

Financial Stability Report
2012

CENTRAL BANK OF BARBADOS

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Abbreviations

Abbreviation	*Meaning*
BCP	Basle Core Principles
BSE	Barbados Stock Exchange
CAR	Capital Adequacy Ratio
CARICOM	Caribbean Community
CBB	Central Bank of Barbados
CGBS	Caribbean Group of Banking Supervisors
CIBC	Canadian Imperial Bank of Commerce
DTI	Deposit Taking Institution
FIA	Financial Institutions Act
FSAP	Financial Sector Assessment Programme
FSC	Financial Services Commission
FSI	Financial Stability Indicator
GDP	Gross Domestic Product
IBFS	International Business and Financial Services
JSE	Jamaican Stock Exchange
NPL	Non-performing Loan
ROA	Return on Assets
ROE	Return on Equity
TTSE	Trinidad and Tobago Stock Exchange
USA/US	United States of America

Preface

This is the second issue of the Central Bank of Barbados' Financial Stability Report, produced in collaboration with the Financial Services Commission (FSC). The Central Bank and the FSC are jointly responsible for the continuous oversight of the financial system, to assess vulnerabilities and to initiate policies to increase the resilience of the system in the face of possible adverse events. The Central Bank's Financial Stability Unit works with the FSC's staff to ensure that the assessment of risk exposures covers the activities of banks, insurance companies, non-bank financial institutions, credit unions, the activities of the Barbados Securities Exchange and issues and redemptions of government securities. This report analyses a range of financial stability indicators for banks and other financial institutions, as well as balance sheet and income and expenditure trends. For the banking system, financial forecasts are used to project expectations for capital adequacy and the quality of credit. Progressive stress tests are also used to test for possible contagion among banks, and from banks' exposures to financial institutions abroad.

The FSR is published annually and, like most of the Central Bank's publications, is published exclusively online. In June of each year the Central Bank publishes an update on the annual FSR.

1 Overview

The financial system remained resilient amid dampened domestic economic activity and the protracted correction in global financial markets. Asset growth at Deposit Taking Institutions (DTIs) was moderate. The system remained liquid and profitable, as entities continued to hold more capital than required by local regulatory or international guidelines, suggesting that the banking system as a whole is able to withstand various economic shocks. Moreover, commercial banks, which dominate deposit taking activity, are all affiliated with strong international or regional parent banks, which are all well capitalised.

The slowdown in economic growth contributed to weak loan demand and a further deterioration in credit quality among all DTIs. Nevertheless, most of these NPLs were classified as being in the least critical category, suggesting reasonable recovery prospects. Actual losses for commercial banks have generally been less than one percent of total loans. While the levels of NPLs were less than at commercial banks, a greater proportion of credit unions' non-performing loans were classified as being in the more critical credit category.

Various stress tests were undertaken to determine the impact of credit risk on the capital adequacy of banks, non-banks and credit unions. Analyses suggest that these institutions are able to remain solvent even in the face of sizeable shocks. In addition, contagion effects were assessed based on the interconnectedness of commercial banks as well as their exposures to other regions, and the results underscored the resilience of the financial system.

The local insurance industry has also shown resilience despite the initial uncertainty generated by the demise of CLICO (Barbados) Limited. Corporate profits among life and general insurers grew by almost 30 percent in 2011 compared to 2010. However, a reduction in claims paid out by insurers was the driver of profit growth, as premium revenues were below those of 2010. The industry remained stable with liquidity levels and capitalisation above internationally recognised benchmarks. Notwithstanding the sale of the mortgage and general insurance arms of CLICO, the settlement of all obligations remained unresolved at the end of the year.[1] While there is no regional strategy for resolving the CLICO matter, the Judicial Manager for CLICO (Barbados) announced that the Barbadian High Court had granted permission to restructure the company. The restructuring plan proposed that the value of liabilities be written down to match the assets of the company and that all assets and liabilities be transferred into a new company.

During 2012, Barbados' regulatory framework continued to be enhanced across the financial landscape through the issuance of guidance notes for the insurance industry, the implementation

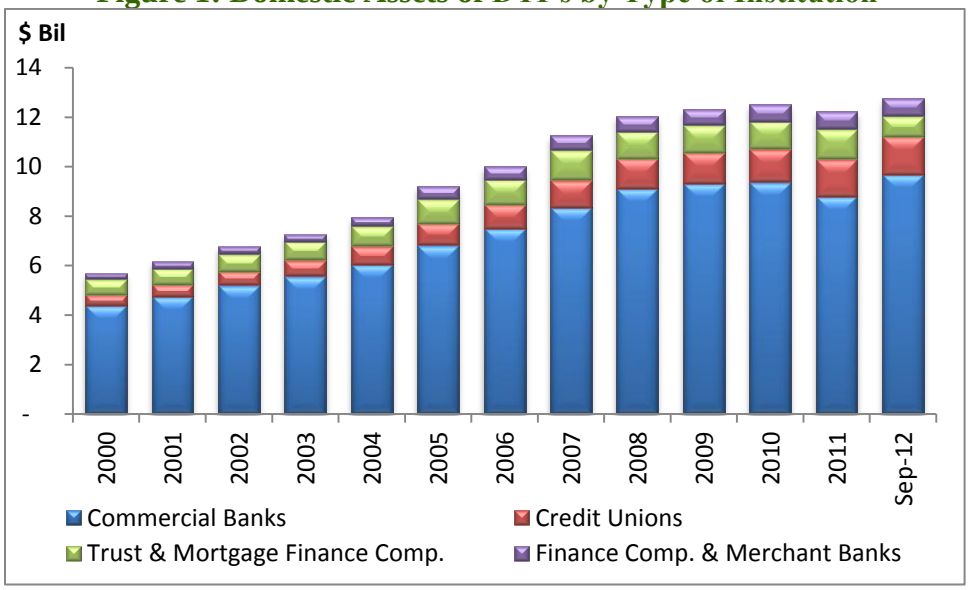
[1] CLICO (General) Insurance Limited was purchased and rebranded as Sun General Insurance in early 2012, while the Barbados Public Workers Co-operative Credit Union Ltd purchased CLICO Mortgage and Finance in 2010.

of additional aspects of the Basle framework for commercial banks, and a review of the capitalisation rules for the credit unions.

2 Trends in Financial Sector Activity[2]

In spite of the generally weak economic environment, the domestic assets of DTI's[3] in Barbados grew by 4.5 percent as at September 2012, to $12 billion. Commercial banks' assets, which account for 80 percent of DTI's domestic assets, recorded an underlying growth of 4.8 percent during the year, as banks increased their investments in Treasury bills given the weak loan demand. In addition, there was a shift of assets from trust and mortgage finance companies to commercial banks due to the amalgamation of a trust company and its parent bank. Non-banks[4] and credit unions, each of which accounts for 10 percent of DTI's assets, grew by 4.7 percent and 3.2 percent, respectively.

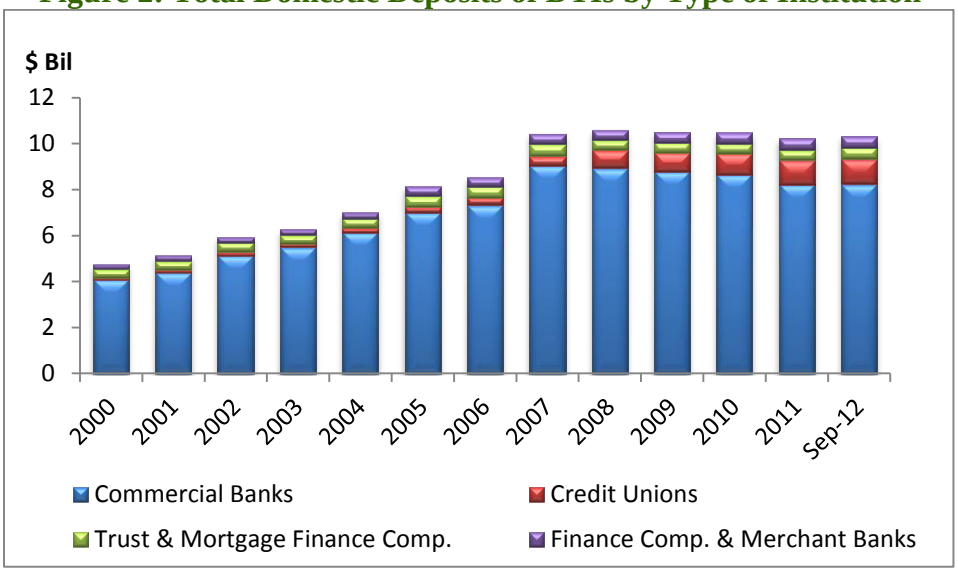
Figure 1: Domestic Assets of DTI's by Type of Institution



Total loans comprised almost 70 percent of DTI's domestic assets as at September 2012. The consolidated loan portfolio has been somewhat constrained over the past few years as the shows that loans from DTIs remained largely unchanged at around $8.4 billion even though the underlying level of loans at commercial banks fell slightly. This can be compared to the 10 percent average growth between 2000 and 2008. Domestic deposits on the other hand, remained relatively flat (1 percent growth), even though the accumulated funds at trust and mortgage institutions as well as credit unions rose by over 14.3 percent and 2.7 percent, respectively.

[2] The data used in this section of the report is up to September 2012.
[3] DTI's comprise commercial banks, credit unions and non-bank financial institutions.
[4] Non-banks comprise trust and mortgage finance companies, as well as finance companies and merchant banks, each associated with a parent company operating in the financial sector.

Figure 2: Total Domestic Deposits of DTIs by Type of Institution



3 Banking System

Following broad-based declines in 2011, commercial banks' domestic assets expanded 4.8 percent during 2012, net of the consolidation of a bank and its associated trust and mortgage finance company. This growth was mainly reflected in a 20 percent increase in investments, primarily government Treasury Bills. The distribution of commercial banks' assets was similar to 2011 with loans and advances accounting for the majority of total assets (48 percent), followed by foreign assets (14 percent) and investments (12 percent).

Figure 3: Domestic Assets of Commercial Banks

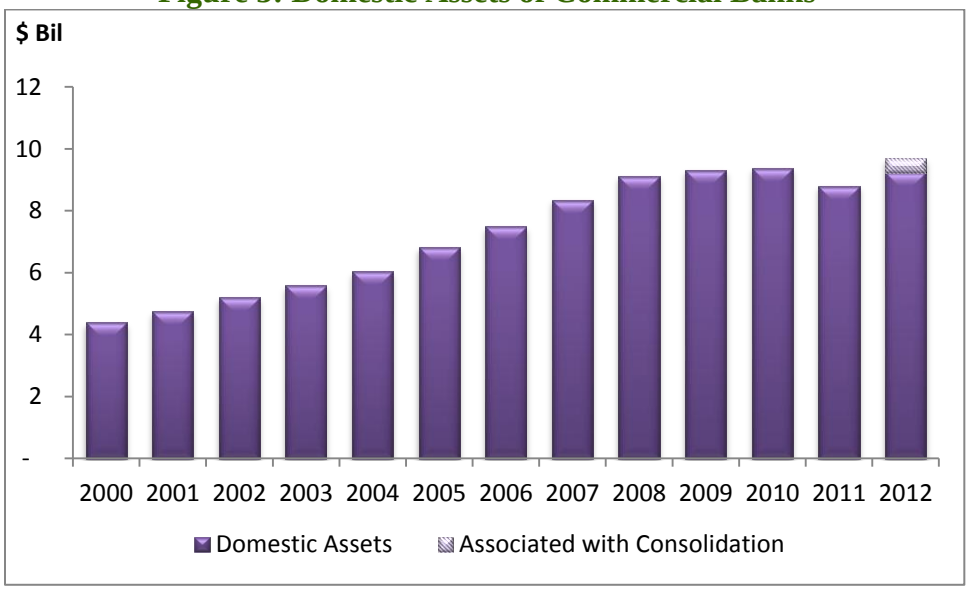
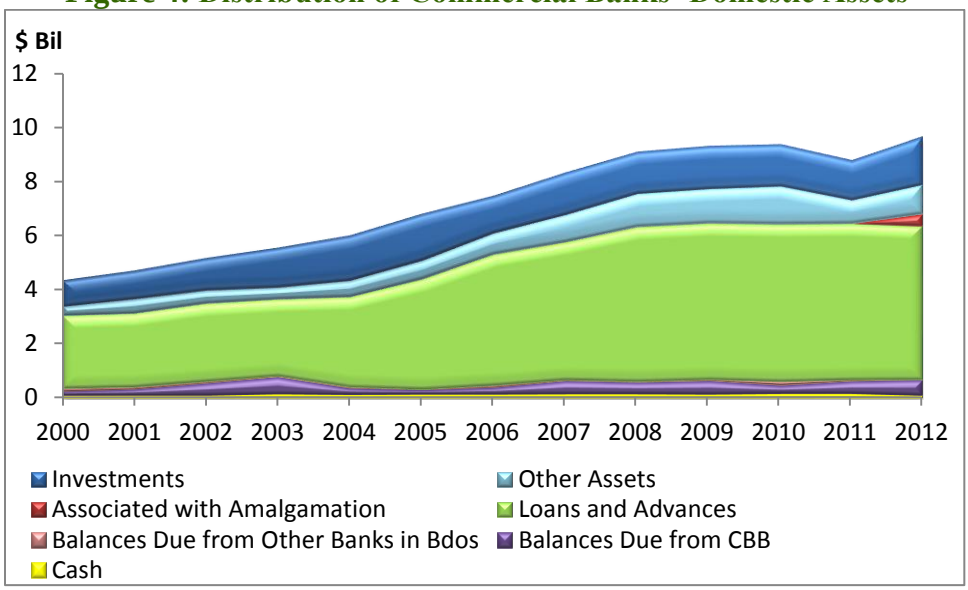


Figure 4: Distribution of Commercial Banks' Domestic Assets



The loan portfolio of banks remained relatively flat since 2008, apart from the 5.5 percent increase which resulted from the merged operations in 2012. The consolidation only impacted the personal category, but a notable expansion in credit occurred in the tourism sector (5.8 percent), while professional and other services fell by 6 percent. All other sectors remained on par. Currently, personal loans account for the majority (48 percent) of total loans and advances, trailed by professional and other services (15 percent).

Figure 5: Total Loans and Advances of Commercial Banks

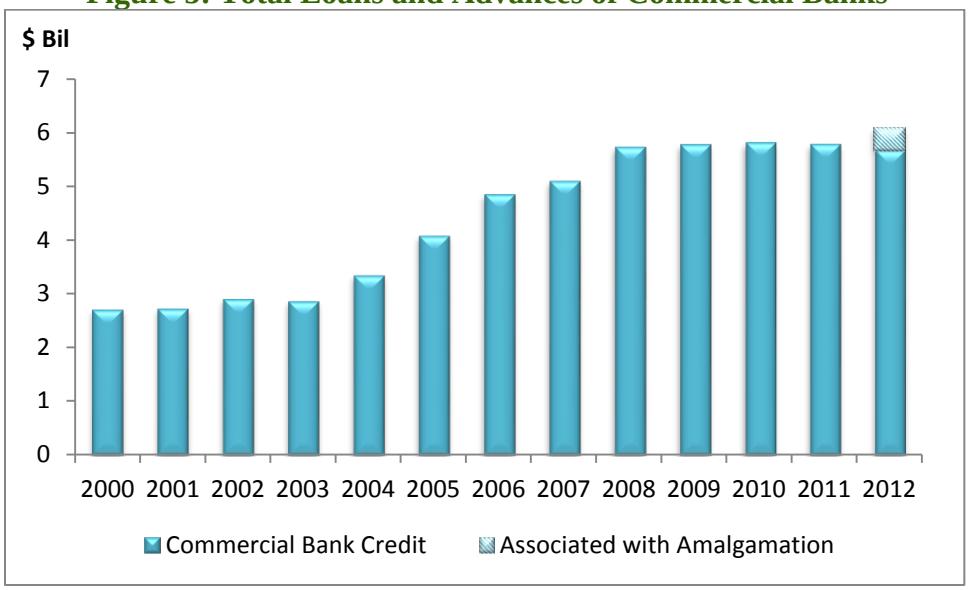


Figure 6: Distribution of Total Loans and Advances

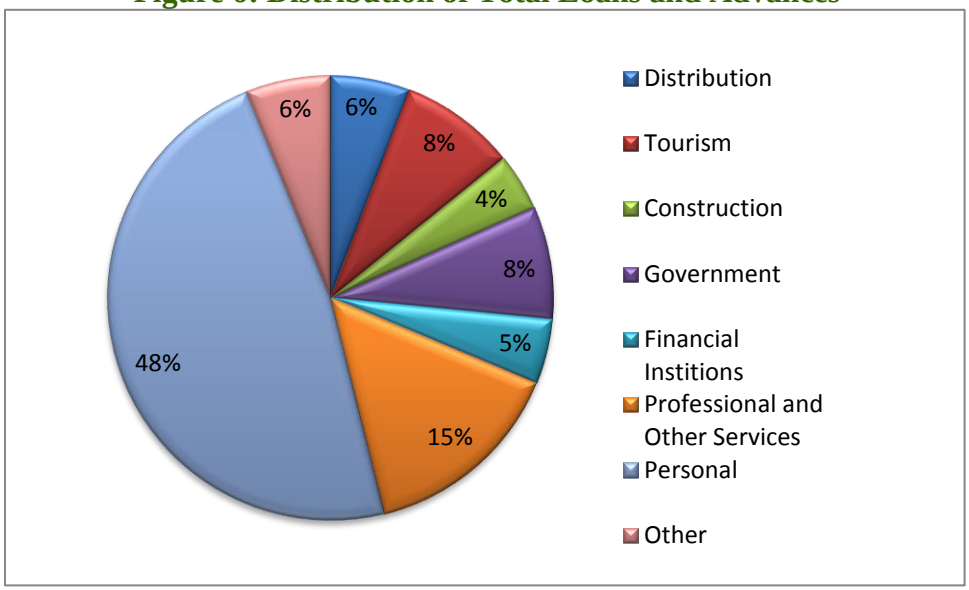
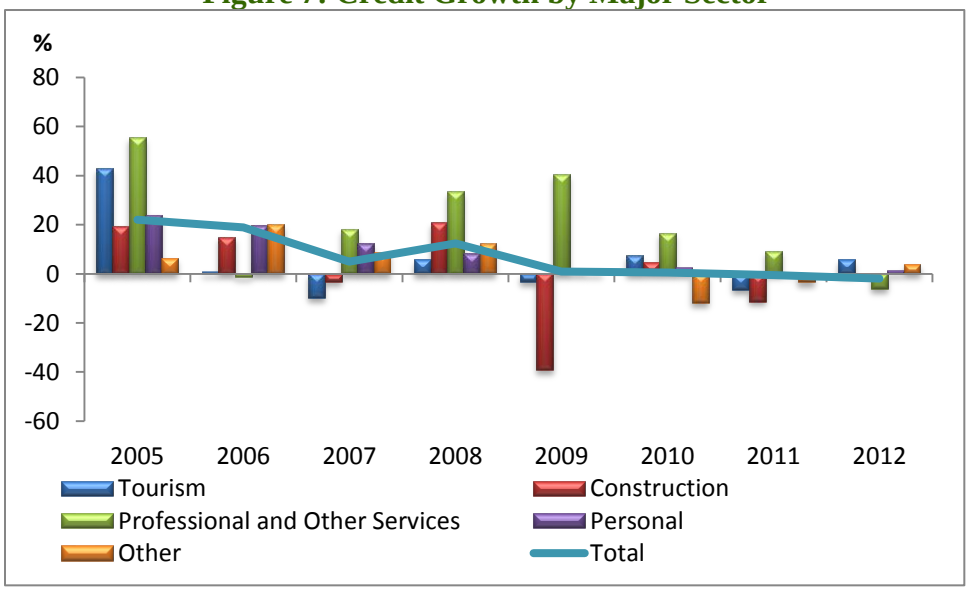


Figure 7: Credit Growth by Major Sector



Box 1: Regulatory and Supervisory Developments

During 2012, the Central Bank of Barbados (Bank) continued its collaboration with other domestic regulators and stakeholders on various regulatory and supervisory issues, including those relating to international business and financial services. The Bank contributed to the regional financial stability project being undertaken by CARICOM and participated in regional regulatory working groups on regional crisis management, consolidated supervision and Basel II/III.

Policy Development

The Bank has made progress with the implementation of the Market Risk Amendment to the Basel I framework, which is to be implemented in 2013. A Market Risk Survey was issued to the banking industry, which sought to determine the level of market risk faced by licensees. A Guideline on Measuring Capital Adequacy for Market Risk and Market Risk Regulatory Reporting forms were also issued. The Guideline provides licensees with guidance on the calculation of the minimum capital requirements for market risk in the trading book. Other guidelines issued relate to the Supervisory Management Framework, the Consolidated Supervision Framework, Credit Risk Management, Intervention Policy, Basle II, Large Exposures and Interest Rate Risk Management. The Bank has updated its approach to Basel II implementation, which involves three phases: (1) a focus on strengthening the qualitative aspects of Pillar 2; (2) the implementation of the Market Risk Amendment; and (3) implementation of Pillars 1 & 3. It is expected that Basel II should be fully implemented by 2015.

Also in 2012, the Bank developed a draft Bill to amend the Financial Institutions Act, Cap. 324A. These amendments essentially sought to address the weaknesses and gaps identified by the Financial Sector Assessment (FSAP) of 2008, and to bring the local regulatory framework more in line with Pillar 2 of Basel 2. Along with amendments to specific terms and definitions for the purpose of clarity and correctness, the Bill's key amendments seek to broaden the scope of the Bank's supervisory power, inclusive of consolidated supervision, and its capacity to impose specific target capital ratios, specify remedial action and impose non-financial penalties for non-compliance.

Financial Sector Assessment Programme (FSAP) Preparation

The Bank conducted a self-assessment of compliance with the Basel Core Principles (BCPs) for Effective Banking Supervision in preparation for an FSAP in 2013. The Bank has been collaborating with the Financial Services Commission, the Barbados Deposit Insurance Corporation and the Ministry of Finance to prepare Barbados for this assessment.

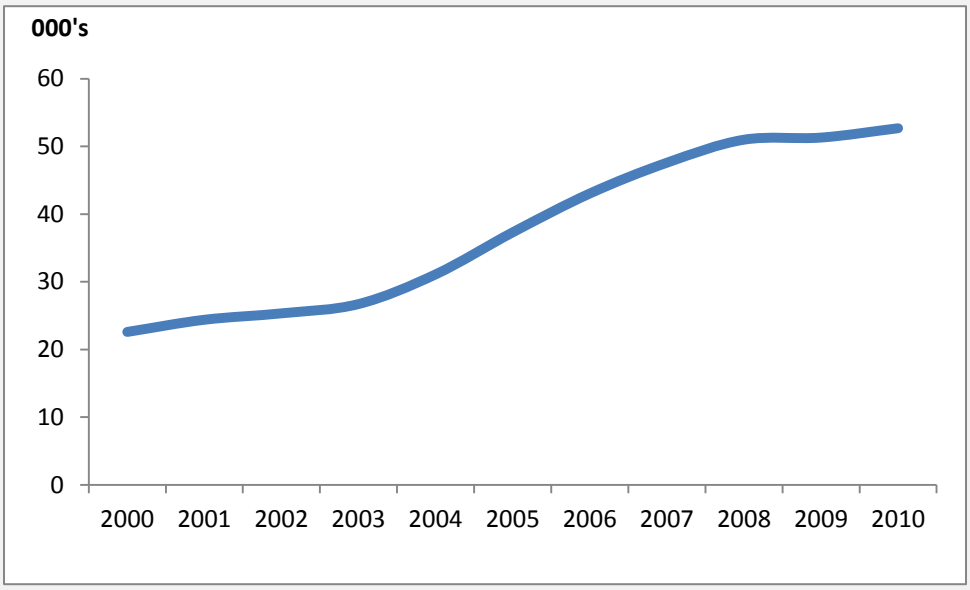
Box 2: Household Debt and Financial Stability in Barbados[5]

Prior to the 2008 worldwide recession, household debt experienced a secular rise across a wide range of countries. The optimistic view of rising household debt was that the trend was good for households, reflecting the ability to smooth consumption over time and a more efficient financial sector. The pessimistic view was that it resulted in increased vulnerability for households, raising the risk that corrections would trigger or exacerbate any initial economic slowdown.

At the end of 2009, household debt as a percentage of GDP in Barbados was just under 60 percent. This figure was above that of Finland (54 percent) and just slightly below that for Germany (64 percent). In contrast, countries such as Spain (89 percent), Ireland (121 percent) and the United States (99 percent) had considerably higher household debt-to-GDP ratios.[6]

Over a 20 year period (1990-2010) total household debt in Barbados grew from an estimated $500 million to approximately $4.5 billion. The estimate suggests an average debt per household of approximately $53,000.

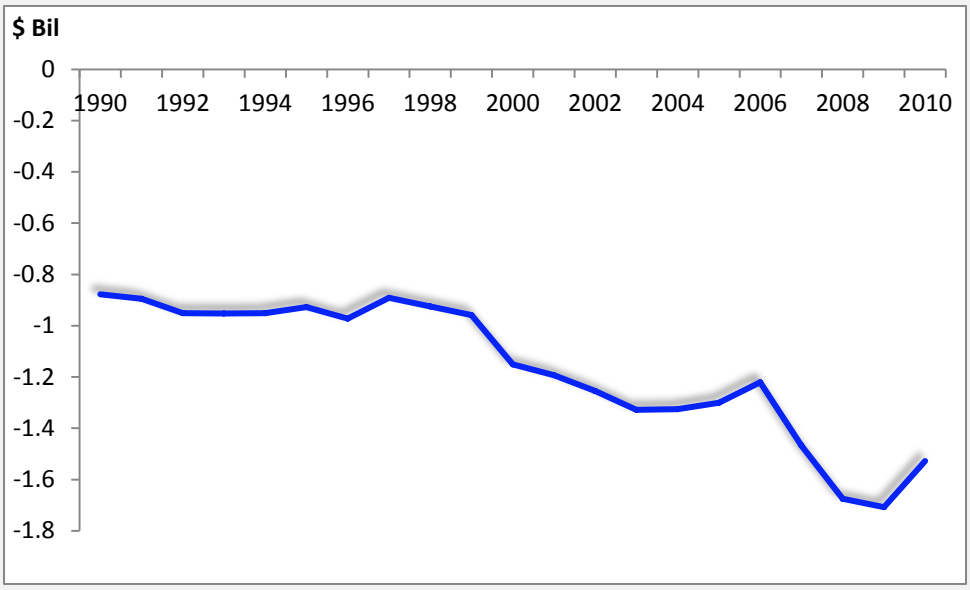
Debt Per Household in Barbados



The significant determinants of the stability of household debt are economic growth, unemployment, loan-to-value ratios, wages growth and the cost of credit.

[5] This is a summary from Carter et al 2012. Please see working paper for the full discussion.
[6] Barbados' household debt to GDP ratio is significantly below the 85% threshold as suggested by Cecchetti et al. (2011).

Net Indebtedness of Households in Barbados



While gross household debt has grown significantly, net indebtedness continues to be largely negative. However, it is recommended that authorities closely monitor these indicators as they have been leading predictors of financial difficulties in other countries.

References:

Carter, J., Moore, W. and Jackman, M. (2012). "Is the Magnitude of Household Debt in Barbados a Concern?" Economic Review, Volume XXXVIII, Issue 2, Central Bank of Barbados.

Cecchetti, S.G., Mohanty, M.S. Zampolli, F. (2011). The Real Effects of Debt. BIS Working Paper No. 352, Monetary Economic Department

Since the onset of the crisis in 2008, domestic deposits have remained generally flat. During 2012 marginal growth of 1.7 percent was recorded, with no significant movements observed in any of the depositor categories. Total domestic deposits continue to be dominated by private individuals (53 percent), followed by business firms (16 percent). When classified by type, savings deposits have historically accounted for a greater portion of the total than time and demand deposits. The overall marginal increase recorded in 2012 was uneven as demand deposits fell by 10 percent, while savings and time deposits increased by 2 percent and 16 percent, respectively.

Figure 8: Total Domestic Deposits by Depositor

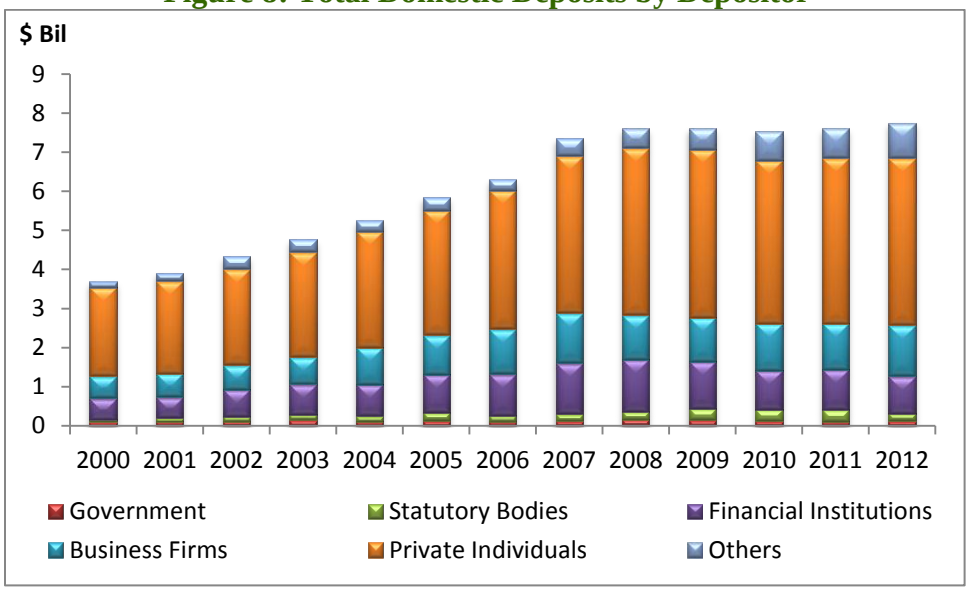


Figure 9: Total Domestic Deposits by Type

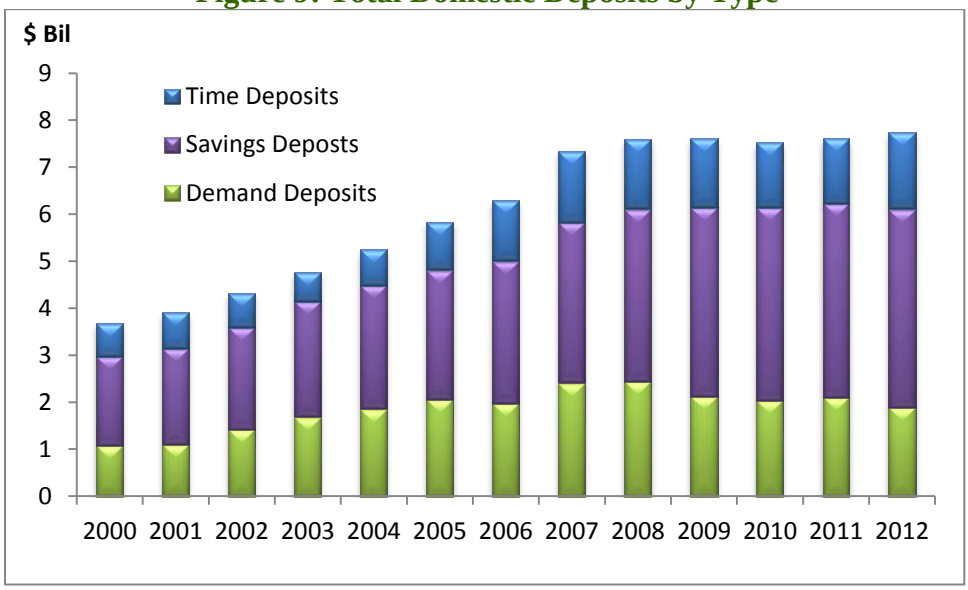


Figure 10: Total Domestic Deposit Growth by Type

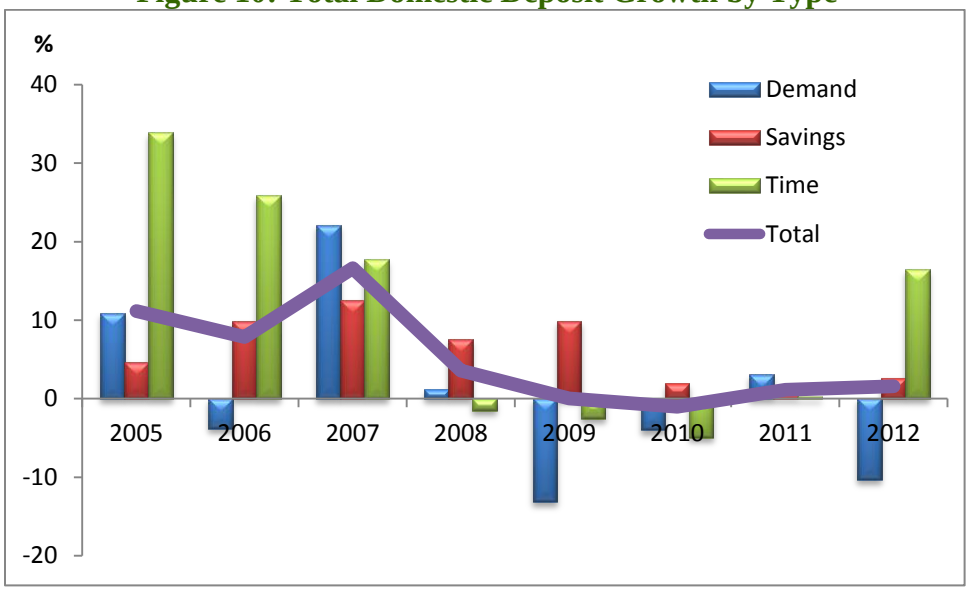


Figure 11: Savings Deposits by Depositor

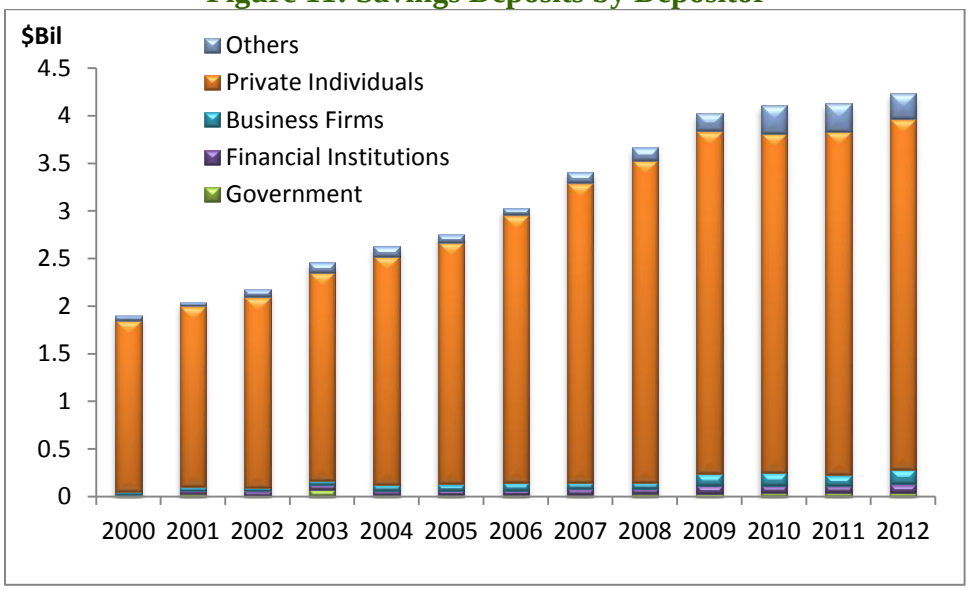
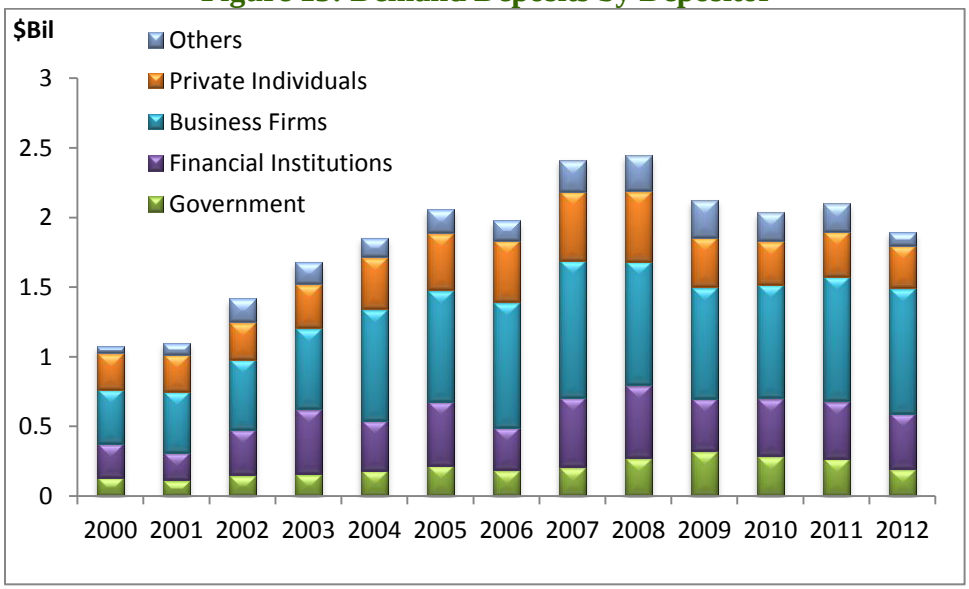


Figure 12: Time Deposits by Depositor

Figure 13: Demand Deposits by Depositor



Private individuals hold the majority of savings deposits, accounting for approximately 87 percent of total deposits. Historically, time deposits and demand deposits have been more diversified in terms of depositor categories, with business firms dominating the demand deposits and financial institutions accounting for the majority of time deposits.

As a result of these movements, liquidity in the banking system continues to be high, reflected by relatively stable liquid-asset ratios and loan-to-deposit ratios. The liquid-assets ratio increased from 12 percent at the end of 2011 to 13.2 percent as at September 2012.

Figure 14: Liquidity Indicators

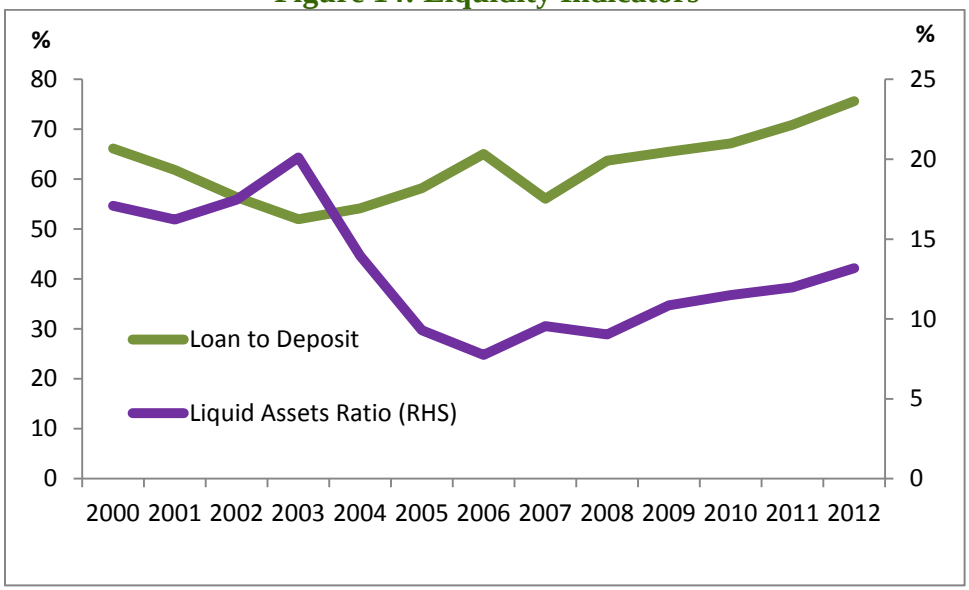
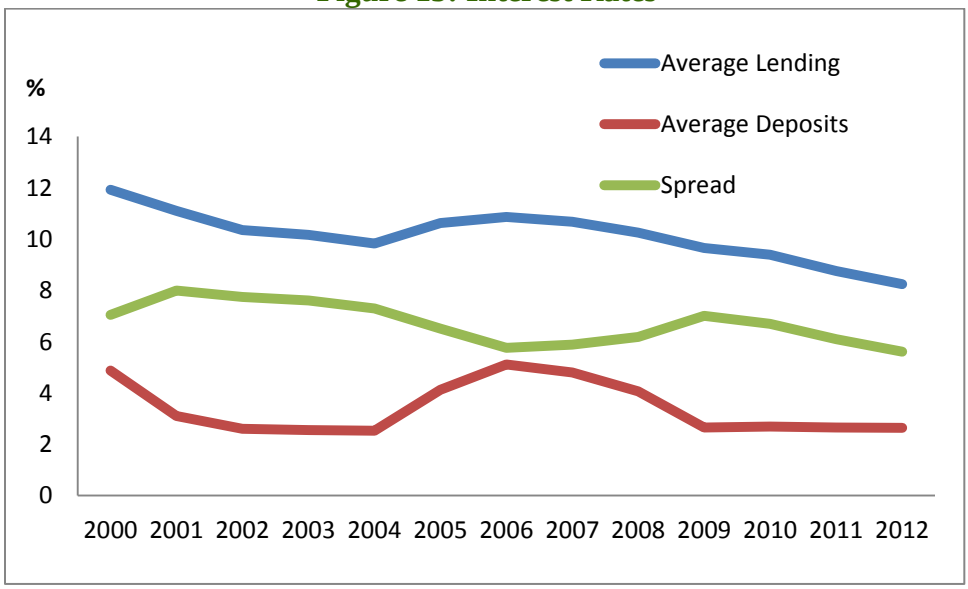


Figure 15: Interest Rates



The spread between average lending and average deposit rates has been declining since 2009, falling from 7 percent in that year to 5.6 percent in 2012. This outturn was driven mainly by reductions in the average lending rate, a reflection of weak loan demand since 2008.

3.1 Commercial Banks' Financial Soundness Indicators

Table 1: Key FSIs for the Domestic Commercial Banking System

	2006	2007	2008	2009	2010	2011	2012
Solvency Indicators							
Capital Adequacy Ratio (CAR)	14.6	16.4	16.1	17.5	17.1	19.3	19.6
Liquidity Indicators[#]							
Loan to deposit ratio (%)	65.0	56.1	63.7	65.5	67.2	70.9	75.6
Demand deposits to total deposits (%)	35.9	36.4	34.8	36.6	35.2	32.1	27.3
Domestic demand deposits to total domestic deposits	31.4	32.9	32.1	27.9	27.1	27.6	24.4
Liquid assets, % of total assets	7.7	9.5	9.0	10.8	11.5	12.0	13.2
Credit Risk Indicators							
Total assets (growth rate, %)	10.9	23.5	4.2	-5.6	-1.5	-4.7	9.0[*]
Domestic assets (growth rate, %)	9.8	11.4	9.2	2.3	0.6	-6.1	4.8[*]
Loans and advances (growth rate, %)	18.7	4.9	12.4	0.9	1.0	-0.5	-1.9[*]
Non-performing loans ratio (%)	4.5	2.9	3.4	7.9	10.8	11.1	12.7
Substandard loans/ Total loans (%)	3.5	2.1	2.5	6.7	9.1	8.7	9.9
Doubtful loans/ Total loans (%)	0.3	0.3	0.4	0.4	1.0	1.8	1.9
Loss Loans / Total loans	0.7	0.5	0.6	0.9	0.7	0.6	0.8
Provisions to non-performing loans (%)	34.1	52.0	63.4	41.5	37.4	32.9	36.5
Foreign Exchange Risk Indicators							
Deposits in Foreign Exchange (% of total deposits)	14.2	18.9	14.8	13.3	12.9	6.6	4.0
Profitability Indicators							
Return on Equity (ROE)	19.5	19.3	17.3	15.6	11.3	6.1	5.9
Return on Assets (ROA)	2.0	1.8	1.4	1.6	1.1	1.0	1.0

Source: Central Bank of Barbados
All 2012 data to September.
[*] Reflects removal of financial consolidation.
[#] Includes foreign components unless otherwise stated.

Table 1 presents key Financial Soundness Indicators (FSIs) for the commercial banking system.

Solvency

Figure 16 illustrates that over the past eight years commercial banks have consistently surpassed the regulatory requirement of 8 percent for capital adequacy. With risk-weighted assets declining by 8 percent over the period, the banking system's total capital adequacy as at September 2012 was 19.6 percent compared to 19.3 percent, recorded one year earlier. The lowest CAR reported by any bank was 17.7 percent, with the highest being 21.6 percent. Additionally, the core capital (Tier 1) adequacy ratio for the banking system was registered at 18.1 percent.

Figure 16: Capital Adequacy and Risk-weighted Assets

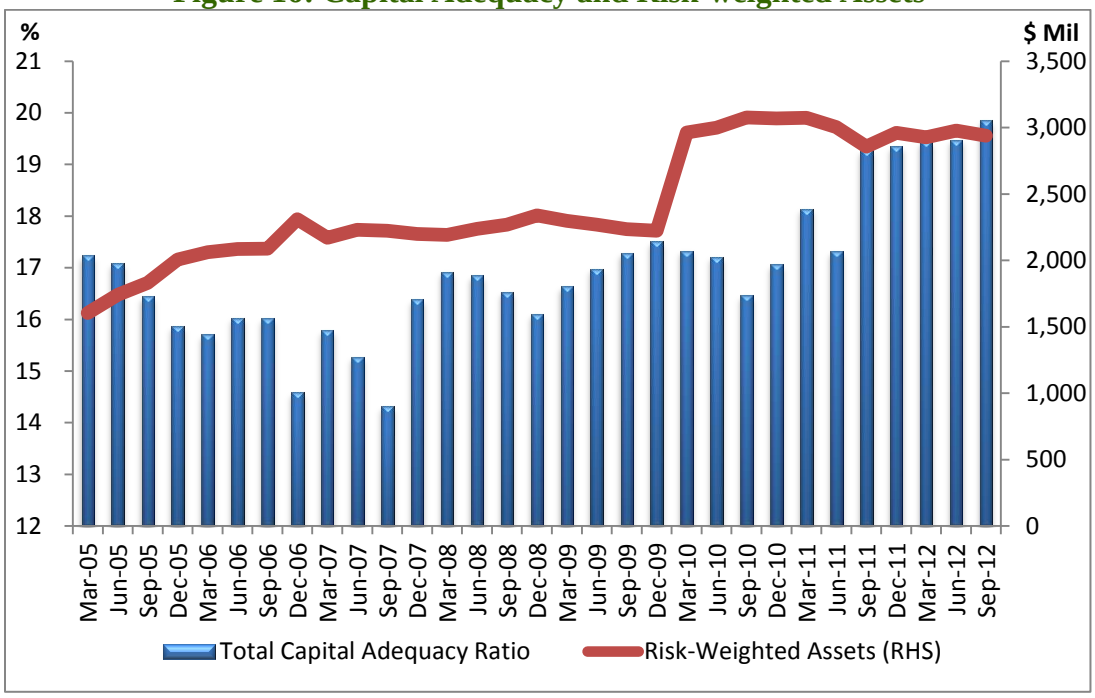


Table 2: Capital Adequacy and Rating of Parent

Domestic Bank	Majority Shareholder	Majority Shareholder Capital Adequacy (Tier 1-2012)	Majority Shareholder's Rating (Moody's)	Country Rating (Majority Shareholder) (Standard and Poor's)
Republic Bank Barbados Limited	Republic Bank Limited	30.7*	Baa1	A/Trinidad and Tobago
CIBC FirstCaribbean International Bank	CIBC	13.8	Aa2	AAA/Canada
Bank of Nova Scotia	Bank of Nova Scotia	13.6	Aa1	AAA/Canada
Royal Bank of Canada	Royal Bank of Canada	13.1	Aa3	AAA/Canada
First Citizens	First Citizens Group	45.5#	A1	A/Trinidad and Tobago
Citibank Ltd	Citigroup Inc.	12.7**	Baa2	AA+/USA

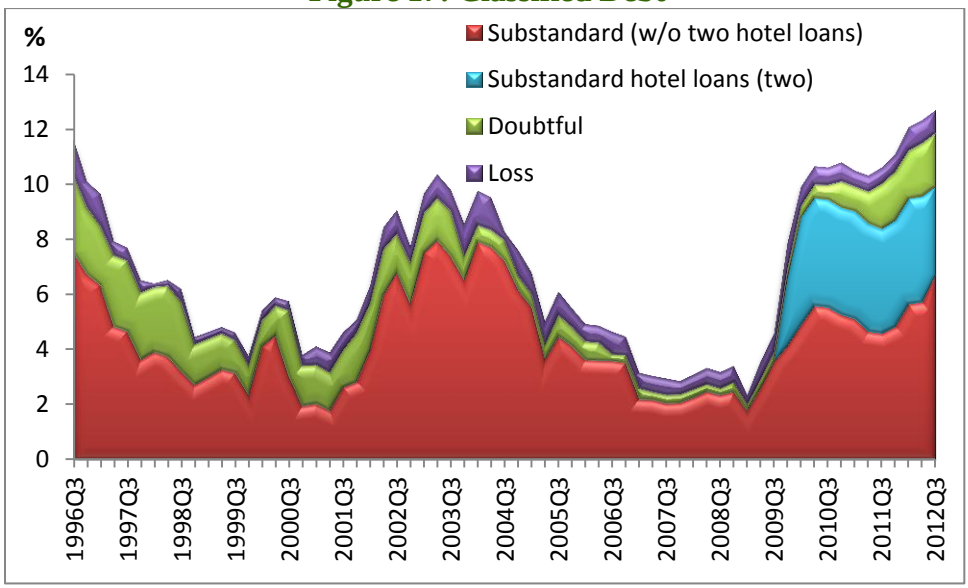
* Tier I & Tier II Capital Adequacy.
** Third Quarter 2012 Report.
# Data from 2011 Annual Report.

Given that all commercial bank licensees operating in Barbados are subsidiaries or branches of regional or international banking groups, Table 2 presents the capital adequacy and relevant ratings of banks' parent companies. In addition to considerable excess capital adequacy, strong balance sheets and existence in relatively stable economies, the ratings of these parent companies remained within the investment grade category.

Credit

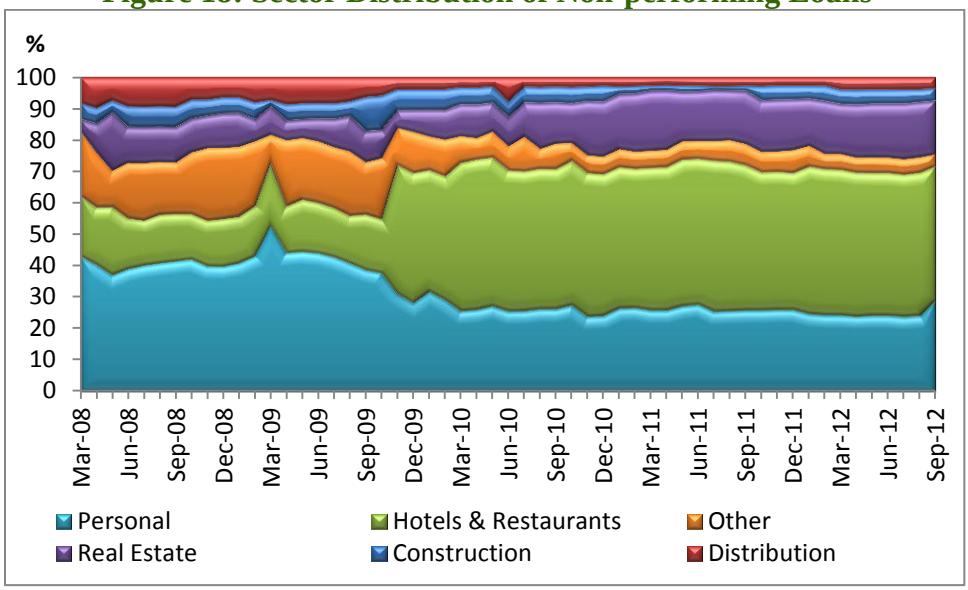
After exceeding 10 percent during 2010 and 2011 as a result of a few hotels loans categorised as substandard, the NPL ratio for the banking sector rose from 11.1 percent at the end of 2011 to 12.7 percent as at September 2012. This outturn, the majority of which occurred during the first quarter of 2012, is attributed to the continued worsening of credit quality in the hotel sector and is mainly reflected in the substandard category. Additionally, the doubtful and loss categories edged up slightly from 1.8 and 0.4 percent to 1.9 and 0.6 percent, respectively.

Figure 17: Classified Debt



Non-performing loans classified as substandard accounted for 78 percent of total NPLs, while the doubtful and loss categories were 15 and 7 percent, respectively. With this substantial portion of NPLs classified as substandard and only 10 percent provisioning required for this category, commercial banks continued to assign provisions well above the statutory requirements, to cover losses possibly arising from classified debt. Though provisions to NPLs declined during 2010 and 2011, commercial banks have re-built their reserves to prior levels. Overall commercial banks actual provisions are adequate to cover 37% of the system's total classified debt as at September 2012. Hotels and restaurants continue to account for a significant portion of NPLs (43 percent), followed by the real estate and personal sectors, each representing approximately 23 percent.

Figure 18: Sector Distribution of Non-performing Loans



Historically, loan losses have been very small when compared to commercial banks' total loan portfolio. Figure 19 illustrates that though write-offs net of recoveries increased sharply during 2009, these still only represented about 1.8 percent of banks' total loans and advances. During 2012, 0.2 percent of total loans were written off.

Figure 19: Commercial Banks' Loan Losses

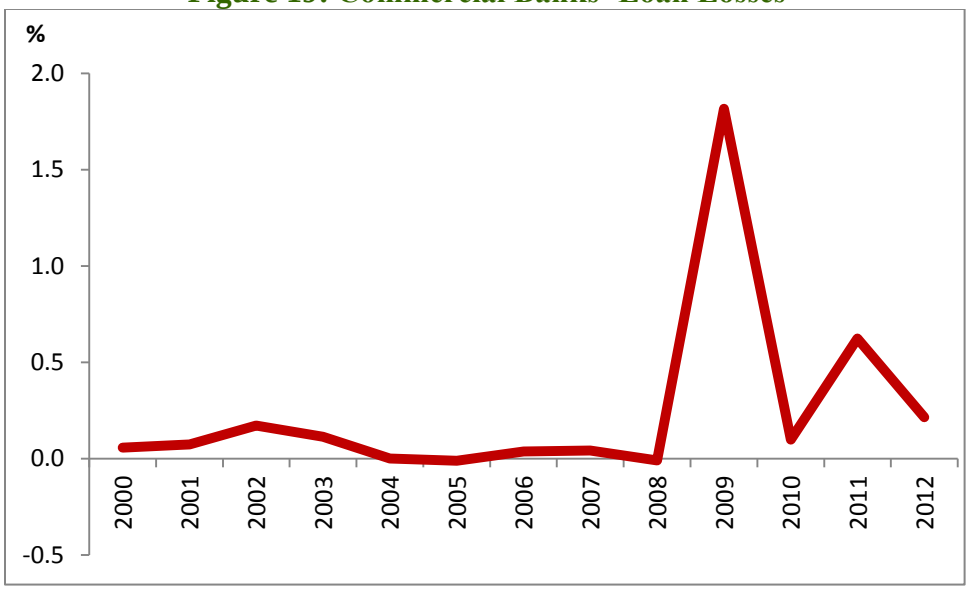
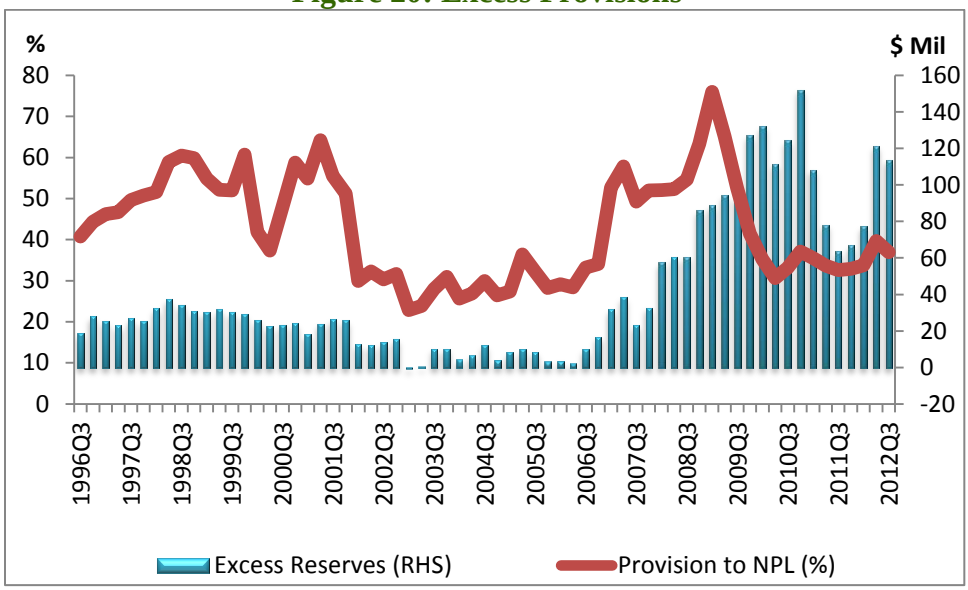


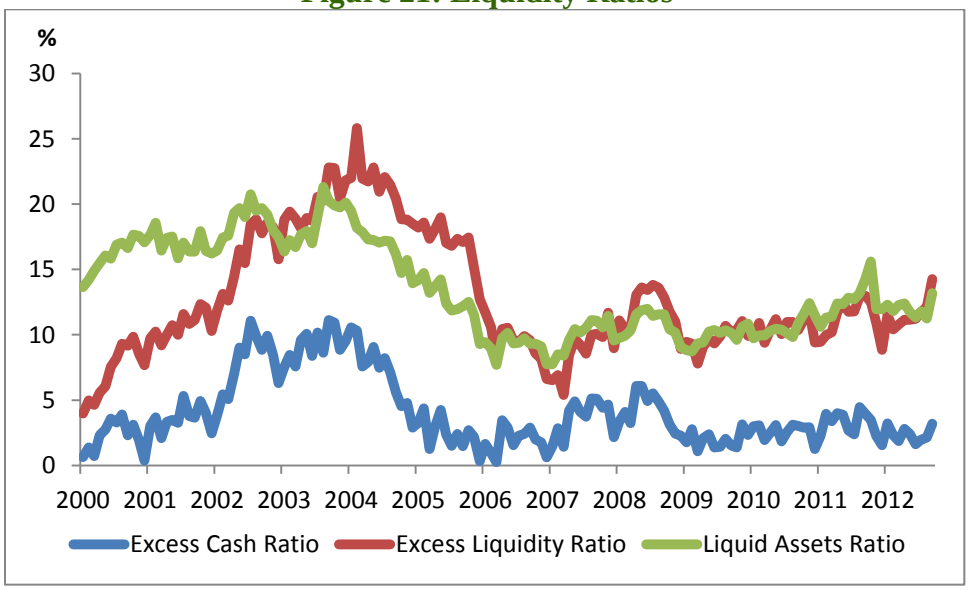
Figure 20: Excess Provisions



Liquidity

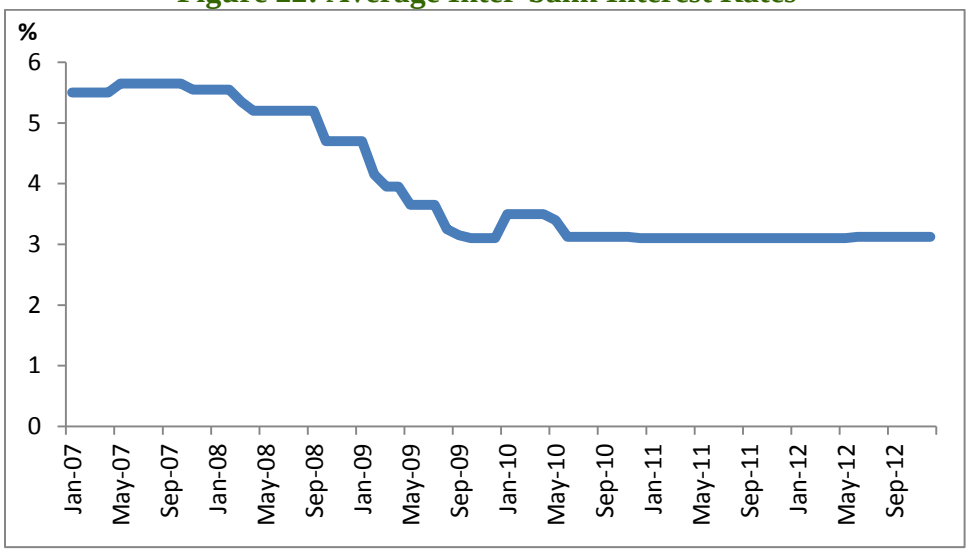
Liquidity in the commercial banking system continued to be relatively high, with total holdings of cash and securities corresponding to 26 percent of domestic deposits, compared to the required minimum level of 15 percent[7]. These ratios are largely reflective of increased excess government securities, which grew 35 percent since the end of 2011.

Figure 21: Liquidity Ratios



[7] There is a 5 percent reserve requirement on domestic deposits and a 10 percent requirement on government securities.

Figure 22: Average Inter-bank Interest Rates



With surplus liquidity in the system and weak loan demand, the average interbank interest rates have remained stable over the past two years.

Profitability

Following two consecutive years of decline, commercial banks' profits experienced an improvement for the first nine months of 2012. Though not yet returned to pre-crisis levels, profits increased approximately 10 percent on average when compared to the similar period of the previous year. However, this increase was not common across all banks. This outturn was associated with a 15 percent increase in interest income. The average annualised rate of return on assets and return on equity remained on par at 1 percent and 5.9 percent, respectively.

Figure 23: Bank Profitability as at the end of September

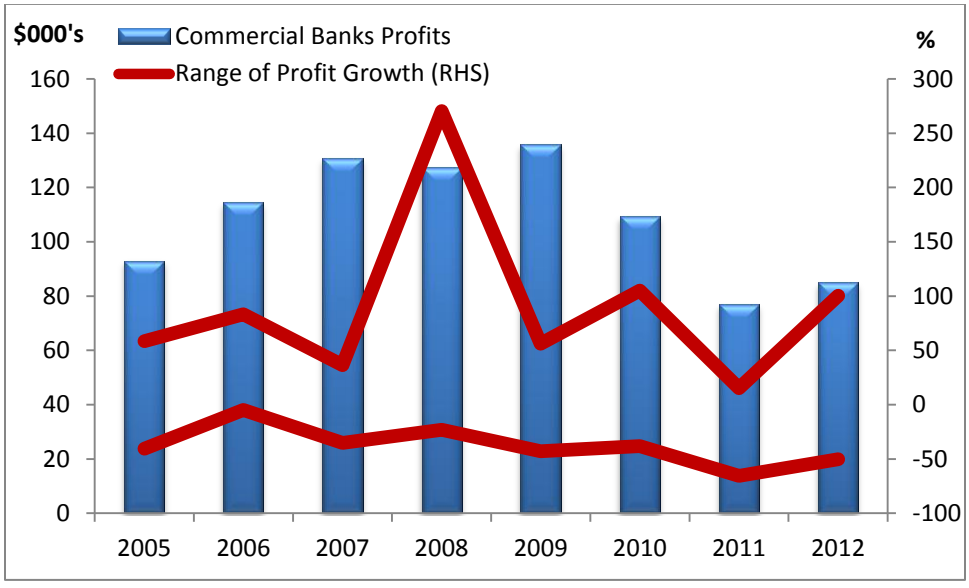
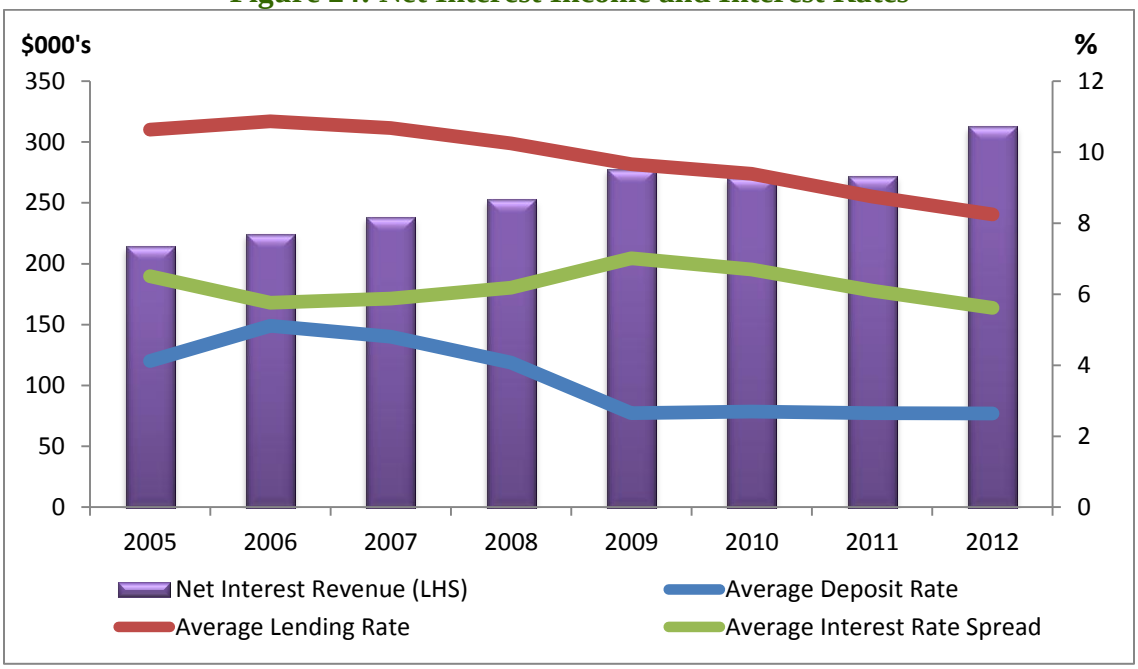


Figure 24: Net Interest Income and Interest Rates



The banks' net interest margin has generally trended upward since 2007, with gradual increases in net interest revenue despite a contraction in the interest rate spread.

Figure 25: Net Interest Margin of Commercial Banks

External Exposures

The net external position of the commercial banking system fell into deficit during 2012, reversing the surplus position recorded in 2011. This outturn reflected a substantial reduction in the net balances at headquarters and branches and net balances at other banks abroad.

Figure 26: Net External Assets

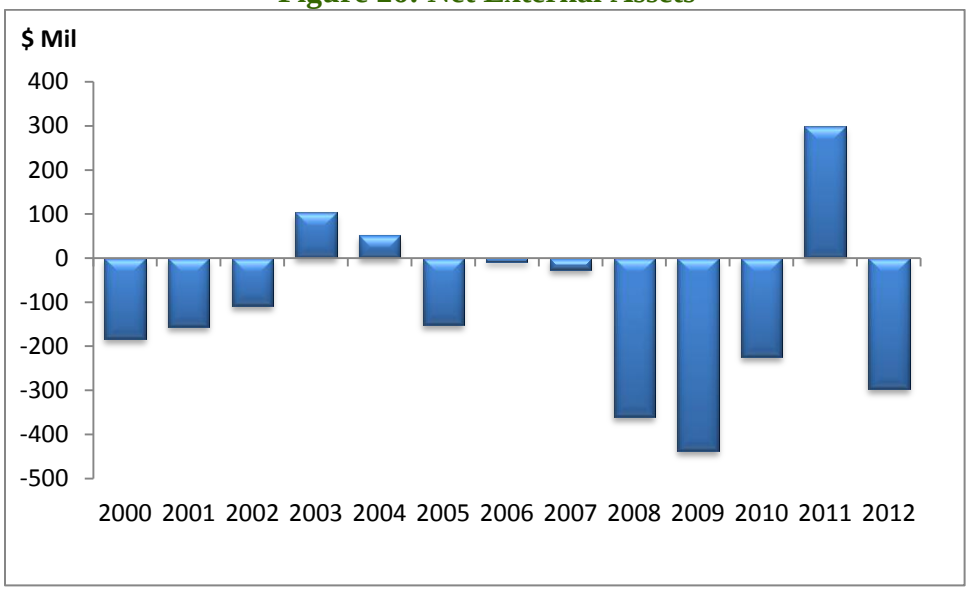


Figure 27: Net External Assets

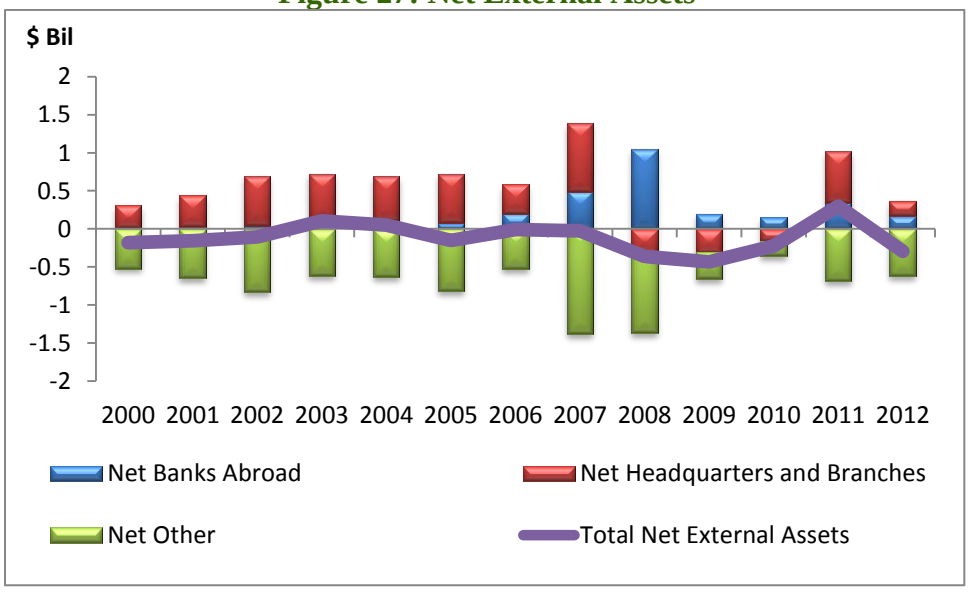
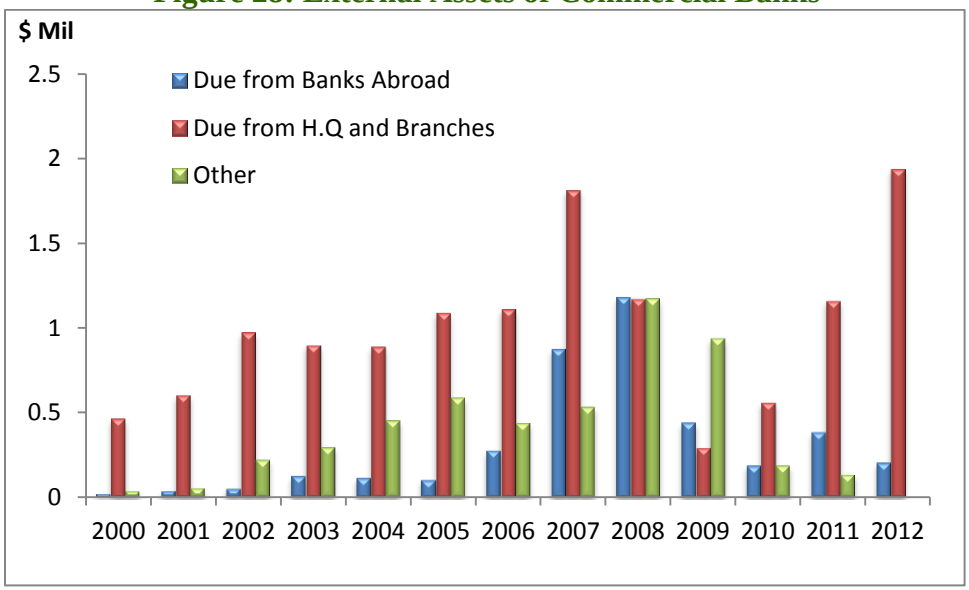
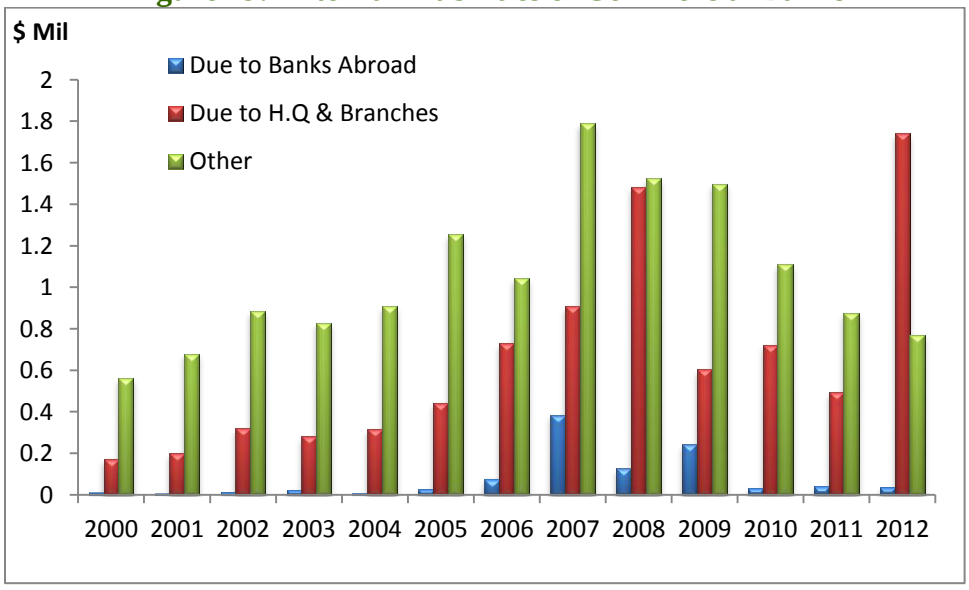


Figure 28: External Assets of Commercial Banks



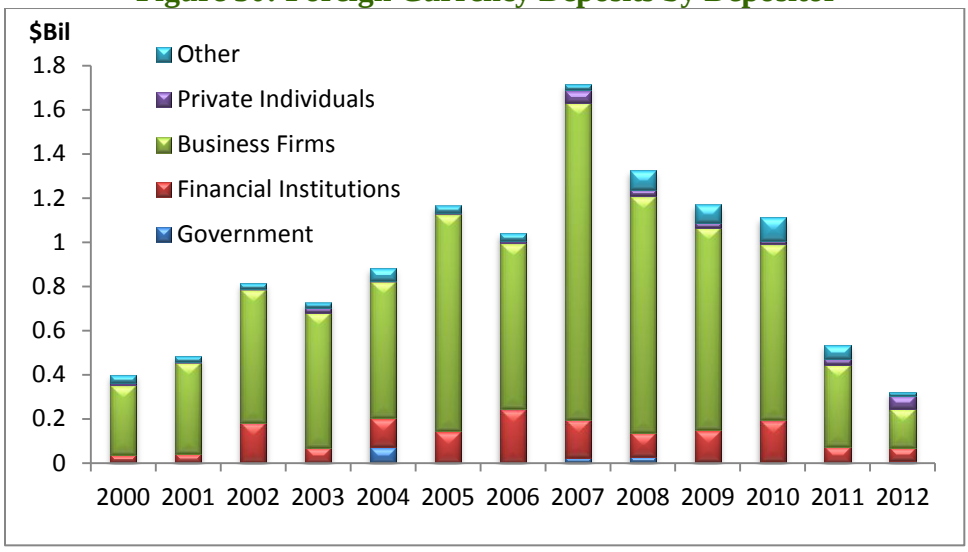
Total external assets of commercial banks grew by 33 percent in 2012 from $1,733 million at the end of 2011 to $2,297 million at September 2012, driven mainly by a build-up in balances due from headquarters of one bank. This transaction was more than offset by increased balances due to headquarters and branches of that institution. The net effect of this transaction along with a further build-up in these balances on the liabilities side led to an 80 percent increase in the foreign liabilities of banks. As a result, commercial banks' external position shifted from $298.4 million at December 2011, to -$296 million at September 2012.

Figure 29: External Liabilities of Commercial Banks



Deposits in foreign currency have declined consistently since 2007 from $1.7 billion to $320 million at September 2012, declining 40 percent since the end of 2011. While the decline was initially due to the global financial crisis, the fall-off of the past three years reflects the transfer of business from the domestic financial system to other locally licensed international financial institutions. Additionally, most of these foreign currency deposits are classified as demand, with just over half of the total being held by business firms.

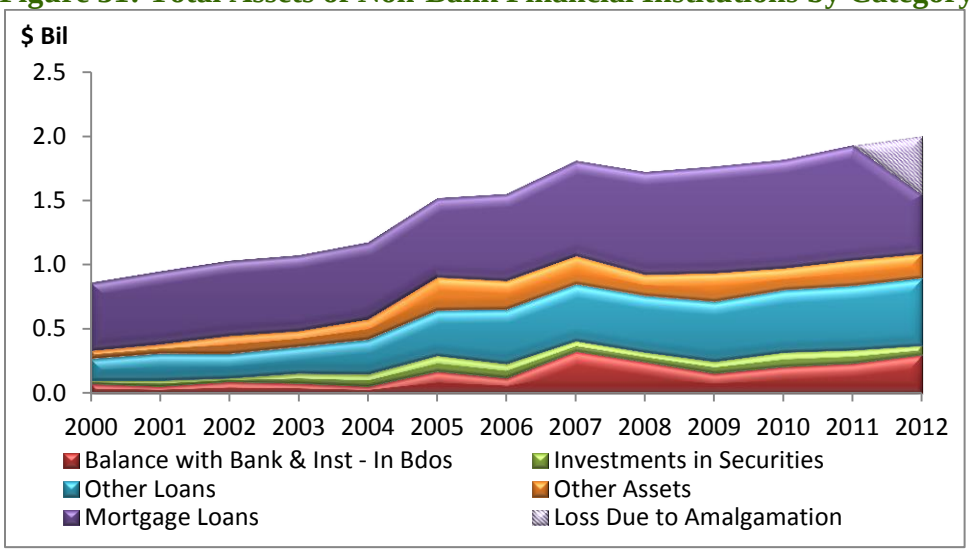
Figure 30: Foreign Currency Deposits by Depositor



4 Non-Bank Financial Institutions

Nonbank financial institutions are funded primarily by time deposits and mainly provide consumer and real estate loans. During 2012, this sub-sector contracted from 13 to 11 institutions, with 4 of those remaining providing trust services. Over the past year, nonbank financial institutions remained stable and well capitalised, recording capital adequacy ratios that were well above the 8 percent regulatory requirement. Estimates of aggregate ROE and ROA were 5.4 percent and 1.3 percent respectively, for the nine months to September 2012.

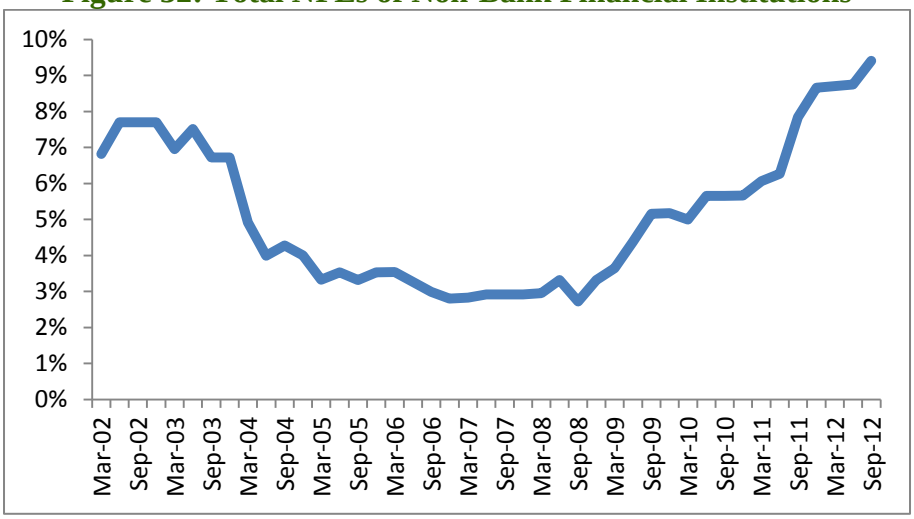
Figure 31: Total Assets of Non-Bank Financial Institutions by Category



Since the onset of the crisis which saw a 7 percent reduction during 2008, total assets of non-bank financial institutions experienced steady growth over the last four years, expanding at an average rate of 3 percent per annum. The rise in 2012 was reflected in the build-up of balances with banks by two institutions and the growth in consumer credit.

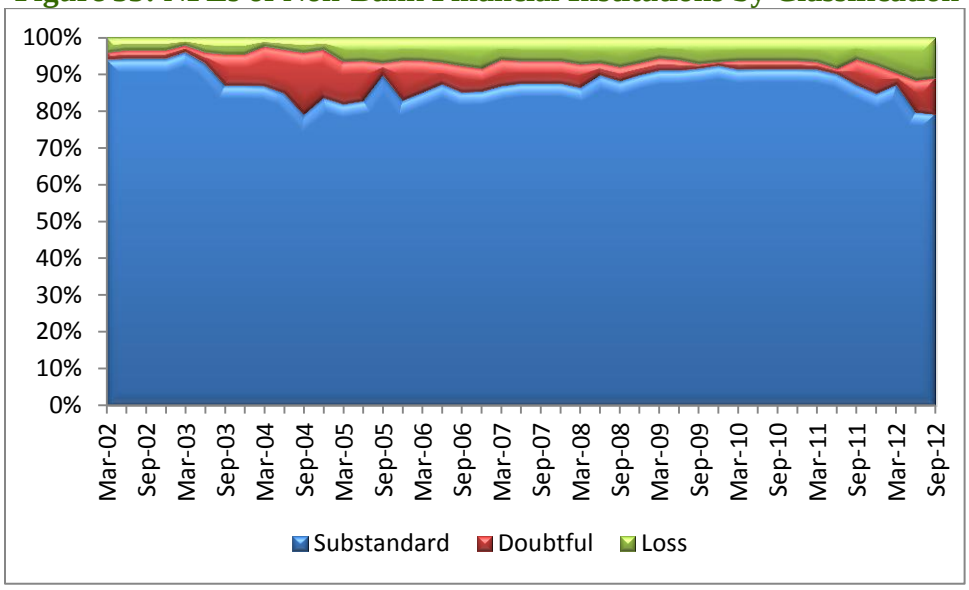
The main area of risk exposure was credit risk through mortgages and other areas of personal lending. These institutions also maintained significant credit and liquidity exposures to commercial banks, but this was mitigated by the high capitalisation and liquidity of the commercial banks. Foreign currency risk was minimal due to the low level of foreign denominated securities in the non-bank financial sector. The credit quality of these institutions reflected the slowdown in economic activity, as the non-performing loan ratio rose from 8.7 percent to 9.4 percent at September 2012, a continuation of the trend seen since 2008 (see Figure 30).

Figure 32: Total NPLs of Non-Bank Financial Institutions



The distribution of classified debt revealed that approximately 80% continued to be in the least critical category of 'substandard', where the probability of loss is low. The trend over the past year however, revealed a deterioration in the quality of the classified debt portfolio, where the share of the poorer quality loan categories ('Doubtful' and 'Loss') have increased. In response to the deterioration of credit quality, non-bank financial institutions increased their reserves, as the provision to NPL ratio more than doubled (from 14.4% to 31.4%) as at September 2012.

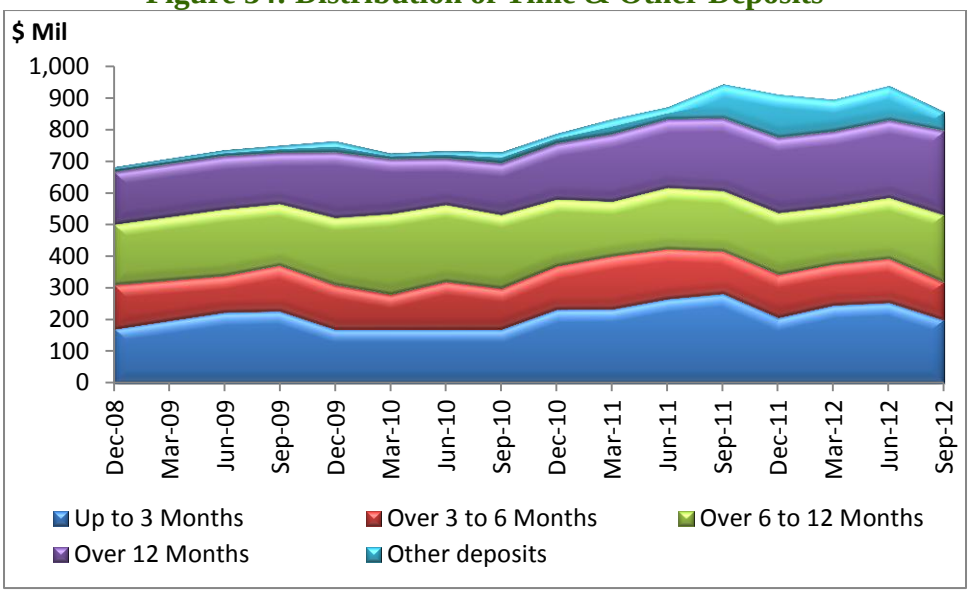
Figure 33: NPLs of Non-Bank Financial Institutions by Classification



Similar to commercial banks, the non-bank financial institutions continued to be well funded, but almost entirely by time deposits that were evenly distributed across maturities. This facilitated better maturity matching, as well as provided a steady flow of liquid funds for operations. It also resulted in relatively stable liquidity ratios of above 56 percent and 23 percent for liquid-assets to

short-term liabilities and volatile-deposits to total deposits, respectively. These figures were in keeping with historical amounts and low rollover risk of the non-banks' liabilities. The loan-to-deposit ratio trended upward during the year, increasing from 152 percent to 158 percent over the past year.

Figure 34: Distribution of Time & Other Deposits

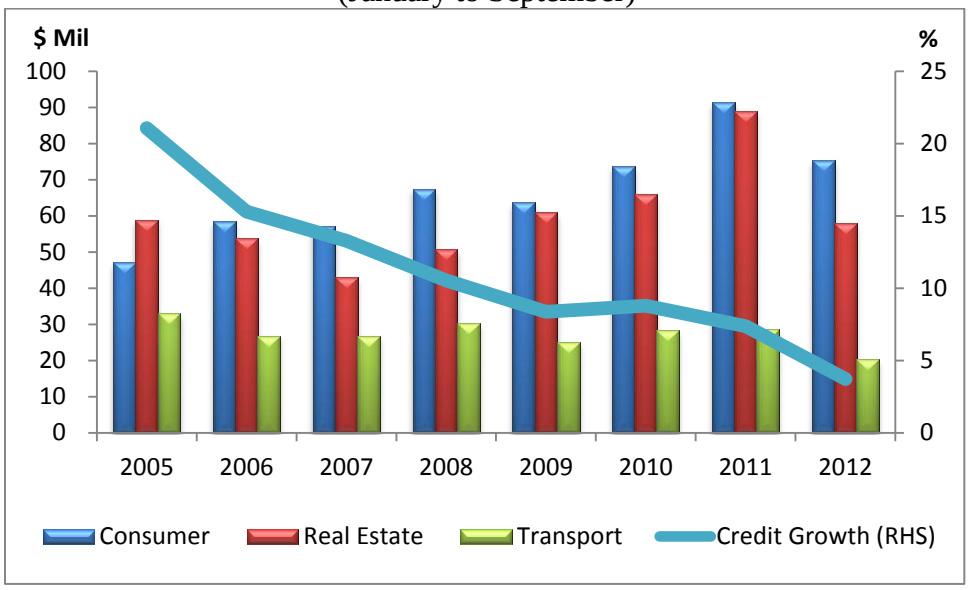


5 Credit Unions

At the end of the third quarter of 2012, the number of credit unions (35) remained unchanged from the previous year, with a combined membership of approximately 150,000. These institutions experienced modest growth in assets of about 3.2 percent during 2012, reflected in a significant increase in investments, compared to double-digit growth rates of pre-crisis years.

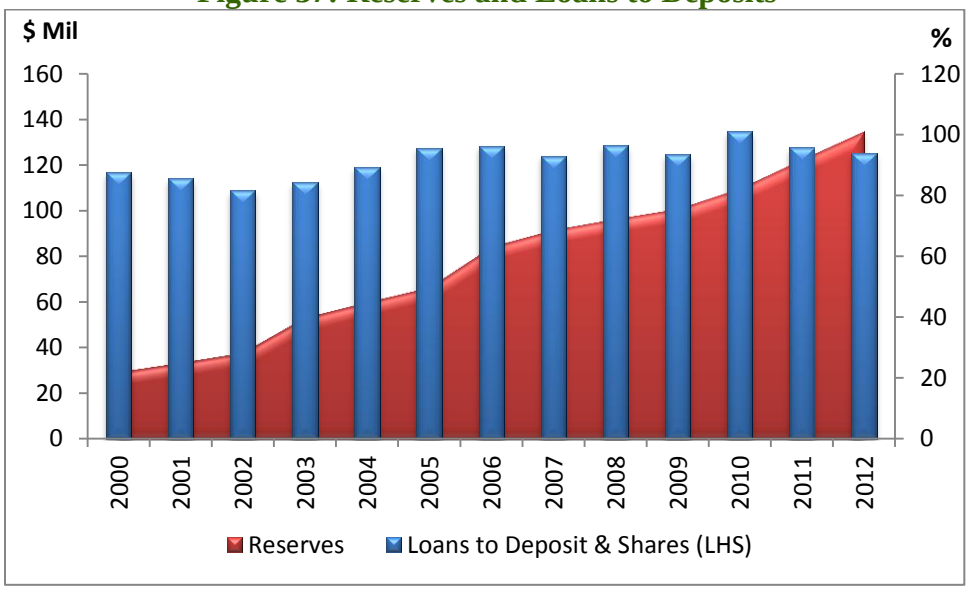
Figure 35: Total Assets of Credit Unions by Category

Figure 36: New Credit Issued and Total Credit Growth
(January to September)



Although loans continued to represent 79% of total assets, the growth rate of total credit declined further in 2012, a reflection of the weak loan demand in the wider economy. This has led to a marginal decline in the loans-to-deposit and shares ratio to 94%.

Figure 37: Reserves and Loans to Deposits

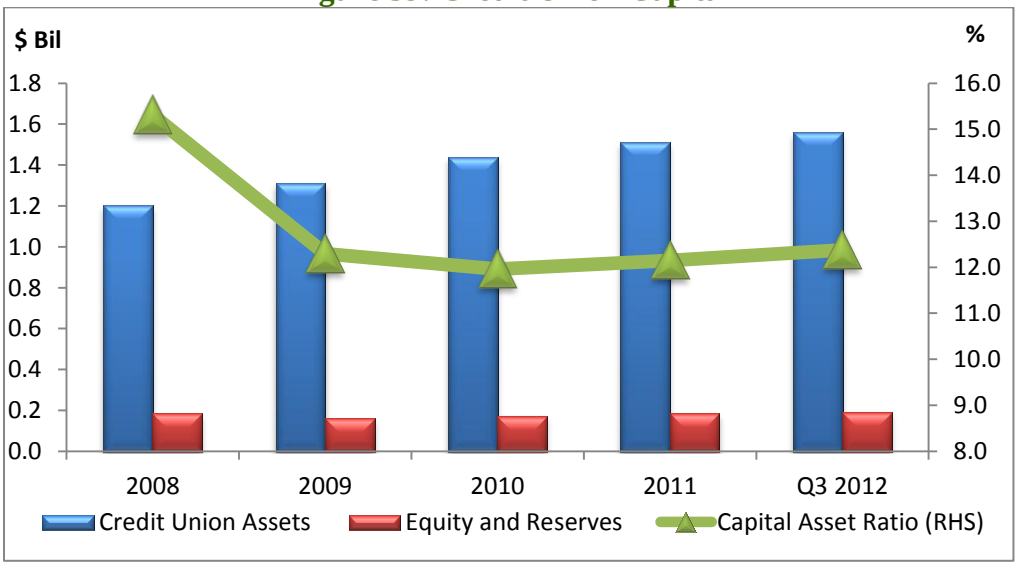


The slowdown in loan growth was also reflected in the profits with the annualised combined ROA at September 2012, decreasing slightly to 3.1 percent.

Figure 38: Return on Assets

Despite a reduction in the return on assets, the sector has remained profitable over the years, allowing it to enhance its capital and reserve position. Credit union capitalisation ratio remained above the PEARLS[8] guideline of 10 percent, reaching 12.4 percent as the end of the third quarter of 2012. The capitalisation has trended upward slightly since 2010, due to modest growth in equity and reserves.

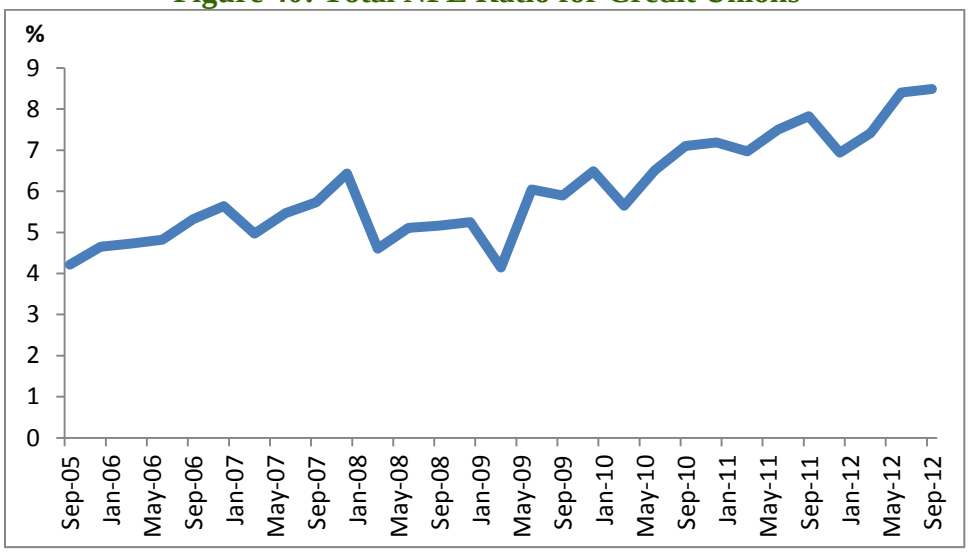
Figure 39: Credit Union Capital



The four largest credit unions, which represent 83 percent of that sector's assets, were adequately capitalised with each capital and reserves to total assets ratio being at least 10 percent.

[8] The PEARLS guideline has been developed by the World Council of Credit Unions. It specifies limits for Protection, Effective Financial Structure, Asset Quality, Rate of Return and Cost, Liquidity and Signs of Growth.

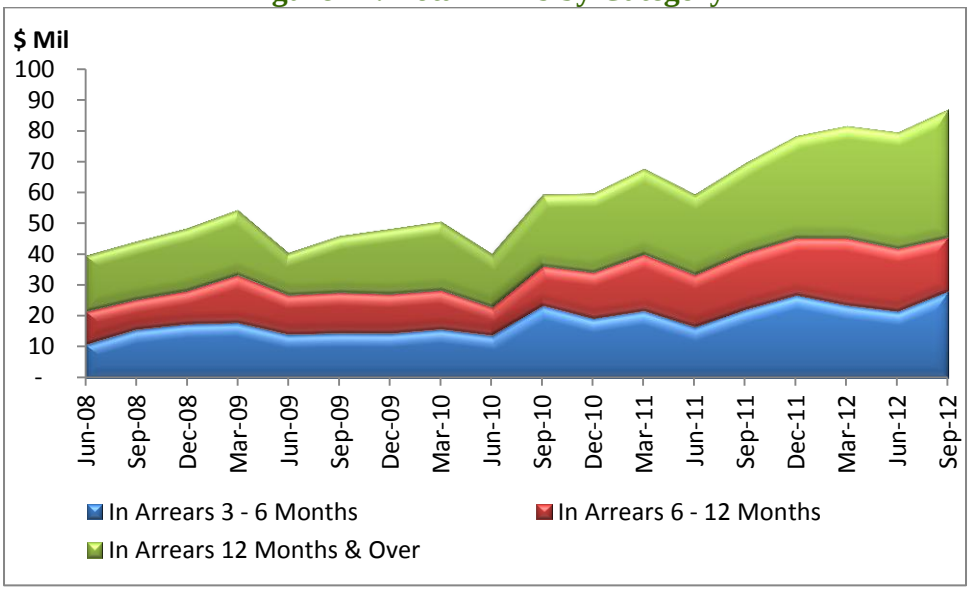
Figure 40: Total NPL Ratio for Credit Unions



Asset Quality

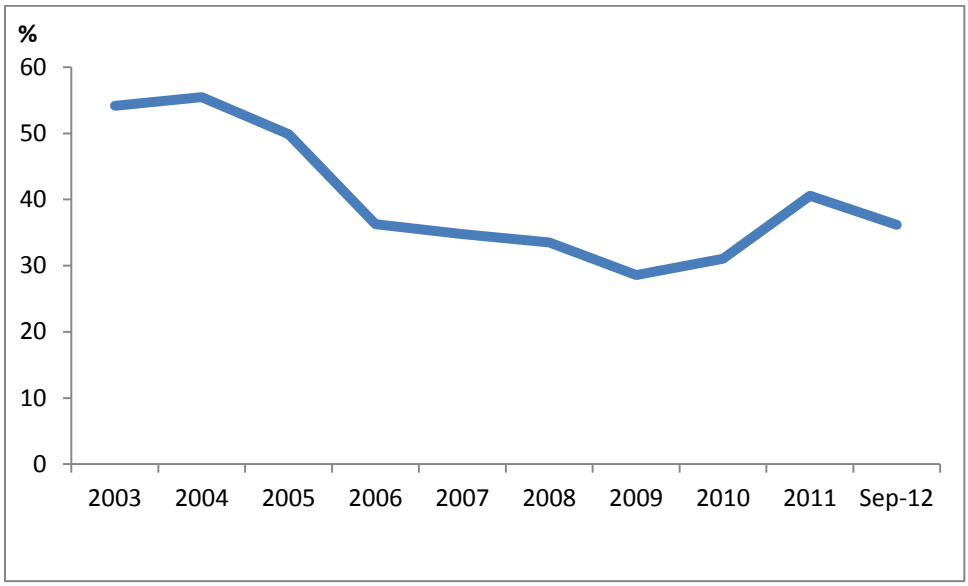
The quality of the loan portfolio of credit unions deteriorated gradually, as the classified debt ratio increased to 8.5 percent at September 2012, up from 6.9 percent in December 2011.

Figure 41: Total NPLs by Category



All three sub-categories of classified debt showed increases. However, these financial institutions continued to be liquid and well-funded with historically stable members' shares and deposits, as well as reserves accumulated from several years of profitable activity.

Figure 42: Credit Union's Provisions for Loan Losses / Gross Classified Loans



The ratio of loan losses to gross classified loans fell in 2012 from 41 to 36 percent, due to the expansion of loans in arrears. While this ratio is comparable to that of commercial banks, credit unions carry a greater proportion of loans in the most critical category.

5.1 Insurance Companies[9]

The major challenges faced by the insurance industry remained sluggish growth, generally high debt levels among Caribbean governments and low or declining interest rates. This environment has reduced the demand for insurance products, while increasing the risk that insurers face in holding government bonds.

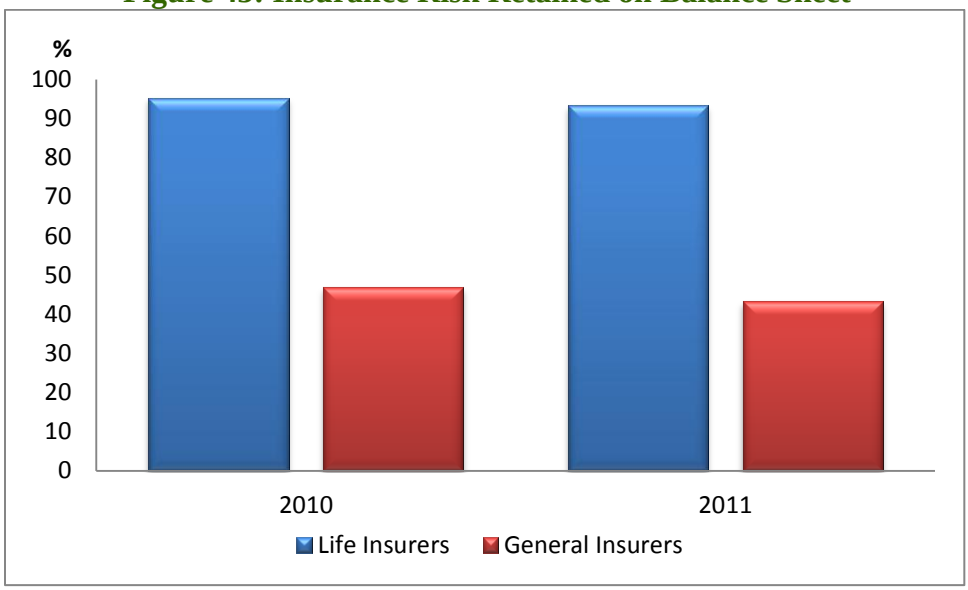
Life Insurance

While major regional and local life insurers remained stable and well capitalised during 2011, net premiums written declined by 6.2 percent over 2010, reflecting the prevailing weakness of the local economy. In addition, there was a slight decline in the life insurance risk undertaken by the regional life insurance industry, which retained 93.5 percent of the value of premiums on their balance sheet compared to 95.2 percent in 2010[10].

The claims ratio (ratio of claims paid to premiums collected) of the life insurance industry improved, but the yield on the investment assets fell from 6.5 percent to 6.2 percent in 2011. Short-term liquidity remained adequate with the ratio of cash and deposits to current payables being in excess of 150 percent. However, longer term liquidity also remained adequate although the investment portfolio of the industry became slightly less liquid, with the ratio of mortgage loans and real estate to other assets rising from 23.3 to 28.4 percent.

[9] The data used in this section of the report is up to December 2011.
[10] Life insurers typically hold a large proportion of insurance risks on their balance sheets unlike general insurers.

Figure 43: Insurance Risk Retained on Balance Sheet

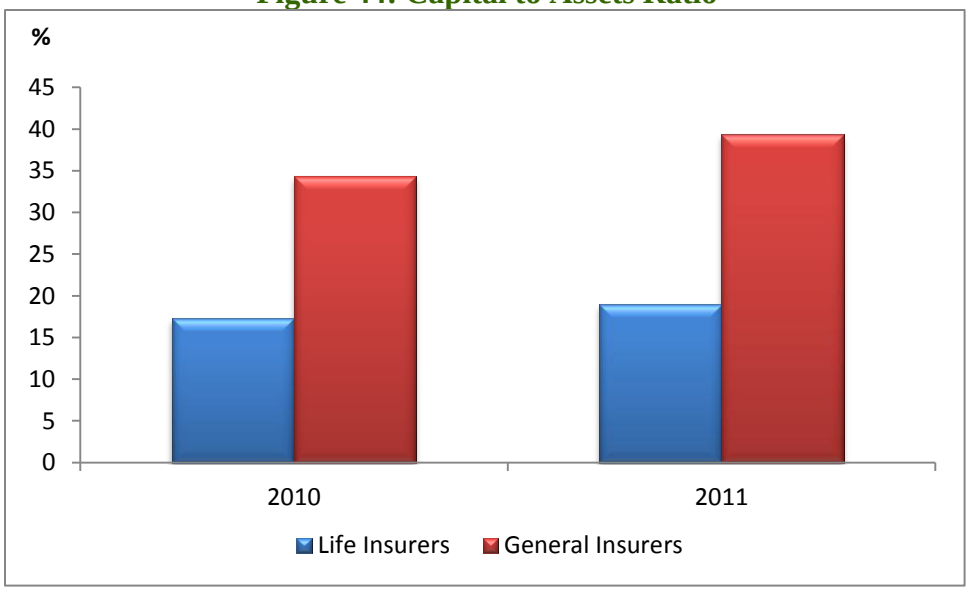


General Insurance

Gross premiums written by the general insurance industry fell by 3.1 percent, largely because of a contraction of 25 percent in the accident and sickness category, which more than offset an increase in the value of property insurance premiums. Claims made as a proportion of industry premiums rose from 46.9 to 49.3 percent of net premiums in 2011, but this performance remained in-line with international standards. General insurers retained more of the insurance risks of their various business lines with the reinsurance premiums ceded to gross premium ratio falling from 56.7 to 53 percent in 2011. Short-term liquidity in the industry remained more than adequate, with the ratio of cash and deposits to current payables being 403 percent at the end of 2011.

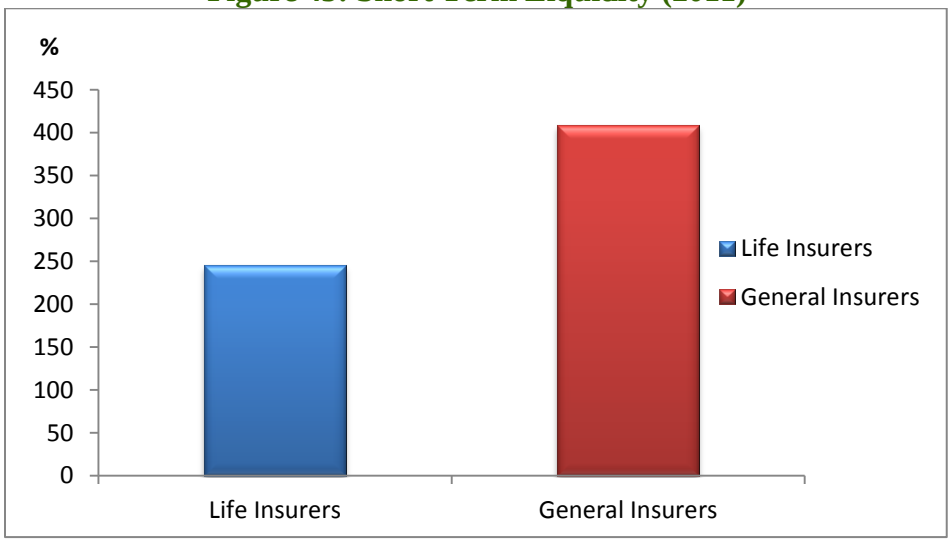
The performance of region-wide general insurers was impacted by flooding associated with three hurricanes in the first quarter of 2011. Similarly, other global disasters continued to pose problems for international reinsurers with one of the larger Caribbean insurers reducing the scope of its international reinsurance profile.

Figure 44: Capital to Assets Ratio



Regulatory activity increased significantly in 2012 with many guidance notes being circulated by the Financial Services Commission (FSC) on areas such as internal controls, asset valuation guidelines and statutory reporting guidelines. In addition to directly engaging its regulated entities, the FSC has also proposed amendments to the Insurance Act, Cap. 310 aimed at strengthening capital buffers and clarifying the operation and obligations of the insurance companies' statutory fund.

Figure 45: Short Term Liquidity (2011)



6 Stress Test Analysis

A series of tests were simulated to determine the impact of different exogenous shocks on the financial system. In particular, the analysis examined whether institutions' capital is sufficient to absorb potential losses associated with the exogenous shocks. Under each scenario, the entire impact of the shock is transmitted directly to the institution's capital.[11]

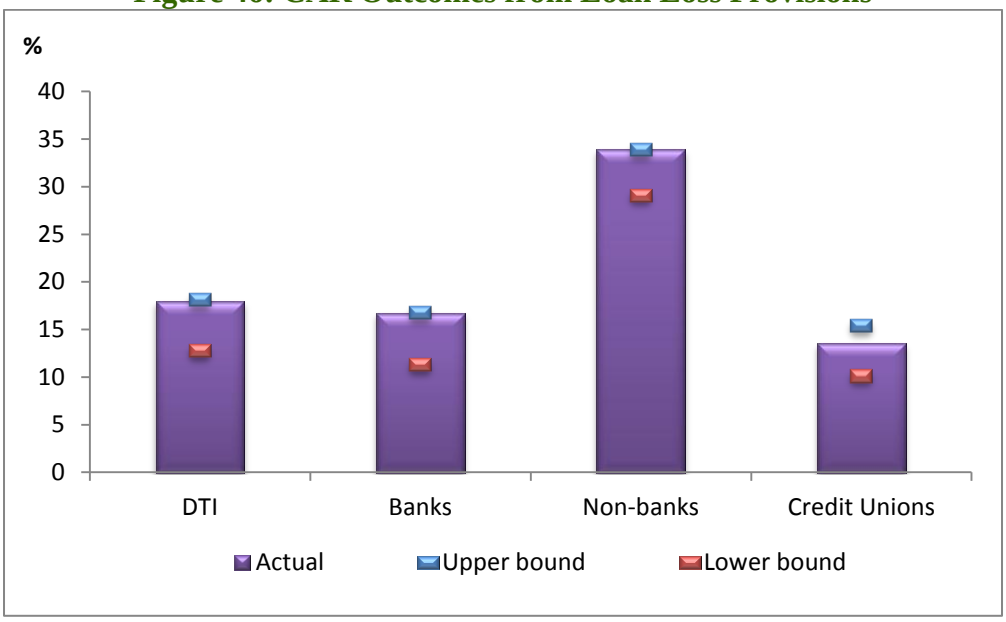
6.1 Credit Risk

The first simulation examined adjustments to the loan loss provisions. Institutions are required to make minimum legal provisions for various classifications of their credit portfolio. Currently, the minimum standard for institutions in Barbados is 10 percent for Substandard Loans, 50 percent for doubtful loans and 100 percent for the lowest category, loss loans. Pass loans and special mention loans have no provision requirements.

Figure 46 provides a snapshot of the current CAR holdings and adjustments given different assumptions of the loan loss provisioning requirements. Across DTIs, the capital adequacy ratio at September 2012 ranged from 14 percent to 124 percent[12]. Furthermore, the lower limit and the upper limit of capital adequacy ratios were established by adopting two extremes to loan loss provisions. The upper limit, representing a "best case" scenario, assumes no required provisioning on pass and special mention loans as well as only a 10 percent provisions for all other classifications. For the lower bound or "worst case" scenario, 1 percent provisions were made on pass loans, 5 percent on special mention loans and 100 percent provisions on all other classifications. While the system as a whole (DTIs) maintained CAR above the 8 percent statutory benchmark, two banks and three part 3 companies would require a capital injection when adopting the lower bound assumptions.

[11] Regulatory capital was derived from the balance sheet of branch institutions since they do not report capital positions. This facilitated the calculation of capital adequacy ratios for the banking system.
[12] The methodology used to determine capital adequacy for the commercial banking system was applied to the credit union sector.

Figure 46: CAR Outcomes from Loan Loss Provisions



6.1.1 Increase in NPL

Another scenario assessed the impact of rising non-performing loans on the CAR of institutions. The binding loan loss provision used is similar to the baseline assumptions discussed previously, that is, 1 percent on pass loans, 5 percent on special mention loans, 20 percent on substandard loans, 50 percent on doubtful loans and 100 percent on the loss category. The shock is with respect to the initial level of NPLs and full pass-through to capital is assumed. Figure 47 illustrates the impact of 100 percent increase in NPLs with a series of incremental increases in the provisioning requirements on this new classified debt. The results indicate that with the most extreme case of 100 percent provisioning, the DTIs as a whole remained above the 8 percent threshold. While commercial banks and non-bank financial institutions were able to withstand these shocks, the credit union sector falls below the requirement when provisioning of 75 percent is applied.

Figure 47: CAR Outcomes from Increasing NPLs

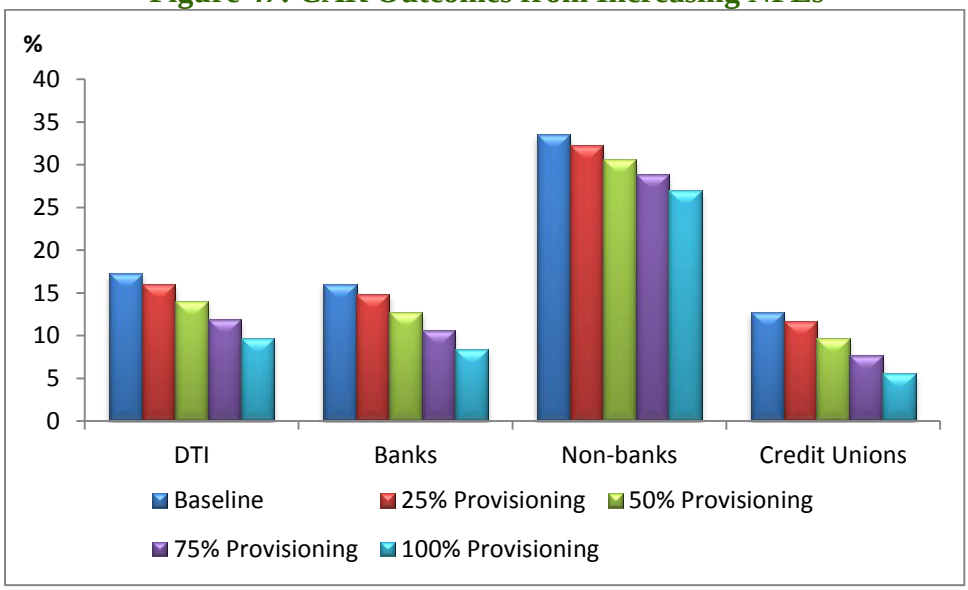
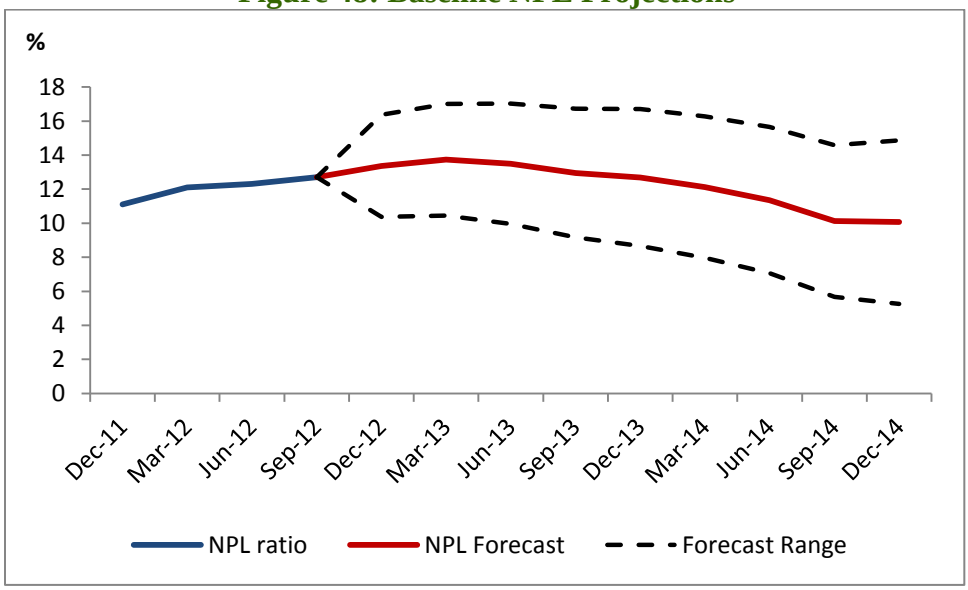


Figure 48 projects the path of NPLs based on the current GDP estimates in the Central Bank's macroeconomic forecasting model. Under this framework NPLs are expected to peak in early 2013 before improving over the medium term.

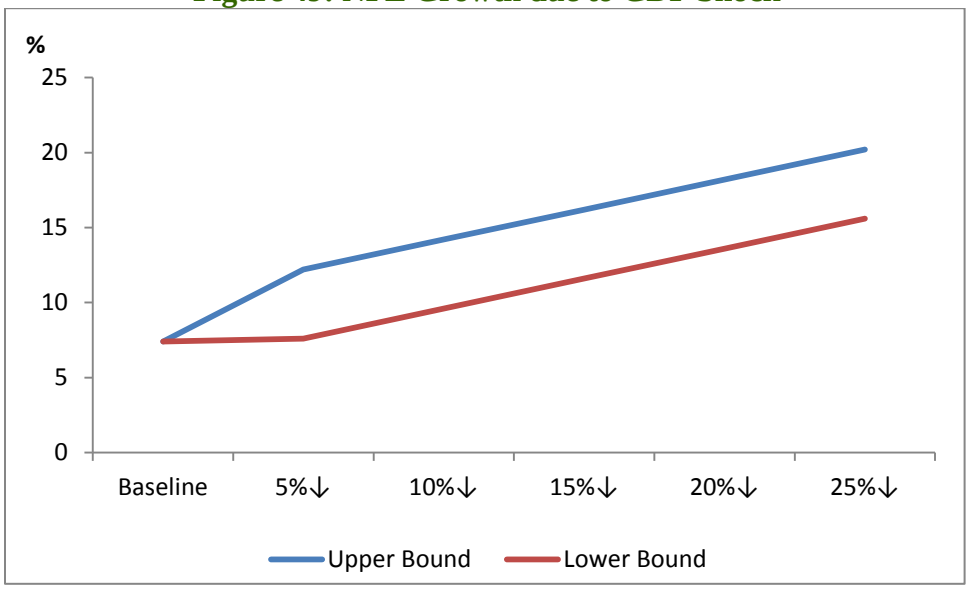
Figure 48: Baseline NPL Projections



Moreover, Figure 49 maps out the growth path for NPLs over the medium term based on a marco-prudential framework of forecasting NPLs in commercial banks. The estimation framework suggests that the changes in the business cycle have a significant and direct impact on the banks' NPLs and it takes about 4 quarters for an initial shock to materialise into higher NPLs.

This framework is forward looking as it provides guidance on the direction of classified debt so that the likely impact on capital can be assessed.

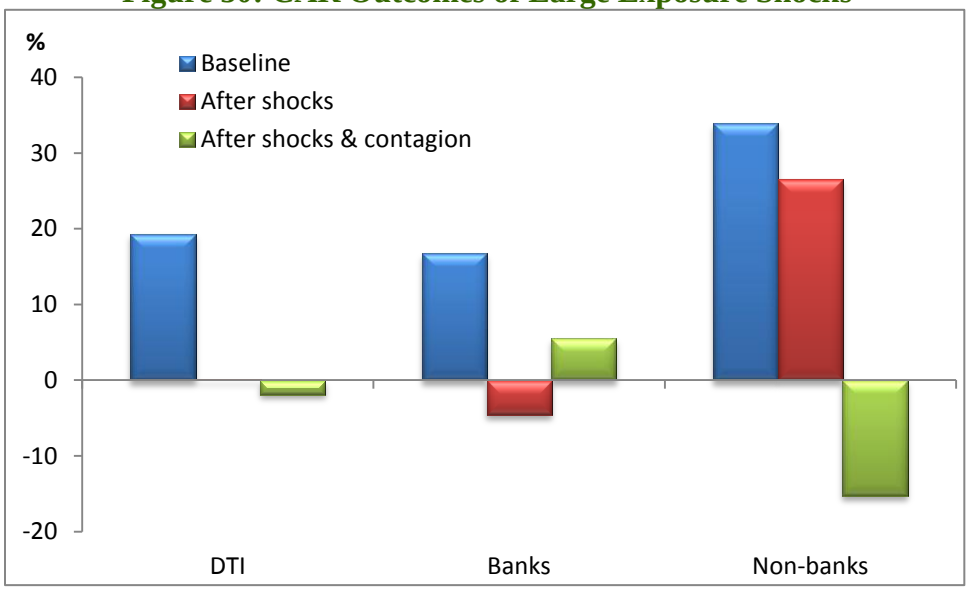
Figure 49: NPL Growth due to GDP Shock



6.1.2 Large Exposure

This simulation assumed that adverse shocks hit the largest borrowers of each bank such that all of the corresponding loans become nonperforming. The largest five borrowers per institution were identified and the shocks applied sequentially for up to five rounds, assuming that full provisioning is required after each round. In the first instance one institution was found to be technically insolvent (by having negative after-shock capital). That institution's impact was significant enough to offset the strong capital positions of other banks. Furthermore, sizeable contagion effects also impacted non-banks which led to that sector also becoming technically insolvent.

Figure 50: CAR Outcomes of Large Exposure Shocks

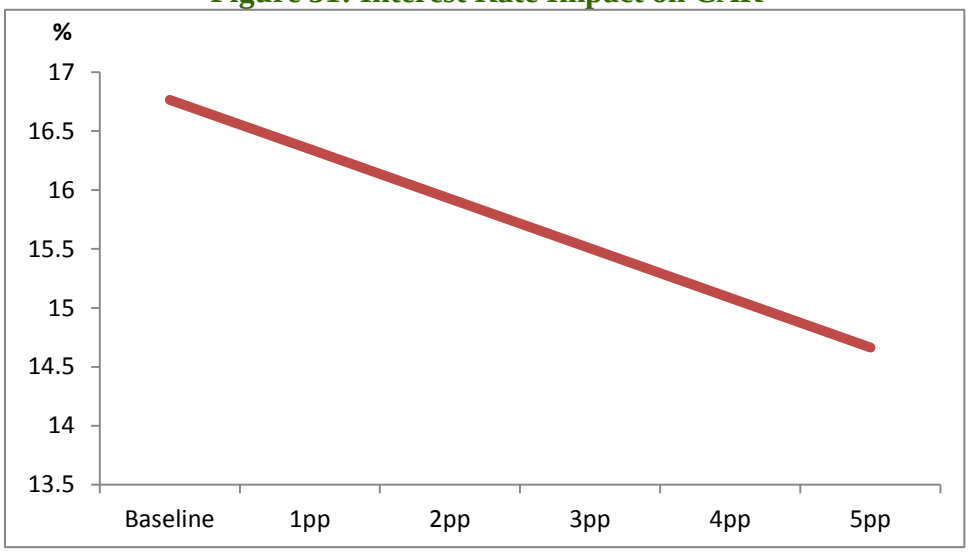


6.2 Interest Rate and Exchange Rate Risk

Two types of interest rate effects can be considered: (1) an impact on flows of income and costs that are sensitive to the market interest rate, and (2) a stock effect on the market value of each bank's holdings of government bonds. However, the analysis was restricted only to the impact on rising deposit rates. Figure 51 shows the effect of interest rate increases (percentage points) on banks' CAR and indicates that they are able to absorb losses that might be associated with significant increases in interest rates.

Similarly, a nominal depreciation of the domestic currency can directly affect an institution based on its net open position or indirectly, where individuals borrow in foreign currency. This summary only considers the direct impact. While most banks have a positive net open position, the system as a whole has a negative open position and would hence be penalized in the event of depreciation. In this case, the results indicate that 25 percent depreciation would require one bank to increase its capital, while the other is able to withstand shocks up to 150 percent depreciation. There is no evidence of contagion from these two banks to the other banks in the system.

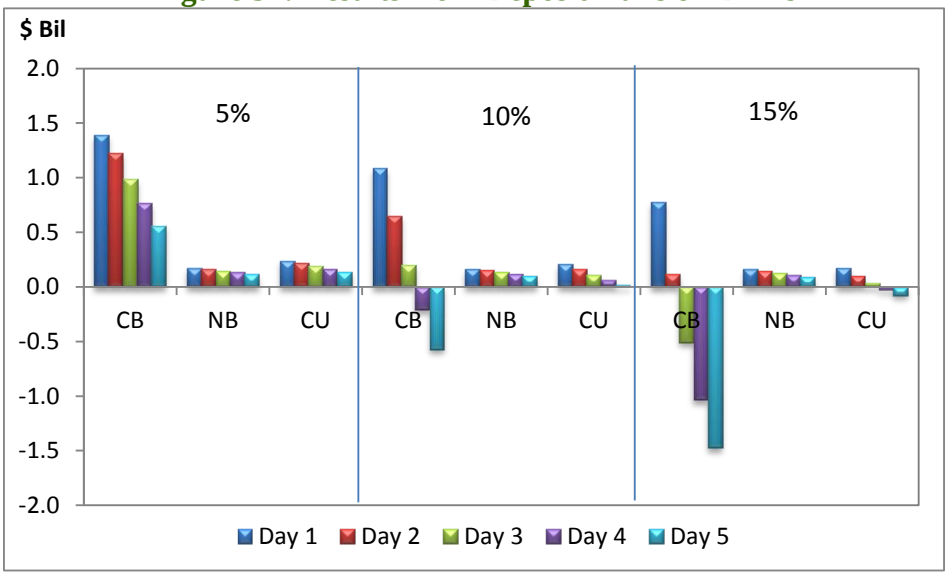
Figure 51: Interest Rate Impact on CAR



6.3 Liquidity Risk

This exercise examined the strength of liquidity positions held by DTIs by assuming simple deposit runs over a five-day period. To set the context, 95 percent of all liquid assets were assumed to be available in a given day, while one percent was assumed for all other assets. In addition, withdrawals on time deposits were fixed at three percent and one percent per day on domestic and foreign accounts, respectively and drawdowns on foreign currency demand deposits were also fixed at five percent per day. The simulation therefore investigated the impact of five percent, 10 percent and 15 percent runs per day on domestic demand accounts, given the previous assumptions.

Figure 52: Results from Deposit Runs on DTI's



CB – Commercial Banks; NB – Non-Bank Financial Institutions; CU – Credit Unions

The results in Figure 52 suggest that DTIs are generally able to withstand 5 percent runs on deposits over the five-day period. However, one non-bank was not able to meet all its obligations after the runs on day 1. A total of two non-banks needed more liquidity after day two and four after day four. Under the 10 percent shock, commercial banks encountered liquidity problems after day four, while non-banks and credit unions were somewhat resilient. Six institutions would require more liquidity after day three, 2 banks and 4 non-banks. By day 5 a total of eight institutions would require some form of liquidity support. With a 15 percent run per day, eight institutions – 4 banks and 4 non-banks – need liquidity support after day 3 and all banks, four non-banks and the credit union group became vulnerable after day 4.

Assuming that the foreign investments of commercial banks are lost in their entirety, and trigger deposit runs on domestic bank branches and subsidiaries, the impact in capital adequacy was determined. The impact on each domestic bank was examined to determine vulnerabilities that may arise from second and third round effects. Table 3 presents the results based on cross-border exposures and shows the resulting range of the capital adequacy for each region of exposure.

Table 3: Results of Default of Individual Banking Sectors and Groups

Shocks	After Shock CAR Range (%)	Banks with CAR<8%
*Limited Liquidity**	15.03 - 21.73	-
Europe	15.04 - 21.71	-
Canada	13.57 - 17.11	-
USA	14.61 - 21.90	-
Caribbean Affiliates	(10.61) - 21.26	1
Global Affiliates	(16.46) - 21.26	1

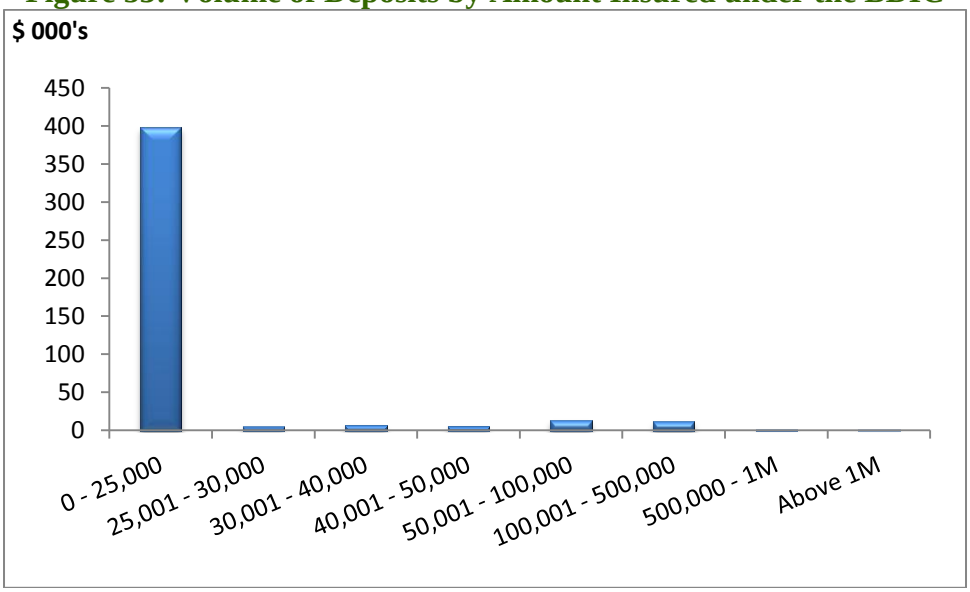
Overall the results suggest significant exposures to Caribbean and Global Affiliates with one bank failing in each case. Losses to all other geographic regions were insufficient to erode capital levels below the 8 percent threshold.

6.3.1 Deposit Insurance

Deposit insurance plays a key role in maintaining stability in the financial system[13]. It serves primarily to protect depositor accounts up to $25,000 and at the end of 2011, 90 percent of all accounts were fully secured (see Figure 53). Of the remaining accounts, $6.4 billion (80% of total deposits) would be at risk in the event of a financial collapse. Nevertheless the risk of loss related to these uninsured deposit balances is however mitigated by the high levels of liquidity in the financial sector, the solid capital adequacy and continued profitability of these institutions which further reinforces their capital buffers against losses.

[13] Only commercial banks and deposit taking non-bank financial institutions (14 institutions) currently participate in this fund.

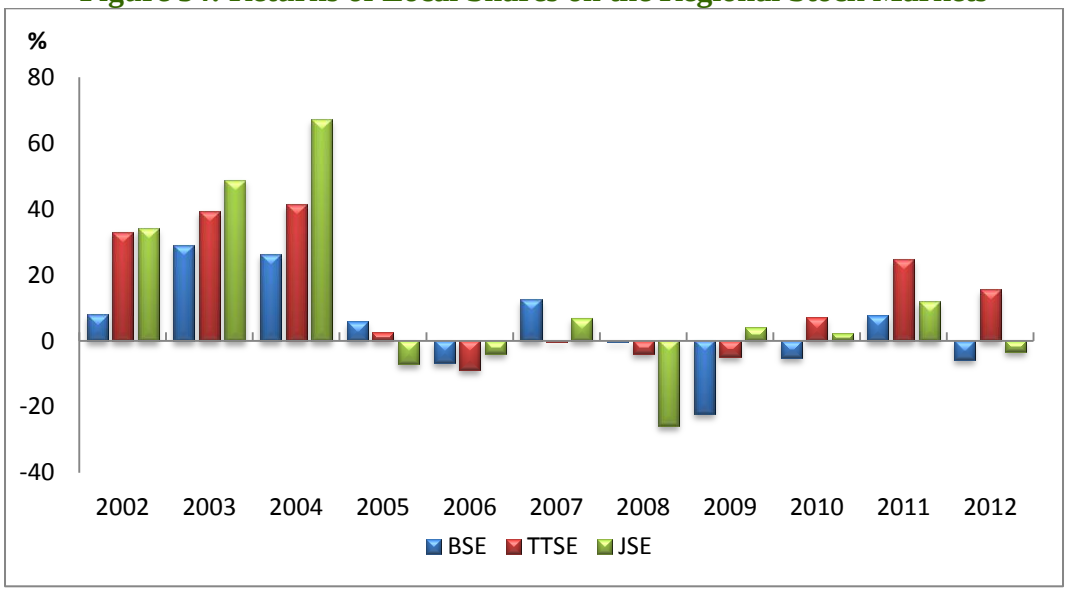
Figure 53: Volume of Deposits by Amount Insured under the BDIC



7 Equity Markets

The performance of regional markets diverged significantly in 2012 with shares on the Trinidad and Tobago market rising by over 15 percent while the Barbadian and Jamaican stock markets declined by 5.6 percent and 3.4 percent, respectively. The decline in Barbadian-listed stocks occurred despite modest improvements in profits of several of the larger corporations on the stock exchange and represents the fourth year of losses since 2008. In contrast, international stock markets increased with the MSCI world index[14] growing 2.6 percent during 2012.

Figure 54: Returns of Local Shares on the Regional Stock Markets

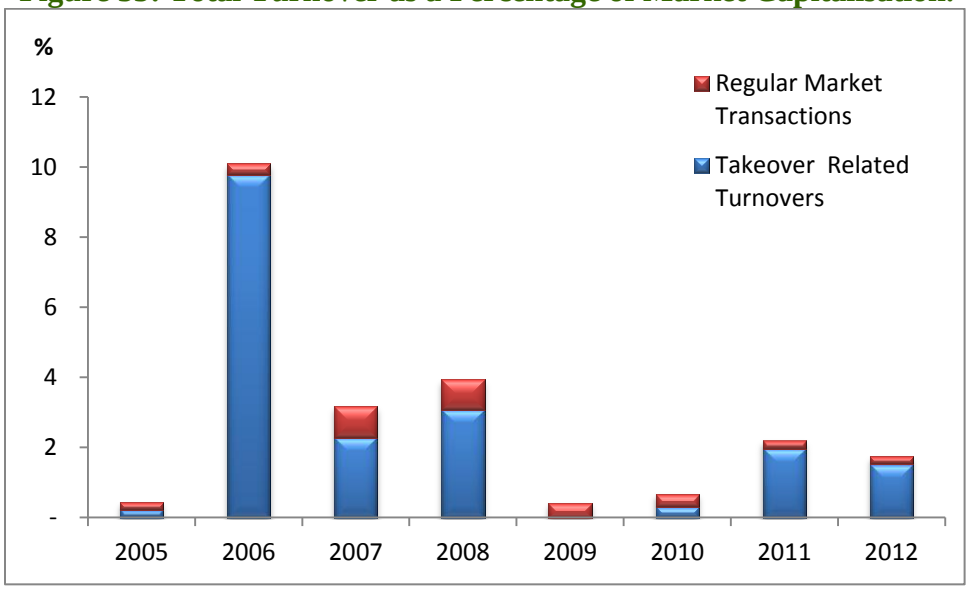


[14] The MSCI World Index combines 24 developed market indices.

In an environment of shrinking equity values, the local market capitalisation fell by more than 5 percent in 2012 compared to 2011. The delisting of shares continued to be a feature of the local market, with one of the 21 currently listed companies, announcing its intention to delist. Two new securities were listed on the Barbados Stock Exchange in 2012. However, these equity funds were focused on providing local investors with exposure to various international equity and commodity markets.

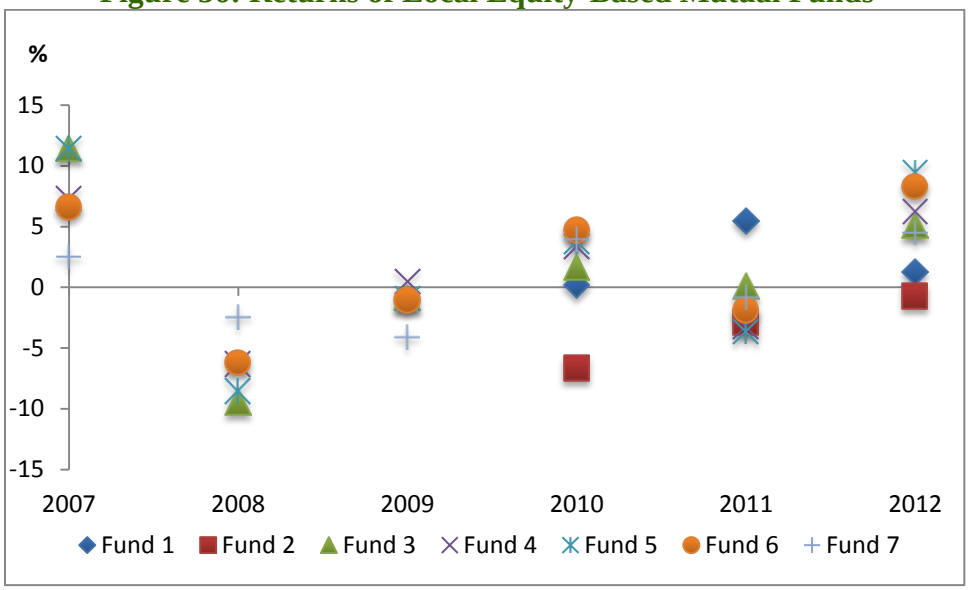
Activity on the BSE in 2012 was driven by takeover-related transactions with the purchase of the former Barbados National Bank by Republic Bank. Turnover in 2011 was similarly dominated by the takeover of Light and Power Holdings by Emera Inc.

Figure 55: Total Turnover as a Percentage of Market Capitalisation.



Local equity-focused mutual funds posted their best results since the slowdown in 2008. The more successful funds generally had a greater exposure to the more buoyant Trinidad and Tobago or international markets and less exposure to the Barbadian or Jamaican markets.

Figure 56: Returns of Local Equity-Based Mutual Funds



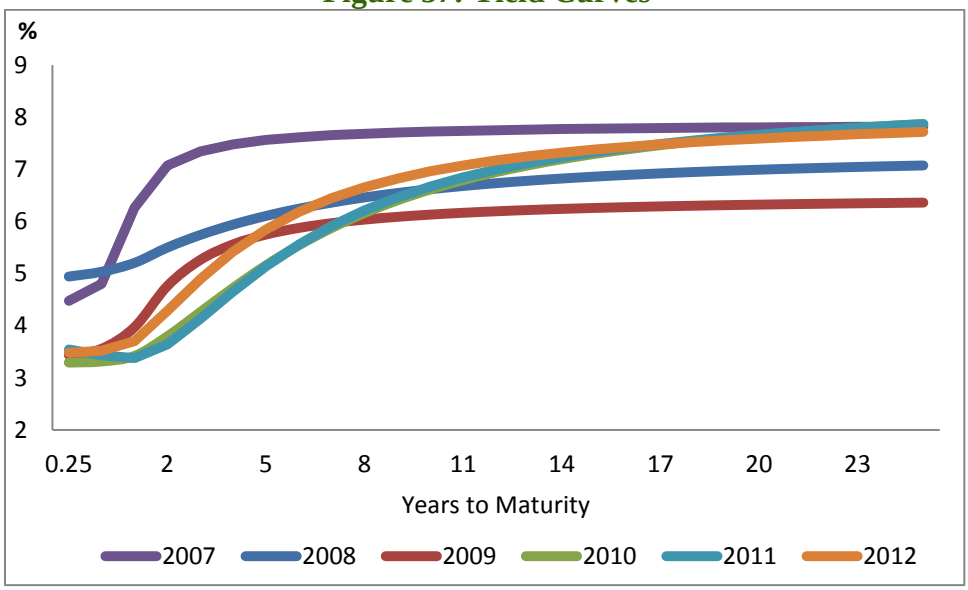
The Barbados Stock Exchange sought to address the issue of low volume trades unduly impacting the market prices by instituting threshold volumes for each security below which trades would not impact the market prices. Consequently, the odd-lot market was abolished.

8 Government Debt Securities

During 2012, two issues of Treasury notes ($125 million) and eight issues of debentures ($625 million) were offered to the public at weighted average coupon rates of 6.2 percent and 7.3 percent, respectively. The new issues resulted in a net increase of $496.1 million in the total amount treasury notes and debentures outstanding, compared with an average net increase of $410.9 million over the past four years. Approximately three-quarters of the new issues during the year were taken up by the National Insurance Scheme (NIS) and insurance companies. The NIS continues to be the majority holder of government securities with 50 percent, while insurance companies and commercial banks hold 17 percent and 12 percent, respectively.

While there was little movement at the long end of the yield curve the short end of the curve shifted upward modestly compared to 2011.

Figure 57: Yield Curves



9 Appendix

Table 1: Selected Financial Indicators – Non-bank Financial Intuitions

	2007	2008	2009	2010	2011	2011Q3	2012Q3
Solvency indicator							
Capital / Assets (%)	18.1	21.2	22.6	23.5	23.8	22.3	22.8
Liquidity indicators							
Loan to deposit ratio (%)	165.0	180.0	168.3	167.6	152.3	145.8	114.4
Volatile deposits to total deposits (%)	34.5	25.0	22.4	29.0	23.0	26.9	23.3
Liquid assets/Short Term Liabilities (%)	67.4	54.7	46.7	52.8	77.4	71.9	66.5
Credit risk indicators							
Asset Growth (%)	16.7	-5.0	2.5	2.7	6.2	8.1	4.7
Nonperforming loans ratio (%)	2.9	3.3	5.2	5.7	8.7	7.8	9.4
Substandard loans/Total loans (%)	2.6	3.0	4.8	5.2	7.4	6.8	7.5
Doubtful loans/Total loans (%)	0.2	0.1	0.1	0.1	0.7	0.6	0.9
Loss loans/Total loans (%)	0.2	0.2	0.3	0.3	0.6	0.5	1.0
Reserves to nonperforming loans (%)	18.3	21.2	16.2	14.5	17.0	14.4	31.4
Profitability indicators							
Net Income/Capital (%)	10.7	10.4	11.1	10.9	8.3	8.5	5.4
Return on Assets (ROA)	2	2.1	2.4	2.5	1.9	1.9	1.3

* Reflects the underlying growth in assets.

Table 2: Selected Financial Indicators – Credit Unions

	2007	2008	2009	2010	2011	2011Q3	2012Q3
Solvency Indicator							
Reserves to Total Liabilities (%)	8.2	8.0	8.1	8.1	8.1	9.2	9.9
Liquidity Indicators							
Loan to deposit ratio (%)	217.1	123.5	118.6	112.2	113.4	108.5	116.5
Liquid assets/Short Term Liabilities (%)	14	9	11	11	5	6.5	7.3
Credit risk Indicators							
Total assets, annual growth rate (%)	13.6	7.4	9.1	9.7	5.1	4.2	3.2
Loans, annual growth rate (%)	11	10	8	8.6	7	4.5	1.7
Nonperforming loans ratio (%)	6.4	5.2	6.5	7.2	7.0	7.8	8.5
Arrears 3 – 6 months/Total Loans (%)	2.1	1.6	2.1	2.1	1.9	2.5	2.4
Arrears 6 – 12 months/Total Loans (%)	1.8	1.3	1.8	1.9	1.7	1.6	2.0
Arrears over 12 months/Total Loans (%)	2.5	2.3	2.7	3.2	3.4	3.7	4.2
Provisions to Total loans (%)	2.2	1.8	1.9	2.2	2.8	2.6	3.1
Profitability Indicator							
Return on Assets (ROA)	7	4	4	4	3	3	3

Technical Summary for the Stress Test Analysis

The stress testing exercise used in this report primarily adopted the methodology described in Cihak 2007. This system-wide approach covered five banks, seven non-banks and the consolidated credit union sector. The Stress Tester 2.0 is an excel-based framework that examines the peer-group outcomes on capital adequacy ratios after undergoing various stress scenarios. However, NPL projections as well as the cross border exposure analysis were done outside of the Stress Tester 2.0 framework.

The nonperforming loan (NPL) ratio as projected in Figure 48 is based on the finding in Guy and Lowe (2011). In particular, they found that nonperforming loans (NPL) were strongly related to its past levels, gross domestic product (GDP), bank returns (ROA), changes in aggregate price levels (DP) including the cost of financing (DR). The estimation was done using panel data so that a combination of banks specific and marcoeconomic impacts can be examined. The reduced aggregate estimates were of the form:

$$\text{npl} = 1.72 + 0.69 \times \text{npl}_{-1} - 0.11 \times \text{GDP}_{-4} - 1.4 \times \text{ROA} - 0.37 \times \Delta\text{P} - 0.33 \times \Delta\text{R}_{-4}$$

Figure 49 was also derived from the NPL forecasting framework and shows the NPL cross-sectional forecasting outcomes for various GDP shocks as at the end of 2014.

References

Čihák, M. (2007) Introduction to Applied Stress Testing
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Guy, K. and Lowe, S. (2011) Nonperforming Loans and Bank Stability in Barbados
Economic Review, Vol. XXXVII, Issue 3, pp. 77-99, Central Bank of Barbados