

FINANCIAL STABILITY REPORT

2016

CENTRAL BANK OF BARBADOS

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Preface

Oversight of the financial system is shared between the Central Bank of Barbados (Bank), the Financial Services Commission (FSC) and the Barbados Deposit Insurance Corporation (BDIC) in the form of a Financial Oversight Management Committee (FOMC). The FOMC is responsible for the continuous oversight of the financial system, the assessment of vulnerabilities and the initiation of policies to increase the resilience of the system in the face of possible adverse events. The Bank collaborated with the FSC in the preparation of the sixth issue of Barbados' Financial Stability Report which provides a thorough assessment of the risk exposures of banks, insurance companies, credit unions and other depository financial institutions. This report analyses a range of financial stability indicators for financial institutions, as well as balance sheet and income and expenditure trends. For the banking system, macroeconomic forecasts are also used to project expectations for the quality of credit. Progressively intensified stress tests are used to evaluate a range of possible financial risks for both depository financial institutions and the insurance sector.

Abbreviations

Abbreviation	*Meaning*
AML	Anti-Money Laundering
CAR	Capital Adequacy Ratio
CFT	Countering Financing of Terrorism
CBB	Central Bank of Barbados
DTI	Deposit Taking Institution
FIA	Financial Institutions Act
FOMC	Financial Oversight Management Committee
FSC	Financial Services Commission
FSR	Financial Stability Report
GDP	Gross Domestic Product
GPW	Gross Premiums Written
IMF	International Monetary Fund
KYCC	Know Your Customer's Customer
NPL	Non-performing Loan
ROA	Return on Assets

1. Overview

Key financial sector indicators point to the continued stability of the Barbadian financial system during 2016. The banking system remained the largest, and arguably most central group of institutions within the financial system. The overarching feature of the commercial banking environment continued to be extremely high levels of liquidity as banks reduced their holdings of government securities and overall loan growth remained weak. Against this backdrop, banks still managed to increase profitability, due primarily to lower interest expenses. Though there was no increase in their credit portfolios due to the continued weakness in business-related lending, an overall improvement of credit risk was reported as the banks' non-performing loan (NPL) portfolio continued to subside.

Capital remained above international guidelines even with the introduction of capital reporting using Basel II requirements. The strength of the parent companies remains critical to these institutions' soundness, and is a significant safeguard against potential spill-overs, since most inter-bank exposures are between domestic affiliates and their parents. The parent entities continued to obtain strong reviews from domestic regulators and international ratings agencies.

With their focus on personal lending, credit unions reported robust growth in loans and investments, an improvement in the ratio of non-performing loans to total loans, and increased profitability. However, a significant proportion of their NPLs have not been serviced in over a year and their provision levels remain significantly below those of banks.

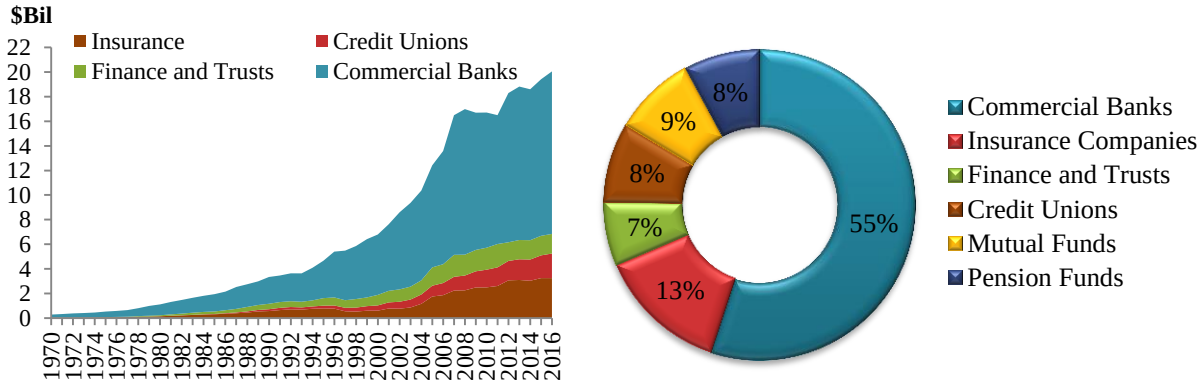
The performance of the insurance industry was mixed during 2015, the last full year for which data is available. The industry as a whole recorded an overall increase in assets but the general insurers experienced a fall in their asset base. Several general insurers registered losses leading to an erosion of capital buffers in this subsector. However, life insurers recorded strong growth in premiums and a marginal increase in profitability.

Stress tests performed on the financial system suggest that the system is generally stable and can survive a range of adverse events. In particular, stress tests for banks continued to emphasise their resilience to a variety of economic shocks. Deposit-taking finance and trust companies were also robust, although specific vulnerabilities emerged under less adverse conditions than for banks. For credit unions, capital levels in the industry are adequate to absorb potential losses due to credit risk shocks and liquidity was sufficient to buffer potential deposit runs. Stress tests for the insurance sector, including the impact of recessionary, pandemic, natural disaster shocks and banking and sovereign crises, indicated that the overall industry appears to be reasonably resilient, though some companies faced significant losses of capital.

2. Structure of the Financial System

Commercial banks remained the dominant player in the financial system holding 55 percent of domestic financial assets. The insurance industry accounted for 13 percent, while credit unions continued to gain share, attracting 8 percent of the market compared to 7 percent five years ago. Trust and finance companies, mutual funds and private pension schemes each held less than 10 percent of the system's assets.

Figure 1: Assets of the Financial System by Institution[1]



Source: Central Bank of Barbados

Total assets of the system grew 4.5 percent ($805 million), from 260 percent of GDP at September 2015 to reach 266 percent of GDP at September 2016 (Table 1). This growth was mainly due to expansions in commercial banks' claims on the Central Bank, credit unions' loans and investments and higher asset values of mutual funds.

Table 1: Structure of Financial Services Sector to GDP

(Assets as at September)	2015 $Mil	2016 $Mil	2015 % GDP	2016 % GDP
Commercial Banks	12,733	13,220	145	146
Insurance Companies[#]	3,020	3,243	34	36
Trust & Finance Companies	1,590	1,594	18	18
Credit Unions	1,850	1,999	21	22
Mutual Funds	1,877	2,044	21	23
Pension Funds[#]	1900*	1,900	21	21
Total	**22,970**	**24,000**	**260**	**266**

Source: Central Bank of Barbados and Financial Services Commission;
Notes: [#]Insurance and pension fund data is as at December of the previous year;
**Pension fund data repeated due to unavailability of prior year data;*

Interconnectedness and cross border linkages remain a key feature of the financial system. All five banks are foreign-owned. The larger insurance companies operate both regionally and internationally, and some have mutual funds and pension investment businesses. At the same

[1] Mutual fund and pension fund data is not available for the entire historical period.

time, several trust and finance companies are owned by banks, or are affiliated with credit unions or other non-financial conglomerates. Additionally, pension plans are partly invested in local fixed income mutual funds.

Many insurance companies operate in Barbados as a branch of a foreign parent company and are thus not required to hold share capital within their Barbadian operating company. Such firms usually depend on the strength and financial capital of their parents for injections of additional funds, should any shortfalls arise. As of December 31, 2015, there were six branch insurance companies operating in Barbados. One bank and one trust and finance company also are branch operations to which capital does not apply.

Table 2 presents a summary of the ratings agencies' perspectives on the parent banks and largest insurance company as well as the ratings of the sovereigns in which they are headquartered. The table suggests that parent entities are well capitalised and in the event of a crisis, the sovereigns have the capacity to support these entities

Table 2: Capital Adequacy and Rating of Parent

Domestic Bank/Insurance Company	Majority Shareholder	Majority Shareholder Capital Adequacy (Tier 1-2016)	Majority Shareholder's Rating (Standard and Poor's)	Country Rating (Majority Shareholder) (Standard and Poor's)
Republic Bank Barbados Limited	Republic Bank Limited	21.2*	BBB+	A-/Trinidad and Tobago
CIBC FirstCaribbean International Bank	CIBC	11.3**	A+	AAA/Canada
Bank of Nova Scotia	Bank of Nova Scotia	12.4**	A+	AAA/Canada
Royal Bank of Canada	Royal Bank of Canada	12.3**	AA-	AAA/Canada
First Citizens	First Citizens Group	48.7*	BBB+	A-/Trinidad and Tobago
Sagicor Life[2]	Sagicor Financial Corporation	-	B	A+/Bermuda

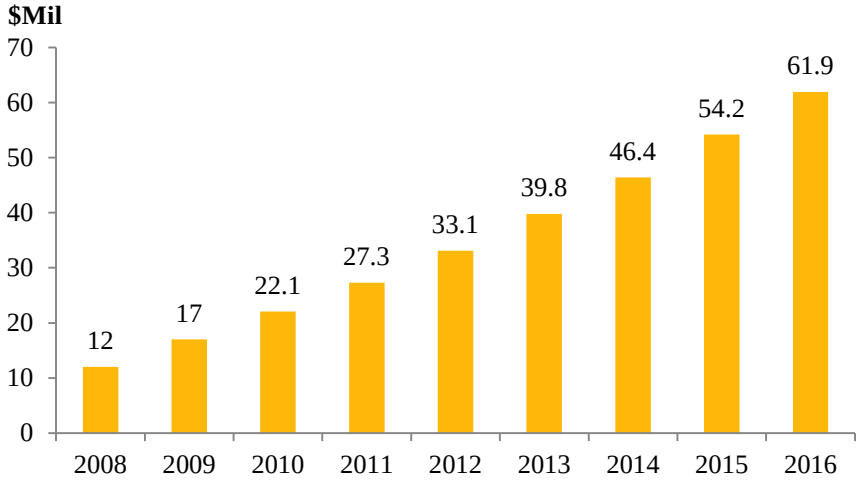
Notes: *Tier I & Tier II Capital Adequacy under Basel 1 (Annual Report 2016 - Data as at Sep 2016);
**Based on Basel III Tier 1 capital requirements and definitions (Annual Report 2016 - Data as at Oct 2016);
#Standard and Poor's senior debt rating.

The financial landscape continued to be characterised by a high level of concentration, with the three Canadian banks accounting for 75 percent of total bank assets. At the same time, the largest seven of thirty-four credit unions represented 92 percent of the industry. The life-sector accounted for two-thirds of the insurance market with only six insurers operating and the top three life insurers accounting for 95 percent of total industry assets. There were fifteen general insurance companies, with the top three holding 63 percent of general insurers' assets. Furthermore, the six largest of 303 pension plans captured 46 percent of total assets under management.

[2] Sagicor Financial Corporation re-domiciled its headquarters to Bermuda from Barbados in 2016.

Confidence in the financial system is buttressed by the existence of the Deposit Insurance Corporation, which guarantees each depositor at commercial banks up to $25,000 on domestic currency accounts. As at year-end 2016, over 90 percent of qualified accounts in the Barbadian banking system were fully covered in the event of an institution's collapse. The deposit insurance fund has shown steady growth since its inception in 2007 and was last valued at $62 million (Figure 2).

Figure 2: Deposit Insurance Fund



Source: Barbados Deposit Insurance Corporation

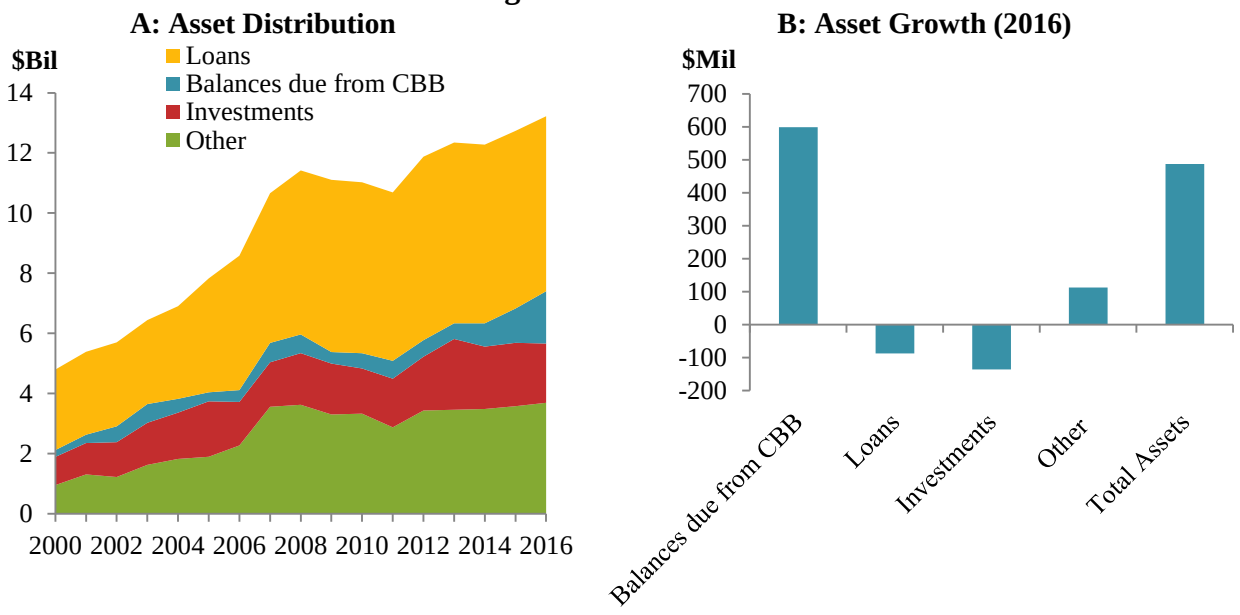
3. Analysis of the Financial System

The Barbadian economy displayed signs of recovery, with growth of 1.6 percent in 2016 as tourism, and to a lesser extent construction, boosted economic activity. Consequently, unemployment fell to 10 percent from an average of 11 percent a year ago. However, the fiscal deficit, though declining, remained a source of concern as the resultant rise in the debt levels caused further risk aversion and Barbados' debt was further downgraded by international ratings agencies during the year. This served to reduce financial institutions' appetite for domestic Government debt. At the same time reserve levels fell to around the equivalent of 10 weeks of imports of goods and services.

3.1 Commercial Banks[3]

Banks' total assets grew 3.8 percent to reach $13.2 billion, principally reflected in a build-up of balances at the Central Bank. However, loans and investments declined, the latter due primarily to a reduction in holdings of Government paper.

Figure 3: Total Assets



Source: Central Bank of Barbados

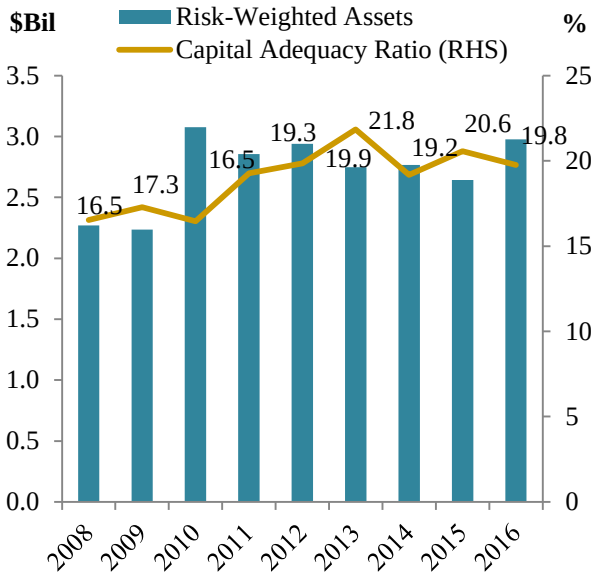
Commercial banks' capital position remained strong and continued to be a main indicator of the system's resilience. Under Basel II requirements[4], banks capital adequacy ratio fell to 18.9 percent in December 2015 from its September 2015 position of 20.6 percent, due to an 11 percent increase in risk-weighted assets under the revised calculation methodology. By

[3] All data as at September 2016.
[4] Banks began reporting capital under Basel 2 requirements from December 2015.

September 2016, the ratio recovered to 19.8 percent due to an improvement in regulatory capital, as well as a decline in risk-weighted assets. Overall, the ratio remains well above international standards and comparable with regional norms.

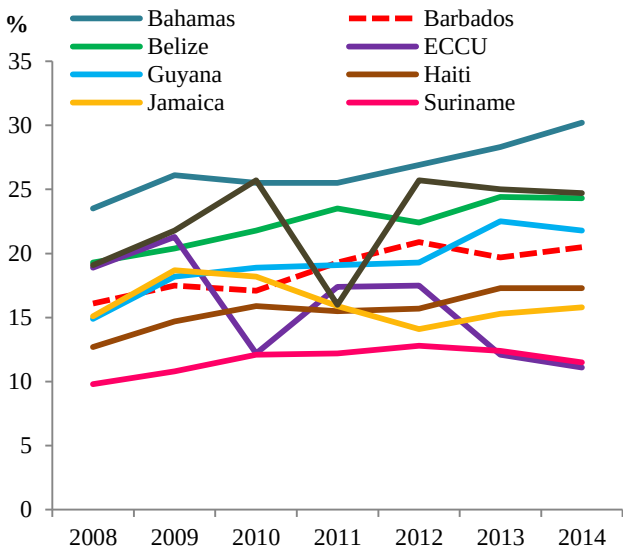
Figure 4: Capital Adequacy

A: Risk Weighted Assets and CAR



Source: Central Bank of Barbados

B: Regional Comparisons[5]

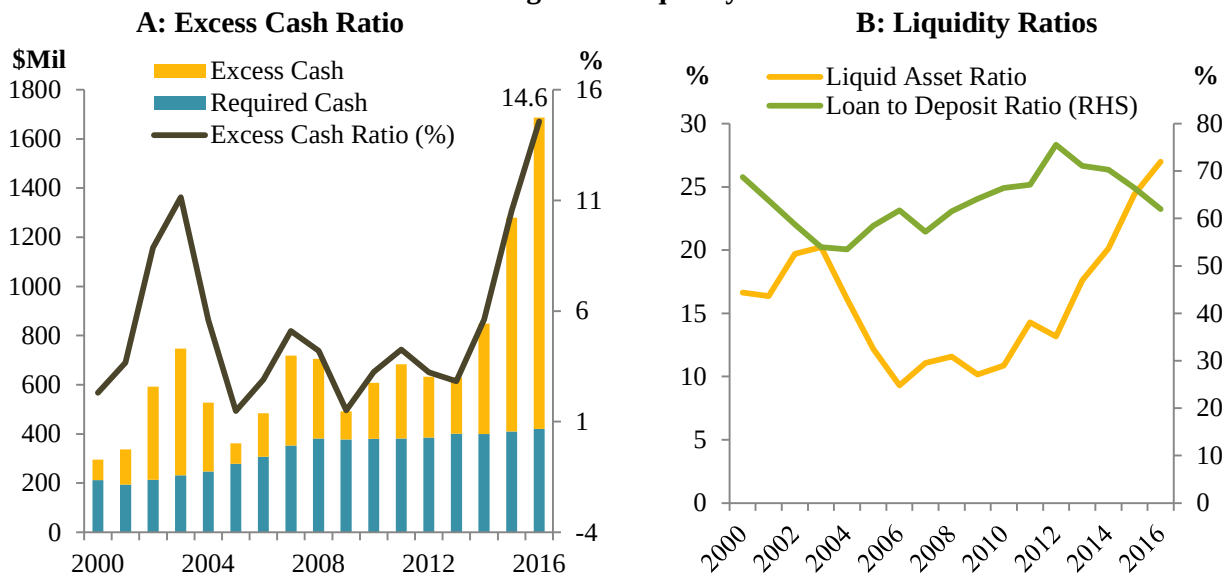


Source: Caribbean Regional Financial Stability Report 2015

Elevated levels of excess liquidity are a structural characteristic of the Barbadian financial system but this feature of the financial system has been exacerbated by weak commercial lending activity, and risk aversion by the banks due to downgrades of Barbados' sovereign credit rating. Consequently, the sector continued to build up its liquidity levels, reflected in claims on the Central Bank, recording an excess cash ratio of 14.6 percent in September 2016 compared to 10.5 percent one year prior. Additionally, the liquid asset ratio grew to 27 percent, the highest on record, due in part to the banks' continuing shift from long-term paper to short-term treasury bills. The loan-to-deposit ratio fell to 62 percent on the basis of moderate deposit growth and an ongoing contraction in loans.

[5] The rest of the region still reports under Basel 1.

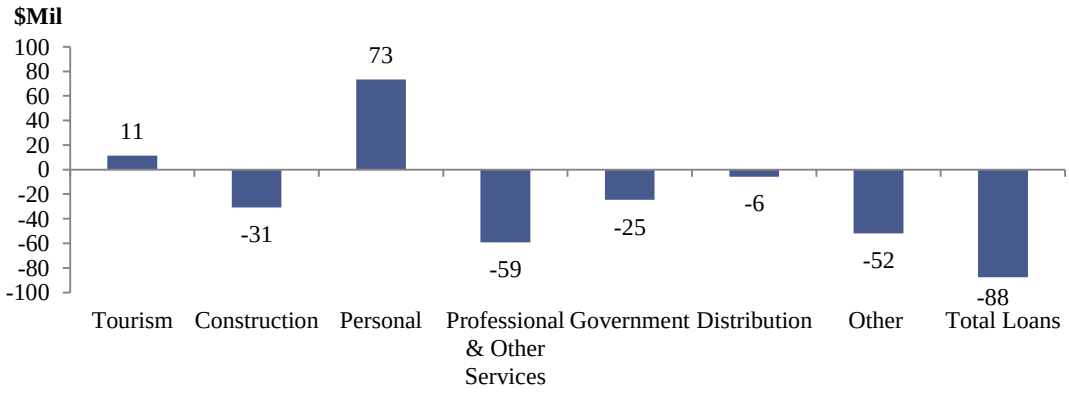
Figure 5: Liquidity Indicators



Source: Central Bank of Barbados

Loans declined 1.5 percent across all sectors, with the exception of consumer loans which grew by $73 million. Of the growth in consumer credit, $29 million represented personal mortgages. The marginal uptick in credit to the tourism sector illustrated in Figure 6 primarily reflects the reclassification of an existing loan previously captured under "Professional and Other Services".

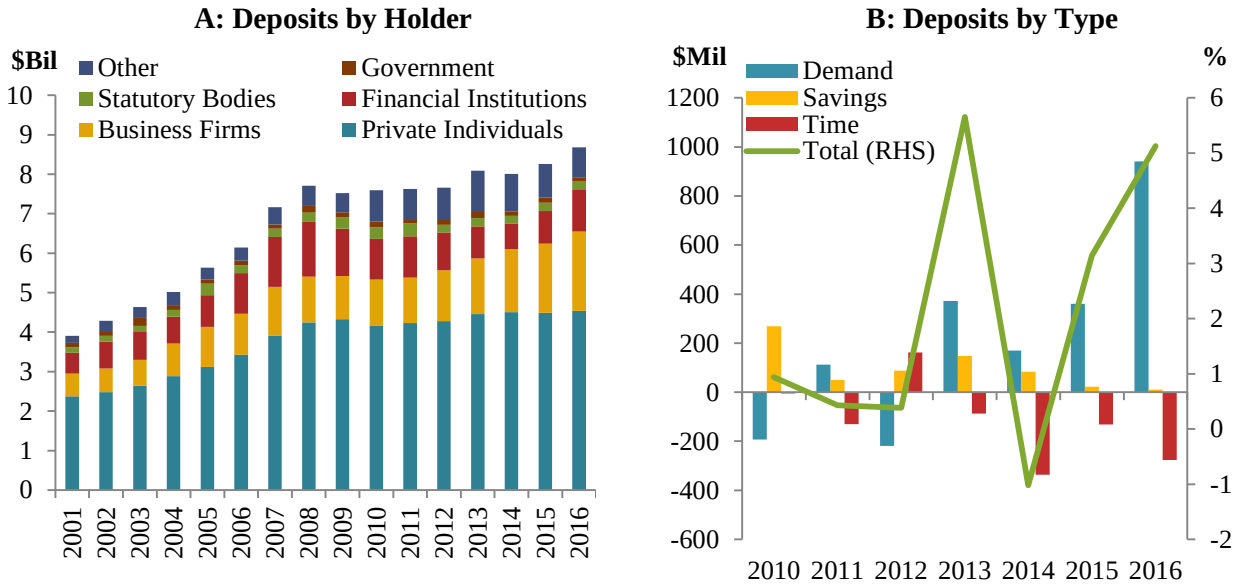
Figure 6: Loan Growth (2016)



Source: Central Bank of Barbados

Banks' funding by way of deposits rose 5 percent, primarily reflected in the demand deposits of corporate and financial depositors. Domestic demand deposits accounted for about 39 percent of total deposits, while total demand deposits (foreign and domestic) represented 42 percent of total deposits. The trend of declining time and slow growth of savings deposits continued to impact the distribution of deposits, as interest rates continued to slide.

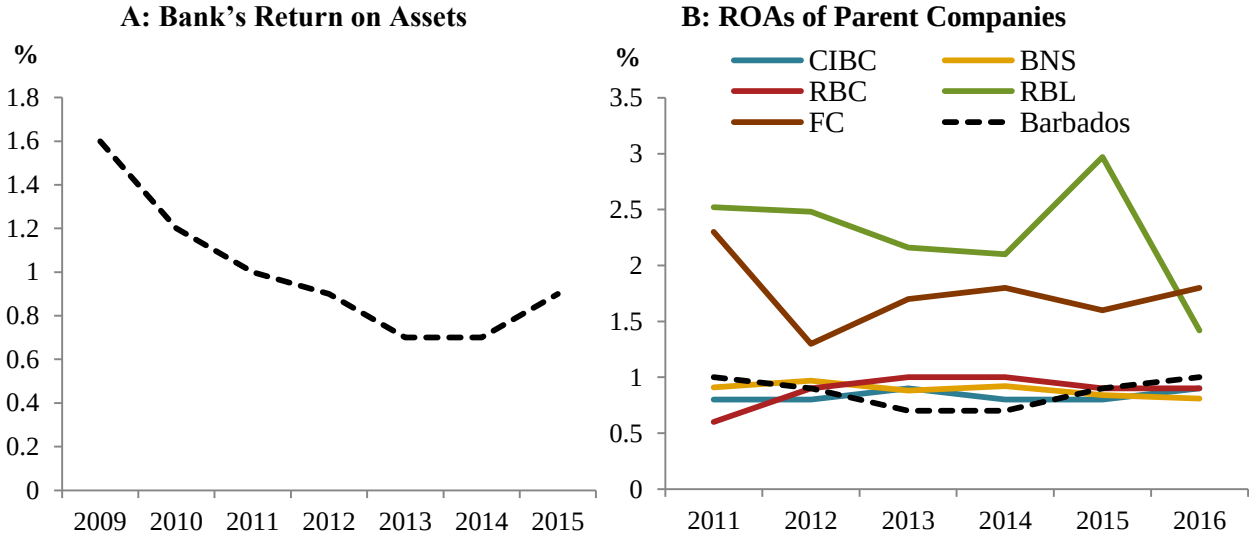
Figure 7: Domestic Deposits



Source: Central Bank of Barbados

The ROA ratio stabilised at around 1 percent, in spite of banks' build-up of non-interest earning assets - primarily claims on the Central Bank - for the third consecutive year. Overall, banks' ROA remained competitive with their home jurisdictions.

Figure 8: Return on Assets



Source: Central Bank of Barbados

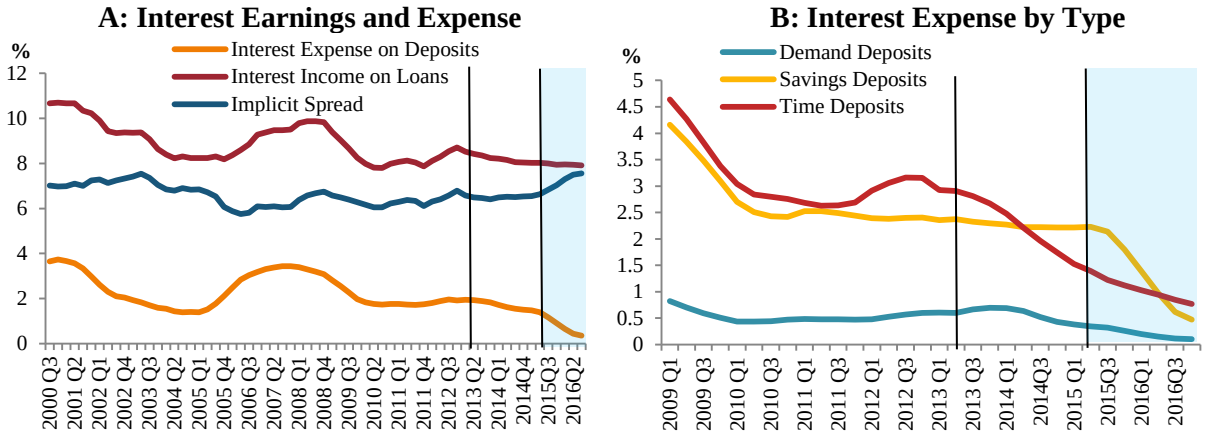
Source: Annual Reports of Parent Companies

The spread between interest paid on deposits and received on loans continued to widen across all institutions since the removal of the minimum deposit interest rate in April 2015[6]. As at

[6] In April 2013, the minimum deposit rate was abolished and a minimum savings rate was applied to savings deposits of individuals and non-profit entities. This minimum savings rate was removed in April 2015.

September 2016, the average interest rate on deposits was estimated at 0.3 percent, less than half of what it was one year earlier.

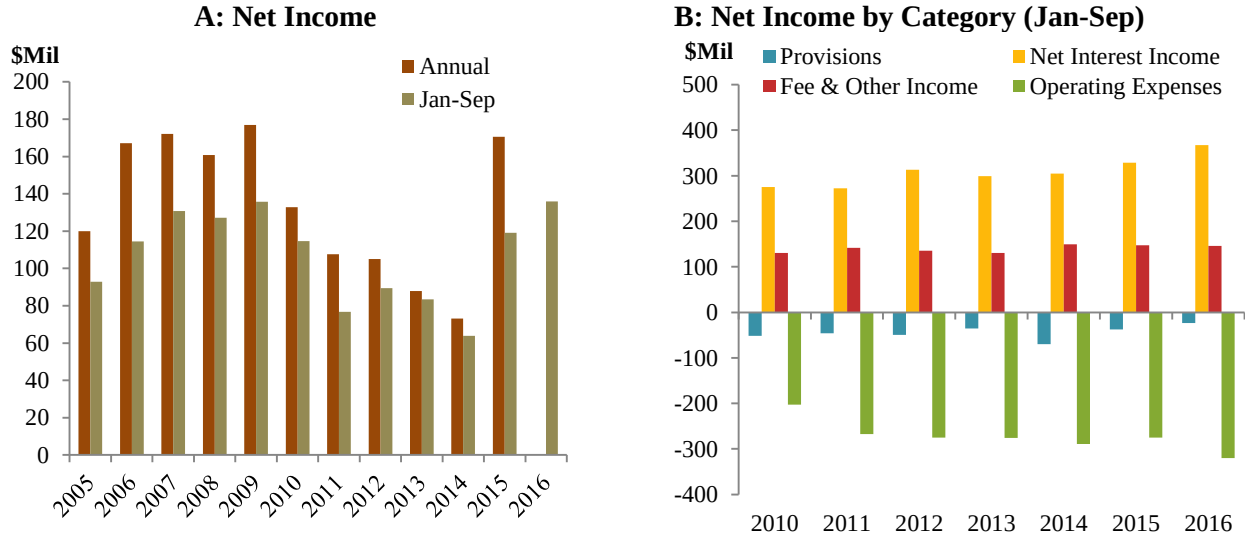
Figure 9: Commercial Banks' Interest



Source: Central Bank of Barbados

The upward trend in net interest income generated from falling deposit rates, along with a reduction in provisions expensed for impaired loans, led to higher overall net income, despite banks' increasing operational costs over the January to September 2016 period, compared to one year ago.

Figure 10: Profitability



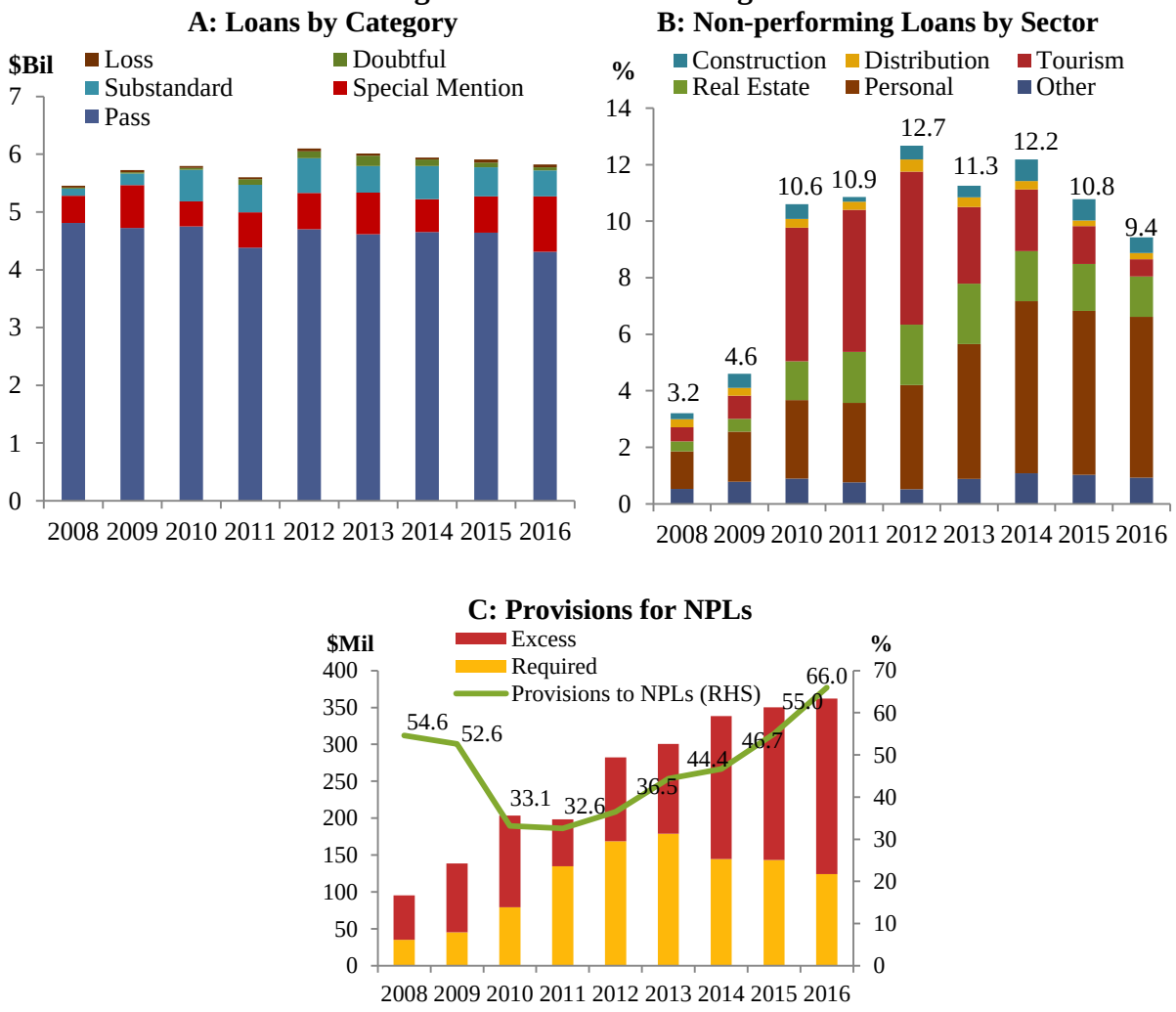
Source: Central Bank of Barbados

Improvement in the banks' credit quality persisted over the period with the NPL ratio falling to 9.4 percent in 2016. This was marked by a reduction in all categories except distribution, which recorded a slight increase. NPLs continue to be concentrated in the least severe substandard category which accounted for 81 percent of gross classified loans, with the doubtful and loss

categories accounting for 10 and 8 percent, respectively. Since 2013, households remained the main driver of classified debt, representing 59 percent of the total at September 2016.

Given the fall in NPLs, coupled with a $12 million increase in cumulative provisions, the provision to NPL ratio strengthened, growing from 55 percent to 66 percent over the twelve-month period. Additionally, net write-offs averaged 0.6 percent of total loans over the year to September 2016, double the figure recorded during the previous year, but equivalent to 2013 and 2014.

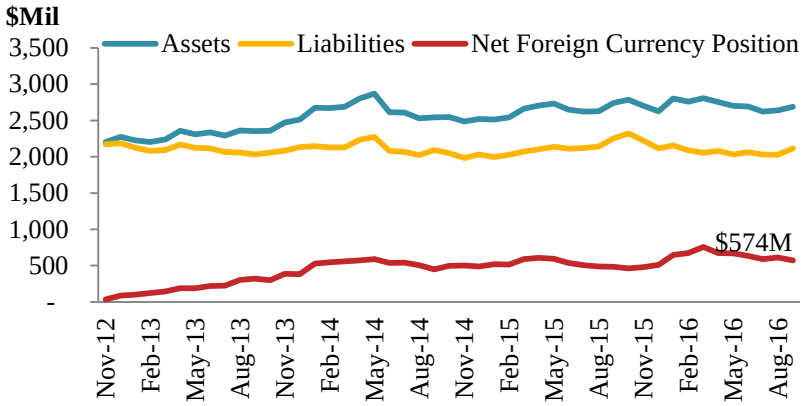
Figure 11: Non-Performing Credit Portfolio



Source: Central Bank of Barbados

Indicators of foreign exchange risk did not suggest any build-up of risk by domestic commercial banks. Assets denominated in foreign currency fell 1.8 percent but there was a 6.1 percent decline in foreign currency liabilities. Consequently, banks' overall net foreign position grew by $89 million to reach $574M in September 2016.

Figure 12: Net Foreign Assets



Source: Central Bank of Barbados

3.2 Deposit-taking Trust and Finance Companies

The structure of the non-bank financial sector (NBFI) remained unchanged over the past two years with six deposit-taking institutions and seven non-deposit taking (mainly trusts) institutions. This sector continued to be mainly funded by time deposits and its major assets consisted mainly of mortgage loans primarily for the purchase of property/land, and non-mortgage loans (motor vehicles loans and other personal and small business loans).

As at September 2016, total assets of the deposit-taking NBFIs stood at $1.6 billion, an increase of $15 million (1 percent) since September 2015. This moderate growth reflected increased short-term investment balances at banks and institutions.

Figure 13: Asset Distribution (DTIs)

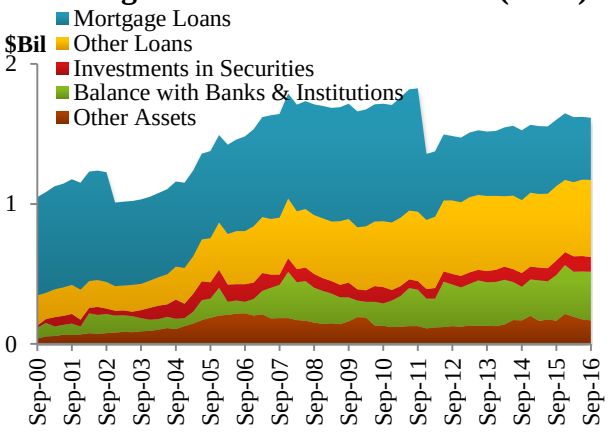
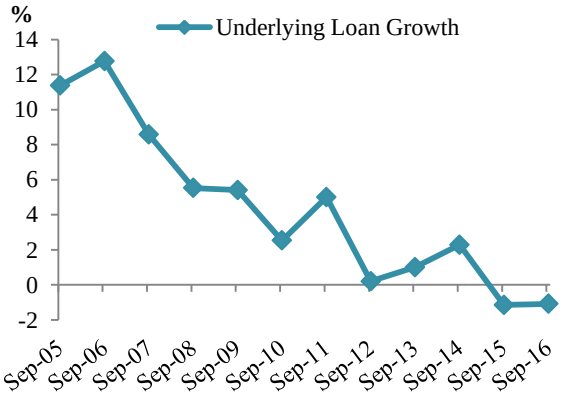


Figure 14: Loan Growth



Source: Central Bank of Barbados

Loans, the largest category of assets, contracted for the second successive year, as they fell by 1.1 percent to $994 million at September 2016. The mortgage subcategory of the loan portfolio declined by $29 million, but its impact was partially offset by an $18 million increase in advances provided for motor vehicle and other personal and small business purposes. The

decline in the mortgage loan portfolio was primarily the result of a strategic decision by one institution in this sector to decentralise new mortgage issuance with an affiliate in the banking sector, while allowing its current mortgage portfolio to be paid down.

Figure 15: Non-Performing Loans

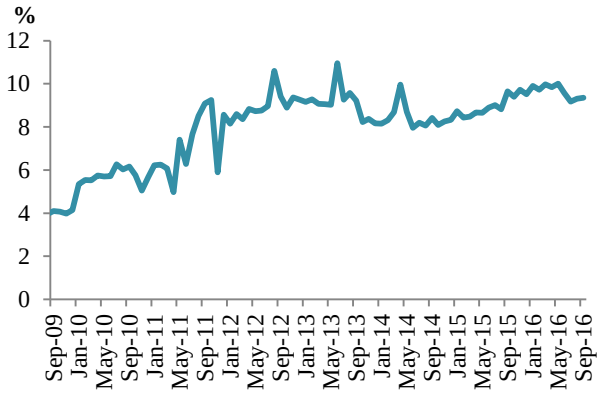
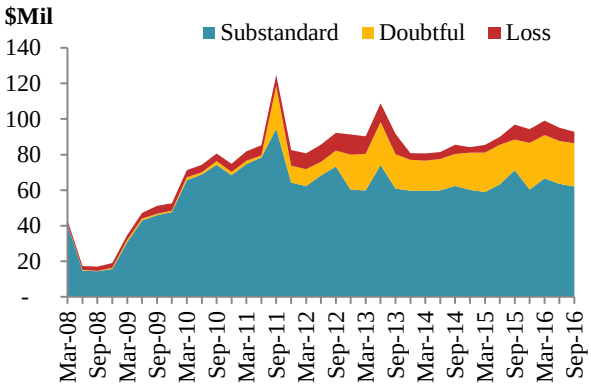


Figure 16: Distribution of NPLs



Source: Central Bank of Barbados

The contracting loan book and the deterioration of a few business-related loans contributed to a marginal increase in the NPL ratio for the first half of 2016, which peaked at 10 percent, but declined to 9.3 percent at September. The improvement in the second half of the year under review was mainly the result of decreases in classified debts to the personal and construction sector.

Despite the protracted period of high NPLs since 2010, 67 percent remained in the sub-standard category of classification. This category implies the lowest risk of loss and there were no significant signs of deterioration in the classified debt portfolio. Provision levels increased over the period to reach 40 percent of NPLs, but remained lower than the provision levels of the commercial banks, which routinely exceed regulatory requirements. At the same time, write-offs fell to 0.2 percent of total loans over the year to September 2016 from 0.5 percent and 1.4 percent in 2014 and 2015, respectively.

Figure 17: Provisions to NPLs

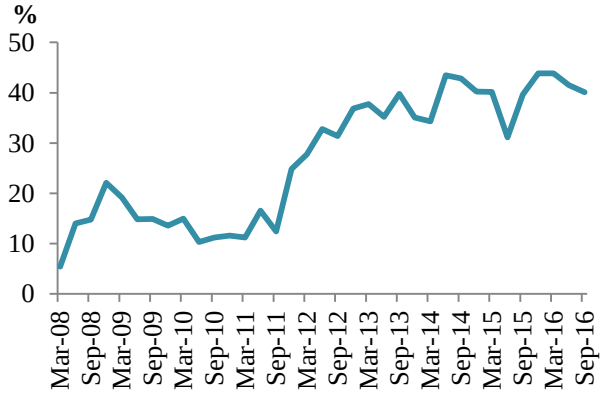
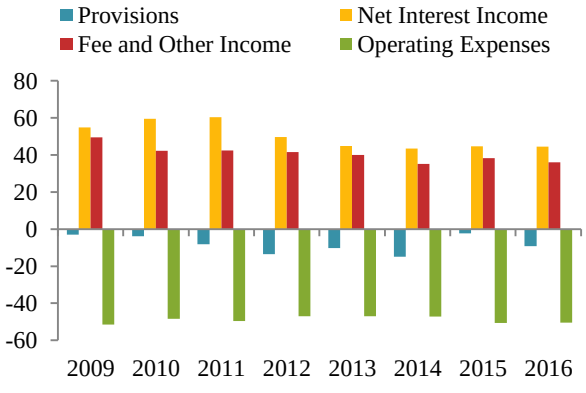


Figure 18: Profitability

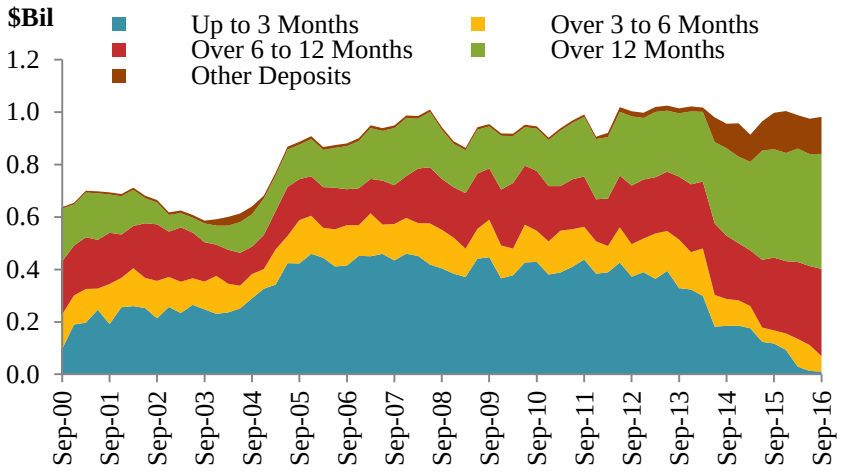


Source: Central Bank of Barbados

This increased provisioning by the NBFIs impacted net income in the sector, which fell by nearly a third to $15.3 million. Consequently, ROA declined from 1.4 percent to 0.9 percent. However, the increase in retained earnings pushed the capital to asset ratio to 23.7 percent, up marginally from 23 percent one year earlier.

Total deposits declined by 1.8 percent over the year, as time deposits decreased by 2 percent to $839 million, while other deposits rose 2 percent. The decrease in time deposits was a reflection of a similar decline at one of the larger institutions in this sector which made a strategic decision to wind down its deposit portfolio and encourage affected clients to move their deposits to other entities within their financial group.

Figure 19: Deposit Distribution



Source: Central Bank of Barbados

Within the time deposits category, there was some migration by depositors to longer time bands where interest rates are higher. However, these institutions recorded lower interest expense paid on their funding base, which also positively impacted their profitability.

Given the contraction in both loans and deposits, the loan to deposit ratio declined marginally over the period to 100.3 percent. The loan to deposit ratio generally exceeded 100 percent over the past five years, as borrowing from liquid parent entities continue to bridge the gap between lending and deposits. Additionally, the liquid assets ratio rose from 21.7 to 22.1 percent, representing a gradual improvement over the last five years.

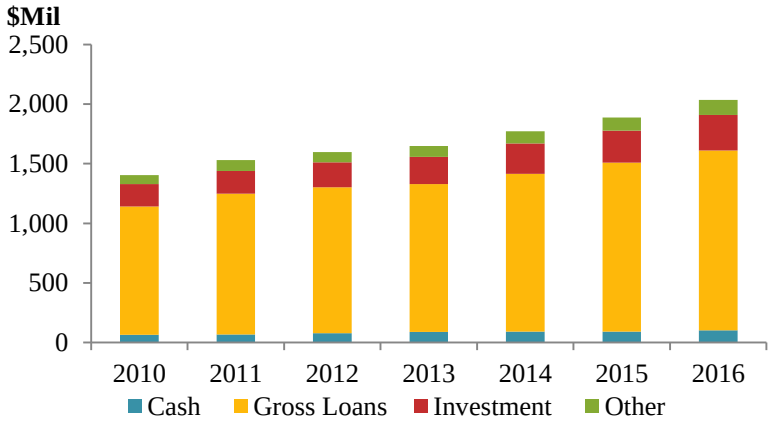
3.3 Credit Unions[7]

At the end of September 2016, there were 34 registered credit unions operating in Barbados. The sector reported membership of approximately 183,000 persons, representing an increase of 3.4 percent over the comparable period of the previous year. For the same period, the consolidated

[7] All data as at September 2016.

assets of the sector were approximately $2 billion, as assets grew by approximately 8 percent (Figure 20). This increase was primarily reflected in an increase in gross loans to members ($90.4 million), investments ($29.4 million) and cash ($10.2 million).

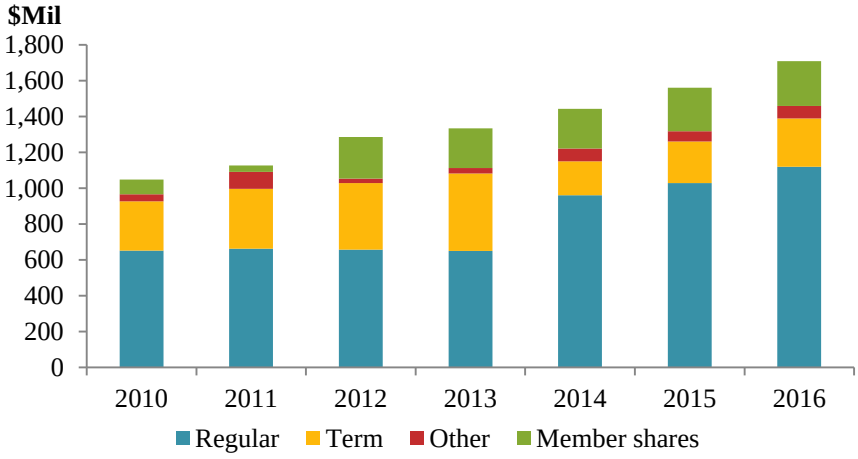
Figure 20: Asset Distribution



Source: Financial Services Commission

As at September 2016, gross loans to members represented the largest asset on the combined balance sheet for the credit union movement, accounting for approximately 75 percent of total assets, slightly down from 77 percent of total assets for the same period of the prior year. Between September 2015 and September 2016, gross loans to members increased by 6.4 percent. Consumer personal loans accounted for the majority of loans to members (51 percent) followed by real estate loans (29 percent) and transport (19 percent). During the period under review, private transport loans increased by 9.1 percent. In contrast, personal consumer credit and real estate loans fell by 3.8 percent and 5.5 percent, respectively.

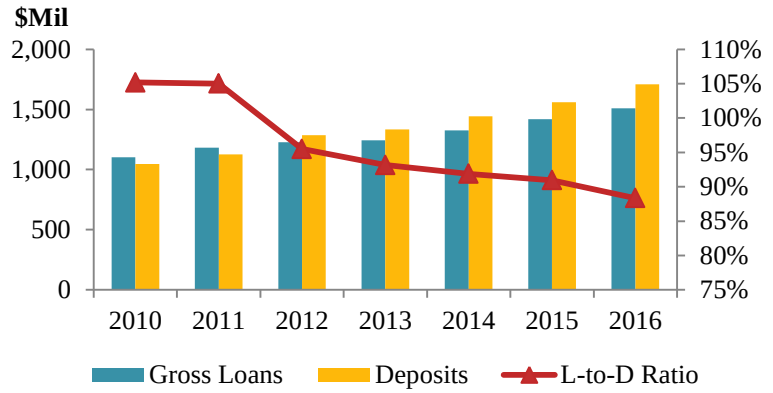
Figure 21: Distribution of Members' Savings



Source: Financial Services Commission

Members' savings, which comprise both members' deposits and members' shares, increased by 9.5 percent to reach $1,708.1 million at the end of September 2016. During the review period, regular deposits increased by 8.8 percent, while term deposits grew by 16.4 percent.

Figure 22: Net Loans to Deposits Ratio

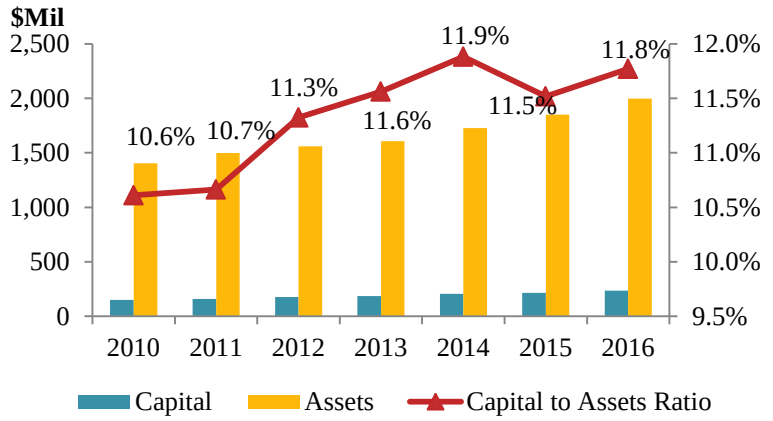


Source: Financial Services Commission

The net loans-to-deposit ratio continued to trend downward, falling to 88.3 percent of total deposits at the end of the period, from 90.9 percent in 2015 (Figure 22). Over the medium term, the credit unions' deposits have grown faster than loans. This increase in deposits was partly influenced by declining interest rates at commercial banks during the period under review.

The sector remained adequately capitalised during the period under review. The capital[8] to assets ratio increased by 0.25 of a percentage point to reach 11.8 percent at the end of September 2016, an outturn marginally higher that the 11.4 percent average capital to assets ratio over the past five years (Figure 23).

Figure 23: Capital to Assets Ratio



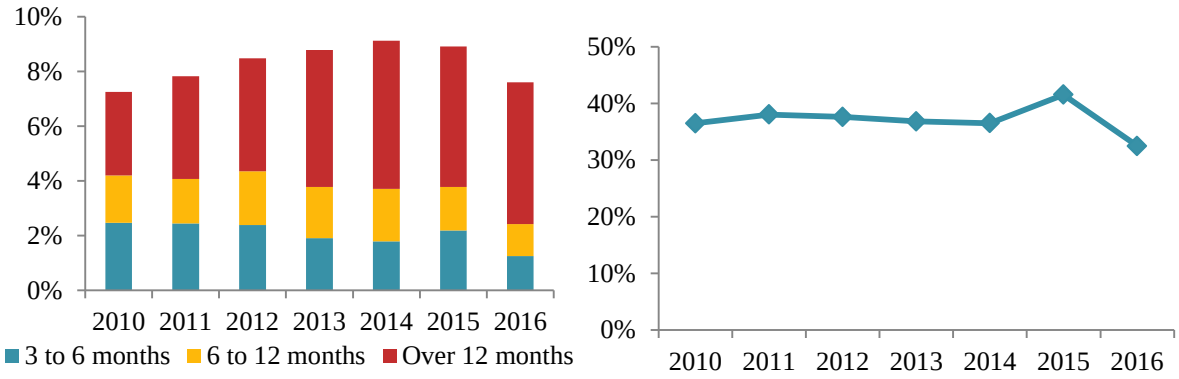
Source: Financial Services Commission

[8] The capital used in the calculation of this ratio consists of share capital, statutory reserves, liquidity reserves and undivided surplus. Unlike for banks credit union assets are not risk weighted.

The quality of the loan portfolio for the credit union sector improved during the period under review, as the absolute value of NPLs fell modestly, while gross loans expanded. Consequently, the NPLs to gross loans ratio decreased from 8.9 percent at the end of September 2015 to 7.6 percent at the end of the comparable period one year later.

Figure 24: Non-Performing Loans

A: Non-Performing Loan Ratio **B: NPLs net of provisioning to Capital**

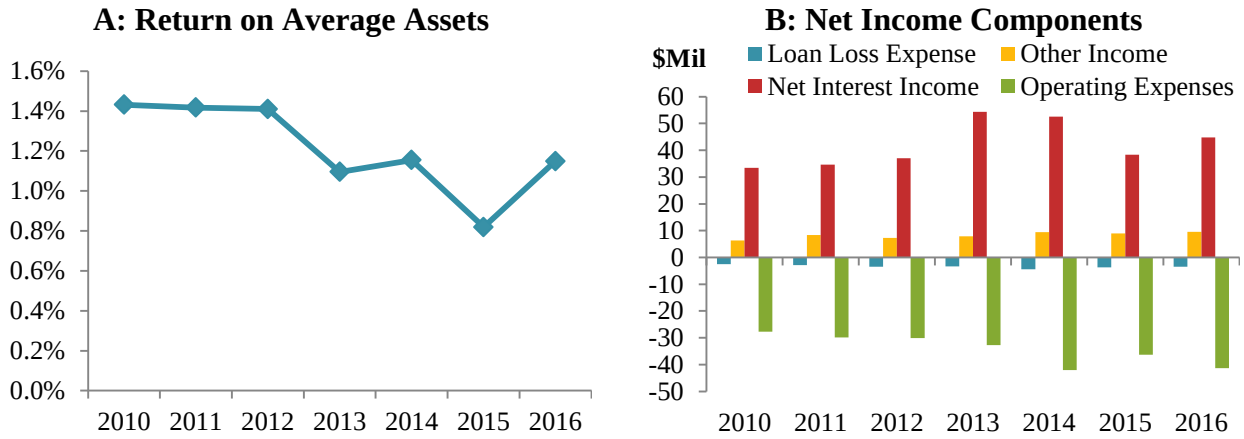


Source: Financial Services Commission

Most of the improvement in the NPL ratio occurred in the three-to-six months NPL category. NPLs in this category represented 1.3 percent of total gross loans, which is lower than the average of the last seven years of 2.1 percent. However, the majority of NPLs were non-performing for periods in excess of twelve months, as this category represented 5.2 percent of the total NPL ratio for the period under review. The persistence of loans in this category remains an area of active monitoring as these NPLs tend to be concentrated in mortgages which involve a lengthy legal resolution process. The sector continued to make progress with respect to provisions for NPLs which ended the period up 3.5 percentage points, to 33.4 percent of NPLs.

The annualised return on average assets (ROAA) was estimated at 1.2 percent for September 2016, an improvement over the 0.8 percent calculated for the corresponding prior period. The main driver of this movement was an increase in net income of 51 percent ($3.7 million) when compared to the same period in 2015. The sector's net interest income improved by 16.8 percent but this was partly offset by an increase in operating expenses of 8.2 percent for the same period.

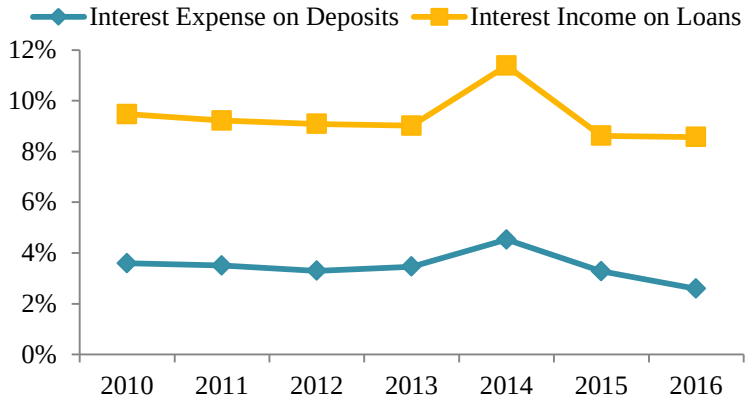
Figure 25: Profitability



Source: Financial Services Commission

The average estimated annualised interest income yield on credit union loans was 8.6 percent, while interest expenses were 2.6 percent on total deposits (Figure 26). This resulted in a spread of 6 percent at the end of September, compared to 5.3 percent one year ago. The decision by the Central Bank to abolish controls on interest rates at commercial banks resulted in a shift in deposits to credit unions and downward pressure on deposit rates within the credit union sector.

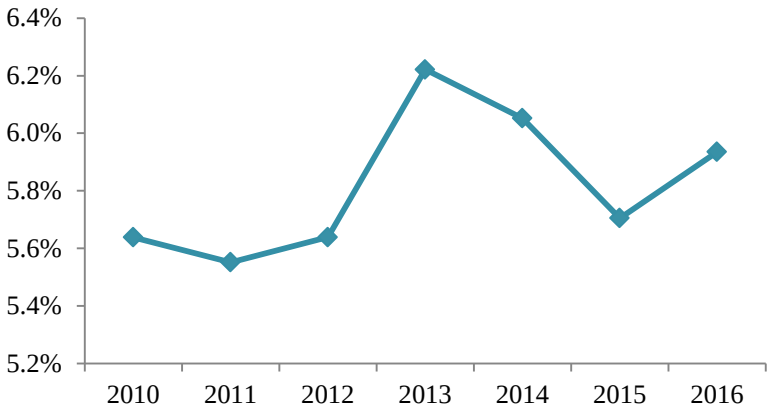
Figure 26: Average Annualized Interest Yield on Loans vs Interest Yield on Deposits



Source: Financial Services Commission

Liquidity indicators remained within recent historic norms: the ratio of cash to deposits, shares and loans payable was 5.9 percent at the end of September 2016 compared to 5.7 percent the corresponding prior period and in line with the average of 5.7 percent since September 2010. This represented an improvement in the level of access to very liquid resources over the review period. Similarly, the liquid assets to total assets ratio also increased to 5.9 percent versus 5.7 percent a year ago. However, liquidity levels remain below the pre-recession period of 2003 to 2009 when the liquid assets ratio averaged 10.7 percent.

Figure 27: Liquidity Ratio (Cash only)



Source: Financial Services Commission

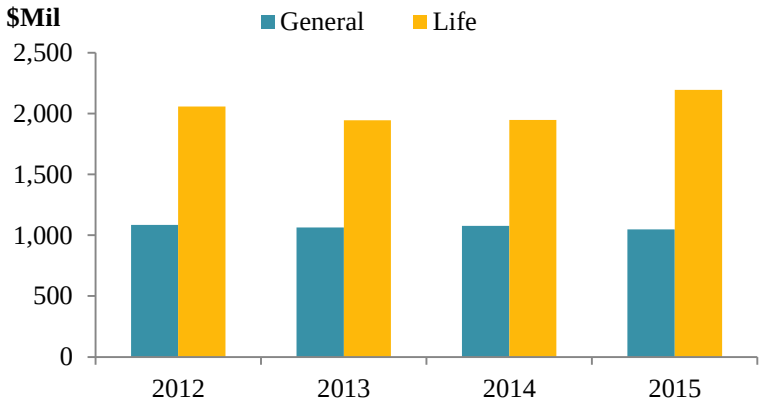
3.4 Insurance Companies[9]

In Barbados insurers are classified into the broad categories of life and non-life (general) insurance segments of the market.

Assets

At the end of 2015, total assets in the domestic insurance industry stood at $3.24 billion, a growth rate of 7.2 percent from the 2014 year end. Total assets in the life insurance sub-sector expanded by 12.7 percent, but assets for the general insurance sector declined by 2.6 percent over the same period.

Figure 28: Total Insurance Industry Assets 2012-2015



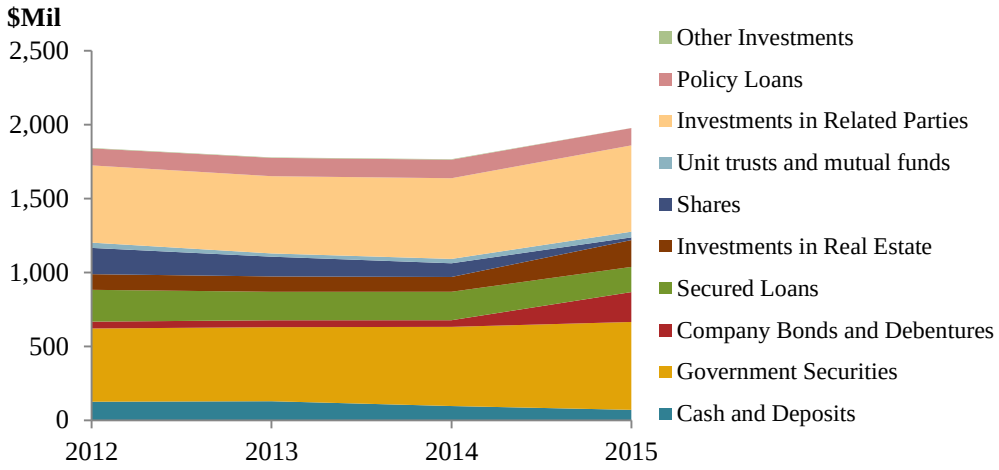
Source: Financial Services Commission

Government securities represented the single largest life insurance industry asset class as of the end of 2015, accounting for 28 percent of total industry assets. This category was followed

[9] All data as at December 2015.

closely by investments in related parties with 27 percent of total industry assets. Other sizeable industry asset positions were investments in company bonds and debentures (9 percent), secured loans (8 percent) and investments in real estate (8 percent).

Figure 29: Life Insurance – Loans & Investments 2012-2015



Source: Financial Services Commission

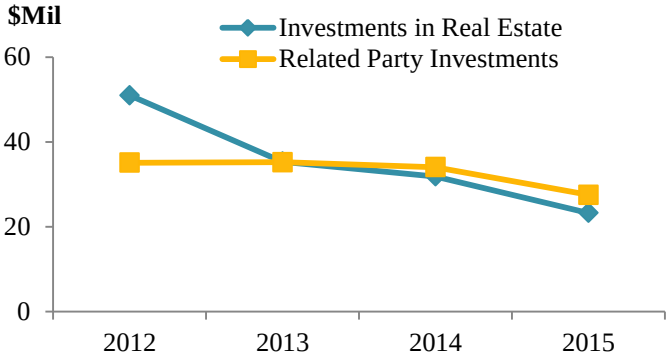
Sovereign risk exposure, especially to Barbados and other Caribbean governments, continued to be a concern for insurers, As a result, in 2015, there was significant growth in investments in company bonds and debentures, and investments in real estate, as life insurers moved to diversify their holdings across the various asset classes. By the end of the year, these investments accounted for about one-fifth of total loans and investments together, as compared to just 9 percent the prior year.

Investments in company bonds by life insurers were primarily corporate bonds from large companies based in the United States or other developed countries. The FSC continues to monitor the build-up of real estate and mortgage assets by insurers to ensure that they comply with relevant prudential and risk guidelines.

Conversely, the significant investment accounts experiencing the largest declines were investments in shares and secured loans. Both accounts declined significantly over the past three years due specifically to reductions in the holdings of those asset classes by some of the larger insurers, some of whom liquidated their equity portfolios to ensure compliance with statutory fund holding requirements.

In the general insurance sub-sector, the decline in the asset category "investments in real estate" since 2012, was primarily due to a downward "fair value" adjustment to investment properties of one of the larger general insurers rather than changes in the overall industry. Related party investments also declined over the period.

Figure 30: General Insurance –Select Investments 2012-2015

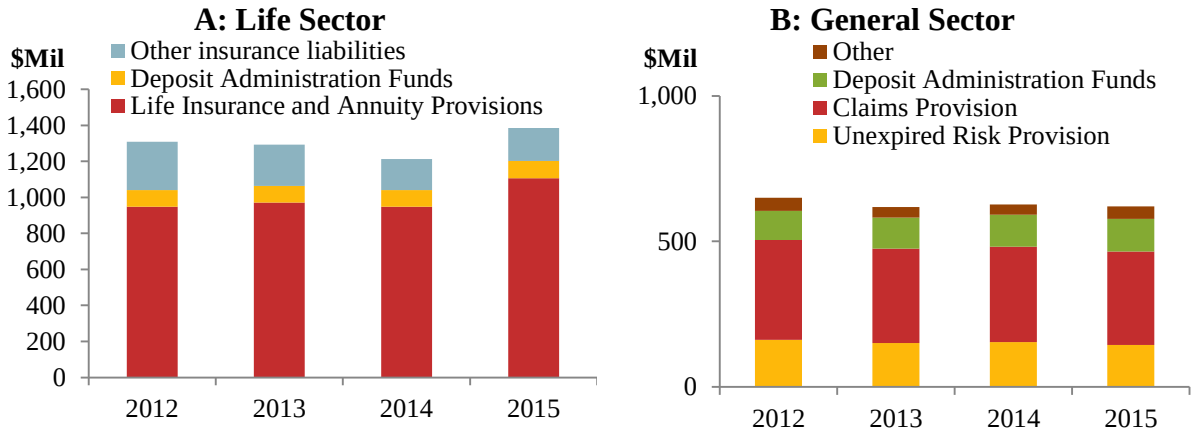


Source: Financial Services Commission

Liabilities

The majority of liabilities for both the life insurance and general insurance sub-sectors continued to consist principally of policyholders' liabilities. For the life sub-sector this took the form of life insurance and annuity provisions while for the general insurance sub-sector these were mainly claims in the course of settlements, and various provisions associated with unearned premiums. For general insurance sector those liabilities grew marginally by 1.3 percent to the end of 2015.

Figure 31: Total Insurance Liabilities



Source: Financial Services Commission

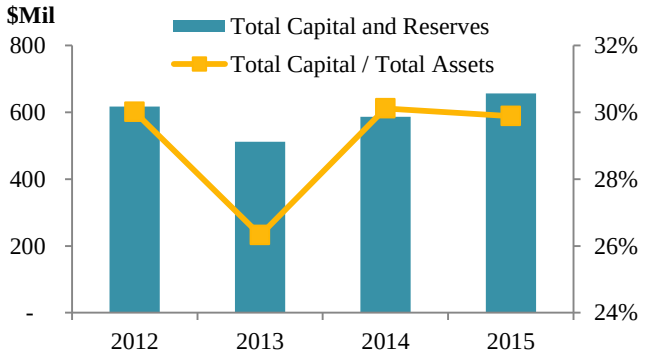
Capital and Reserves

Life Insurance Sector

The sector remained adequately capitalised with a capital-to-assets ratio of 29.9 percent. Total capital and reserves grew by 11 percent in the life insurance sector from the prior year, maintaining the upward trend in capital which was also higher by 13 percent in 2014 over 2013. More than 80 percent of capital and reserves on the life insurance sector comprised share capital.

The continued strength of the capital-to-assets ratio was underpinned by a doubling of the return on average assets to 4.7 percent.

Figure 32: Total Capital and Reserves and Capital-to-Assets Ratio – Life 2012-2015



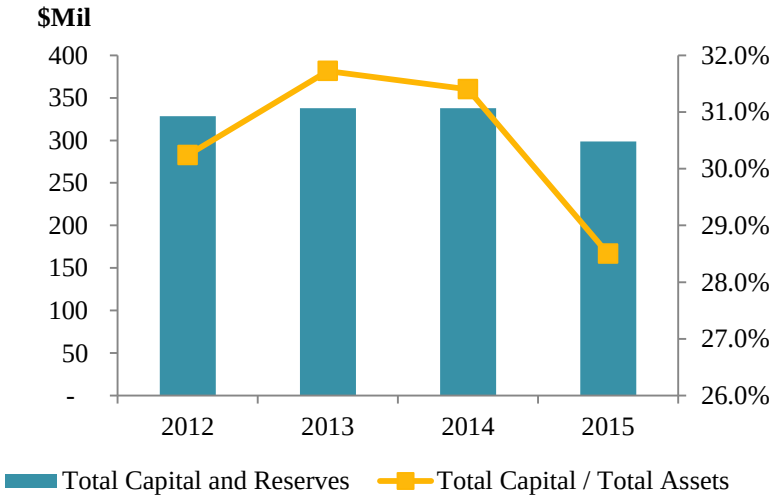
Source: Financial Services Commission

General Insurance Sector

The capital assets ratio of general insurers declined to 28.5 percent, down from 31.7 percent two years earlier. During 2015, total capital and reserves fell by 12 percent, reflecting the impact on retained earnings of losses by six general insurers. Of the top four general insurers classified by gross premiums written (GPW), only one made losses, while three of the mid-tier seven general insurers made losses and two of the four smallest general insurers made losses.

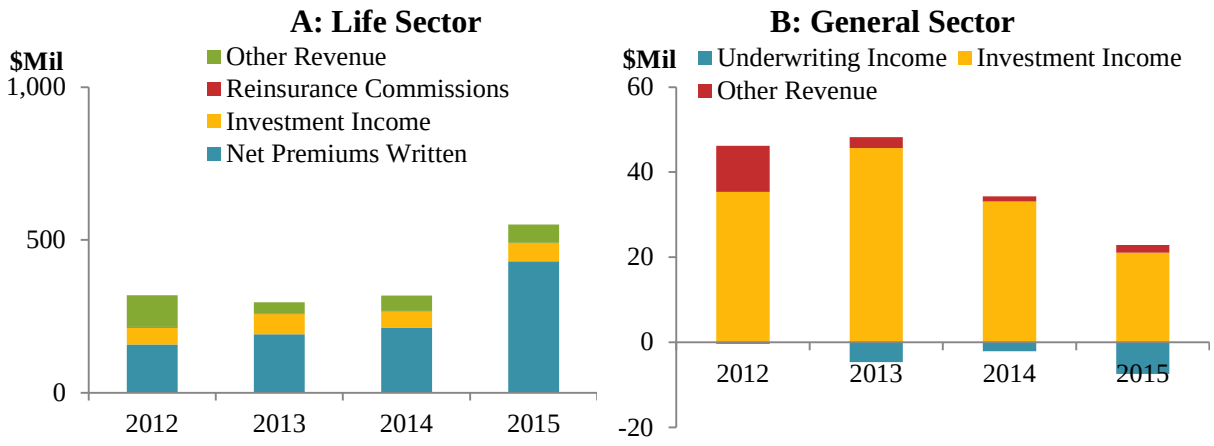
With net income for the 15 general insurers contracting by 55.5 percent in 2015 following a 40.7 percent decrease one year earlier, the return on average assets (ROAA) in the sub-sector continued on its downward trend, having fallen from 4.4 percent in 2013 to 1.2 percent by 2015. Increased incurred claims expenses, and hence further losses in underwriting income, as well as lower investment income were the main reasons for the overall decline in net income.

Figure 33: Total Capital and Reserves & Capital-to-Assets Ratio – General 2012-2015



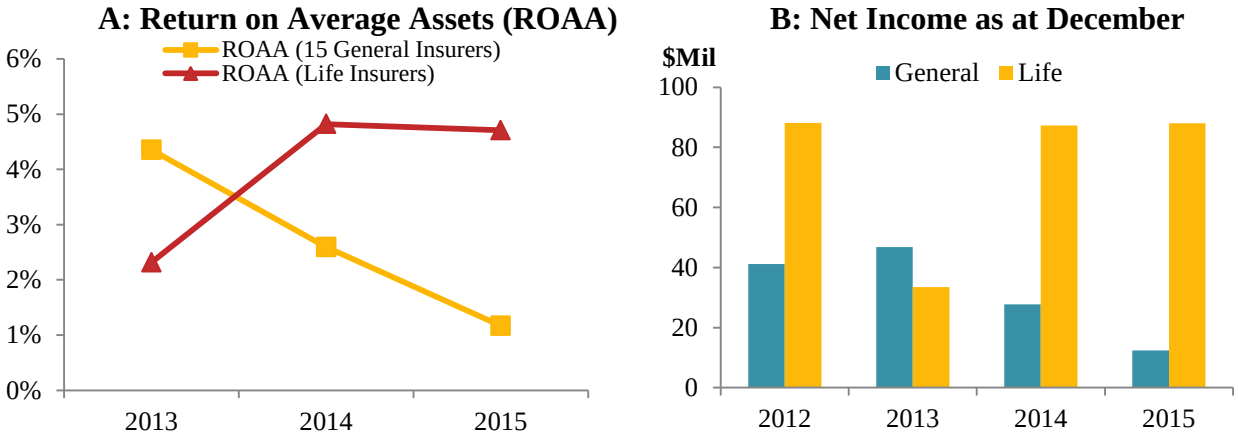
Source: Financial Services Commission

Figure 34: Total Revenue



Source: Financial Services Commission

Figure 35: Profitability



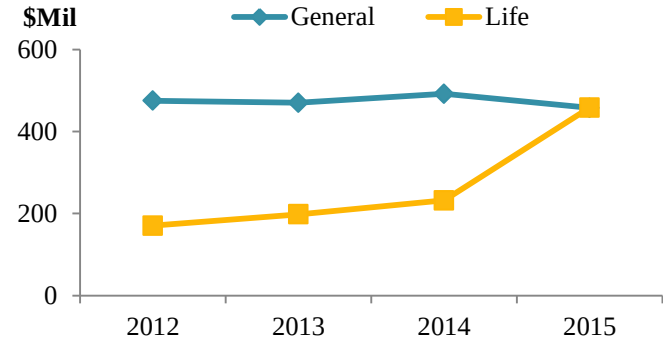
Source: Financial Services Commission

Underwriting Performance

Gross Premiums

One significant transaction by one of the larger insurers caused GPW to jump by 97.7 percent for the life insurance sector. Even without this major transaction, growth in premiums was strong at 32.2 percent, well above the industry average over the 2012 to 2014 period of 16 percent. Among the fifteen (15) general insurers, GPW declined by 8.1 percent in 2015, while overall GPW - inclusive of the three life insurers who write substantial insurance business in the general insurance industry - declined by 7 percent in 2015, as compared to the prior year (Figure 36).

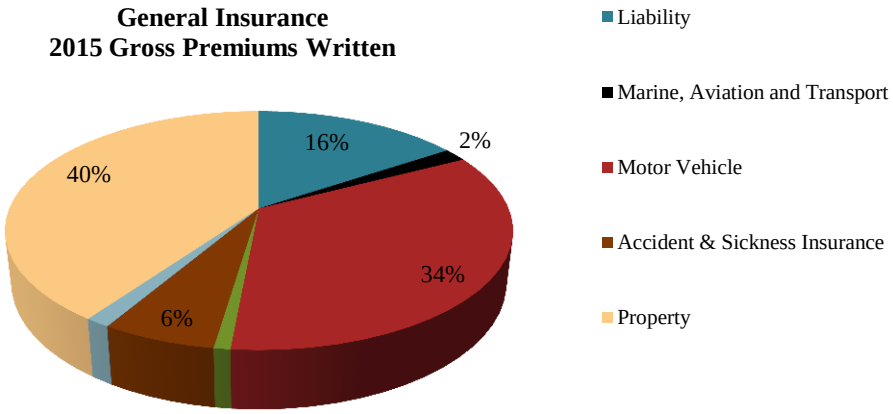
Figure 36: Gross Premiums Written (GPW) 2012 – 2015



Source: Financial Services Commission

In the general insurance sub-sector, the two largest lines of insurance written in 2015 were property insurance followed by motor vehicle insurance, which together accounted for approximately 74 percent of total premiums written in the sub-sector.

Figure 37: General Insurance 2015 Gross Premiums Written (GPW)

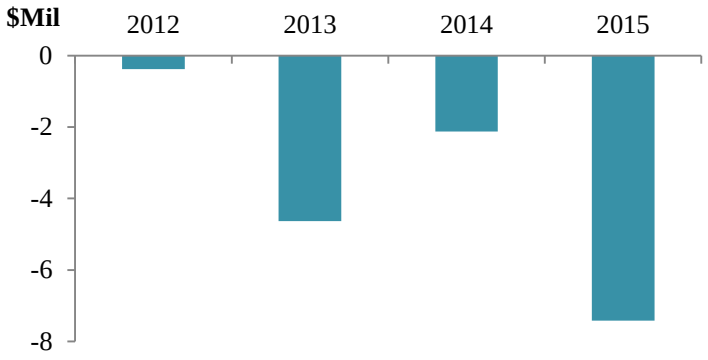


Source: Financial Services Commission

In the life insurance sub-sector more than half the value of GPW in 2015 was from annuities while ordinary life was the second largest type of GPW accounting for 29 percent. The analysis by number of policies actually in force highlighted that more than 70 percent of insurance policies written in the life sub-sector were ordinary life policies, followed by industrial life and group life. This significant contribution of annuities to the total value of GPW in 2015 was as a result of one domestically licensed insurer writing a more significant portion of foreign business and hence was not representative of the overall industry. Only a few annuities were written in 2015. However, they contributed significantly to the value of total GPW.

Underwriting losses for general insurers of $7.4 million were considerably worse that the 2014 underwriting losses of $2.1 million. Nine of the 15 general insurers made underwriting losses in 2015, the same as the prior year. The decline in underwriting income as well as the number of general insurers making loses in the industry continued to be a source of concern. The spike in underwriting income in 2013 was attributable to good underwriting performance of one of the larger insurers, rather than a system wide improvement.

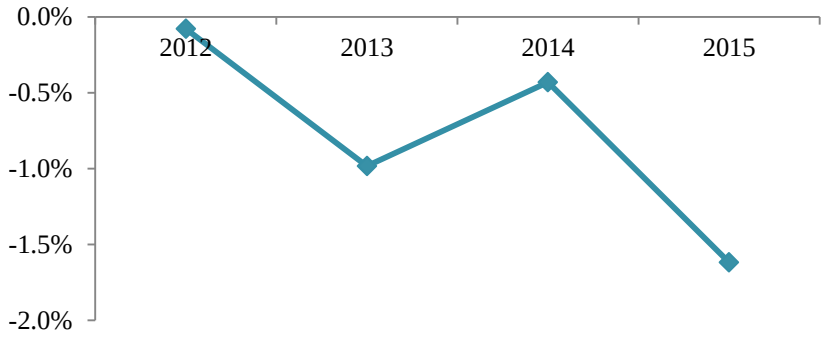
Figure 38: General Insurance Underwriting Income 2012 - 2015



Source: Financial Services Commission

The ratio of underwriting income to GPW in the general insurance sub-sector continued to deteriorate. Underwriting losses in the sector pushed the ratio negative from at least 2012 and the trend continued to worsen in 2015, as general insurers continued to make losses on their core business of underwriting.

Figure 39: Underwriting Income to Gross Premiums



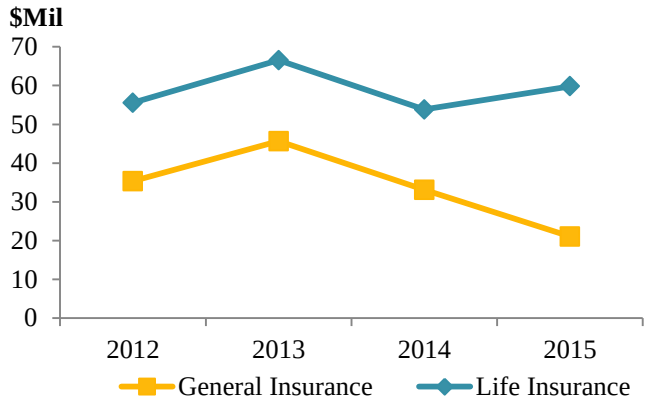
Source: Financial Services Commission

The sector is currently in a "soft market" cycle which has been characterised by substantial competition between firms as well as the availability of excess reinsurance, resulting in premium rates remaining low. Despite no recent natural catastrophes afflicting the general sub-sector, underwriting profits have therefore been hard to generate, although the sector has not suffered from higher than expected claims.

Investment Income

Investment income for both the life insurance and general insurance sectors trended in opposite directions. Investment income in the general insurance sector declined during 2015 and 2014 by 36.4 percent and 27.5 percent, respectively. However, the life insurance sector recorded an 11.1 percent increase in 2015, primarily due to an improved investment performance from one of the larger life insurers, rather than reflecting the wider life insurance sub-sector.

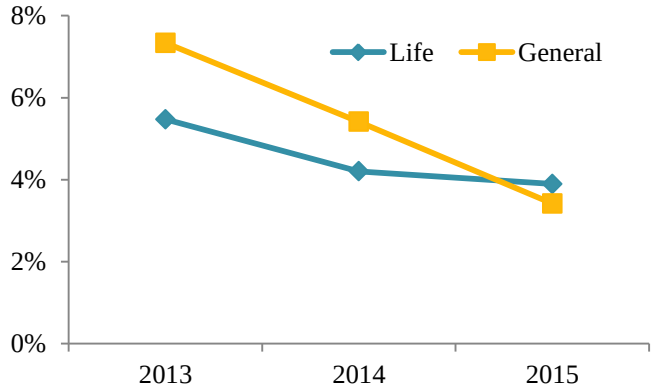
Figure 40: Investment Income 2012-2015



Source: Financial Services Commission

Since 2013, there has been a decline on the return on invested assets, which fell from 7.3 percent and 5.5 percent respectively in the general and life insurance sub-sectors, to 3.4 percent and 3.9 percent, respectively. Declining investment yield was the other significant reason for the fall in industry profitability over the past three years.

Figure 41: General Insurance – Investment Return on Invested Assets 2012-2015



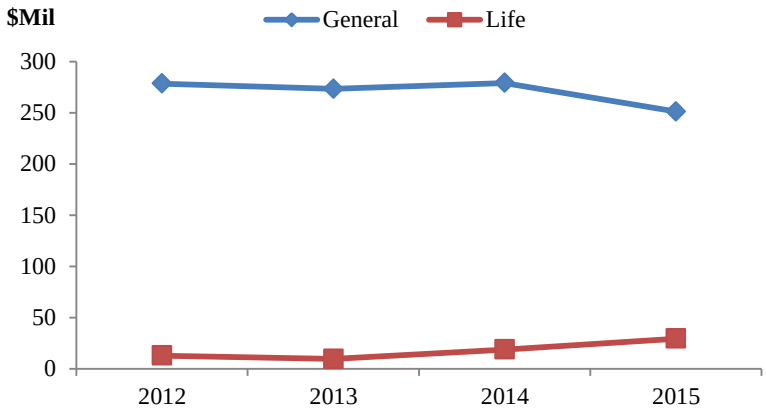
Source: Financial Services Commission

Reinsurance

Reinsurance is heavily used by the insurance sector, specifically general insurers as a risk diversification tool. It also allows domestic general insurers the ability to transfer the risk of higher than expected claim payments to reinsurers at a cost of policyholders' premiums. The quantum of reinsurance purchased in the Barbados market is typically above average due to the current levels of available capital in the industry and its related ability to bear catastrophic risk. The reinsurance retention ratio measures how much of gross premiums are retained rather than passed off to reinsurers. In 2015, 47 percent of gross premiums were retained, up from 45 percent in 2014.

In 2015, more than 8.5 times as much business was ceded by the general insurance subsector to reinsurers as compared to life insurers. This amounted to $251.1 million by the general insurance sector but only $29.4 million by the life insurance sector.

Figure 42: Reinsurance Ceded 2012-2015



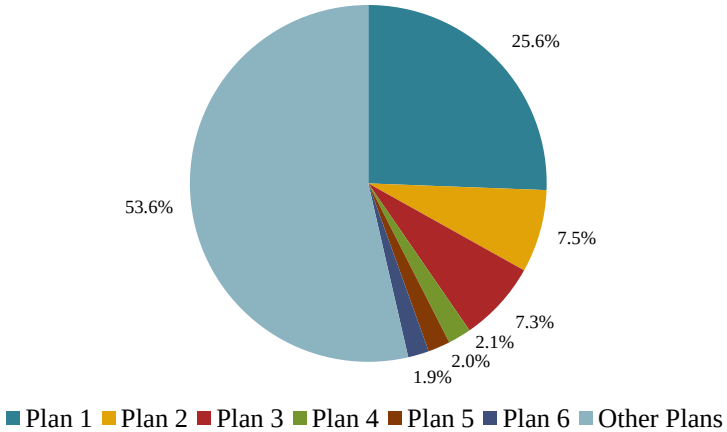
Source: Financial Services Commission

3.5 Pensions Funds

Assets under Management

The occupational pension plans industry as at December 31, 2015 based on available data, had approximately $1.9 billion in assets. Statistics at December 2015 reported 303 pension plans with approximately 29,000 members. Figure 43 shows the breakdown of the assets and indicates that the top 6 plans held 46.4 percent of total assets in the industry.

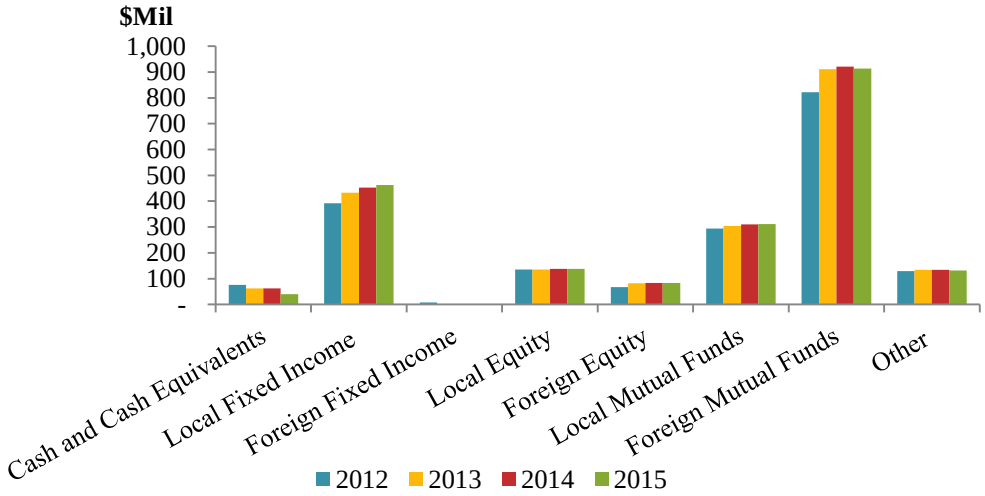
Figure 43: Estimated Breakdown of the Total Pension Industry Assets



Source: Financial Services Commission

With respect to the asset distribution for the occupational pension industry, the pension funds are heavily invested in local fixed income and foreign mutual funds. At December 2015, local fixed income accounted for 22.2 percent of total assets, an increase of 0.7 of a percentage point from the previous period. Foreign mutual funds accounted for 43.9 percent of total assets, a marginal increase from the comparable period of 2014.

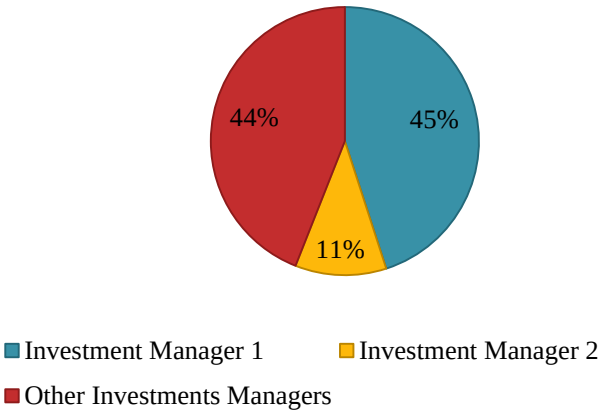
Figure 44: Assets Distribution for the Pensions Industry



Source: Financial Services Commission

A review of the industry assets as shown in Figure 45, revealed that 56 percent of the total assets under management are invested with the top two local investment entities.

Figure 45: Industry Assets by Investment Manager



Source: Financial Services Commission

Adequacy of pension plan valuations on a going concern basis

As per the legislation governing occupational pension plans, a going concern unfunded liability refers to the amount, if any, by which the sum of the going concern liabilities and the prior year credit balance exceeds the going concern assets. Based on the data available 24 pension plans

had a going concern unfunded liability with each of those plans providing an action plan for the funding of the liability.

3.6 Mutual Funds

As at the end of September 2016, there were sixteen domestic mutual funds (including sub-funds) registered with the FSC. This represented a decline when compared to the same period one year earlier as two exchanged-traded funds matured and one balanced fund was liquidated during the twelve-month period ended September 2016.

Table 3: Assets under Management by Type of Fund as at September 30

Type of Fund ($Mil)	2011	2012	2013	2014	2015	2016
Balanced	111.9	111.6	106.9	99.1	113.7	117.0
Exchange-Traded	18.5	19.2	21.0	22.7	12.6	0.0
Growth	508.8	540.6	565.4	1,095.6	1,073.1	1,189.8
Income	203.0	188.6	196.8	556.7	604.0	665.9
Property	86.1	84.6	81.0	76.3	75.0	71.0
Total	**928.3**	**944.7**	**971.1**	**1,850.3**	**1,878.5**	**2,043.7**

Source: Financial Services Commission

Total assets under management for the domestic mutual fund sector in Barbados stood at $2 billion at the end of September 2016, an increase over the prior year. The rise was mainly the result of increases in the growth, income and balanced funds categories, which offset a decline in the property funds category. The growth fund category accounted for the largest proportion of assets under management at the end of September 2016 (58 percent), followed by the income fund category (33 percent). During the period under review, the growth fund category increased by 10.9 percent, while the income fund category grew by 10.2 percent.

Portfolio Allocation

With regard to the portfolio allocation for the domestic mutual funds sector, there is a significant difference between the types of assets held by the various types of mutual funds. Mutual funds classified as growth are focused on capital appreciation over the long-term, primarily through investments in equity securities. Table 4 indicates that on average growth funds held 39.1 percent of their portfolio in equity and 38.5 percent in other mutual funds. Income funds held assets consisting primarily of fixed income securities with the investment objective of providing long-term income and capital stability with a low level of risk. The main type of investment held by income funds in Barbados were fixed income securities which accounted for over half (54.4 percent) of the asset portfolio at the end of September 2016.

Balanced funds are focused on both long-term income and capital growth through a balanced allocation of equities and fixed income securities. As at the end of the review period, the primary assets held by balanced funds were equities (42.1 percent), fixed income securities (27.6 percent) and mutual funds (26.1 percent). The domestic mutual funds categorised as property funds invest mainly in real estate properties in the Caribbean and internationally and provide

investors with the opportunity to earn income and achieve long-term capital gains from the portfolio. Consistent with the foregoing, the primary asset held by this category of fund was real estate, which accounted for approximately 61.5 percent ($57.8 million) of the fund's portfolio.

Table 4: Portfolio Allocation by Type of Fund as at September 30, 2016

	Balanced Funds	Growth Funds	Income Funds	Property Funds	All Funds
($Mil)					
Cash and Cash Equivalents	4.5	72.3	79.6	9.0	165.4
Derivatives	0.0	0.0	0.0	0.0	0.0
Equities	49.7	471.1	10.5	0.2	531.6
Fixed Income Securities	32.5	93.3	370.8	1.0	497.7
Mutual Funds	30.9	463.7	63.3	0.0	557.9
Real Estate	0.0	77.1	0.0	57.8	134.9
Other	0.5	27.7	157.1	26.0	211.2
Total	**118.1**	**1,205.27**	**681.3**	**94.1**	**2,098.73**

Source: Financial Services Commission

Jurisdiction Exposure

Table 5 provides the jurisdiction exposure for the domestic mutual fund industry in Barbados. With regard to the portfolios for the balanced, property and income funds categories, the jurisdiction exposure is generally to the Barbados market. However, the main jurisdiction exposure for the growth fund category is split between the Barbados and the US/International markets.

Table 5: Jurisdiction Exposure by Type of Fund as at September 30, 2016

	Balanced Funds	Property Funds	Income Funds	Growth Funds	All Funds
($Mil)					
Barbados	77.1	88.4	474.5	522.0	1,162.0
Jamaica	0.1	0.0	1.0	27.7	28.8
Trinidad	4.5	0.2	23.6	71.2	99.6
Other Caribbean	7.8	5.5	60.9	73.9	148.1
US/International	28.6	0.0	121.3	510.4	660.4
Total	**118.1**	**94.1**	**681.3**	**1,205.3**	**2,098.7**

Source: Financial Services Commission

4. Stress Tests and Scenario Analyses

4.1 Commercial Banks and Finance and Trust Companies

The stress tests[10] reported in this section evaluate the resilience of commercial banks and deposit-taking finance and trust companies to imposed macroeconomic and other adverse shocks. The impact of the shocks is directly transmitted to the institutions' capital, and is assessed both on an institution-specific and systemic basis. Therefore, the simulations determined whether existing capital buffers were adequate to absorb potential losses and focused particularly on credit, large exposure, interest rate and liquidity risk. The results of the stress tests indicate that commercial banks and trust and finance companies can endure a range of negative shocks, although some vulnerabilities do emerge under extremely severe conditions.

4.1.1 Credit Risk

The domestic regulatory existing standard for the provisioning of NPLs for institutions licensed under the Financial Institutions Act (FIA) in Barbados is 10 percent for substandard loans, 50 percent for doubtful loans and 100 percent for loss loans. This simulation examines the adequacy of institutions' capital with adjustments to provisioning criteria across classifications. Table 6 presents the provision rates used under the various scenarios and the results are illustrated in Figure 46.

Table 6: Provisioning Rates for Scenarios

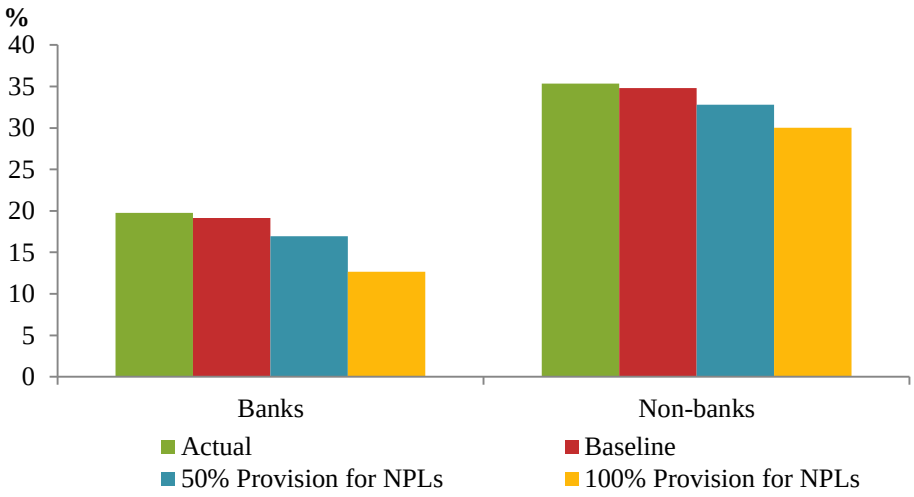
	Pass	Special Mention	Substandard	Doubtful	Loss
Actual	0	0	10	50	100
Baseline	1	5	20	50	100
Scenario A	1	10	50	100	100
Scenario B	1	20	100	100	100

Source: Financial Services Commission

The actual CAR is that reported at September 2016, while the baseline CAR, as well as Scenarios A and B, follow the provisioning assumptions as outlined above. The outcome suggests that capital levels are generally sufficient to withstand direct increases to provisioning rates. However, under Scenario A, one non-bank's capital fell below the 8 percent prudential limit, and, in Scenario B, one bank and three non-banks required additional capital.

[10] Stress tests were not conducted for two of the five commercial banks (branches), since they do not report capital positions.

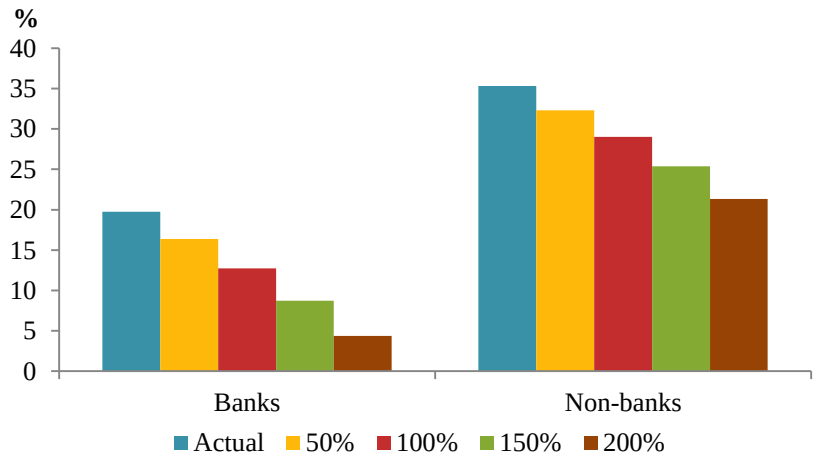
Figure 46: CAR Outcomes from Loan Loss Provisions



Source: Central Bank of Barbados

The second simulation assesses institutions' capacity to absorb severe shocks to NPLs. The impact of sequential increases in NPLs combined with 100 percent provisioning for the additional NPLs was simulated. Figure 47 indicates that for up to a 150 percent increase in NPLs, the aggregate CARs remained adequate. However, with a 50 percent increase in NPLs, one non-bank had a CAR below 8 percent, while a 100 percent increase renders two non-banks in breach of the statutory requirement. Only after the severe assumption of 150 percent would two banks require additional capital.

Figure 47: CAR Outcomes from Increasing NPLs

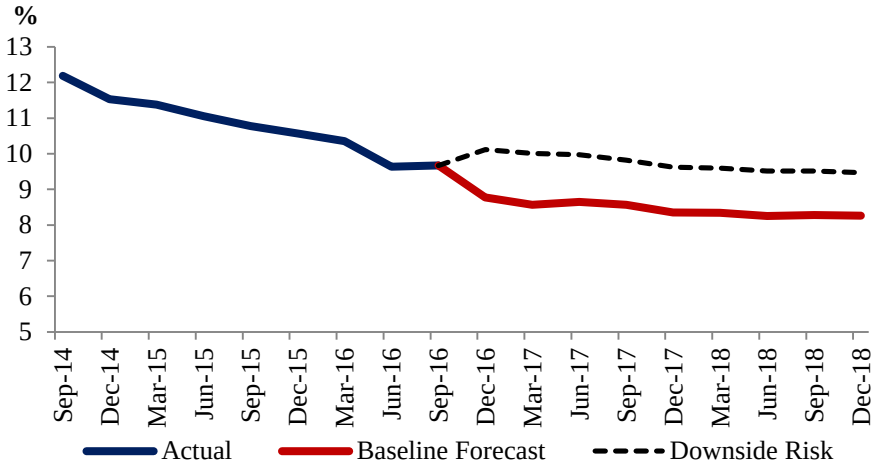


Source: Central Bank of Barbados

Based on the current macroeconomic environment, the NPL ratio is expected to continue to improve over the medium-term as depicted in Figure 48. The NPL forecasting framework tends to provide fairly accurate forecasts of the NPL ratio, as the projection for September 2016, is in

line with the actual outturn. A trajectory for further downside risks[11] has also been estimated suggesting it is not likely for the NPL ratio to go above 10 percent over the medium term, providing that there is a sustained economic recovery over the period.

Figure 48: NPL Projections



Source: Central Bank of Barbados

4.1.2 Large Exposure Risk

This simulation assumes that adverse shocks affect the five largest borrowers of each institution and assess the impact on the institutions' capital. It was assumed that the largest loans sequentially become non-performing (up to five rounds), and the impact was assessed under the requirement of 10 percent, 50 percent and 100 percent provisioning. All institutions maintained adequate levels of CAR with 10 percent provisioning. If 50 percent provisioning is required, one institution requires more capital after the fourth round. Under 100 percent provisioning, three institutions fall below the prudential requirement after round two, and four after round five. By round five, the banking system's CAR would be significantly depleted.

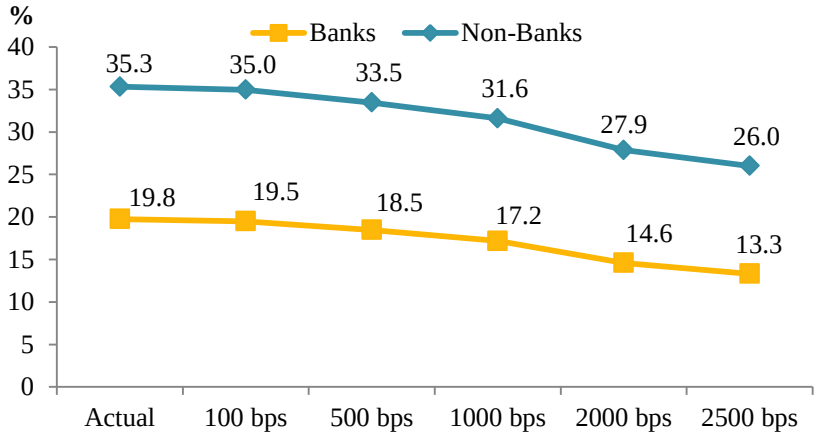
4.1.3 Interest Rate Risk

The interest rate scenario assesses banks' ability to absorb losses associated with significant increases in interest rate. Since the funding structure of depository institutions is typically mismatched in terms of the relative maturities of deposits and loans, this stress test utilised

[11] Downside risks could emerge in the event of a negative shock which results in macroeconomic conditions deviating significantly from expected trends.

depository institutions short-term maturity gap to examine the impact of rising deposit rates[12] on institutions' funding costs and ultimately their profitability. The results revealed that commercial banks are relatively well insulated against rising deposit rates. Only under the severe assumption of an increase of 1000 basis points (10 percentage points), would one non-bank fail, while three non-banks failed after 2000bps (20 percentage points).

Figure 49: Interest Rate Impact on CAR



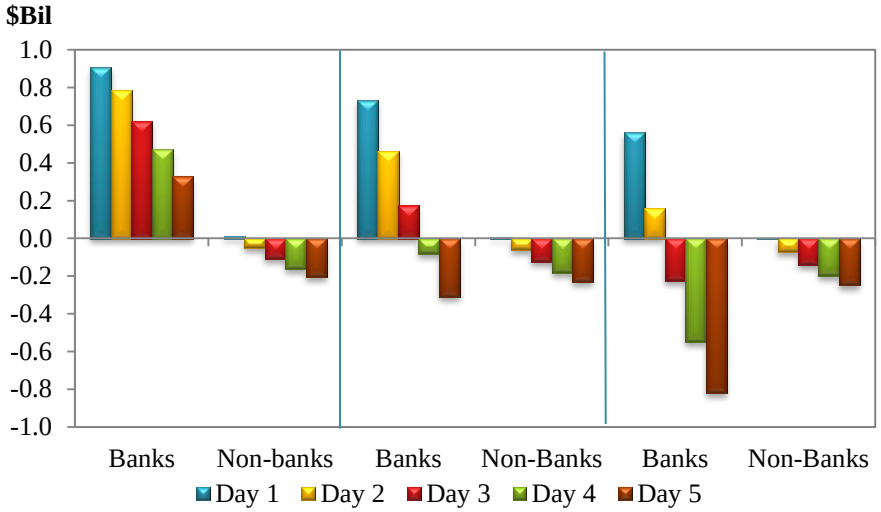
Source: Central Bank of Barbados

4.1.4 Liquidity Risk

This simulation examined the strength of liquidity positions held by DTIs assuming simple deposit runs over a five-day period. It assumed 95 percent of all liquid assets were available on a given day, and one percent for all other assets. The exercise investigated the impact of five percent, 10 percent and 15 percent runs per day on domestic demand accounts, given these assumptions.

[12] This simulation examines the short-term maturity gap and hence assumes no rise in lending rates in the funding gap up to one year

Figure 50: Results of Deposit Runs



Source: Central Bank of Barbados

The results depicted in Figure 50 indicate that non-banks are severely affected by day one under the least severe assumption. Under 5 percent runs per day, four non-banks require liquidity support after day one, and five after day two. Only with 10 percent deposit runs, would one bank require liquidity support after day 3, two after day 4, and three after day 5.

4.2 Credit Unions

Under the FSC's current framework, credit unions are expected to have a capital asset ratio of at least 10 percent. Should a credit union fall below this threshold, the FSC engages in enhanced monitoring of this institution until it is able to return to the minimum regulatory guideline.

4.2.1 NPL

In order to determine the ability of the industry to meet regulatory requirements even in the face of adverse economic shocks, the top seven credit unions – representing 92 percent of the industry – were subjected to five sensitivity tests on the level of NPLs. The assumptions are outlined in Table 7 below.

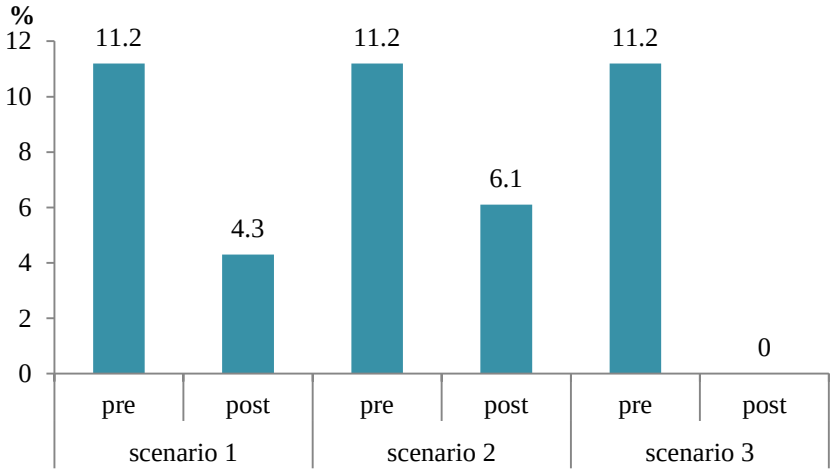
Table 7: Scenario Assumptions for NPL Shocks

	NPL Shock	Base	Provisions
Scenario 1	300%	Total NPLs	current levels
Scenario 2	150%	Total NPLs	100%
Scenario 3	300%	Total NPLs	100%
Scenario 4	progressive	Consumer NPLs	20%
Scenario 5	progressive	Mortgage NPLs	20%

Source: Central Bank of Barbados

The average level of NPL provisioning among these entities is about 20 percent as at September 2016. Under scenario one, assuming a 300 percent increase in NPLs on the September 2016 base, the industry capital moved declined from 11.2 percent to 4.3 percent. In addition, one credit union failed (i.e. lost all of the available capital) under this scenario.

Figure 51: Capital Ratio Outcomes from Increasing NPLs



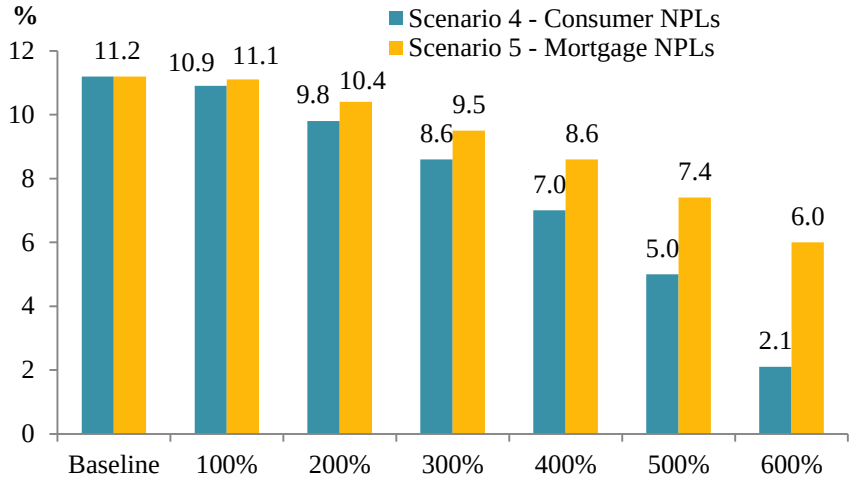
Source: Central Bank of Barbados

Scenario 2 assumes an under-provisioning correction for NPLs, so that additional NPLs are subjected to 100 percent provisioning. In this case, one credit union also failed when NPLs were by increased by 150 percent, and the industry capital fell to 6.1 percent. When the ratio was tripled under Scenario 3, the aggregate system capital is wiped out (Figure 51).

In the following Scenarios, NPL shocks were applied to the larger loan sectors, namely consumer and montages. Using the same 20 percent provisioning rate, it would take an NPL increase of around four times the current level of NPLs in consumer lending to wipe out the capital of one credit union. The ratio of capital to total assets for the entire industry moved from 11.2 percent to 7 percent in this instance (Figure 52). At around an increase of six times the current value, the aggregate industry capital declines to 2.1 percent with one institution failing in each case.

Lastly, using the same 20 percent provisioning rate, it is estimated that an increase of five times the current level of mortgage NPLs would completely deplete the capital of the most vulnerable credit union. The ratio of capital to total assets at this point moved from 11.2 percent to 7.4 percent for the entire industry. (Figure 52)
It would take an 800 percent in current mortgage loan NPLs, to wipe out the aggregate industry's capital.

Figure 52: Capital Ratio Outcomes from Increasing NPLs



Source: Central Bank of Barbados

4.2.2 Liquidity

Another key consideration is the credit unions' ability to withstand liquidity shocks. These shocks have historically been influenced by factors such as the duration of the credit union-depositor relationship, an individual's social network and the linkage between the granting of loans and deposits.

Given the number of available factors which influence whether a deposit run would occur, it was assumed that over a ten-day period credit union members withdrew a percentage of the previous day's deposits, with the exception of deposits pledged against loans. Deposits were assumed to be withdrawn at an ever-increasing rate until day three, at which point it was assumed that the industry is able to stabilise the deposit withdrawal rate. By construction the results were extremely dependent on the initial liquidity and the results suggested that under this scenario only four of the seven credit unions have liquidity remaining by day ten.

In a second test, the aggregated sector's liquid assets were completely exhausted, assuming there was "depositor flight" of around 20 percent in magnitude. That is, if depositors were to simultaneously withdraw 20 percent of their funds in a one-time transaction, it would completely wipe out the sector's liquid asset base. The analysis does not take into consideration liquid investments held by the credit unions which will be incorporated in future stress tests.

4.3 Insurance Sector

Stress tests were conducted on six life insurance companies and the seven largest general insurance companies(by premium) at the end of 2015. The scale of the imposed shocks was

guided by Jobst et al (2014)[13]in determining the appropriate levels of each of the relevant criteria considered in the particular "shock".

It was also assumed that the impacts of shocks in each scenario were immediate (occurring within the span of one financial year) and that all other factors remained constant over the subsequent three years. Under the "baseline" or "no shock" scenario, the annual net income was projected to remain constant over the three year timespan. For each scenario, it was assumed that the company is either able to make the same level of income as in year zero ("with net income") or that it makes no income at all following the initial shock ("without net income"). The scenarios also did not presume any actions on the part of the company's management to either improve or worsen the situation of any of the companies being tested. It was assumed that the shocks were reflected in changes in balance sheet and income variables that are likely to be impacted under each scenario. These resulting assumptions are tabulated below for each scenario.

Scenario 1: Recession

Under the scenario, it was assumed that a recession would generate the declines in asset values outlined in Table 8.

The results indicated that all of the life companies were at least able to absorb the initial shock at the start and recover before the end of the three-year observation period. Two companies seemed particularly vulnerable to the assumptions made and lost significant portions of their projected capital by the end of year three. For the general companies, the top seven managed to stay solvent but five companies had significantly less capital at the end of the year three.

[13] Andreas A. Jobst, Nobuyasu Sugimoto, and Timo Broszeit , "Macroprudential Solvency Stress Testing of the Insurance Sector", IMF Working Paper 2014, WP/14/33.

Table 8: Assumptions for Recession

Life Sector		General Sector	
Asset Class	**Balance Sheet Shock (%)**	**Asset Class**	**Balance Sheet Shock (%)**
Equity	-18	Equity	-18
Real Estate	-10	Real Estate	-10
Corp Bond Values	-8	Corporate Bond Values	-8
Sovereign Bond Domestic	0	Sovereign Bond Domestic	0
Sovereign Bond Foreign	0	Sovereign Bond Foreign	0
Mortgages	-5	Mortgages	-5
Policy Loans (unsecured)	-8	Policy Loans (unsecured)	-8
Cash & Deposits	0	Cash & Deposits	0
Investment in Related Parties	-5	Investment in Related Parties	-5
Lapse Rates		Premium decline 1y	-10
Premium decline 1y	-10	Premium decline 2y	-10
Premium decline 2y	-10	Premium decline 3y	-10
Premium decline 3y	-10	Loss ratio increase 1y	2
		Loss ratio increase 2y	3
		Loss ratio increase 3y	5

Source: Financial Services Commission

Figure 53: Recessionary Scenario (Life)

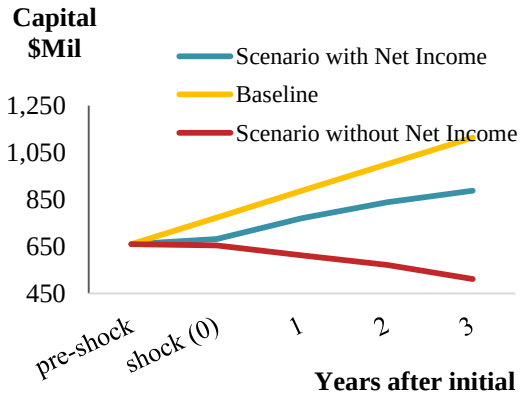
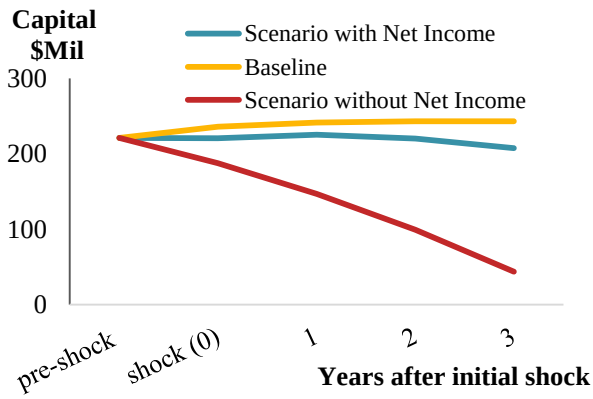


Figure 54: Recessionary Scenario (General)



Source: Financial Services Commission

Scenario 2: Sovereign Risk

Under this scenario, growth has been projected but there remains heightened sovereign risk on Caribbean government debt instruments. This is due in no small part to the recent financial crisis followed by recent downgrades from various ratings agencies, such as Standard and Poor's. In this scenario, sovereign bonds lose one fifth of their value and there are smaller declines in other asset categories. This is significant due to the fact that the current legislation requires insurance companies to hold at least 80 percent Barbadian assets in the statutory fund. Therefore, there is significant concentration risk due to the large amount of sovereign assets which insurance companies hold in their investment portfolios.

The life industry was projected to recover within one year after a brief decline from the initial shock. However, it should be noted that the impact of the initial shock was a bit more pronounced than the corresponding initial recessionary shock (Scenario 1).

Without the projected impairment on premium inflows, recovery and subsequent growth were easier to achieve. A similar trend can be seen for the general companies, even if the growth trend is still hampered by lost income.

Table 9: Assumptions for Sovereign Risk

Life Sector		General Sector	
Asset Class	**Balance Sheet Shock (%)**	**Asset Class**	**Balance Sheet Shock (%)**
Equity		Equity	
Real Estate	-13%	Real Estate	-13%
Corp Bond Values		Corporate Bond Values	
Sovereign Bond Domestic	-20%	Sovereign Bond Domestic	-20%
Sovereign Bond Foreign		Sovereign Bond Foreign	
Mortgages	-8%	Mortgages	-13%
Loans		Policy Loans (unsecured)	
Cash & Deposits		Cash & Deposits	
Investment in Related Parties		Investment in Related Parties	
		Commission decline 1y	-20%
		Commission decline 2y	-10%
		Commission decline 3y	-5%

Source: Financial Services Commission

Figure 55: Sovereign Crisis (Life)

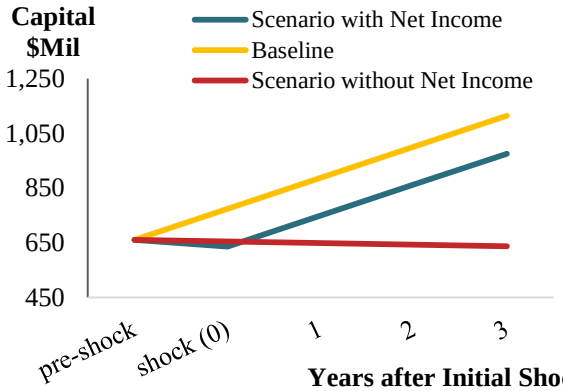
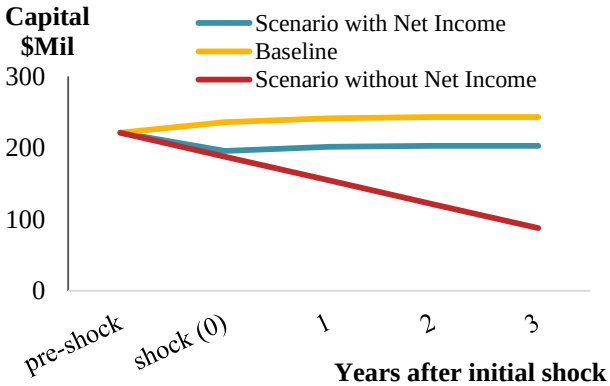


Figure 56: Sovereign Crisis (General)



Source: Financial Services Commission

Scenario 3: Pandemic

In light of recent global concerns about certain communicable diseases such as Ebola, SARS, etc., provision was made to consider a pandemic scenario. With travel being made more accessible in recent times, there is an increased probability of a visitor bringing a highly

communicable disease to the island. One of the most infectious and deadly epidemics of the 20th century was the 1918 outbreak of Spanish Flu (H1N1 Influenza Virus). This pandemic infected 500 million people worldwide and killed between 50 to 100 million (about 3 to 5 percent of the world's population at the time). While the factors which are suspected to have been responsible for the H1N1's rapid spread are not currently present in Barbados (e.g. war, malnourishment, and weakened resistance from chemical warfare), we have used this as our worst case scenario for pandemic.

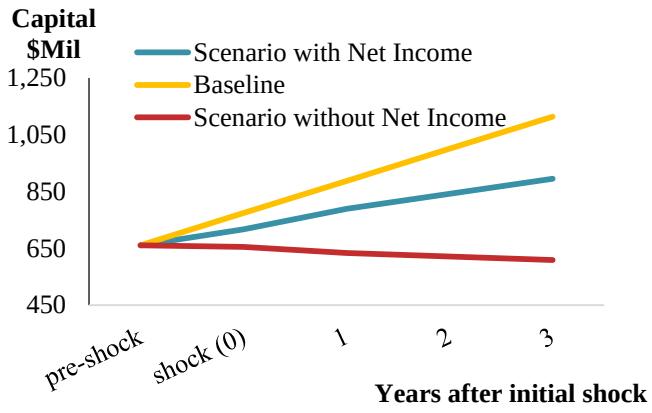
From the results of Scenario 3, the industry largely weathered the initial shock as illustrated in Figure 57. One life insurer had 87 of its capital wiped out at the end of the three year period, after steadily trending downwards due to not having enough projected income to negate the effect of the initial shock. It was found that this company would have no capital by the end of year four should the trend be allowed to continue.

Table 10: Assumptions for Pandemic

Life Sector	
Asset Class	**Balance Sheet Shock (%)**
Excess Mortality	0.15%
Equity	-10%
Real Estate	-8%
Corp Bond Values	-5%
Premium decline 1y	-10%
Premium decline 2y	-5%
Premium decline 3y	0%

Source: Financial Services Commission

Figure 57: Pandemic Scenario (Life)



Source: Financial Services Commission

Scenario 4: Natural Catastrophe

While Barbados has not experienced a direct hit from a hurricane (Category 1 and upwards) since 1955, it is not impossible that one could be experienced in the near future. This was based on the damage sustained in 1955 from Hurricane Janet and was estimated at about 8 percent of the sum assured. In light of an increasing number of storms and the potential of weather systems to increase in severity due to global warming and changing weather patterns, this assumption can be revised at any time to make the stress more severe.

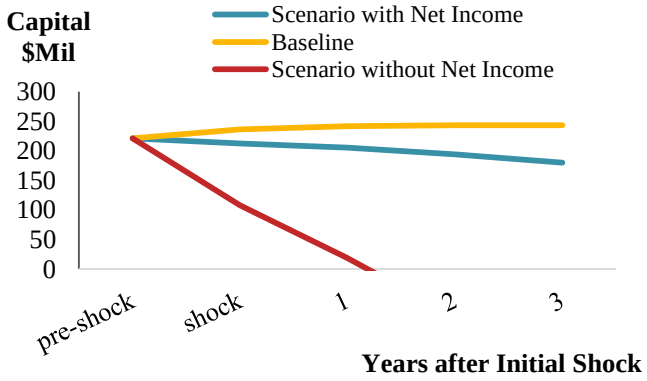
This scenario was found to adversely affect most of the seven general insurance companies tested. These companies were not able to return to pre-shock levels by the end of the three year observation period. Indeed, one company was found to be insolvent by the end of year two. However, this shock does not take into account reinsurance buffers which the industry possesses.

Table 11: Assumptions for Natural Catastrophe

General Sector	
	Hurricane
Stress Loss	-8%
Commission decline 1y	-20%
Commission decline 2y	0%
Commission decline 3y	0%
Premium decline 1y	-10%
Premium decline 2y	-5%
Premium decline 3y	-3%

Source: Financial Services Commission

Figure 58: Natural Catastrophe Scenario (General)



Source: Financial Services Commission

Sensitivity Testing

In addition to four scenarios, the exercise also focused on four sensitivities which are crucial to the industry. Along with sovereign bonds default, claims increase, technical provisions revaluation and reinsurance default were also examined. While both life and general companies utilise reinsurance to varying degrees, reinsurance default is of particular interest to the general

insurance industry, which relies on a significant amount of reinsurance in order to write higher volumes of business.

As expected for the life insurance industry, the reinsurance default tests needed the largest movement to wipe out capital on both the first company and the industry as a whole. For most of the general insurance companies tested, the reinsurance default made a significant change in capital as well as the solvency margin cover ratio. But while this change was significant, the effect was not as pronounced as sovereign default or natural catastrophe.

5. Research Notes

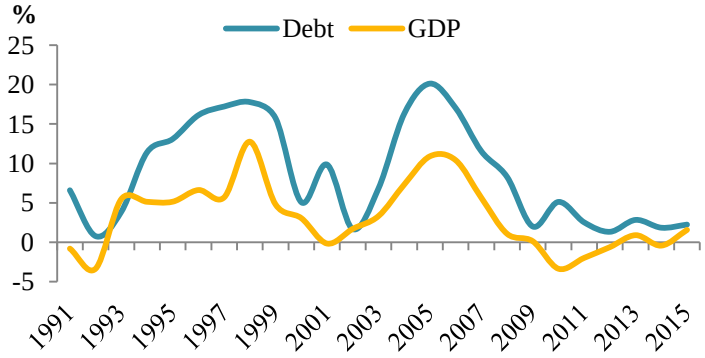
5.1 Household Debt: Implications for the Barbados Financial System[14]

Lisa Brathwaite, Anton Belgrave and Tiffany Grosvenor-Drakes

Given the collapse of the sub-prime mortgage market, it can be argued that the level of household indebtedness has significant implications for the financial sector and financial stability. This is not just a developed country concern, however, as median household debt has risen in advanced economies as well as most emerging economies. In standard macroeconomic models, the role of household debt has traditionally been to smooth consumption and it has not, until recently, featured as a major determinant of consumption. Nevertheless, the intuition that household indebtedness may be more significant than traditionally accorded preceded the 2009 global recession. Indeed, King (1994) found that large increases in private debt in the 1980s made many OECD countries vulnerable to the problem of weak growth and debt deflation. The somewhat belated acceptance of the importance of household debt has been driven by the convergence of three strands of evidence (Lombardi et al (2017)). Firstly, household indebtedness proved to be good predictor of both the probability and intensity of recessions. Secondly, US micro-based studies of individual households suggested that highly indebted households significantly reduced their consumption relative to less indebted peers. Thirdly, credit booms, particularly those in the construction sector, had a significant supply side effect and were accompanied by a slowdown in productivity. The foregoing provided the impetus for a closer examination of household debt in Barbados.

Macroeconomic conditions affect both the demand and supply of household debt as well as households' ability to service this debt, which has spin-off effects to the wider economy. This is not unexpected as households tend to be vulnerable to changes in income, and by extension, unemployment and interest rates. On the supply side, lending institutions may tighten lending criteria during periods of downturn and are dependent on adequate funding (deposits), the growth of which is also known to be positively related to economic activity.

Figure1: Changes in Household Debt vs. Changes in GDP

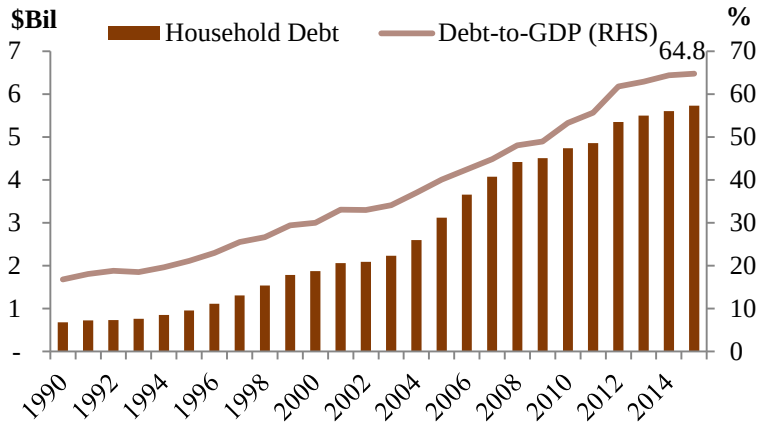


[14] All source data central Bank of Barbados

Household debt[15] in Barbados steadily increased to reach $5.7 billion at the end of 2015, from $1.9 billion in 2000 (Figure 2). Between 1991 and 2000, consumer debt averaged growth of around 10.7 percent per year, edged down to an average of 9.8 percent between 2001 and 2010, and then slowed to approximately 2.2 percent per year after 2010, congruent with global economic recession. In general, there is a positive relationship between household debt and GDP, with borrowing declining during periods of reduced economic activity (Figure 1).

In relation to GDP, this share has more than tripled over the last two decades to reach 61 percent of GDP, a magnitude that is comparable to that witnessed in many developed countries (Carter et al 2012). This phenomenon can be attributed to an increasing proportion of Barbadians owning homes, both for residential purposes and as an investment good, a greater level of public knowledge and education on lending products and services, and wider access to these services via increased financial development and financial intermediation, including the development of the non-bank financial sector.

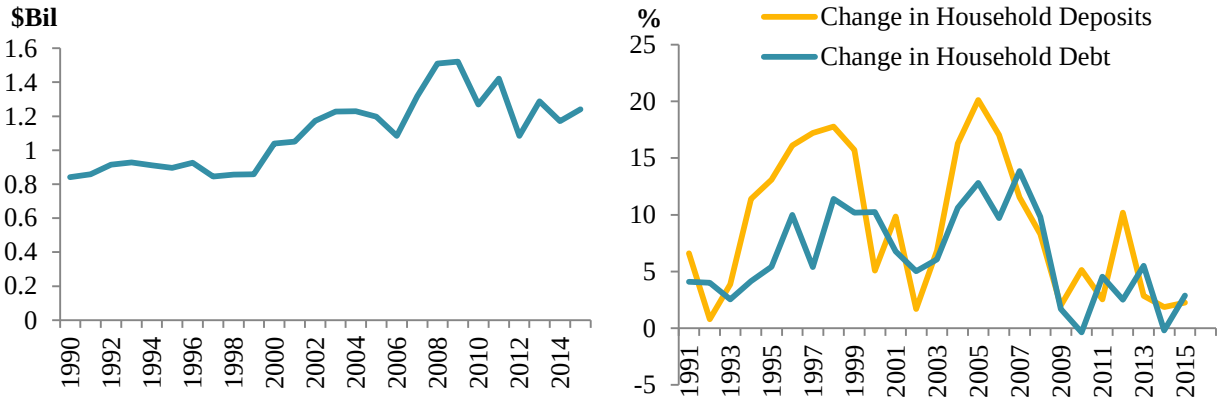
Figure 2: Household Debt & Debt-to-GDP



While there has been rapid growth in gross household debt, Barbadians continue to be net savers, with total savings consistently exceeding debt. Net savings is estimated to be approximately $1.2 billion (13.6 percent of GDP) at the end of 2015 as illustrated in Figure 3. At a first glance, the magnitude of net savings may suggest that household debt in Barbados is not a problem; however, this relationship may be skewed by the distribution of loans and savings amongst borrowers, as the overall average may not be representative of a typical household on a net basis. This caveat is supported by Barbados Country Assessment of Living Conditions (2010) which indicated that the average net income of more than 75 percent of the working population is less than $2,000 per month.

[15] Due to data unavailability, household debt as defined here does not include hire purchase loans by non-financial providers.

Figure 3: Net Household Savings

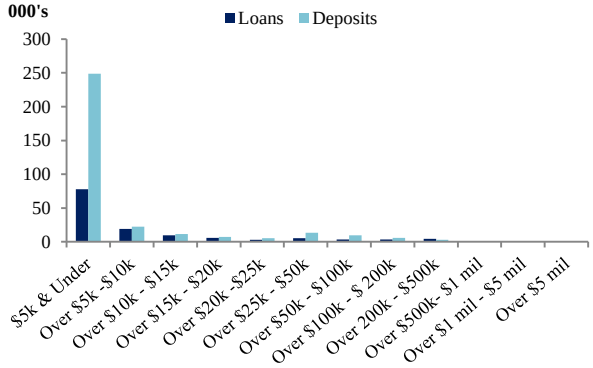


An analysis of the size of loan and deposit accounts of individuals at commercial banks reveals that while the majority of loan and deposit accounts are less than $5,000, the overall value of deposits and loans in this category is low compared to other size bands (Figure 4). More specifically, 59 percent of all loans are valued at less than $5,000, while 76 percent of deposit accounts are captured in this category.

Additionally, Figure 5 indicates that a few depositors are driving the significant net savings position, particularly in the $25,000 to $200,000 range of accounts, which together only account for approximately 9 percent of all loan and deposit accounts. Therefore, due to the skewed nature of the distribution, the overall net savings of the financial system should be interpreted with caution.

Figure 4: Loans and Deposits by Size of Account (Commercial Banks - September 2016)

A: Number



B: Value

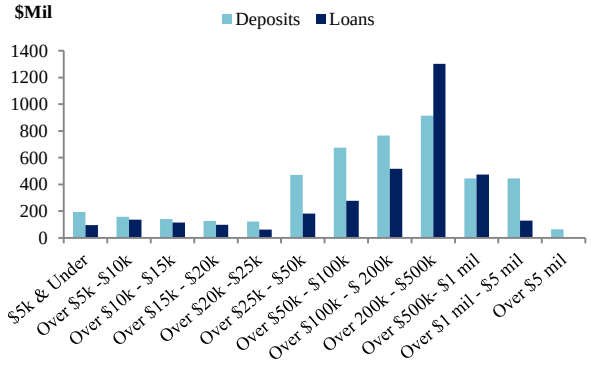
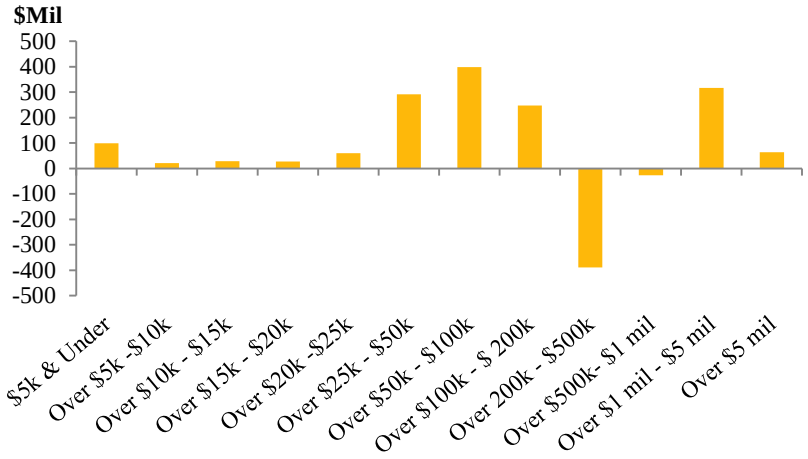
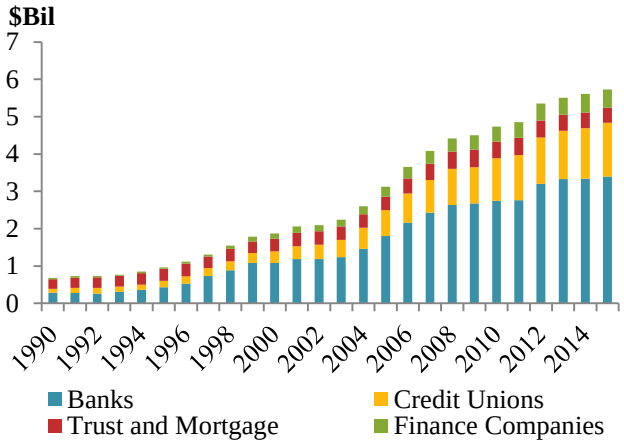


Figure 5: Net Savings by Size of Account (Commercial Banks - September 2016)



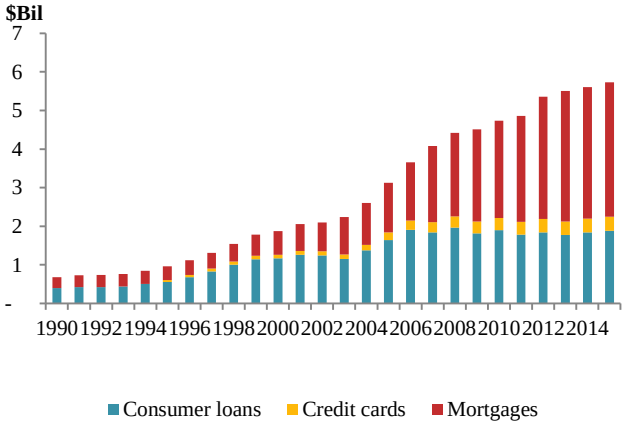
Banks have historically been the main lender of credit to Barbadian households, supplying $3.4 billion or 60 percent of the household debt stock in 2015. While commercial banks have traditionally dominated the market, trust and finance companies and credit unions have collectively gained notable share, with credit unions in particular growing from 15 percent in 1990 to 25 percent at the end 2015.

Figure 6: Market Share by Type of Institution



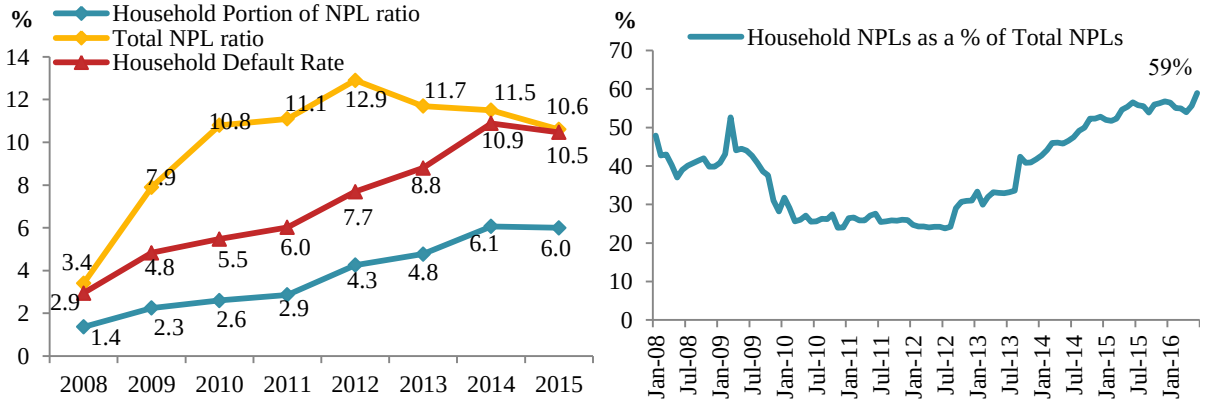
Household debt can be decomposed into three broad categories: consumer loans, credit cards and mortgages. Consumer credit remained relatively stable over the last decade and represented $1.9 billion or 33 percent of household debt in 2015. Lending via credit cards, the smallest component accounted for $0.4 billion, but has expanded substantially since 1996, growing at an annual average of 11 percent per year. The overall growth in consumer debt, however, was primarily driven by mortgage credit which stood at $3.5 billion and accounted for 61 percent of household debt in 2015. In addition to a greater number of mortgages over the period, the rising value of mortgage debt over the period can also be attributed to the increased cost of housing. Belgrave et al (2016) found that housing prices rose by over 500 percent over the period 1995 to 2014.

Figure 7: Decomposition of Household Debt



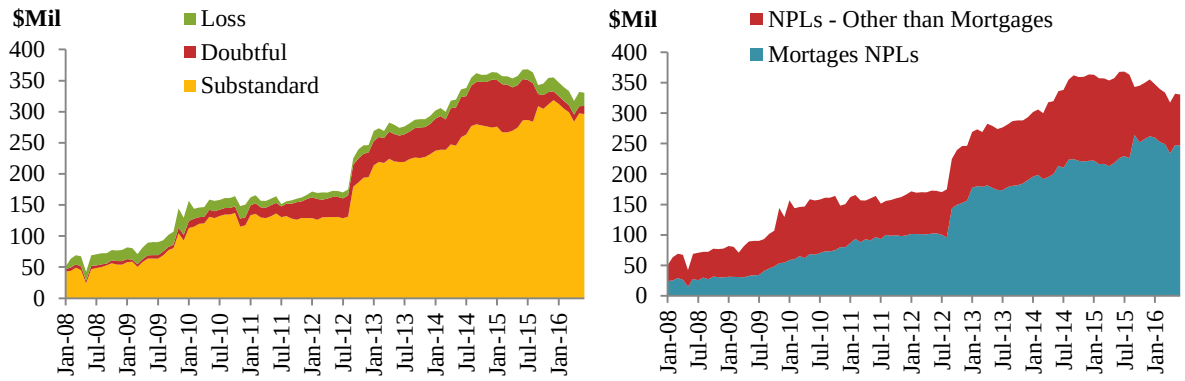
The default rate on household debt[16] tended to be below the overall NPL ratio of banks' total loan portfolio, but deteriorated within recent years to be more in line with the NPL ratio, and reached 10.5 percent at the end of 2015. Following the economic slowdown and the associated rise in unemployment, delinquency in household debt gradually increased to represent 59 percent of total delinquent loans as at June 2016, compared to 28 percent at the end of 2009. This deterioration was concentrated in the mortgage sector which accounted for 75 percent of total household non-preforming debt at June 2016. However, given the highly collateralised nature of these loans, the majority of them remain in the least severe -"substandard"- category, requiring 10 percent provisioning. To address the issue of the potential under provisioning of loans associated with this category, progressive stress tests are conducted to account for under-provisioning in the substandard portfolio. Over the years, these have all indicated that banks remain adequately capitalised.

Figure 8: Household NPLs (Commercial Banks)



[16] NPL analysis for household debt conducted on commercial bank data only.

Figure 9: Household NPLs by Classification & by Category (Commercial Banks)



Indeed, while household debt has grown significantly over the period, this does not by itself indicate that its current level poses significant risk to the country's financial stability. Despite the current economic challenges, household debt growth rates remained positive and as macroeconomic conditions improve, credit to households is expected to continue to grow.

On average households continue to be net savers, although the distribution of loans and savings highlights the skewed nature of this observation due to a few depositors. Additionally, while household debt represents a significant portion of banks' overall portfolio of bad debt, the vast majority are mortgages backed by collateral. However, given the sluggish real estate market and the time it takes the legal system to settle these debts, these loans may remain on financial institutions' balance sheets for extended periods of time.

Debt allows households to smooth consumption over time and permits individuals to obtain assets, such as homes, which under other circumstances they may not be able to afford. With the caveat that individual households, if coupled with irresponsible lenders can overextend themselves, debt can be socially useful. The significant increase in household debt is also highly reflective of the fact that the way the average person views debt has changed over time. Furthermore, the value of individual debt would tend to increase over time due to qualitative improvements in the housing stock.

However, it emphasises the need for microeconomic data on household income, improved understanding of micro structure of loans and deposits, and the debt bearing ability of households (debt service/income, debt/assets).

As noted earlier, the significance of the mortgage component of household debt also emphasises that real estate prices play a pivotal role in assessing household debt's impact on financial stability. Higher real estate prices tend to be associated with higher levels of household indebtedness, and therefore underwriting standards must be maintained to ensure that these levels are not excessive. On the other hand, a fall in housing prices reduces the value of the collateral backing these mortgages, and in some cases the borrowers' willingness to service their debt. Hence real estate prices need to be monitored in conjunction with the growth rate of household debt as leading indicators of impending financial difficulties.

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5.2 De-risking in Barbados

By Bradley Kellman

Global financial institutions are increasingly terminating or restricting business relationships with remittance companies and smaller local banks in specific regions of the world – a practice known as "de-risking". In order to understand the impact of de-risking in the Barbados context, the problem needs to be examined from multiple perspectives. Unlike other countries, regionally and internationally, de-risking has not significantly impacted Barbados via its domestic financial institutions experiencing sudden and significant declines in access to correspondent banking services. Rather, de-risking has developed into a significant threat to the key international business and financial services (IBFS) sector, which has been a pillar of Barbados' economic growth and development model in addition to its global impact on money value transmission services providers (MVTs)[17], which facilitate remittance inflows in to Barbados

As international bodies and regulatory agencies have become aware of the practice of de-risking, many have sought ways to measure or quantify its impact. The number of correspondent banking relationships (CBRs) terminated over a defined time period has emerged as a popular, but simplistic indicator in measuring the impact of de-risking on a country. For Barbados, over the period 2013 to 2016 the commercial banking sector lost just four correspondent banking relationships. This represents an immaterial loss of CBRs in the context of a domestic financial system dominated by five commercial banks, each of them foreign owned, with multiple correspondent relationships and the ability to utilise parent bank resources to facilitate cross border transactions if necessary.

The minimal loss of CBRs while encouraging, belies the true impact on Barbados. The increased scrutiny from correspondent banks and the need to deploy greater resources in order to manage the potential Money Laundering & Terrorist Financing (ML/TF) risk presented by some client segments have materially altered the business strategy of most of Barbados' domestic commercial banks. Under external pressures from their own foreign correspondent banks and reduced profitability, domestic institutions were forced to exit some domestic client relationships which were deemed either too risky from an ML/TF perspective or provide an inadequate rate of return relative to the resources needed to maintain the relationship. The decision by local commercial banks to exit these relationships was not taken lightly. However, the importance of maintaining existing correspondent banking relationship during a time where establishing new relationships has become exponentially more difficult meant that local banks had little choice but to terminate. Available data indicated that Barbados' commercial banks have exited in excess of

[17] The Barbados Money Laundering and Financing of Terrorism (Prevention and Control) Act defines MVTs as the business of accepting cash, cheques or any other monetary instrument or other store of value and paying a corresponding sum in cash or in another form to a beneficiary, by means of a communication, message or transfer or through a clearing system to which the money or value transmission service belongs

60 client relationships since 2013, primarily with clients in the international business sector and money/value transmission (MVTs) service providers.

The increased scrutiny by global correspondent banks and de-banking of local clients has undoubtedly had some impact on the operations and profitability of the domestic banking sector. In addition to terminating relationships with some clients, domestic institutions have become increasingly selective in relation to new clients from sectors perceived as presenting an elevated ML/TF risk. In particular, IBFS sector clients have become increasingly unattractive for the local banking sector, in part due to:

- The low tolerance of global correspondent banks for transactions originating from IBFS sector participants and flowing through their Barbados based respondent bank clients into their accounts;
- The significant resources required to provide an appropriate level of enhanced due diligence and monitoring required for higher risk ML/TF clients;
- The negative impact on the profitability dynamics of these higher risk relationships arising from the increased resource requirements
- The threat of regulatory actions such as special investigations, large civil money penalties and reputational risk if errors are made and illegitimate/illegal transactions are missed.

In recent years, the challenges faced by the IBFS sector with regard to maintaining existing banking relationships or establishing new relationships has increased significantly. These challenges were highlighted in the Barbados International Business Association's (BIBA) 2014/15 report by its Banking Sub-committee. The Committee highlighted the experience of some international banks, characterised by a sudden increase in AML/KYC requests, and in many instances coupled with short response deadlines which on occasion resulted in some accounts being suspended or closed if responses were deemed inadequate or too slow.

The MVT sector has also borne much of the brunt of de-risking regionally and domestically. High transaction volumes across regional and international borders coupled with the cash intensive nature of MVTs makes them inherently high risk from an ML/TF perspective. In addition, the adoption of a "risk based approach" to anti-money laundering by financial institutions globally has increased the resources needed to effectively manage the risk presented by MVT clients. Additionally, global correspondent banks doing business with domestic institutions are wary of MVT related transactions passing through their accounts via their Barbados based correspondent clients. The rise of Know Your Customer's Customers protocols, often referred to as KYCC, and a lack of clarity on how far this should extend, has meant that global correspondent banks have chosen to err on the side of caution. To this end it is understood that some United States based correspondent banks have indicated to their Barbados respondent clients that they have little appetite for this type of activity passing through their accounts. This has ultimately led to some of Barbados' commercial banks taking the decision to

exit the majority, if not all of their MVT client relationships and a prohibition on new clients in this sector.

Despite these significant challenges, the Barbados commercial banking sector has met the burgeoning AML/CFT requirements by reinforcing their compliance departments and leveraging the resources of parent organisations where possible. The result has been an improved financial system better equipped to identify and manage ML/TF risk and safeguard the integrity of the financial system. Significant co-operation between the financial sector and various regulatory authorities has also allowed the Barbados perspective on de-risking to be communicated in international fora. It is envisaged that active participation in the international discourse on the problem allows Barbados to share its unique experiences with de-risking and ultimately have meaningful input into whatever solution is crafted.

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Appendix A: Key Financial Soundness Indicators

Table 1: Commercial Banks' Key Financial Soundness Indicators (FSIs)

	2011	*2012*	*2013*	*2014*	*2015Q3*	*2015Q4*	*2016Q1*	*2016Q2*	*2016Q3*
Solvency Indicators									
Capital Adequacy Ratio (CAR)	19.3	21	19.7	20.5	20.6	18.9	18.5	19.7	19.8
Liquidity Indicators[#]									
Loan to deposit ratio (percent)	70.9	73.6	70	70.3	66.4	65.5	63.6	64.1	63
Demand deposits to total deposits (percent)	32.1	29.3	32.3	33.9	38.2	39.6	40.8	40	42.1
Domestic demand deposits to total domestic deposits	27.6	26.8	29.3	30.9	33.9	35.7	37.7	36.8	38.9
Liquid assets, percent of total assets	12	14.6	18	20.3	24.4	25.3	25.2	26.3	27
Credit Risk Indicators (percent)									
Total assets (growth rate)	-4.7	11.5*	2.8	-1.3	3.7	4	4.4	2.5	3.8
Domestic assets (growth rate)	-6.1	6.1*	6.5	-0.6	5	3.3	0.5	0.2	0.5
Loans and advances (growth rate)	-0.5	-1.1*	-2.6	-0.4	-0.6	-0.8	-2.2	-1.1	-1.5
Non-performing loans ratio	11.1	12.9	11.7	11.5	10.8	10.6	10.4	9.6	9.4
Substandard loans/ Total loans	8.7	9.9	8.6	9	8.5	8	8	7.8	7.6
Doubtful loans/ Total loans	1.8	2.3	2.5	2	1.4	1.5	1.4	1	1
Loss Loans/ Total loans	0.6	0.8	0.6	0.5	0.9	1.1	1	0.8	0.8
Provisions to non-performing loans	32.9	33.9	44.9	47.7	55	55.5	59.3	64.6	66
Foreign Exchange Risk Indicators									
Deposits in Foreign Exchange (percent of total deposits)	6.6	4.9	4.4	4.8	7.1	6.7	5.7	5.8	6
Profitability Indicators									
Return on Assets (ROA)	1	1.1	0.8	0.7	0.8	0.9	0.9	1	1
Interest Rate Spread	5.7	6.7	6.5	6.5	6.9	7.1	7.4	7.6	7.6

Source: Central Bank of Barbados
**Reflects the underlying growth after removal of the impact of the financial consolidation of a NBFI with its parent*
 # Includes foreign components unless otherwise stated

Table 2: NBFIs' Financial Stability Indicators (FSIs)

	2011	*2012*	*2013*	*2014*	*2015Q3*	*2015Q4*	*2016Q1*	*2016Q2*	*2016Q3*
Solvency Indicators									
Capital / Assets (percent)	24.5	23.6	24.2	24.3	23.0	22.8	23.2	23.4	23.7
Liquidity indicators									
Loan to deposit ratio (percent)	152.3	109.9	99.0	105.5	100.7	98.8	100.9	101.0	100.3
Liquid assets, percent of total assets	14.7	17.8	19.8	16.0	21.7	22.4	20.8	22.0	22.1
Credit risk indicators									
Asset Growth	-20.2	6.1	3.9	2.6	3.1	3.0	-1.7	0.1	1.0
Total Loan Growth	5.0	2.3	0.5	2.1	-1.4	-1.9	-1.5	-1.8	-1.1
Nonperforming loans ratio (percent)	8.6	9.1	8.2	8.3	9.7	9.5	10.0	9.6	9.3
Substandard loans/Total loans (percent)	6.7	6.0	6.1	6.0	7.1	6.1	6.7	6.4	6.2
Doubtful loans/Total loans (percent)	1.0	2.0	1.8	2.1	1.7	2.6	2.5	2.4	2.4
Loss loans/Total loans (percent)	0.9	1.1	0.4	0.3	0.8	0.8	0.8	0.8	0.6
Reserves to NPLs (percent)	12.5	11.3	12.2	9.4	22.1	21.5	24.1	20.7	19.4
Profitability indicators									
Net Income/Capital (percent)	10.8	6.3	7.8	3.9	6.1	4.5	3.7	3.5	4.0
Return on Assets (ROA)	1.9	1.2	1.9	0.9	1.4	1.0	0.9	0.8	0.9

Source: Central Bank of Barbados

Table 3: Credit Unions Financial Stability Indicators (FSIs)

(%)	*2010*	*2011*	*2012*	*2013*	*2014*	*2015Q3*	*2016Q3*
Solvency Indicator							
Reserves to Total Liabilities	10.4	10.7	11.4	12.9	11.9	10.6	10.9
Liquidity Indicators							
Loan to deposit ratio	114.8	113.6	117.1	116.5	92.7	90.9	88.3
Liquid Assets to Assets?							
Credit risk Indicators							
Total assets, annual growth rate	9.7	5.1	4.4	4.2	6.2	7.1	8.0
Loans, annual growth rate	8.6	6.5	3.2	3.7	7.3	7.1	6.0
Nonperforming loans ratio	7.2	6.9	8.2	8.5	9.4	8.9	7.6
Arrears 3-6 months/ Total Loans	2.1	2	1.9	2.4	2.2	2.2	1.3
Arrears 6 – 12 months/Total Loans	1.9	1.6	1.9	2	1.5	1.6	1.2
Arrears over 12 months/Total Loans	3.2	3.5	4.4	4.1	5.7	5.1	5.2
Provisions to Total loans	2.2	2.8	3.2	3.1	3.5	2.7	2.5
Profitability Indicator							
Return on Assets (ROA)	1.2	1.2	1.3	1.4	0.6	0.8	1.1

Source: Central Bank of Barbados

Table 4: Life Insurance Performance Indicators

Year	*2012*	*2013*	*2014*	*2015*
Gross Premium Written	170.5	198.1	232.0	458.6
Net Premiums Written	157.7	190.9	213.3	429.6
Total Assets	2,056.9	1,946.0	1,948.4	2,195.1
Total Liabilities	1,439.6	1,433.8	1,361.6	1,539.0
Net Operating Income	97.7	47.4	88.7	94.1
Net Income After Tax	88,1	33.4	87.3	88.1
Related Party Investments	522.4	522.4	545.9	584.0
Investments in Real Estate	106.0	104.0	100.2	181.6
Reinsurance Ceded	12.8	9.6	18.7	29.4
Reinsurance Commission Received	2.0	1.1	0.9	1.1
Incurred Claims	21.2	28.7	53.4	40.6
Commissions Paid	17.4	21.0	20.6	38.9
Ratios (%)				
Capital to Asset Ratio	30.0	26.3	30.1	29.9
Return on Average Asset	n.a	2.3	4.8	4.7
Total Assets to GDP	23.7	22.3	22.4	24.8
Risk Retention Ratio	92.5	96.4	91.9	93.7

Source: Financial Services Commission and Central Bank of Barbados (ratios)

Table 5: General Insurance[18] Performance Indicators

($Mil)	*2012*	*2013*	*2014*	*2015*
Gross Premium Written	475.2	470.3	492.2	457.8
Net Premiums Written	207.3	205.3	219.8	213.7
Total Assets	1,085.8	1,064.9	1,076.1	1,048.3
Total Liabilities	734.3	725.6	740.1	749.5
Net Operating Income	41.7	39.8	28.3	11.4
Net Income After Tax [19]	41.2	46.8	27.8	12.4
Related Party Investments	35.1	35.2	34.1	27.5
Investments in Real Estate	51.0	35.4	31.9	23.3
Reinsurance Ceded	278.5	273.3	279.1	251.1
Reinsurance Commission Received	43.9	42.4	60.5	60.7
Incurred Claims	130.5	126.8	121.8	136.1
Commissions Paid	38.7	34.1	35.8	31.4
Ratios (%)				
Capital to Asset Ratio	30.2	31.7	31.4	28.5
Return on Average Assets	n.a	4.4	2.6	1.2
Total Assets to GDP	12.5	12.2	12.4	11.9
Risk Retention Ratio	43.6	43.7	44.7	46.7

Source: Central Bank of Barbados and Financial Services Commission (ratios)

[18] Numbers presented inclusive of 15 general insurers and the general insurance business of 3 life insurers
[19] Only net income of 15 general insurers is presented