the result of exceptional transactions than a drop in investor confidence (Chart 3.8). In all, foreign investors sold shares for a total amount of Rs576.7 million and purchased shares worth Rs167.8 million. These





Chart 3.7: SEMDEX and Sectoral Indices





transactions, which underlined changes in ownership, were mainly in the Commerce and Investment sectors. Foreign purchases represented around 0.4 per cent of the total value traded on the stock market.

3.2.3 The Foreign Exchange Market

The rupee exchange rate has reflected movements of major currencies on international markets as well as demand and supply conditions on the domestic foreign exchange market. The dealt rupee rate depreciated by 4.2 per cent against the US dollar and appreciated by 9.3 per cent against the euro and 1.1 per cent against the Pound sterling in the second half of 2011. In nominal effective terms, MERI2, which is calculated using the currency distribution of trade and tourism receipts as weights, has been rather stable over the period under review (Chart 3.9).

With volatility in the EUR/USD exchange rate driven by euro area uncertainty, the rupee has thus been most volatile against the euro, while volatility in the Rs/US dollar rate has dampened during the last quarter of 2011 (Chart 3.10). The Bank intervened in the domestic foreign exchange market on several occasions between July and December 2011 in an effort to reduce excess volatility. The Bank's purchases, which totalled US\$45.2 million and EUR4.2 million, have exceeded its total sales to the market.

Banks' foreign exchange liquidity position drastically fell to US\$5.7 million in the second semester compared to US\$58.3 million in the corresponding period of 2010 and US\$29.9 million in the first half of 2011. Transactions on the interbank foreign exchange market rose to US\$312.8 million during this period.

3.3 Credit Growth and Credit Risks

Domestic business confidence has shown a tendency to decline in the second half of 2011 as the global economy felt the brunt of the euro area crisis and fiscal austerity measures in advanced economies. This has resulted in lacklustre credit conditions. Growth in total credit by banks in Mauritius has stabilised somewhat over the past twelve months. A new scheme has been introduced to improve the access to finance of Small and Medium Enterprises (SMEs), which can play a major role in the economic development of the country. Although credit risk has amplified due to the bleak global economic outlook, the quality of banks' credit portfolio has remained stable. The ratio of non-





Chart 3.10: Rupee Volatility





performing loans to total banks' loans has declined by 20 basis points over the past twelve months to 2.3 per cent as at end-September 2011.

In order to prepare the economy to better face the deteriorating global economic environment, the government has elaborated a national resilience plan to promote growth for the next three years encompassing the financing of enterprises, with a special focus on SMEs, infrastructure development and job creation. To achieve this objective, the government has committed Rs7.3 billion to a National Resilience Fund which, among others, provides support to companies experiencing financial hardship as a consequence of the slowdown in the global economy.

3.3.1 Total Credit Growth

Growth in total credit y-o-y hovered around 15 per cent over most of 2011 after having been on an upward trend since end-2009. As at end-December 2011, total credit growth stood at 14.9 per cent compared to 17.0 per cent as at end-December 2010 (Chart 3.11). Growth of credit in Mauritius, which accounts for 47.0 per cent of total credit, has also followed a fairly stable path, especially in the second semester of 2011, averaging 10.7 per cent over the period July to November 2011 before decelerating to 8.3 per cent in December 2011. The growth of credit outside Mauritius had maintained an uptrend since the end of the first semester of 2011 but slowed to 21.4 per cent in December 2011.

The weighted average cost of credit in Mauritius has fluctuated around 9.50 per cent since the third quarter of 2010 following the 100 basis points cut in the Key Repo Rate in September 2010 (Chart 3.12). Compared to end-December 2010, rupee loans – which make up more than 80 per cent of credit in Mauritius – have grown by 13.6 per cent as at end-December 2011 while foreign currency loans – which constitute around 13 per cent of credit in Mauritius – have contracted by 7.6. per cent

3.3.2 Household Sector Credit

As at end-December 2011, household sector credit accounted for 24.9 per cent of total credit in Mauritius compared to 23.2 per cent as at end-December 2010. This type of credit is therefore an important consideration in assessing the threats to financial stability in the domestic banking system.

High debt leaves households vulnerable to slowing income growth and increases their risk of default. This particularly holds in periods of lower economic growth and uncertain labour market conditions.

In 2011, the average growth rate of household credit by banks in Mauritius picked up to 16.4 per cent, from 14.2 per cent in 2010. Most of banks' credit to households is made up of housing loans, with the rest being geared towards consumption purposes such as personal and professional loans and credit card advances. Over time, growth in housing loans has continued to increase, reaching 22.6 per cent as at end-December 2011 compared to 20.5 per cent a year earlier (Chart 3.13). Banks' credit to households for housing purposes has thus attained 61.3 per cent of households' credit portfolio as at end-December 2011. The growth in credit extended for consumption







purposes decelerated to 7.6 per cent, from 12.1 per cent as at end-December 2010. Within consumption credit granted to households, credit card advances were almost unchanged from a year earlier, with a growth rate of 8.8 per cent as at end-December 2011.

The rising trend towards housing loans to households mitigates to some extent the risk of default in this sector since housing loans are generally supported by robust collaterals, notably a fixed charge on the property. The possibility that the current low interest rate environment may not be sustained in the future and lead to a reduction in households' capacity to repay their debts is also not assessed to be a major risk for the moment although it warrants monitoring.

3.3.3 Corporate Sector Credit

Corporate credit is the most sizeable part of bank credit in Mauritius, representing 73.0 per cent as at end-December 2011 compared to 72.2 per cent a year earlier. Corporate credit growth, which had been rising over 2010, started to decline as from the start of 2011 (Chart 3.14). As at end-December 2011, corporate credit growth stood at 9.6 per cent y-o-y compared to 15.1 per cent y-o-y as at end-December 2010. The decrease in corporate credit growth may be partly explained by the global uncertainty, which may have reduced the demand for credit and also made banks more cautious in supplying credit.

The largest share of corporate credit is extended to the tourism sector, which constituted 26.0 per cent of total corporate credit, while credit to manufacturing, construction and traders represented 11.0 per cent, 12.2 per cent and 17.3 per cent of corporate credit, respectively, as at end-December 2011. As a percentage of total private sector credit, credit to the tourism, manufacturing, construction and traders sectors represented 19.0 per cent, 8.0 per cent, 8.9 per cent and 10.2 per cent (Chart 3.15).

Growth in credit to the tourism and financial and business services sectors decelerated sharply from 23.6 per cent and 17.9 per cent as at end-December 2010 to 6.6 per cent and 2.8 per cent, respectively, as at end-December 2011. In contrast, credit growth to the manufacturing, construction and traders sectors increased from 1.4 per cent, 11.4 per cent and 17.9 per cent to 1.7 per cent, 11.5 per cent and 19.2 per cent, respectively, over the same period (Chart 3.16).









As at end-December 2011, the tourism sector was borrowing 27.7 per cent of its loans in foreign currencies while manufacturing was borrowing 26.9 per cent, traders 12.0 per cent and financial and business services 12.0 per cent. Although this may point to foreign exchange risks, it should be highlighted that those sectors also receive payments in foreign currencies.

Overall, the major financial stability risk from corporate credit lies in the uncertainty regarding the performance of individual sectors, particularly export-led sectors within that segment, in the context of the global economic downturn in 2012.

3.3.4 Cross-Border Loans

Around 51.2 per cent of banks' total loans as at end-September 2011 have given rise to cross-border loans compared to 48.9 per cent as at end-March 2011.



Cross-border loans have represented 28.8 per cent of total assets in the banking sector as at end-September 2011 compared to 26.1 per cent as at end-March 2011. The largest cross-border exposure remains to Asia, mainly India, and to a much lesser extent to Europe and Africa (Table 3.1). However, the risks to financial stability arising from banks' exposure to these markets are not considered to be substantial as they exhibit very low ratios of NPLs to total loans. The ratio of NPLs to total loans in Asia, which accounts for 65.5 per cent of total cross-border loans as at end-September 2011, stood at 0.48 per cent only while the ratio of NPLs to total loans in Europe, which represents 10.8 per cent of total cross-border loans, was 0.96 per cent. In Africa, where total cross-border loans have almost doubled to 10.5 per cent of total, the ratio of NPLs to total loans in Africa was 2.8 per cent. On average, the ratio of crossborder NPLs to total credit is less than 1 per cent.

3.3.5 Non-Performing Loans

Total non-performing loans (NPLs) in the banking sector have increased by 1.3 per cent from end-March 2011 to reach Rs10,456 million as at end-September 2011. As a percentage of total loans in the banking sector, total NPLs have edged down to 2.3 per cent as at end-September 2011, from 2.4 per cent as at end-March 2011, suggesting broadly unchanged asset quality of banks. As a share of credit extended in Mauritius, NPLs have decreased slightly from 4.5 per cent to 4.3 per cent while, as a share of credit extended outside Mauritius, NPLs have edged up from 0.6 per cent to 0.7 per cent (Table 3.2). The low ratio of NPLs to credit outside Mauritius has thus substantially reduced the overall ratio of NPLs to total loans of the banking sector.

Table 3.1: Banks' Cross-Border Loans								
	Septem	nber-09	Septem	ıber-10	Septem	nber-11		
Region	Ratio of Percentage of NPLs to total total cross- border loans respective region		Percentage of total cross- border loans	Ratio of NPLs to total loans in the respective region	Percentage of total cross- border loans	Ratio of NPLs to total loans in the respective region		
Africa	5.60	10.00	6.21	3.76	10.50	2.82		
Asia	68.40	0.10	70.17	0.07	65.50	0.48		
Australia	0.30	0.20	0.26	0.16	0.50	0.05		
Europe	14.40	1.10	9.61	2.20	10.80	0.96		
Middle East	2.30	-	3.29	0.00	5.30	0.41		
US and Canada	0.60	-	1.36	0.39	0.50	0.04		
Others	8.50	0.10	9.09	0.10	6.90	1.21		

Four major economic sectors that account for the bulk of NPLs in the banking sector are Personal, Construction, Manufacturing and Traders (Charts 3.17 and 3.18). As at end-September 2011, these four sectors together represented 78.9 per cent of total NPLs compared to 81.9 per cent as at end-September 2010. Recent developments suggest that there is need to exercise caution over the Personal sector since its share of NPLs in total NPLs and its ratio of NPLs to total loans have increased from 16.1 per cent and 7.9 per cent, respectively, as at end-September 2010 to 26.5 per cent and 13.3 per cent, respectively, as at end-September 2011. The Manufacturing sector has also registered an increase in its ratio of NPLs to total loans from 4.9 per cent as at end-September 2010 to 9.0 per cent as at end-September 2011, though its share of NPLs to total NPLs has decreased from 18.9 per cent to 15.3 per cent over the same period.

Coverage Ratio

Between end-March and end-September 2011, provisions for non-performing loans have come down by 15.1 per cent to Rs4,753 million. Consequently, the coverage ratio, as measured by the ratio of provisions for NPLs to total NPLs, has fallen from 54.2 per cent as at end-March 2011 to 45.5 per cent as at end-September 2011 (Chart 3.19).

3.3.6 Stress Testing

As at end-September 2011, the distribution of credit exposures in key sectors was generally concentrated among banks with capital adequacy ratio (CAR) of above 12 per cent (Chart 3.20). A stress test was conducted to assess the ability of banks to absorb possible shocks on their credit portfolio in the event of a general weakening

Table 3.2: Non-Performing Loans						
	NPLs as a percentage of credit in Mauritius	NPLs as a percentage of credit outside Mauritius	Total NPLs as a percentage of total credit			
Sep-08	4.0	0.5	2.1			
Sep-09	4.5	0.7	2.5			
Sep-10	4.2	0.4	2.1			
Dec-10	4.6	0.5	2.4			
Mar-11	4.5	0.6	2.4			
Jun-11	4.3	0.6	2.3			
Sep-11	4.3	0.7	2.3			

Chart 3.17: Share of Major Sectors' NPLs in Total NPLs



Chart 3.18: Share of Major Sectors' NPLs in Total Credit



Rs million Per cent 14,000 70.0 12,000 60.0 50.0 10,000 8 000 40.0 30.0 6,000 20.0 4,000 10.0 2,00 Mar-08 Sep-08 Dec-08 Mar-09 Jun-09 Sep-09 Dec-09 Mar-10 Jun-10 Dec-10 Jun-08 Sep-1(Mar-11 J-mul Sep-1 Dec-- Non-performing Loans - Coverage Ratio

Chart 3.19: Non-Performing Loans and Coverage Ratio

in economic activities causing an increase in nonperforming loans of 15 per cent in key sectors and 5 per cent in the remaining sectors as at end-September 2011.

The size of the impact of the shock varied between banks, depending on the composition and quality of their portfolio and the amount of capital they have to withstand the shock. Results concluded that banks (excluding branches of foreign owned banks) would generally be resilient to a range of adverse shocks affecting key sectors, with banks' capital adequacy ratio dropping from 15.2 per cent to 11.7 per cent, while the interquartile range would expand by 160 basis points (Chart 3.21). Overall, therefore, the banking sector is assessed to remain resilient to the impact of the specified shock.

3.3.7 Concentration of Credit

Over the year ended 30 September 2011, large exposures in the banking sector have progressed by 32 per cent, mostly as a result of an increase of more than 50 per cent in the large exposures of four banks principally involved in international banking.

Credit concentration risk in the banking sector, as measured by the ratio of aggregate large exposures to the sector's capital base, has therefore expanded from 197 per cent in September 2010 to reach 228 per cent as at end-June 2011 and 250 per cent as at end-September 2011 (Table 3.3). However, the credit concentration ratio is still well below the prudential limit of 800 per cent so that credit concentration risk does not represent a particular cause of concern for financial stability.

3.4 Banking Sector Performance

The banking sector has remained relatively sound, supported by relatively favourable domestic macroeconomic conditions and the better performance of domestic banking activities, which has compensated to some extent the slowdown in global banking activities. Total assets growth has nevertheless come down substantially, from 13.4 per cent at end-September 2010 to 4.0 per cent at end-September 2011.

The downgrade in the credit ratings of some major international banks, headquartered mainly in Europe, over the past six months have not had any major repercussion on their business in Mauritius. Foreignowned banks operating in Mauritius remain wellcapitalised and have maintained relatively good access to non-resident deposits and intragroup funding to finance their core lending business. However, these





banks are vulnerable to the risk that a lesser favourable outcome emanating from the renegotiation of the double tax treaty between Mauritius and India would undermine growth prospects in this cluster.

Banks in Mauritius are highly profitable compared to their counterparts in many advanced countries engulfed in the financial crisis. The profitability of most local banks has been underpinned by relatively elevated net interest income and fees and commission income representing, respectively, 62.7 per cent and 23.1 per cent of their total revenue as at end-September 2011.

Banks' exposures to market risk has remained moderate. The aggregate ratio of foreign exchange exposure to tier 1 capital stood at 1.7 per cent at end-September 2011 compared to 4.3 per cent at end-September 2010. Banks are also little exposed to the risk that changes in interest rates may adversely impact on their earnings. As at end-September 2011, it has been estimated that a 200 basis points decrease in interest rates would lead to a contraction of 0.3 per cent in the level of banks' pre-tax profits over one year.

Table 3.3: Credit Risk Concentration						
	Percentage of aggregate large exposures to capital base	Percentage of aggregate large exposures to total credit facilities				
Mar-09	211	26				
Jun-09	209	31				
Sep-09	212	28				
Dec-09	197	24				
Mar-10	209	26				
Jun-10	197	23				
Sep-10	197	25				
Dec-10	221	26				
Mar-11	200	23				
Jun-11	228	28				
Sep-11	250	30				

3.4.1 Market Concentration

The domestic banking sector continues to be moderately concentrated, as shown by the Herfindahl-Hirschmann Index (HHI) for banking sector loans, deposits and assets, which remained in the 'moderate concentration' band during the period December 2008 to September 2011.

On a disaggregated basis, four out of the twenty banks in operation held 58.8 per cent of total banking assets as at end-September 2011. These four banks individually held assets in excess of 10 per cent of total banking sector assets. From a segmental point of view, the Segment A assets of two banks represented 57.8 per cent of total Segment A assets. The HHI for Segment A assets thus stood at 2,066, which tends to point to high concentration in this segment and to the likelihood of systemic risk.

3.4.2 CAMEL Rating

Effective March 2011, the Bank has started to disclose the CAMEL rating of individual banks to encourage banks to improve their performance. CAMEL rating is an international bank rating system covering capital adequacy, asset quality, management quality, earning and liquidity. A standardised methodology is used to produce consistent and comparable ratings, which ranges from 1 to 5 whereby 1 stands for 'strong'; +/- 2 for 'satisfactory'; +/-3 for 'fair'; 4 for 'marginal' and 5 for 'unsatisfactory'.

On 28 December 2011, the Bank released the CAMEL rating evaluation of individual banks as at end-June 2011 (Table 3.5). The exercise concluded that the performance of the banking sector was stable, with 15 banks given a 'satisfactory' rating and 4 banks a 'fair' rating.

On 20 December 2011, Moody's Investors Service reaffirmed the sovereign debt rating of Mauritius to Baa2 with a stable outlook. The credit rating agency commented that the Baa2 rating of the government of Mauritius reflects the demonstrated resiliency of the

Table 3.4: Herfindahl-Hirschmann Index									
	Dec-08	Dec-09	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11
Loans	1,263	1,259	1,317	1,347	1,347	1,293	1,309	1,307	1,312
Deposits	1,297	1,207	1,218	1,220	1,190	1,168	1,197	1,209	1,216
Assets	1,172	1,067	1,112	1,097	1,068	1,047	1,092	1,082	1,109

economy and public finances to shocks, despite its small size and a relatively high level of public debt. Moody's Investors Service also reconfirmed the credit rating of the two largest domestic-owned banks as investment grade, with a stable outlook in the fourth quarter of 2011.

3.4.3 Regulatory Capital

Mounting risks to the stability of the domestic financial system on concerns that deeper fiscal stresses in Europe and weaker global economic recovery could indirectly lead to a deterioration in the quality of banks' credit portfolios and impact negatively on their capital ratios. Despite this uncertain environment, the banking system has been resilient, with adequate capital to withstand adverse economic shocks.

The capital adequacy ratio has been comfortably maintained above the 10 per cent minimum requirement. It has decreased slightly by 20 basis points over the past twelve months to 15.8 per cent as at end-September 2011 due to the higher growth in risk-weighted assets relative to the growth in capital.

Over this period, banks have accumulated capital

Table 3.5: CAMEL Ratings as at end-June 2011					
ABC Banking Corporation Ltd	3+				
AfrAsia Bank Limited	2+				
Bank of Baroda	2+				
Bank One Limited	2-				
Banque des Mascareignes Ltée	3+				
Barclays Bank PLC	2+				
Bramer Banking Corporation Ltd	3+				
Deutsche Bank (Mauritius) Limited	2+				
Habib Bank Limited	2-				
HSBC Bank (Mauritius) Limited	2+				
Investec Bank (Mauritius) Limited	2+				
Mauritius Post and Cooperative Bank Ltd	3+				
P.T Bank Internasional Indonesia	2+				
SBI (Mauritius) Ltd	2-				
Standard Bank (Mauritius) Limited	2+				
Standard Chartered Bank (Mauritius) Limited	2-				
State Bank of Mauritius Ltd	2+				
The Hongkong and Shanghai Banking Corporation Limited	2+				
The Mauritius Commercial Bank Limited	2+				

Note: The CAMEL rating for Century Banking Corporation Ltd is not disclosed since the bank has been in operation as from 31 March 2011. largely by retaining profits. No bank have needed capital injection from the public sector or had to deleverage by shedding assets. Internal simulation exercises have shown that, as at end-September 2011, the capital adequacy ratio of the banking sector (excluding the branches of foreign-owned banks operating in Mauritius) could absorb losses to a maximum of 33.0 per cent of the existing level of activities.

Tier 1 Capital

The capital adequacy of banks is most often assessed on the basis of tier 1 capital as a ratio of risk-weighted assets. The sector's tier 1 capital ratio (excluding branches of foreign-owned banks operating in Mauritius) has hovered around 12.9 per cent over the year to end-September 2011. In level terms, tier 1 capital has increased by 16.4 per cent during this period, of which around 94.8 per cent originated from retained earnings. Tier 1 capital across most banks composed mainly of common equity, which is the component of capital having the highest loss-absorbing capacity.

As an indication of the comparative health of the banking sector, the dispersion of total resources by tier 1 capital shows that around 49.2 per cent of total assets were held by banks having tier 1 capital ratios of more 12.0 per cent as at end-September 2011 compared to 35.5 per cent a year earlier (Chart 3.22).

Overall, banks' strong capital positions mean that many of them are well positioned to meet the more challenging Basel III capital standards when they would be phased in gradually over the years.



Chart 3.22: Dispersion of Total Assets by Tier 1 Capital

Leverage

The leverage ratio of the banking sector (excluding branches of foreign-owned banks operating in Mauritius), which measures banks' total assets to tier 1 capital, has increased by 20 basis points over the past twelve months to 4.9 per cent as at end-September 2011 (Chart 3.23). During the same period, banks maintained a relatively equitable balance between leverage and tier 1 capital ratios commensurate with the growth in total on- and off-balance sheet assets and their equivalent in terms of total risk-weighted assets.

3.4.4 Banking Sector Assets

The annual growth rate in banks' assets growth slowed to 4.0 per cent as at end-September 2011, from 13.4 per cent a year earlier, mainly as a result of a deceleration in global banking activities of foreign banks in the wake of





Chart 3.24: Growth of Banking Sector Assets

adverse international economic developments (Chart 3.24). The growth of Segment B assets, which constitute 61.1 per cent of total banking sector assets, has fallen significantly to 1.1 per cent in the third quarter of 2011 compared to 17.3 per cent a year earlier while the growth of Segment A assets has slightly improved to 8.8 per cent from 7.5 per cent a year earlier.

Advances and cash and balances with banks remained the two major components of banks' assets (Chart 3.25). The share of advances increased to 62.5 per cent of total banking sector assets as at end-September 2011, from 55.3 per cent a year earlier, while the share of cash and advances in total banking sector assets decreased to 24.4 per cent, from 29.0 per cent.

Asset Diversification

Risk-taking behaviour in the domestic banking sector is quite different depending on whether a bank is mainly engaged in Segment A or Segment B activities. Over the year ended September 2011, aggregate data for the sector



indicates that the share of risk-free assets in total assets has gradually fallen from 18.1 per cent to 16.4 per cent while the share of assets bearing 50 per cent and 100 per cent risk weights have gone up from 8.1 per cent and 42.0 per cent to 9.5 per cent and 44.8 per cent, respectively. The major part of total banking sector assets (82.3 per cent) remained concentrated in the zero, 20 per cent and 100 per cent risk-weight buckets (Chart 3.26).

On a bank-type basis, domestic banks have invested 54.4 per cent of their assets in high risk assets bearing 100 per cent risk-weight while foreign-owned banks have invested 38.5 per cent of their assets in this bucket (Chart 3.27). Domestic banks also hold 13.1 per cent of their total assets in 20 per cent and 50 per cent risk-weight assets while foreign-owned banks hold 41.8 per cent of their total assets in those buckets.

3.4.5 Funding and Liquidity Risks

Overall, banks in Mauritius have operated in a favourable funding environment for most of the past years. Funding risk has been moderate since most banks do not rely on short-term wholesale funding to finance their core lending business but instead make greater use of deposits from customers, which have tended to be a stable source of funding.

Deposits from customers (including deposits from resident and nonresident sectors) have thus been the largest component of banks' funding, representing 68.7 per cent of total liabilities of the sector as at end-September 2011 compared to 70.7 per cent a year earlier. Deposits and borrowings from banks, which are the main components of wholesale funding in Mauritius, made up 15.1 per cent of banks' total liabilities as at end-September 2011 compared to 15.7 per cent a year earlier. Shareholders' fund, which is quite a permanent source of funding, accounted for 8.5 per cent of total liabilities of banks as at end-September 2011 compared to 7.8 per cent a year earlier (Chart 3.28).

Interbank loans accounted for only 0.6 per cent of total liabilities of banks as at end-September 2011 compared to 0.3 per cent as at end-September 2010. They have remained mostly untapped since most domestic-owned banks could mobilise sufficient deposits to finance their lending activities.

The availability of funding in the domestic market has remained buoyant. Domestic-owned banks source most of their funding from deposits from resident sectors to finance their activities although the size of deposits from the nonresident sector is also significant. Customer deposits from resident sectors represented 62.0 per cent of the total liabilities of domestic-owned banks as at end-September 2011 compared to 64.4 per cent as at end-September 2010. Aggregate borrowings from banks, which represented only 4.3 per cent of the total liabilities of domesticowned banks, comprised mainly cheaper funding raised abroad to finance lending in foreign currency to the nonresident sector.

Foreign-owned banks operating in Mauritius have continued to retain satisfactory access to deposits from the nonresident sector to fund their operations although there was a mild contraction of 2.8 per cent over the year to September 2011. However, in order to manage maturity and currency mismatches,



Chart 3.27: Risk Diversification Matrix by Bank Type (September 2011)



some of the foreign-owned banks have continued to place a significant proportion of their nonresident deposits with their parent/sister banks while having recourse to intragroup funding to finance their core lending business. Despite the slowdown in shortterm wholesale funding markets internationally, parent banks have preferred to continue funding the operations of their foreign-owned subsidiaries rather than lending to other banks due to the higher risk of financial contagion in interbank markets globally. The aggregate borrowings from banks, mainly from abroad, of subsidiaries and branches of foreign-owned banks operating in Mauritius, respectively accounted for 22.7 per cent and 8.3 per cent of their total liabilities as at end-September 2011 compared to 23.8 per cent and 7.7 per cent as at end-September 2010.

Growth in deposits from customers in the banking sector has remained stable, averaging 8.4 per cent over the year to September 2011. The difference between deposits from customers (including deposits from resident and nonresident sectors) and advances – a measure of the funding gap that needs to be filled in from wholesale and other sources – indicates that the banking sector has been operating with surplus fund representing 6.3 per cent of total liabilities as at end-September 2011 compared to 11.6 per cent of total liabilities as at end-September 2011 compared to 11.6 per cent of total liabilities as at end-September 2010. The reduction was largely due to the fact that the growth in advances which was at 9.9 per cent as at end-September 2011 has continued to outweigh the growth in deposits which stood at 1.1 per cent, throughout most of 2011.

Banks continued to expand their cross-border activities amid a mild contraction in the share of foreign currency deposits to total deposits from 64.6 per cent as at end-September 2010 to 62.1 per cent as at end-September 2011. However, banks have been managing their funding and liquidity risks across currencies cautiously by matching, to a large extent, most of their liabilities with assets in the same foreign currency and maturity.

As at end-September 2011, demand and savings deposits represented 56.5 per cent of total deposits of banks while time deposits, which represent more stable long-term source of funding, accounted for the remaining 43.5 per cent of total deposits (Chart 3.30). The maturity pattern of the time deposits has remained steady over the years even though customers have a broad preference for shorter maturities, typically six months or less.

However, because demand and savings deposits have no contractual maturity and the customers can withdraw funds on request, there is a risk that a significant portion of demand and savings deposits may be withdrawn within a short period of time in reaction to adverse developments affecting banks. Hence, in order to meet their obligations, banks in Mauritius hold a reasonable proportion of liquid assets to manage liquidity risk. As at end-September 2011, the ratio of liquid assets to total deposits stood at 43.8 per cent, down by 4.8 percentage points compared to end-September 2010. The three main components of liquid assets consisted of government securities (21.1 per cent), placements with banks abroad (66.2 per cent) and balances with the Bank of Mauritius (7.8 per cent).



A reverse stress test conducted as at end-September 2011 has indicated that most banks would be able to sustain a drawdown in demand and savings deposits



of more than 15 per cent without going below the minimum statutory cash ratio requirement and without having recourse to repo transactions or any other liquidity-injecting operations by the Bank of Mauritius. Overall, with higher capital levels and a strong liquidity and funding position, the banking system is well placed to cope with periods of market stress.

3.4.6 Profitability

Banks' profitability has tended to be high in Mauritius compared to their counterparts in major advanced economies where, among others, lower trading revenues, lower demand for credit, and higher funding costs have weighed on profits. Quarterly reports have indicated that the annualised pre-tax profits of banks – which constitute the sum of pre-tax profits for the four last quarters - soared to a record Rs17.4 billion as at end-September 2011, from Rs11.2 billion as at end-September 2010. This was due, in part, to the disposal of the custody business by one bank and partly, to the realisation of the profits upon the disposal of some investments by a few foreignowned banks operating in Mauritius. However, even excluding those exceptional gains, the level of pre-tax profits was higher by historical standards.

Higher earnings have boosted banks' return on equity (ROE) and return on assets (ROA). The mean ROE has increased from 14.2 per cent as at end-September 2010 to 16.3 per cent as at end-September 2011 (Chart 3.31). Likewise, the mean ROA, as measured by the ratio of pre-tax profits to average assets, has edged up from 1.2 per cent as at end-September 2010 to 1.4 per cent as at end-September 2011 (Chart 3.32).



Revenue and Expenses

Net interest income remains the dominant source of revenue for the sector (Chart 3.33). As a percentage of total assets, it increased from 1.9 per cent as at end-September 2010 to 2.1 per cent as at end-September 2011. The improvement in net interest income was notable despite the low interest rate environment and hikes in the cash reserve ratio requirement during this period.

Net fees and commission income increased to 0.6 per cent of total assets as at end-September 2011, from 0.4 per cent a year earlier. Trading income remained volatile, reflecting shifts in market conditions, but was slightly higher in 2011. Net trading income as a percentage of total assets increased from 0.3 per cent as at end-September 2010 to 0.4 per cent as at end-September 2011.



Chart 3.32: Distribution of Return on Assets



The other components of income improved significantly to 0.3 per cent of total assets as at end-September 2011 compared to a more modest ratio of 0.1 per cent recorded a year earlier.

Consequently total operating income, expressed as a percentage of total assets, increased from 2.8 per cent as at end-September 2010 to 3.4 per cent as at end-September 2011.

Banks' non-interest expense to total assets was unchanged at 1.3 per cent while net loan impairment charges stood at 0.2 per cent as at end-September 2011. As a result, the sector's cost-to-income ratio contracted from 43.0 per cent as at end-September 2010 to 36.8 per cent as at end-September 2011, which represents an improvement compared to the preceding year.



Box III: Selected Financial Stability Indicators					
Core Set of Financial Soundness Indicators	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11
Capital					
Regulatory capital to risk-weighted assets	15.9%	15.8%	17.2%	16.3%	15.8%
Regulatory Tier 1 capital to risk-weighted assets	13.6%	13.6%	15.0%	14.1%	13.8%
Non-performing loans net of provisions to capital	8.6%	9.1%	8.2%	9.6%	9.6%
Asset Quality					
Non-performing loans to total gross loans	2.5%	2.8%	2.8%	2.6%	2.6%
Sectoral distribution of loans to total loans					
Interbank loans	0.3%	0.3%	0.3%	0.3%	0.6%
Central bank	0.0%	0.0%	0.0%	0.0%	0.0%
General Government	0.0%	0.0%	0.0%	0.0%	0.0%
Other financial corporations	1.2%	1.1%	1.4%	1.3%	1.2%
Nonfinancial corporations	33.9%	33.7%	34.2%	33.3%	33.0%
Other domestic sectors	15.9%	16.1%	15.3%	15.0%	14.7%
Non-residents	48.8%	48.8%	48.9%	50.0%	50.6%
Earnings and Profitability					
Return on assets	1.2%	1.4%	1.4%	1.6%	1.6%
Return on equity	16.7%	20.0%	19.3%	21.5%	22.1%
Interest margin to gross income	70.5%	67.1%	70.0%	65.4%	62.4%
Non-interest expenses to gross income	43.0%	38.9%	39.3%	36.7%	36.8%
Liquidity					
Core Liquid assets to total assets	23.6%	23.4%	19.8%	21.2%	18.2%
Core Liquid assets to short-term liabilities	31.2%	31.9%	28.1%	29.9%	26.7%
Sensitivity to Market Risk					
Net open foreign exchange position to capital	4.3%	7.0%	2.6%	2.0%	1.7%
Encouraged Set of Financial Soundness Indicators					
Capital to assets	7.0%	7.3%	7.5%	7.3%	7.3%
Value of large exposures to capital	217.0%	222.5%	197.4%	228.2%	250.0%
Customer deposits to total (non-interbank) loans	148.8%	149.6%	140.3%	142.7%	131.4%
Residential real estate loans to total loans	6.9%	6.8%	6.9%	6.8%	6.5%
Commercial real estate loans to total loans	3.2%	5.6%	6.2%	6.1%	6.0%
Trading income to total income	11.4%	7.8%	2.1%	8.5%	11.3%
Personnel expenses to non-interest expenses	50.9%	52.8%	54.5%	54.7%	54.5%

Box III (Continued): Selected Financial Stability Indicators					
Macroeconomic Indicators	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11
Headline Inflation	2.0%	2.9%	4.0%	5.1%	6.2%
Year-on-Year Inflation	2.5%	6.1%	7.2%	6.6%	6.3%
Key Repo Rate (end of period)	4.75%	4.75%	5.25%	5.50%	5.50%
Total Public Sector Debt/GDP (end of period)	58.6%	57.4%	56.3%	55.7%	55.4%
Total External Public Sector Debt/GDP (end of period)	10.0%	10.4%	10.9%	10.6%	10.9%
Net International Reserves/Imports of goods (No. of months)	6.6	7.0	6.0	6.3	6.2
Deposit/Broad Money Liabilities*	84.5%	83.8%	84.1%	84.2%	83.4%
Household Debt/GDP (end of period)**	16.0%	16.3%	16.3%	16.7%	17.2%
Corporate Debt/GDP (end of period)**	49.5%	50.6%	49.6%	50.2%	50.5%
	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3
Real GDP Growth***	6.1%	4.9%	4.6%	4.4%	3.7%
Unemployment Rate	7.6%	7.2%	8.3%	8.0%	7.9%
Current Account Deficit/GDP	8.5%	7.4%	4.5%	11.0%	13.2%

* Banks Deposits excluding GBL deposits, deposits from non-residents, Banks outside Mauritius, government deposits and Deposit from Banks inside Mauritius

** Debts contracted with banks only. *** Percentage change over corresponding period of previous year.

1. FSIs are calculated on a domestic consolidation basis using the Financial Soundness Indicators Compilation Guide of the International Monetary Fund. Figures may be slightly different from other parts of this report. 2. Total loans include advances to nonresident sectors.

3. Figures may not add up due to rounding.

3.5 Non-Bank Deposit-Taking Institutions

Following the surrender of licence by one Non-Bank Deposit-Taking Institution (NBDTI) and the merger of another with its parent company in 2011, the number of NBDTIs in operation has come down to nine.

3.5.1 Balance Sheet Growth

Activities of NBDTIs gathered momentum in 2011. The contraction of 1.4 per cent registered in total assets as at end-September 2010 reversed to a growth of 11.8 per cent as at end-September 2011, spurred by increases of 13.5 per cent and 6.3 per cent in the growth rates of loans and leases, respectively.

NBDTIs' total assets as a proportion of total banks' assets increased slightly to 5.7 per cent as at end-September 2011, from 5.3 per cent a year earlier. Leases and loans, the major components of the total assets of NBDTIs, constituted 69.2 per cent of total assets as at end-September 2011. On the liabilities side, NBDTIs, which hold deposits only in rupees and do not from carry out operations in foreign currencies, recorded increase of 12.6 per cent over the year to end-September 2011 in their deposits.

Liquidity of NBDTIs was at comfortable levels, with a liquidity ratio above the regulatory minimum requirement of 10 per cent. For the year ended September 2011, the liquid assets to total assets ratio and the liquid assets to total deposit ratio moved within ranges of 14.0-15.0 per cent and 23.1-24.4 per cent, respectively (Chart 3.35).

3.5.2 Capital Adequacy

Assets of NBDTIs remained concentrated in the 50 per cent and 100 per cent risk-weight buckets. As at end-September 2011, 78.7 per cent of on-balance sheet assets were invested in those buckets. The capital adequacy ratio of NBDTIs stood at 23.9 per cent as at end-September 2011 compared to 22.8 per cent a year earlier (Chart 3.36).

3.5.3 Sector-wise Distribution of Credit and NPLs

As at end-September 2011, credit extended by NBDTIs grew by 11.4 per cent year-on-year. Personal sector credit, which accounted for 56.2 per cent of total credit extended by NBDTIs, grew at a higher rate of 20.7 per cent. While credit to Construction fell, reflecting slowing activity in this sector, it still made up 20.3 per cent of total credit extended by NBDTIs. Manufacturing, Traders and Financial and Business Services in aggregate accounted for around 11 per cent of total credit extended by NBDTIs (Chart 3.37).

The overall ratio of NPLs to total credit for NBDTIs fell to 6.6 per cent as at end-September 2011, from 7.4 per cent as at end-September 2010. NPLs in the Construction sector





Chart 3.36: Risk Diversification Matrix of NBDTIs



represented the most significant portion of total NPLs, again reflecting the difficulties faced by the sector (Chart 3.38). NPLs in the Personal sector hovered around 18 per cent of the total NPLs of NBDTIs. In terms of specific provisioning, the coverage ratio for NBDTIs increased marginally to 37.5 per cent as at end-September 2011 compared to 37.4 per cent a year earlier.

3.6 Insurance sector

3.6.1 Solvency

An important issue regarding financial stability in the insurance sector is to safeguard insurers' ability to continue as going concerns so that they can continue to provide benefits to their policyholders. Insurance companies are thus required to maintain a stated capital of not less than Rs25 million under the Insurance Act



Chart 3.38: NPLs in Key Sectors as a Ratio of Total NPLs



2005 and a minimum capital requirement as per the FSC Solvency Rules. Minimum capital requirement are established as the minimum amounts appropriate for each insurer to support its overall business operations taking into consideration its size and risk profile.

Under the Insurance Rules 2007, the minimum capital requirement for the general insurance business should cover the total amount of capital required for balance sheet assets, investment above the concentration limit, policy liabilities, and reinsurance. For the long-term insurance business, the minimum capital requirement is determined by the company's actuary, based on (i) a stress test requirement determined in accordance with guidelines issued by the FSC to ensure that the long-term insurer remains solvent; or (ii) the higher of an amount of Rs25 million or an amount representing 13 weeks' operating expenses.

General insurers are required to manage their capital on the basis of 100 per cent of their minimum regulatory capital position and a capital requirement ratio that shall at all times be at the target level of 150 per cent of the minimum capital required. According to latest available data, general insurance companies have maintained capital requirement ratios of 244 per cent and 291 per cent in 2009 and 2010, respectively, higher than the target level. Large and medium-size companies have been found to have strong free reserves, appropriate reinsurance arrangements, and good profitability. However, several of the smaller companies have weak financial ratios.

Most long-term insurance companies have been assessed as being solvent by actuarial valuation reports. The industry's solvency average amounts to 143 per cent, which indicates that this insurance segment is in a relatively sound condition. Nonetheless, some companies are under close monitoring as their solvency margins are less than 100 per cent.

3.6.2 Exposure to Global Conditions

There is little indication that the insurance industry has been significantly adversely affected by weakening global conditions. In terms of shareholding, only 4 insurers, of which 2 are branches of foreign insurance companies, had significant overseas shareholders as at 31 December 2010. The industry's investments overseas have also been contained, with general insurers holding relatively few overseas investments given the short tail nature of their business and a very conservative investment strategy while long-term insurers have invested approximately 10 per cent of their total assets overseas. In addition, the amount receivable with regard to insurance policies issued in relation to risks situated outside Mauritius constitute a small proportion of total amount receivable as very few insurers issue such types of policies. Conversely, borrowings from foreign sources, which require the approval of the regulator, have been virtually non-existent.

Overall, the relatively limited exposure of the insurance sector to overseas investments has mitigated the impact of the current crisis on the sector.

3.6.3 Reinsurance Risk

The risk with regard to reinsurance, which is itself used to manage insurance risk, is not assessed as a major cause of concern for financial stability. Since capital is charged where insurers deal with unrated reinsurers, it has been observed that insurers have policies in place to ensure that risks are ceded to top-rated and credit worthy reinsurers. As such, the domestic insurance sector deals primarily with top-rated foreign reinsurers. The financial strength of the reinsurers is monitored on an annual basis.

3.6.4 Credit to Households

According to latest available data as at end-December 2010, credit to households by the insurance sector accounted for 86.1 per cent of their total loans while the share of non-performing loans in total household loans was 5 per cent (Table 3.6).

Table 3.6: Credit to Households by the Insurance Sector				
	Credit to Household	Credit toHouseholHouseholdNPLs toto TotalHouseholCreditCredit		
	(Rs million)	(Per cent)		
2005	3,945.1	99.3	2.3	
2006	3,781.1	94.9	3.1	
2007	3,626.7	91.0	4.3	
2008	3,614.9	87.1	4.0	
2009	3,483.2	87.5	4.8	
2010	3,443.8	86.1	5.0	

4. Financial System Infrastructure

The BIS Committee on Payment and Settlement Systems (CPSS) recognises strengthening of payment system infrastructures as one important way of maintaining financial stability. In order to maintain an efficient financial system infrastructure, the CPSS recommends that financial systems should support various systems, at minimum, one to carry out low value retail clearing and one for high value real time payments.

The introduction of the Bulk Clearing System (BCS), a low value payment stream, during the last quarter of 2011 was a notable addition to the payment system infrastructure of the country. Prior to this date, the payment system infrastructure comprised essentially the MACSS, which is a real time gross settlement system. Except for cheques, there was no system to carry out clearing of low value payments.

The BCS, which has the dual capability of clearing low value items and cheques, enables the matching of payment values with the appropriate payment stream. The objective of the BCS is to provide a separate clearing system for retail bulk payments, including cheques with net settlement on the MACSS. The latter system which is of systemic importance, will be dedicated to clearing large value time sensitive payments only, further contributing towards promoting the stability of the financial system.

4.1 MACSS and the CPSS Core Principles

MACSS is constantly reviewed to ensure compliance with the CPSS Core Principles of Systemically Important Payment Systems (SIPS) and corrective actions are undertaken as and when deemed necessary. This provides the basis for ensuring the resilience and stability of the MACSS. In 2011, the MACSS operated without any downtime despite of handling 14 per cent more transactions compared to the preceding year.

The MACSS basically satisfies the Core Principles of SIPS. Its legal foundation is found in the Bank of Mauritius Act 2004 while the rules and obligations of participants and the procedures for liquidity and risk management are clearly spelt out in the MACSS Terms and Conditions and the MACSS Participant Procedures. These documents are publicly accessible on the Bank's website. The MACSS is based on the credit push principle and payment finality is guaranteed and irrevocable after settlement. Participants hold accounts with the Central Bank on the MACSS through which settlements are carried out.

The MACSS application architecture was designed with a high degree of tolerance towards faults, resilience and availability. The system operates with a hot backup site where application data are replicated in real time for each transaction. In case of failure of the main system, the MACSS application is designed to resume operations from the point of failure.

The direct participants of MACSS are banks which are linked to the Bank through a secured network in a Closed User Group. No other party can access the network unless authorised by the Bank of Mauritius. The Payment messages are carried through the SWIFT network whose security and resilience to fault is guaranteed by the provider.

Moreover, operational procedures have been selected to further enhance security and availability of the system. Daily backups of the application are taken and tapes are stored in fireproof safes at the primary and backup site. The end of day procedures of the application ensure that the files are consistent at the primary and backup sites.

In order to ensure that backup procedures and business continuity plans are effective, a fallback connectivity test is carried out on the second Tuesday of every quarter. During this exercise, operations from the main site are stopped, and all participants operate from the fallback site for a complete day. The fallback site of the Bank is situated in a government security zone where access is strictly controlled. Electricity and telecommunications services are also guaranteed.

The Bank has a contractual obligation to guarantee 99 per cent availability of the MACSS application. The design of the application together with the rigour of the processes have so far met the availability target.

Payment Throughput in 2011

The throughput on MACSS, measured in terms of volume and value of transactions, has increased by an average of 20 per cent in 2011 compared to 2010.

In 2011, a total number of 441,223 transactions were settled on MACSS, while the value of transactions amounted to Rs2,108 trillion compared to Rs1,787 trillion in the previous year. MACSS operated without any notable downtime during the period and all transactions were settled without delay, underscoring the robustness of the system's architecture.

Despite the increase in the value and volume of MACSS transactions over 2011, the introduction of a separate low value clearing system with net settlement on MACSS, the BCS, has led to falls in the volume and value of payments on MACSS in the last quarter of 2011 (Chart 4.1). It is expected that the BCS will help increase the resilience of MACSS since the latter will mainly service high value time sensitive transactions.

4.2 The Bulk Clearing System

The BCS is the clearing system used for low value, high volume payments such as salary, interest and dividend payment. Such payments are generally carried out in bulk for same day settlement. Prior to the introduction of the BCS, there was no system for making such payments and banks resorted to informal arrangements where payment files were exchanged and the gross amount of the payments were settled through MACSS. This arrangement involved many disadvantages, namely an undefined settlement finality and the absence of a dispute resolution mechanism. The BCS addresses such risks and adds a new dimension to the payment streams. With the BCS, it is possible for banks to route payments according to the value and time sensitivity. Effective 6 September 2011, the facility to exchange files between banks has thus been discontinued and the clearing of retail payments is effected through the BCS.

Cheque Truncation System

The Cheque Truncation System (CTS) is another feature of the BCS. It enables the electronic clearing of cheques through the cheque MICR data and digital image. With this system the Bank has an effective tool to make cheque clearing faster and more secure, enhancing financial stability. The security of the whole process is achieved by digitally signing cheque images at source. The system is capable of detecting duplicate, fake or tampered cheques. Since cheques carry an intrinsic settlement risk, the CTS has been desined to detect high value cheques of above Rs1 million for expedited, real time clearing. These cheques constitute a small proportion of total cheques cleared (Table 4.1).

As from March 2012, high value cheques will be removed from the clearing batch and routed to the MACSS for immediate settlement, thereby reducing significantly the risks associated with settlement of such payments.

Increase in the Number of Clearing Cycles

The BCS has necessitated the introduction of two additional clearing sessions to accommodate retail payments and cheques. Since the system is capable of clearing cheques and retail payments within the same cycle, banks effectively have four clearing sessions per day. This procedure enables faster clearing of payment instruments and a significant reduction in settlement risks as the amounts to be settled per cycle are less. Moreover, as cheques which are debit instruments,



Table 4.1: Value Proportion of Cheques Cleared on the CTS				
	Less than Rs100,000	Between Rs100,000 and Rs1 million	Between Rs1 million and Rs10 million	Above Rs10 million
Number of Cheques	1,717,283	123,441	12,231	430
Percentage of total	92.66	6.66	0.66	0.02

and retail payments which are credit instruments, are cleared together, the net settlement obligation per participant is effectively reduced, giving banks more room for manoeuvre with regard to their liquidity management.

In spite of the fact that volume and value of transactions increased by about 20 per cent in 2011 compared to 2010, the hourly distribution of transactions has not surged by the same extent. Indeed the overall distribution became flatter and smoother due to the increase in the number of clearing and settlement cycles. This enhances efficiency in payment settlement and promotes stability of the system (Chart 4.2 and 4.3).



Chart 4.3: Hourly Distribution of Value of <u>Transactions on MACSS</u> (October - December)



5. Risks and Outlook

With the intensification of the euro area crisis in the second half of 2011 and the related banking problems and turmoil in financial markets, the risks to global financial stability have increased. A number of tough policy measures, including strenuous fiscal austerity programs, have been implemented in efforts to ward off the destabilising outcomes of sovereign debt default. While latest developments show that the determination of authorities appears to be paying off, troubled sovereigns still face significant funding challenges that can potentially add to the current uncertainty and volatility in financial markets and exacerbate the downturn in the real economy. The latest IMF forecasts have significantly revised downwards global growth as well as growth in advanced, emerging and developing economies. However, as long as the detrimental links between weak sovereigns, fragile financial markets and decelerating economy continue to exist, substantial downside risks to the growth outlook will be present.

Banks exposed to the risk of sovereign default have faced a liquidity crunch earlier in the second semester 2011 as interbank lending virtually stalled with the rise in risk aversion. Although financial markets strains have eased recently, partly as a result of operations undertaken by the ECB, banks remain under the constant threat of a potential sovereign default and have consequently engaged in deleveraging. The planned increase in European banks' capital requirements has added to deleveraging needs. While useful and necessary under the circumstances, deleveraging poses the risk of increased market volatility as assets lose value and investor confidence falls even more. Reflecting the difficult and uncertain market conditions, banks have tightened credit standards, which augments the risks to the global economy.

Spillovers from the euro area crisis through financial and trade channels to the US appear to have been rather limited so far. With regard to key emerging economies, the euro area crisis has adversely affected trade volumes. The IMF has estimated that world trade growth would grow at a sheer 3.8 per cent in 2012 – around 2 percentage points below its previous forecast – compared to 6.9 per cent in 2011. There are risks that the impact of the euro zone crisis may become more important should euro area growth and banking system deteriorate significantly in the future. Additional risks for emerging economies arise through European banks' deleveraging. This could result in cross-border loans to emerging countries being curtailed, weighing down their growth prospects even more. Deleveraging could also take the form of a pullback in investment flows to emerging economies, which would influence market liquidity and asset values in those economies. Growth prospects would also be affected although a number of emerging countries have sufficient buffers to face such external shocks.

On the domestic front, the main risk to financial stability will stem from a significant deterioration of the euro crisis and worsening investor sentiment. While some sectors are expected to maintain a reasonable growth rate, export-led sectors are particularly vulnerable to weakening global economic conditions and can cause economic activity to slow down more than expected. The stagnation in private investment remains a concern that could also weigh on the economy although it could be compensated to some extent by the planned increase in public sector investment, provided projects are timely implemented.

Although external vulnerabilities, in general, remain significant, various indicators suggest that the country has some leeway to withstand shocks. Financial flows have so far been adequate to finance the current account deficit. Solvency indicators with regard to gross external debt have remained broadly unchanged and do not indicate any major concerns. Gross official international reserves have continued to go up and have comfortably satisfied IMF traditional benchmarks in terms of import cover and ratios to broad money liabilities and gross external debt.

With regard to fiscal policy, the overall budget deficit is set to increase this year. Government has not had any problem funding its debt either from domestic or foreign sources. While increased reliance on foreign debt to finance government's requirements may increase foreign exchange and interest rate risks, government debt remains within reasonable limits and does not pose major financial stability concerns overall.

Domestic financial markets have tended to reflect developments in international markets although

they have functioned reasonably well. Partly as a result of the Bank's interventions on the domestic money and foreign exchange markets, money market rates, including yields on shorter-term government securities, have not displayed undue volatility while the foreign exchange market has been generally wellbehaved. The Bank remains committed to reducing excessive markets volatility.

The domestic banking sector has remained profitable, with individual banks' rating pointing to a rather stable outlook. The growth in banks' assets has progressed, albeit at a slower rate, and the sector is well-capitalised, with most banks well positioned to meet Basel III requirements when they will be phased in. Stress tests performed under a scenario of weakening economic activity demonstrate the ability of banks to withstand such shocks. Concentration in the banking sector is expected to stay moderate. The credit concentration ratio, which is currently well below the prudential requirement, is not expected to increase substantially in the foreseeable future.

Non-performing loans to total loans are presently low and are not expected to increase massively. In terms of cross-border loans, banks are mostly exposed to Asia, and India in particular. Risks to financial stability arising from those cross-border loans are considered to be manageable as non-performing loans are low. The direct exposure of the banking sector to the euro area remains limited. Indirect effects could, however, be felt through macroeconomic linkages, notably via a deterioration in asset quality or a fall in activity.

To strengthen the financial system and reduce vulnerabilities, the Bank is envisaging reducing the complexity of the banking and financial structures in the country to facilitate risk assessment, increase the effectiveness of supervision, and facilitate the efficient resolution of difficulties that banks may encounter. It will thus simplify the structure of domestic systemicallyimportant financial institutions, particularly that of the bank-subsidiary model where a bank is the parent of subsidiaries in the group, and separate banking from non-banking activities to ensure that depositors' money is not at risk.

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