# 2019 FINANCIAL STABILITY REPORT

CENTRAL BANK OF BARBADOS

FINANCIAL SERVICES COMMISSION

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# Preface

Oversight of the financial system is shared between mainly 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.

This ninth issue of Barbados' Financial Stability Report is a collaboration between the Bank, the FSC and the BDIC and provides an assessment of the risk exposures of domestic deposit-taking institutions, insurance companies, mutual funds and pension funds. This report analyses a range of financial stability indicators for financial institutions, as well as balance sheet and income and expenditure trends.

# Abbreviations

| *Abbreviation* | *Meaning* |
|---|---|
| ACH | Automated Clearing House |
| AFSI | Aggregate Financial Stability Index |
| ATM | Automated Teller Machine |
| BACHSI | Barbados Automated Clearing House Services Incorporated |
| BSI | Banking Stability Index |
| CAR | Capital Adequacy Ratio |
| CARIFS | Caribbean Integrated Financial Services |
| CBOE | Chicago Board Options Exchange |
| DTI | Deposit Taking Institution |
| FOMC | Financial Oversight Management Committee |
| FSC | Financial Services Commission |
| GDP | Gross Domestic Product |
| GPW | Gross Premiums Written |
| IFRS | International Financial Reporting Standards |
| IMF | International Monetary Fund |
| NIR | Net International Reserves |
| NPL | Non-performing Loan |
| POS | Point of Sale |
| ROA | Return on Assets |
| RTGS | Real Time Gross Settlement |
| RWA | Risk Weighted Assets |
| SIB | Systemically Important Bank |
| SIFI | Systemically Important Financial Institution |

# 1. Overview

The financial system remained stable during 2019, supporting Barbados' progress in addressing its macroeconomic imbalances. Commercial banks registered improved non-performing loans ratios and achieved modest profitability that enabled them to stay well-capitalised. Credit unions out-performed other deposit taking institutions in terms of asset growth, while mutual funds also increased their penetration. System-wide prudential indicators were generally favourable for the non-banking sector.

The evolution of these sectoral developments reflects the adaptation by financial institutions to the challenges created by a low interest rate environment, excess build-up of liquidity and limited investment opportunities after the 2018 domestic debt restructuring and the implementation of IFRS 9. However, these gains were undermined in the first half of 2020, as the impact of COVID-19 led to a deep recession and surging unemployment in the private sector.

To contain the fall in economic activity, Government has introduced programmes aimed at maintaining household expenditures and public sector employment. It is also attempting to accelerate its capital works program, and to incentivise a return to work in the private sector.

The Central Bank of Barbados (Bank), has adapted its regulatory policies to enable lending institutions to manage the disruption caused by the crisis and to make available, if necessary, low-cost liquidity support. At the same time, the financial industry has offered cash flow relief to borrowers via loan moratoria schemes. The moratoria, although temporary in nature, have so far helped to ameliorate cash flow challenges faced by borrowers without resulting in liquidity problems for financial institutions.

A prolonged deep recession could increase non-performing loans, depress profitability and reduce capital buffers. Returning the financial system to normalcy therefore, requires a sustained economic recovery that enables borrowers to resume loan payments, while encouraging lending institutions to provide new loans. The slower the recovery, the greater the challenge for businesses, individuals and financial institutions.

As a consequence, this Report, in addition to the historical review, focuses on anticipating the challenges for the financial sector. Consequently, the Central Bank and the FSC have again stress tested the financial system. The system should remain stable but some instutions may face difficulties with extreme shocks. These results will inform regulatory guidance, enabling the identification of those segments that may be challenged. These tests are indicative rather than strictly predictive, but they do suggest areas where regulators will need to further engage the industry, including, if necessary, requiring additional capital, tightening up on loan loss recognition and driving industry consolidation to ensure continued financial stability.

# 2. Macro-Financial Environment

## 2.1 Overview of Domestic Economic Conditions

The Bank estimates that the Barbadian economy contracted by 0.1% during 2019, following a decline of 0.4% one year earlier. The tourism sector remained buoyant but weaker than forecast investment prevented a positive outturn for growth. The unemployment rate was stable, but consumer prices rose by 4 percent. Improved foreign exchange earnings - on the strength of higher tourism receipts - reduced external debt service payments and substantially greater public sector capital inflows, enabled gross international reserves to continue to grow, rising by $481 million to $1.48 billion (18.6 weeks of import cover).

The public finances strengthened, as Government sustained its efforts to raise the primary surplus for fiscal year 2019/20 to 6 percent of GDP. Broad-based increases in revenue, coupled with non-interest expenditure restraint, complemented the benefits obtained from lower interest payments resulting from the domestic debt restructuring and the continued suspension of external commercial debt service. The completion of the external debt restructuring in December, allowed the debt-to-GDP ratio to fall from 126.3 percent of GDP at the end of 2018 to 120.0 percent at end-2019, and to 118.0 percent at the end of the first quarter of 2020.

The economic effects of the COVID-19 virus has altered the economic outlook. The economy contracted by 3 percent over the first three months of the year and the decline accelerated in the second quarter, reducing economic activity by 15 percent for the half-year. New unemployment claims exceeded 33,000 between late March and end-June, owing to the shutdown of the tourism sector and safety measures imposed locally to prevent the spread of COVID-19. The emergence of the virus also weakened the external current account but international reserves remain strong.

The economic contraction is expected to reduce revenues substantially during FY 2020/21. In addition, excluding automatic stabilizers generated by the utilisation of the National Insurance Scheme's unemployment insurance fund, Government has targeted incremental expenditure of almost 1.8 percent of GDP in economic support, medical supplies, and business and social welfare payments in response to the COVID-19 emergency. As a result, Government has renegotiated the 6 percent primary surplus goal to a 1 percent target for fiscal year 2020/21 under its Extended Financing Facility with the International Monetary Fund. The resultant increased borrowing requirement is being met by external non-commercial debt, temporarily raising the debt ratio. However, the exposure of domestic financial institutions to government debt remains stable.

The steep downturn and loss of jobs have induced commercial banks and other lending institutions to introduce an array of facilities to provide some cash-flow relief to their customers. These facilities include loan moratoria of up to six months, working capital financing for corporate and business clients, waiver of late fees on all loans for a specified period, and the restructuring of loans on a case-by-case basis.

To ensure financial stability and assist banks and deposit-taking finance and trust companies in their relief efforts, on April 1, 2020, the Bank:

a. Reduced the discount rate at which it provides overnight lending to banks and deposit-taking non-banks from 7 percent to 2 percent;
b. Reduced the securities ratio for banks from 17.5 percent to 5 percent;
c. Eliminated the 1.5 percent securities ratio for non-bank deposit-taking licensees;
d. Made provisions to extend collateralised loans for up to six months as liquidity support for licensees, if necessary.

Despite significant uptake of the moratoria on offer, to-date, no financial institution has had to avail itself of the overnight borrowing facility or access the collateralised loans. This reflects the strength of the pre-COVID-19 capital and liquidity buffers that have so far proven adequate in coping with the initial shock.

While the economy will face a severe contraction in 2020, a partial gradual recovery is anticipated in 2021. The pace of the recovery will be influenced by that in the more advanced economies, which have been adversely affected by the crisis. In addition, the combined impact of the development of health soluations to the virus and the restoration of confidence of travellers, will also shape the exent of the pick-up in 2021.

**Table 1: Selected Economic Indicators**

| | 2015 | 2016 | 2017 | 2018 | 2019 | March 2019 | March 2020 |
|---|---|---|---|---|---|---|---|
| | | | | **Percent** | | | |
| **Real Sector** | | | | | | | |
| Real GDP Growth | 2.4 | 2.6 | 0.6 | (0.4) | (0.1) | (1.0) | (3.0) |
| Inflation | (1.1) | 1.5 | 4.5 | 3.7 | 4.1 | 2.5 | 5.2 |
| Unemployment Rate *(Average)* | 11.3 | 9.7 | 10.0 | 10.1 | 10.1 | 10.6 | n.a |
| | | | | **In percent of GDP** | | | |
| **Public Sector** | | | | | | | |
| Central Government Balance *(Fiscal Year)* | (9.0) | (5.3) | (4.6) | (0.3) | 3.7 | (0.3) | 3.7 |
| Primary Fiscal Balance *(Fiscal Year)* | (2.0) | (2.2) | 3.2 | 3.5 | 6.1 | 3.5 | 6.1 |
| Central Government Debt | 129.5 | 138.4 | 136.9 | 125.4 | 119.3 | 122.6 | 117.4 |
| Gross Public Sector Debt | 144.2 | 151.2 | 148.4 | 126.3 | 120.0 | 125.5 | 118.0 |
| **External Sector** | | | | | | | |
| Current Account | (6.1) | (4.3) | (3.8) | (4.0) | (2.5) | 4.4 | 0.3 |
| Financial Account | 4.7 | 0.9 | 0.9 | 8.7 | 7.6 | 1.5 | 2.0 |
| | | | | **BDS $Mil, unless otherwise stated** | | | |
| **Monetary** | | | | | | | |
| Net Domestic Assets | 1,168.3 | 1,906.5 | 2,041.2 | 1,788.8 | 1,761.6 | 1,831.2 | 1,771.4 |
| NIR | 821.4 | 574.9 | 334.7 | 832.3 | 1,139.4 | 891.0 | 1,209.8 |
| GIR | 878.0 | 639.8 | 411.3 | 999.6 | 1,481.0 | 1,065.2 | 1,574.9 |
| Import Reserve Cover (Goods & Services) (Weeks) | 11.2 | 8.2 | 5.3 | 12.8 | 18.6 | 13.6 | 19.4 |

*Source: Barbados Statistical Service and Central Bank of Barbados*

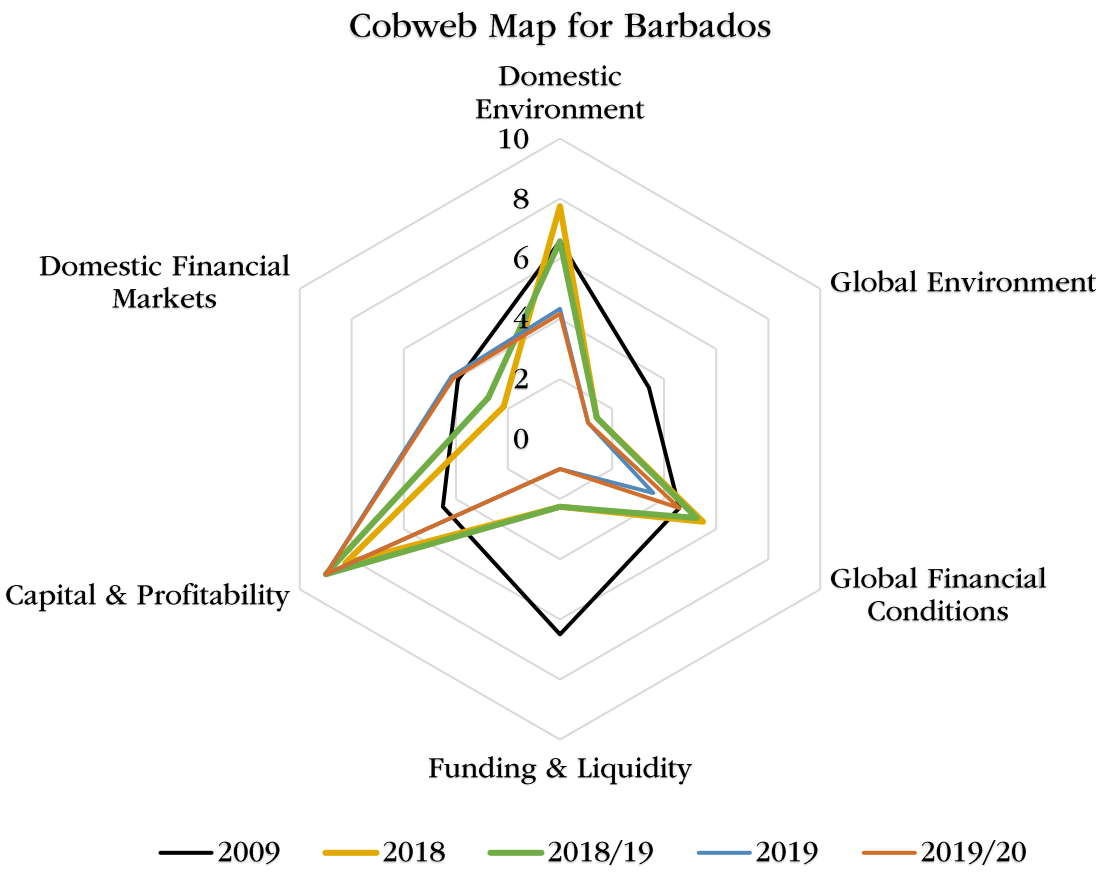
## 2.2 Macro-Financial Risks

The macro-financial environment improved during 2019 and the first three months of 2020, as indicated by the Financial Stability Cobweb, the Aggregate Financial Stability

Index and the Banking Stability Index[1]. These indices quantify the relative balance between risk and stability in the Barbadian financial system. However, with the advent of COVID-19, all of the indicators are expected to trend downward over time.

The Financial Stability Cobweb (**Figure 1**) provides a graphical summary of the risk exposure faced by financial institutions across six dimensions: the domestic environment, domestic financial markets, capital and profitability, funding and liquidity, global financial conditions, and the global environment. Increases in risk are represented by increased values across particular dimensions indexed from zero to ten, but the cobweb does not provide an aggregate indicator of risk. For this report, scores for the six selected dimensions of financial stability risk were computed for the periods 2019 and 2019/20 (April 2019 - March 2020) for comparative analysis.

**Figure 1: Financial Stability Cobweb**




*Note: Movement away from the centre reflects an increase in risk, while movement towards the centre reflects a reduction in risk.*

Due to lower returns on the Barbados Stock Exchange – stemming from an average decline in stock prices – and a smaller ratio of banks' capital to their risk-weighted

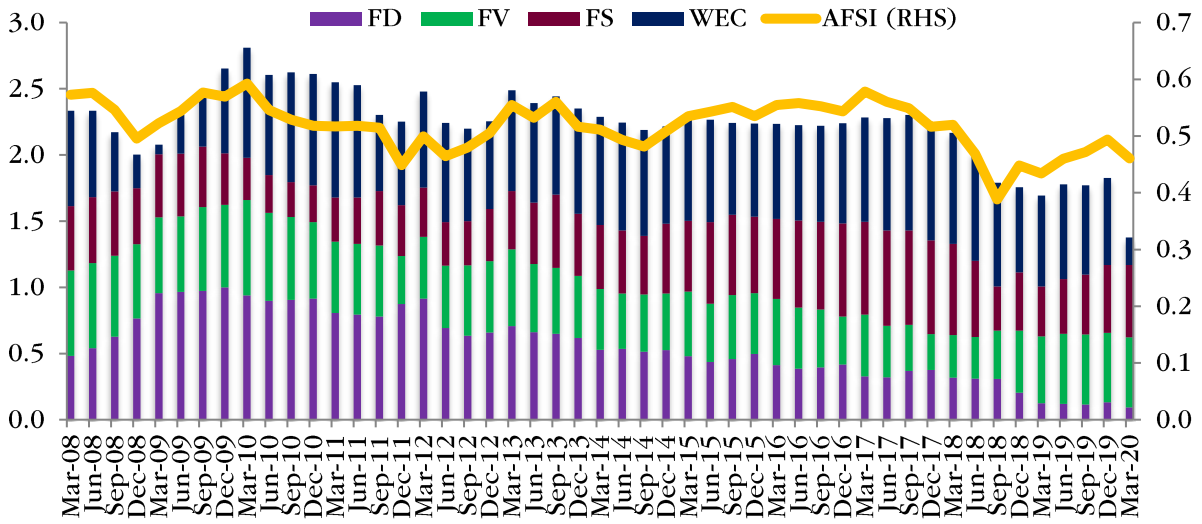
[1] Information on the construction of the indicators is presented in **Appendix A**.

assets, Domestic Financial Markets and Capital & Profitability were the only areas in 2019 that showed increased risk relative to 2018. On the other hand, financial stability risks emanating from the Domestic Environment, Funding & Liquidity and Global Financial Conditions, were lower in 2019 compared to 2018. The reduction of risks associated with Domestic Environment and Funding & Liquidity was substantial, and stemmed from an improved fiscal balance and rising commercial bank liquidity, coupled with declines in the sovereign debt stock as a percentage of GDP and the ratio of broad money to net international reserves. As for Global Financial Conditions, the lower risk score reflected an increase in the MSCI World Index of Equity Returns and decreases in the CBOE Volatility Index and Emerging Market Bond Index Spread.

The risk scores for 2019/20 were effectively the same as that of 2019, except in the case of Global Financial Conditions, which showed an increased risk due to the negative impact of COVID-19 on international capital markets during the first quarter of 2020. In comparing 2019/20 to 2018/19 (April 2018 – March 2019), Domestic Financial Markets was the only area that recorded a higher risk score on account of lower local stock exchange returns, while risks associated with the Domestic Environment and Funding & Liquidity fell.

Unlike the Financial Stability Cobweb, the Aggregate Financial Stability Index (AFSI) displayed in **Figure 2**, is a composite measure of financial stability which is generated as a weighted average of normalised macroeconomic and financial statement variables. Four major sub-indices are used to determine the ASFI, namely, financial development (FD), financial vulnerability (FV), financial soundness (FS), and the world's economic climate (WEC). An increase in the index indicates an improvement in financial stability.

**Figure 2: Aggregate Financial Stability Index**



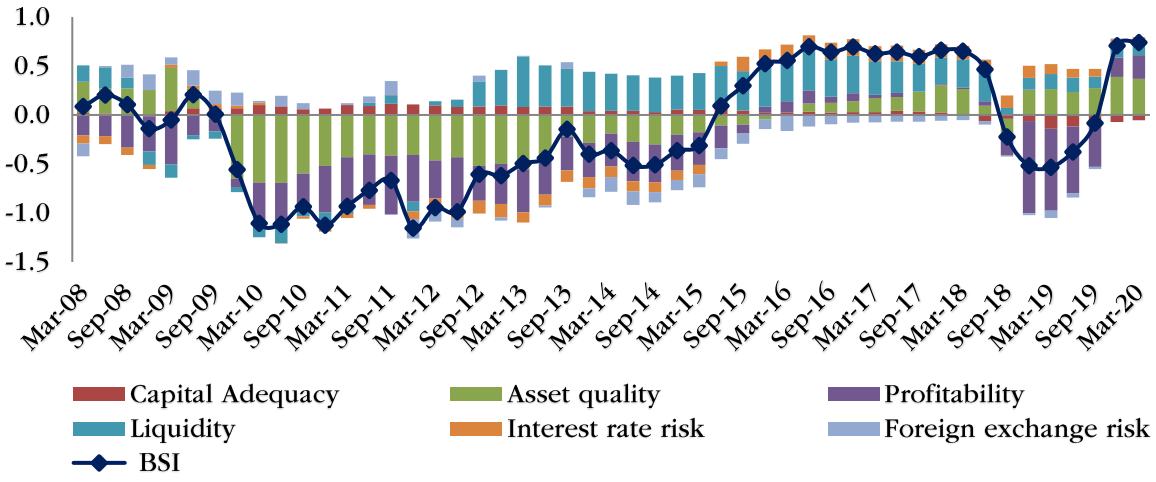

*Source: Central Bank of Barbados*

During 2019, the AFSI increased relative to 2018 due to improvements in all the sub-indices except FD, which is measured by the ratio of commercial bank credit to GDP. Of the three sub-indices that improved, a decline in the non-performing loans (NPL) ratio, coupled with an increase in liquidity, resulted in FS being the leading driver of

the AFSI in 2019. Similarly, the AFSI for the first quarter of 2020, while declining relative to the end of 2019 due to international economic conditions, suggests a more financially stable environment compared to the corresponding period of 2019, due to better financial soundness and macroeconomic conditions, as measured by FS and FV, respectively.

The Banking Stability Index (BSI) is a composite indicator of commercial bank stability. At the end of December 2019, Barbados recorded its first positive BSI since June 2018. This strengthening of financial stability was achieved mainly through improvements in profitability and asset quality. By the end of March 2020, the BSI edged-up further owing to higher profitability and liquidity (**Figure 3)**.

**Figure 3: Banking Stability Index**

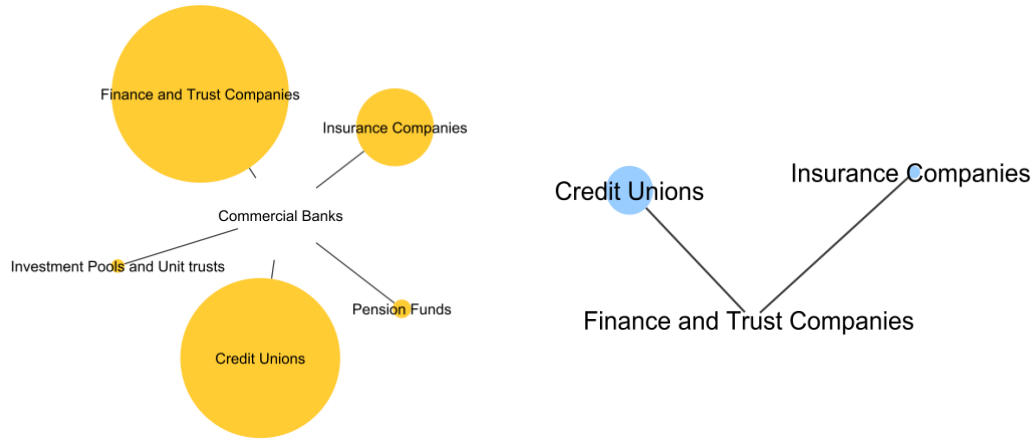



*Source: Central Bank of Barbados*

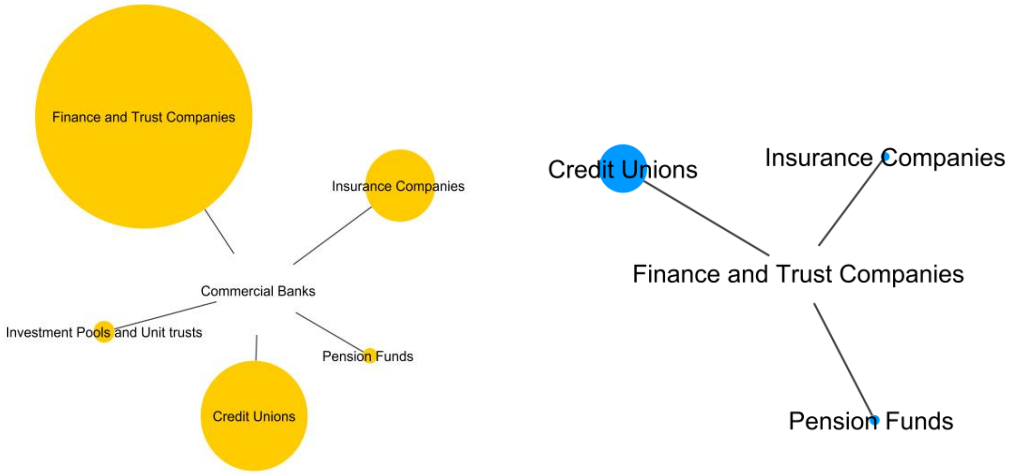
### *2.2.1 Financial System Interconnectedness*

In 2019, several sectors in the financial system continued to show significant exposure to commercial banks relative to their assets. Finance and trust companies remained the subgroup with the greatest exposure to the commercial banks, but their exposure was lower than one year ago, following the consolidation of one entity with its parent commercial bank. Credit unions displayed an increase of relative exposure to the commercial banks due to rising deposits. Given the consolidation, the structure of other financial subsectors' exposures to trust and finance companies changed during the period. Credit unions and insurance companies increased their exposures to the finance and trust companies, but pension funds had no exposures to trust and finance companies by the end of 2019 (**Figure 4**).

**Figure 4: Network of Institutional Exposures (to Commercial Banks and F&Ts) 2019**




**2018**




*Source: Central Bank of Barbados*
*Note: Outer nodes represent the subsectors' deposits in the centre node relative to the assets of that financial sub-sector*

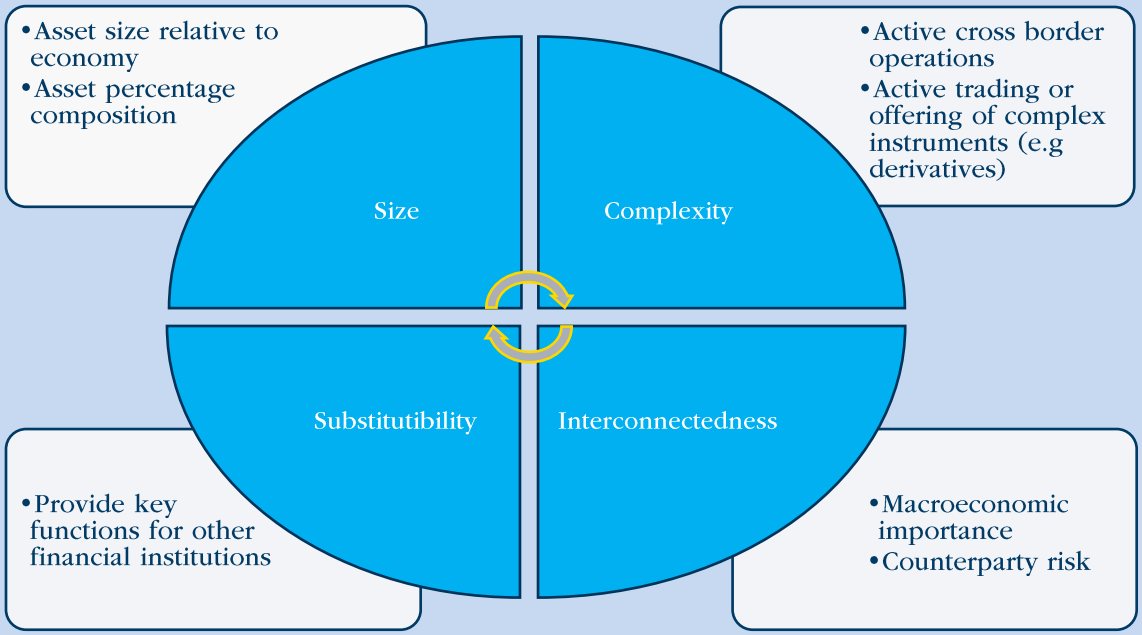
## Box 1: Systemically Important Financial Institutions (SIFIs)

An institution is considered a systemically important financial institution (SIFI) if a shock to that institution causes significant disruption to other financial institutions, and hence threatens financial and economic stability (FSB 2011). This feature of systemic importance is usually driven by the size, complexity, substitutability and interconnectedness of these institutions. However, during economic distress some institutions considered non-systemic may gain importance due to the nature of the environment and their exposure to economic players. Therefore, it is important to develop a framework for identifying and monitoring these types of institutions throughout the economic business cycle, in order to assess and mitigate systemic risk.

In assessing the degree of systemic importance, both quantitative and qualitative analysis is employed. The quantitative approach uses a weighting system on select indicators to uniformly measure systemic importance across banks, while qualitative assessment is informed by intimate knowledge of the financial infrastructure and business environment (BCBS 2012). Together, quantitative and qualitative results provide the basis for identifying systemically important banks.

The primary quantitative indicators used are related to size, complexity, substitutability, and interconnectedness **(Figure 1)**. The size of specific instruments relative to the total balance sheet or off-balance sheet assets, as well as an institution's asset size relative to economic output, is usually an indicator of importance as it highlights those institutions with a large market share. Moreover, when size is considered with the complexity of the business and its connectedness, more meaningful conclusions can be drawn about the level of systemic importance of an institution. The more complex the bank's business structure and cross-border activity, the greater the expected associated systemic risk as there are greater avenues for the transmission of externalities. Substitutability looks at concentration and captures the role the institution plays in providing key services, such as treasury services, for other financial institutions. Therefore, the more concentrated the institution is, the more likely it is to be systemically important. Macroeconomic and counterparty exposures are also analysed under interconnectedness. This offers an indication of how exposed the institution is to other financial institutions, in addition to its role in macroeconomic developments in specific sectors. Weights are generally applied evenly across these four categories but may be adjusted to reflect domestic conditions.

**Figure 1: Quantitative Indicators of Systemic Importance**




On identification of a domestic systemically important bank (SIB), the Basel Committee recommends that regulators impose additional loss absorbing measures on these institutions whether subsidiaries, financial groups or domestic banks. This is usually administered through an additional capital charge. Additionally, these indicators also become important in resolution management, as it indicates those institutions which cannot be easily resolved in the event of a detrimental shock, due to their relatively large size, concentration, high interconnectedness and complexity.

It is important for regulators to regularly assess and identify systemically important institutions. Ongoing monitoring of institutions identified will help to inform regulatory practices and initiate the implementation of proactive measures to ensure financial stability is maintained.

***References:***

Basel Committe on Banking Supervision. 2012. "A Framework for Dealing with Domestic Systemically Important Banks." BIS Consultative Document.

Basel Committee on Banking Supervision. 2017. "Global Systemically Important Banks - Revised Assessment Framework." BIS Consultative Document.

Financial Stability Board. 2011. "Policy Measures to Address Systemically Important Financial Institutions." FSB Policy Document (1-4).

# 3. Financial Sector Developments

## 3.1 Structure of the Financial System

The total assets of the financial system grew by 3.6 percent during 2019, representing 239 percent of GDP. This asset growth was driven by most segments of the financial system. Moreover, some deposit-taking institutions, namely commercial banks and credit unions, experienced an expansion in cash holdings which was fuelled by increased deposits that were unmatched by loan growth (**Table 2**).

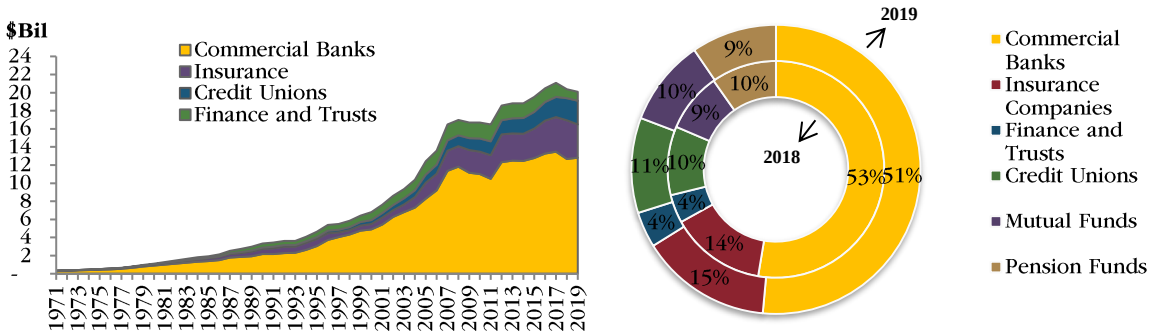
**Table 2: Assets of Financial Services Sector***

| $Mil | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Commercial Banks | 12,447 | 12,774 | 13,280 | 13,469 | 12,662 | 12,825 |
| Insurance Companies | 2,870 | 3,069 | 3,424 | 3,553 | 3,441 | 3,659# |
| Finance & Trusts Companies | 1,630 | 1,647 | 1,535 | 1,569 | 1,016 | 995 |
| Credit Unions | 1,799 | 1,916 | 2,074 | 2,251 | 2,467 | 2,653 |
| Mutual Funds | 1,821 | 1,855 | 2,004 | 2,210 | 2,125 | 2,411 |
| Pension Funds | 2,022 | 2,061 | 2,160 | 2,319 | 2,345 | 2,380 |
| **Total** | **22,589** | **23,322** | **24,477** | **25,371** | **24,056** | **24,923** |

*Source: Central Bank of Barbados and Financial Services Commission*
*Notes: *Includes data revisions to prior periods*
*# Estimated Value*

Commercial banks continued to dominate the financial system, accounting for 51 percent of total financial assets in 2019 (**Figure 5**). The insurance industry and credit union segment had a modest expansion of 1 percentage point to represent 15 percent and 11 percent of the asset share, respectively. Additionally, mutual funds' contribution also increased to 10 percent, while private pension schemes fell to 9 percent. Finance and trust companies' percentage of asset share remained relatively unchanged.

**Figure 5: Assets of the Financial System by Institution[2]**




*Sources: Central Bank of Barbados and Financial Services Commission*

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

High concentration, interconnectedness, and cross-border linkages remained a key structural feature of the financial system, with the presence of local, regional, and international interlocking corporate structures and conglomerates. Of the five local commercial banks in operation, the three Canadian banks accounted for 73 percent of total bank assets, while the two Trinidadian banks held the remaining 27 percent. Additionally, the largest seven of the 33 credit unions accounted for 93 percent of the segment's asset base and the life insurance sector accounted for 71 percent of total industry assets.

### *Deposit Insurance*

The Barbados Deposit Insurance Corporation (BDIC) continues to safeguard the financial system, guaranteeing each depositor at commercial banks and finance and trust companies up to $25,000 on domestic currency accounts. At year-end 2019, the number of qualified, insurable accounts carried an estimated value of $10 billion **(Table 3)**. This represented a 4.1 percent increase when compared to 2019, and was driven by increased deposits in the commercial banking sector.

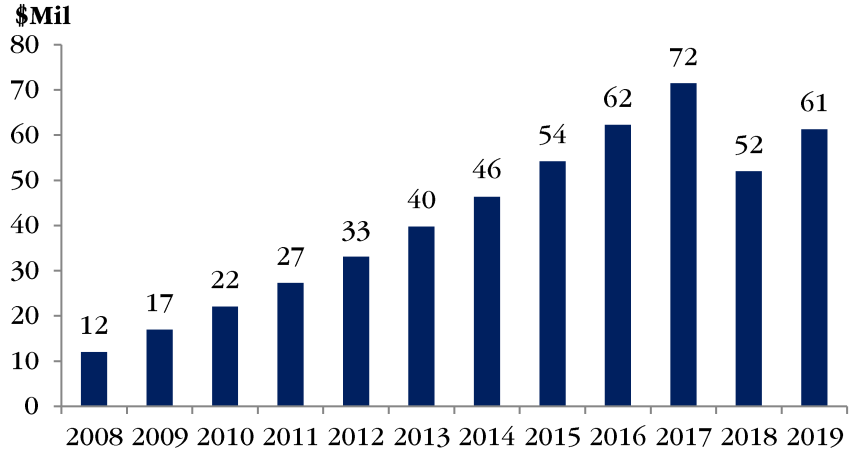
**Table 3: Total Estimated Insurable Deposits**

| **($ Millions)** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** |
|---|---|---|---|---|---|---|
| Commercial Banks | 8,119 | 8,482 | 8,821 | 8,836 | 8,915 | 9,291 |
| Non-banks | 958 | 993 | 873 | 907 | 722 | 740 |
| **Total** | **9,077** | **9,475** | **9,695** | **9,743** | **9,637** | **10,031** |

*Source: Barbados Deposit Insurance Corporation*

At the end of 2019, the Barbados Deposit Insurance fund carried an estimated accounting value of $61 million (**Figure 6**). This asset growth of 17.9 percent was largely due to an upward revaluation of Government bonds, which have a nominal value of $77 million.

**Figure 6: Deposit Insurance Fund**




*Source: Barbados Deposit Insurance Corporation*

## Box 2: The Establishment of Credit Bureaus and Credit Reporting in Barbados

The Government of Barbados is in the process of finalising a framework for the operation of credit bureaus in Barbados which will support the creation of a credit reporting system. It is anticipated that, with a robust credit reporting system, the financial system and the economy will benefit substantially from the mitigation of market failures, such as adverse selection and asymmetric information between borrowers and lenders.

It is proposed that the Central Bank of Barbados administer the licensing and regulation of credit bureaus and credit reporting activities. The local framework is designed to fit harmoniously within the wider credit reporting framework established at the CARICOM level, in order to support the workings of the CARICOM Single Market and Economy (CSME) by making provision for cross-border credit reporting.

Credit information providers – which include financial institutions, Government registries, utility companies, and companies that sell goods on hire purchase or offer other credit terms – would supply a credit bureau with the credit information of customers, provided customers have consented to the sharing of information.

Under this framework, specific information regarding any debt obligation along with its monthly status, any past due amounts, and the agreed schedule of payments are continuously sent to the credit bureau. The Bureau will use the data to create credit reports and scores on credit applicants. Credit reports are used by subscribers to:

a) evaluate credit applications;
b) assess individuals who volunteer to act as guarantors for credit applicants;
c) determine the eligibility of potential tenants; and
d) make any other decision concerning eligibility of data subjects for certain roles and privileges.

Consent is required from data subjects (participating businesses and individuals) before any information concerning their credit history can be shared with subscribers.

The credit report is intended to help reduce credit risk and uncertainty for subscribers. As such, credit bureaus should serve the financial sector well because lending institutions will be less exposed to borrowers who are unlikely to repay. Thus, one potential benefit is a reduction in non-performing loans (NPLs) over the long-term.

Additionally, credit reporting allows small enterprises with good credit histories to leverage their "reputational collateral" to access funding from institutions that might otherwise deny them credit.

Credit bureau information can also improve financial supervisory outcomes. Due to the granularity of information, it is possible to extract information about the distribution of risk within the loan portfolio of banks and to look at further breakdowns in terms of sectors, counterparts, or borrower characteristics. For example, Dent (2014) highlights the importance of central credit registry data in the area of real estate risk monitoring by central banks and banking supervisors. Analysis of the credit conditions in this area is vital for monitoring credit risk and applying the correct macroprudential tools. Therefore, the establishment of credit bureaus can lead to a more stable financial system and economy.

While there are positives associated with credit bureaus, it is important to guard against threats such as:

a) data breaches;
b) identity and information theft;
c) errors of facts; and
d) lack of fairness/transparency.

To reduce such threats, credit bureaus should only collect relevant, accurate, and timely data from designated sources via a system backed by strong security protocols. Data subjects are entitled to one free credit report on themselves annually and can request the correction of erroneous information. As the regulator, the Central Bank will be empowered to investigate any suspected misuse of data by credit bureaus and to sanction parties through revocation of licenses or any action the Bank considers reasonably appropriate. Additionally, a tribunal will be established to resolve disputes arising from credit reporting without parties having to undertake litigation as a primary recourse, thus saving time and reducing costs.

***References:***

Dent, K., 2014. "Should the Availability of UK Credit Data Be Improved?" Bank of England Discussion Paper, May 2014.

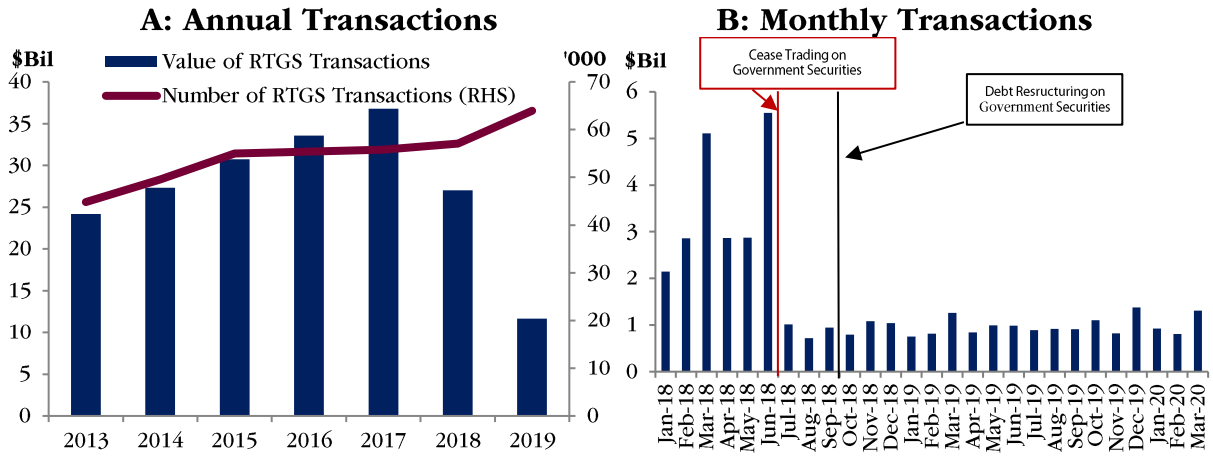
## 3.2 Payment Systems Developments

An efficient payment system is an essential pillar of financial stability. Clearing and settlement systems that are safe and effective facilitate smooth treasury and liquidity management within the financial system. At the same time, payment systems are evolving globally with an accelerating transition away from cheques and towards electronic forms of payments. Therefore, it is of paramount importance that these systems be monitored to ensure that payment chains are intact and operate efficiently. As such the Bank is in the process of finalising its payment legislation which will encompass clearinghouse rules and govern the players and operators in the payment space.

In 2019, payments processed in the domestic market represented 325 percent of GDP, compared to 485 percent at the end of 2018. This contraction continued to be driven by declines in transactions processed through the Real Time Gross Settlement (RTGS)[3] system, and was indicative of reduced primary debt issuance by Government following the debt restructuring in 2018. Despite this falloff, consumer-focused electronic payments continued to show strong growth, although remaining below cheque-based payments in total value. Notwithstanding, the shift from cheque-based payments to direct payments, cash maintained its importance, as measured by growth in currency-in-circulation and the increased usage of automated teller machines (ATMs).

Given the lack of investment-related payments, the value of transactions processed via the RTGS fell sharply by 57 percent. At the same time, there was a larger number of smaller value transactions processed (**Figure 7**). For the first quarter of 2020, the value of transactions processed was 7.6 percent greater than the corresponding period in 2019.

**Figure 7: RTGS Transactions**

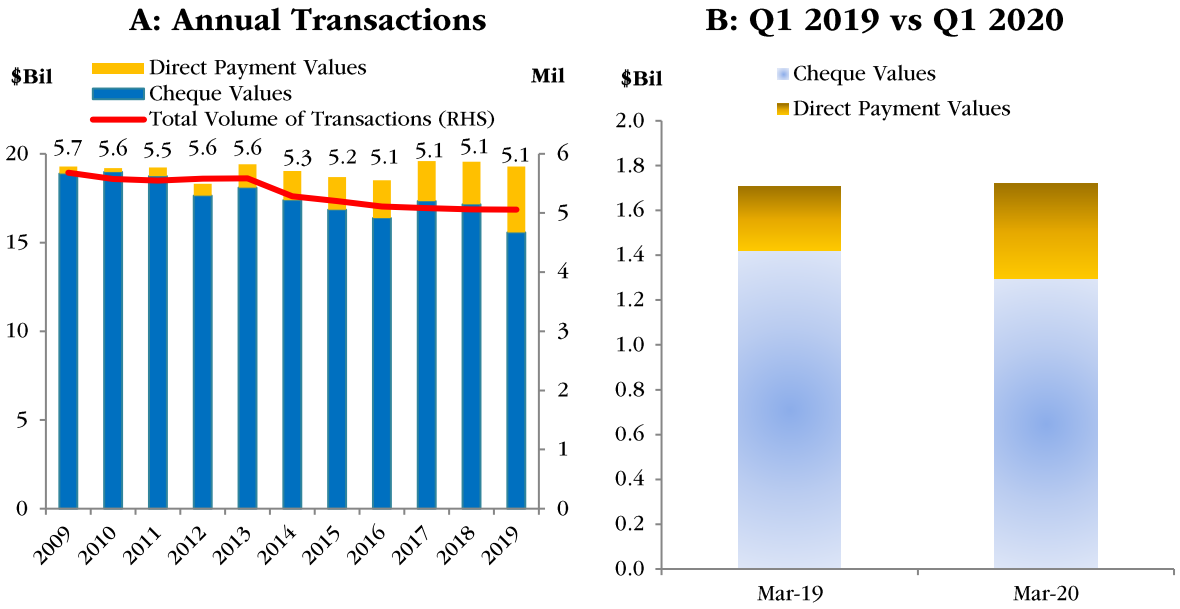



*Source: Central Bank of Barbados*

[3] RTGS processes large value and/or time-sensitive payments between the domestic banking system and the Central Bank.

The value of transactions processed through the Barbados Automated Clearing House Services Incorporated (BACHSI)[4] system declined marginally during 2019, as a decrease in cheque payments was not matched by growth in direct payments. With authorities committed to reducing the issuance of cheques, the number and value of cheques processed fell by 3.4 percent and 9.2 percent, respectively. In contrast, the number and value of direct payments increased just shy of the absolute value of these declines in cheque transactions. However, for the first quarter of 2020, BACHSI payments were 1.3 percent higher than the corresponding period in 2019, as the value of direct payments outweighed the decline in cheque payments for the period (**Figure 8**).

**Figure 8: BACHSI Transactions**




*Source: Central Bank of Barbados*

The value of debit card transactions processed through the financial system's Caribbean Integrated Financial Services Incorporated (CARIFS)[5] network, expanded by 6.1 percent in 2019, with growth in both the value of point-of-sale (POS) and ATM transactions. While the number of ATM transactions were marginally down by 0.5 percent, the value of these transactions was up by 3.4%. On the other hand, both the number and value of POS payments increased by 10.6 percent and 9.3 percent, respectively (**Figure 9**).

For the first quarter of 2020, the value of payments through CARIFS was 7 percent lower than the corresponding period of 2019. This reduction coincides with the economic slowdown due to the COVID-19 pandemic.

[4] BACHSI facilitates the clearing of cheques, direct payments and daily inter-bank settlements.
[5] The CARIFs system provides customers of commercial banks and some credit unions with twenty-four-hour access to their bank accounts via other financial institutions' ATMs and POS terminals.

The transactional value of domestic credit card payments grew by 1.2 percent during 2019 (**Figure 10**). This was driven by an increase of 22 percent in the value of payments undertaken by the business sector. On the other hand, the transactions of the personal sector were slightly lower than for the previous year.

**Figure 9: Debit Card Transactions**

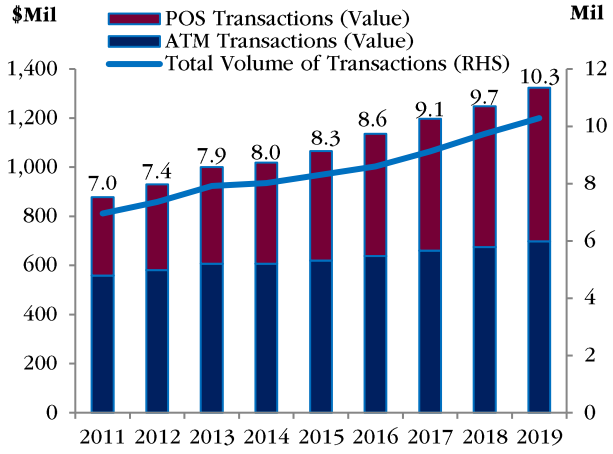
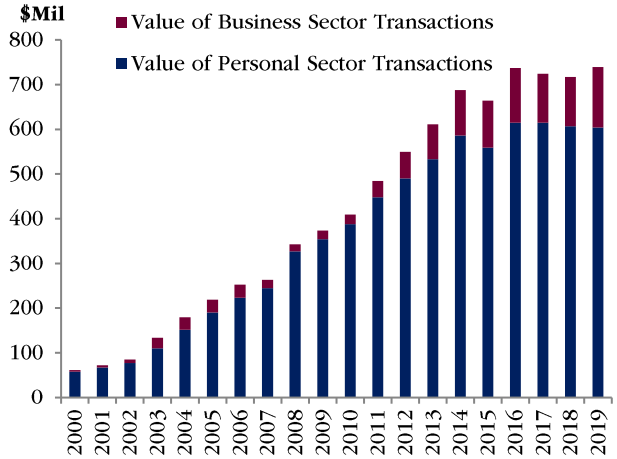


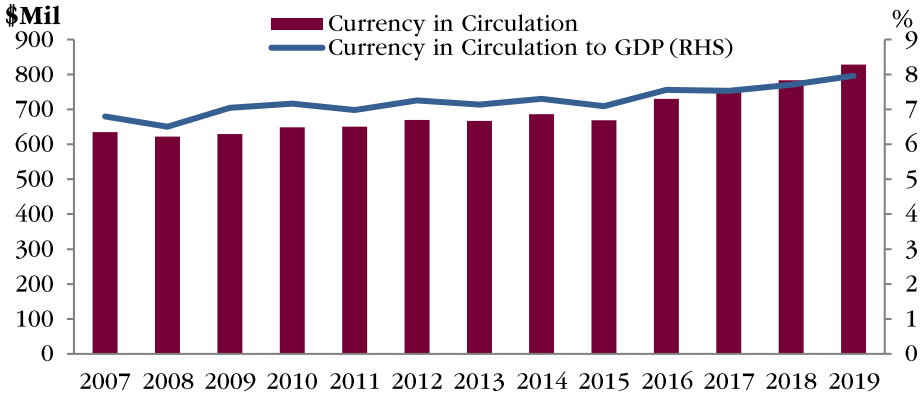

**Figure 10: Credit Card Transactions**




*Source: Central Bank of Barbados*

Despite the strides made in improving the efficiency and ease of use of electronic transactions, the persistent demand for cash continued in 2019, with currency-in-circulation growing by 5.7 percent (**Figure 11**). As at March 2020, currency-in-circulation contracted slightly by 3.2 percent to $802 million, when compared to year-end 2019. However, this was in keeping with the traditional seasonal trends, which results in a spike in demand in December. Preliminary data suggests that April and May exhibited unusually strong demand for cash, relative to seasonal norms, which may be linked to consumer and business uncertainty during the COVID-19 pandemic.

**Figure 11: Currency-in-Circulation**




*Source: Central Bank of Barbados*

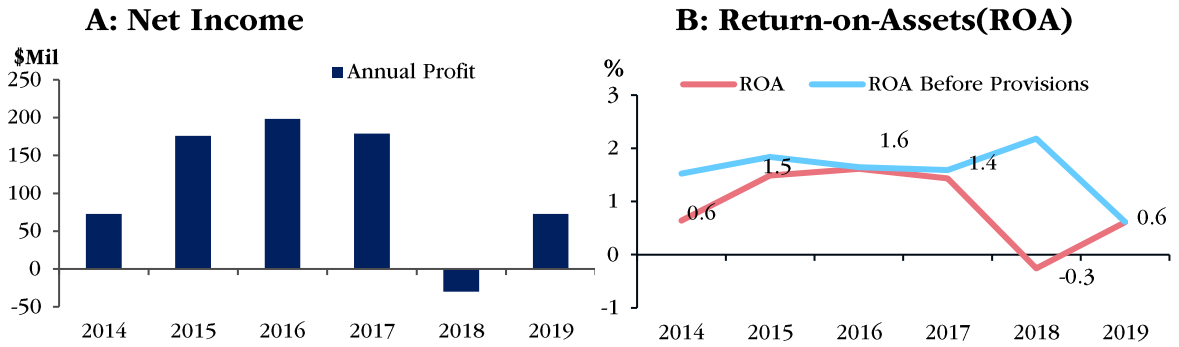
# 4. Analysis of the Financial System

## 4.1 Commercial Banks

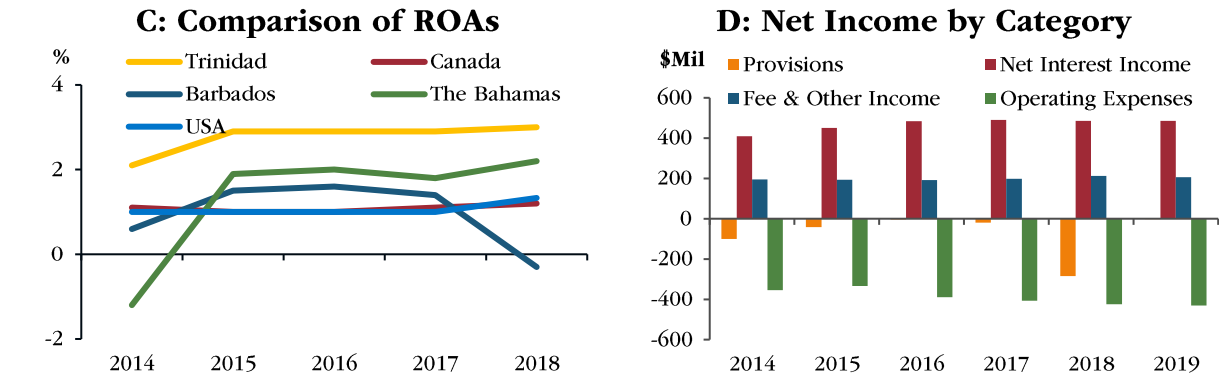
Profitability in the banking sector improved during 2019 (**Figure 12A**), with a twelve-month return-on-assets ratio of 0.6 percent, compared to a loss ratio of 0.3 percent in 2018 **(Figure 12B)**. However, the improvement was not driven by underlying growth in business but by a sharp decline in expenses that outweighed a contraction in total revenue, largely the result of falling interest income for the period. Notwithstanding this recovery in net income, profitability remained below the regional average. In contrast, prior to the debt restructuring in 2018, the commercial banks in Barbados were more competitive with respect to return-on-assets versus their Caribbean peers **(Figure 12C)**.

The fall in expenses was due to the absence of provisioning when compared to a $285 million provisioning charge incurred from the 2018 debt restructuring (**Figure 12D**). However, operating expenses increased by 1.5 percent, driven by growth in non-wage administrative expenses. Net interest income rose marginally, as the decline in interest expense was slightly greater than the fall-off in interest earned.

**Figure 12: Profitability**




*Source: Central Bank of Barbados*



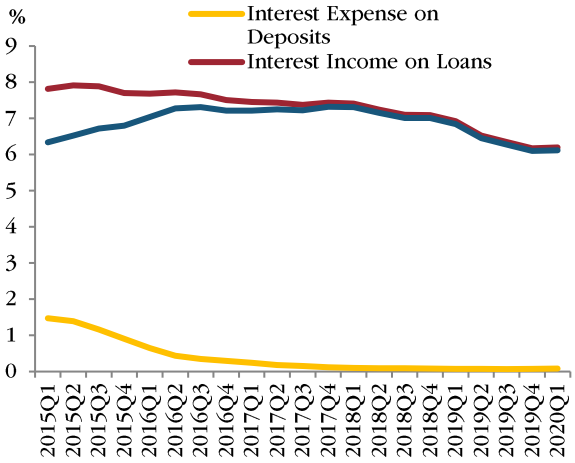

*Source: Central Bank of Trinidad and Tobago, Central Bank of Barbados, Central Bank of The Bahamas, IMF, Statista*

*Source: Central Bank of Barbados*

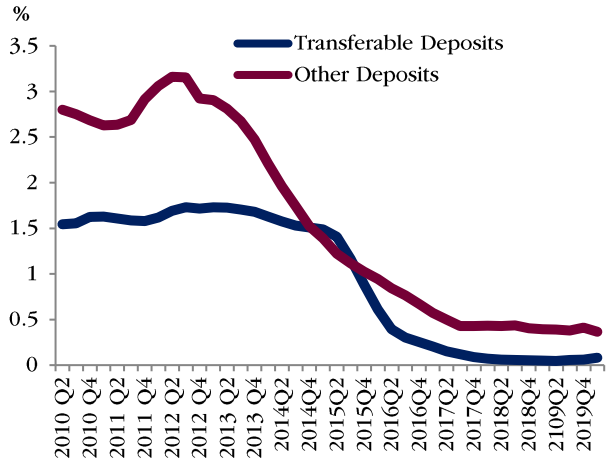
The implicit interest rate on loans was estimated at 6.2 percent in 2019, a reduction from the previous year as rising liquidity continued to drive down interest rates on newly issued loans generally (**Figure 13A**). Similarly, interest rates on deposits remained at recent lows, with the average deposit rate estimated at 0.1 percent resulting in an implicit spread of 6.1 percent. Interest expense on transferable deposits remained at 0.1 percent of deposits, but the interest paid on other deposits edged downward modestly (**Figure 13B**).

**Figure 13: Commercial Banks' Interest**

**A: Interest Earnings and Expense**




**B: Interest Expense by Type[6]**

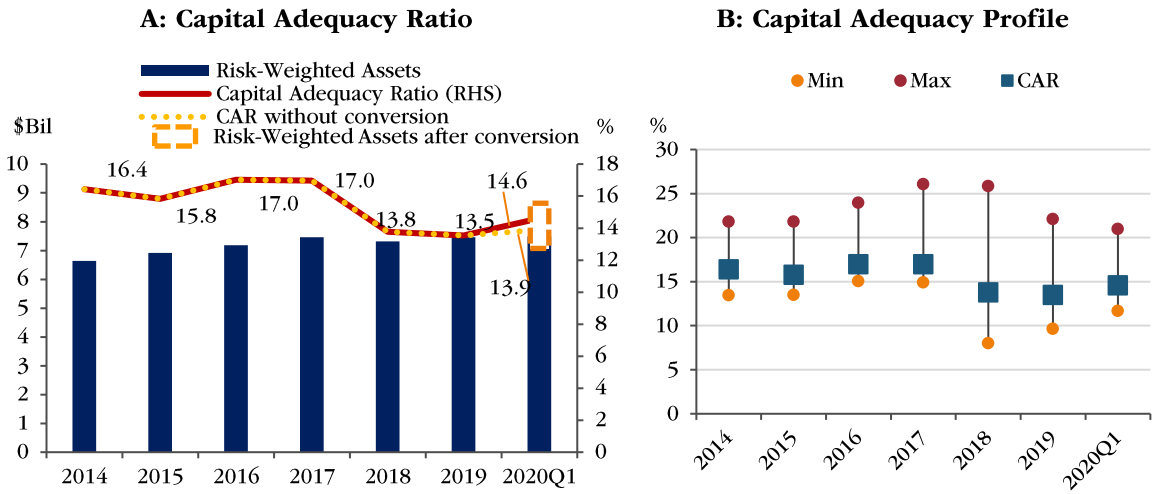



*Source: Central Bank of Barbados*

Capital buffers remained above international benchmarks but were below pre-debt restructuring levels. The system-wide capital adequacy ratio was 13.5 percent at year-end 2019 and increased to 14.6 percent at the end of March 2020, due to the conversion of a bank from a branch of its parent to a subsidiary, coupled with modest profitability (**Figure 14A**). All individual commercial bank capital adequacy ratios were above the 8.0 percent benchmark over 2019, with the individual CARs ranging from 9.6 percent to 22.1 percent (**Figure 14B)**.

[6] Transferable deposits comprise call deposits, demand deposits and savings deposits with unrestricted withdrawal privileges.

## Figure 14: Capital Adequacy



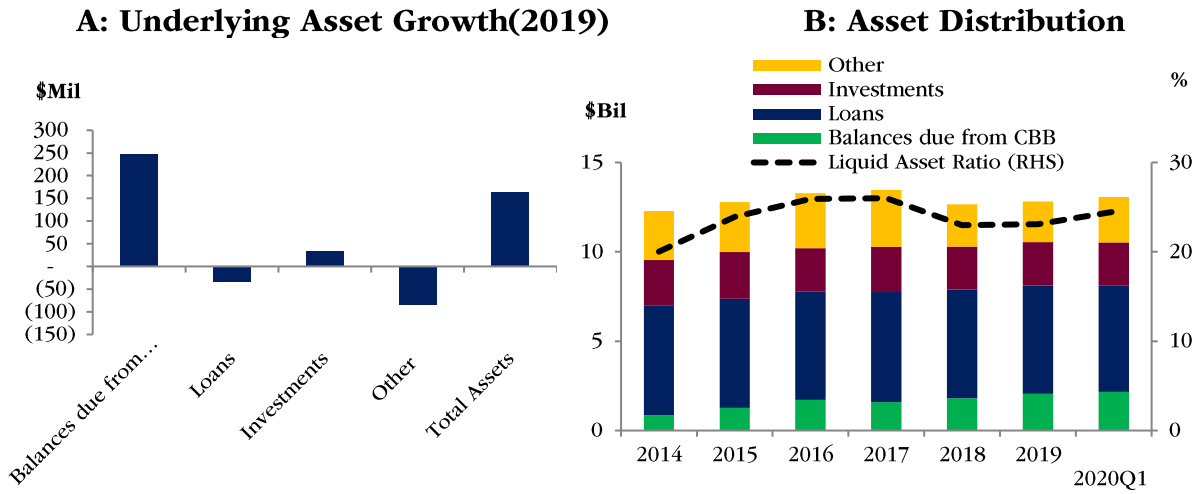

*Source: Central Bank of Barbados*

Liquidity remained abundant throughout the banking system in 2019 and early 2020, significantly mitigating any liquidity-based concerns over the stability of the banking sector during the ongoing COVID-19 pandemic. The consolidated balance sheet of banks expanded by 1.3 percent in 2019, compared to a 5.0 percent reduction one year earlier. With loans contracting this growth in assets was largely reflected in rising liquid balances at the Central Bank **(Figure 15)**. Additionally, the value of the investment portfolio was moderately boosted by an upward valuation of Government of Barbados securities in 2019.

The excess cash ratio rose to 19.0 percent at the end of 2019, a 2.5 percentage point increase from the prior year **(Figure 16)**. Over the first quarter of 2020, the cash held by banks has continued to grow, with the excess cash ratio reaching an unprecedented 19.7 percent of deposits. Similarly, the excess security ratio stood at 8.4 percent in 2019, up from 4.8 percent in the prior year. This can be attributed to the rise in the valuation of Government-issued securities, and was strengthened by the reduction in the securities reserve requirement ratio from 20 percent to 17.5 percent on November 29, 2018.

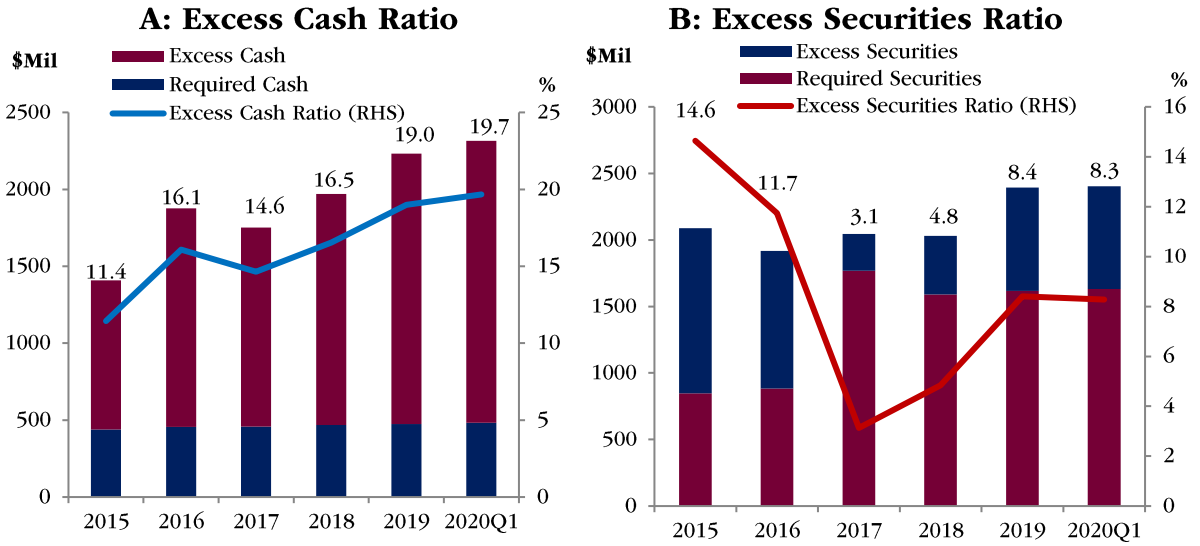
The maturity extension on treasury bills after the debt restructuring, lowered liquid assets as a ratio of total assets from 32.6 percent in 2017 to 17.4 percent in the following year. However, during 2019, the ratio recovered to 19.3 percent due largely to the commercial banks' claims on the Central Bank.

## Figure 15: Total Assets




*Source: Central Bank of Barbados*

## Figure 16: Excess Liquidity

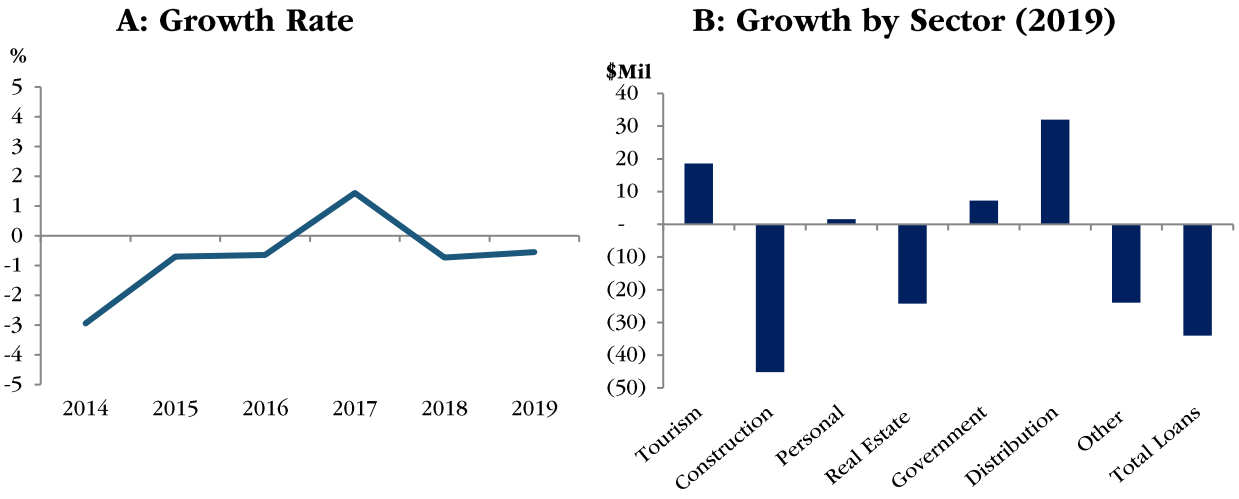



*Source: Central Bank of Barbados*

Loans declined by 0.6 percent in 2019 (**Figure 17A**). The decrease in loan balances was attributed to domestic currency loan repayments by construction companies and repayment of a foreign currency loan to the real estate sector. In addition, construction loans registered a 32 percent reduction in the value because of a reclassification of a large construction loan to tourism (**Figure 17B**).

Based on the first three months of 2020, the stagnation in loans continued, with overall loans down by 1.3 percent. Declines were recorded across all major categories, including tourism due mainly to a significant repayment by one hotel group of its loans.

**Figure 17: Loan Growth**

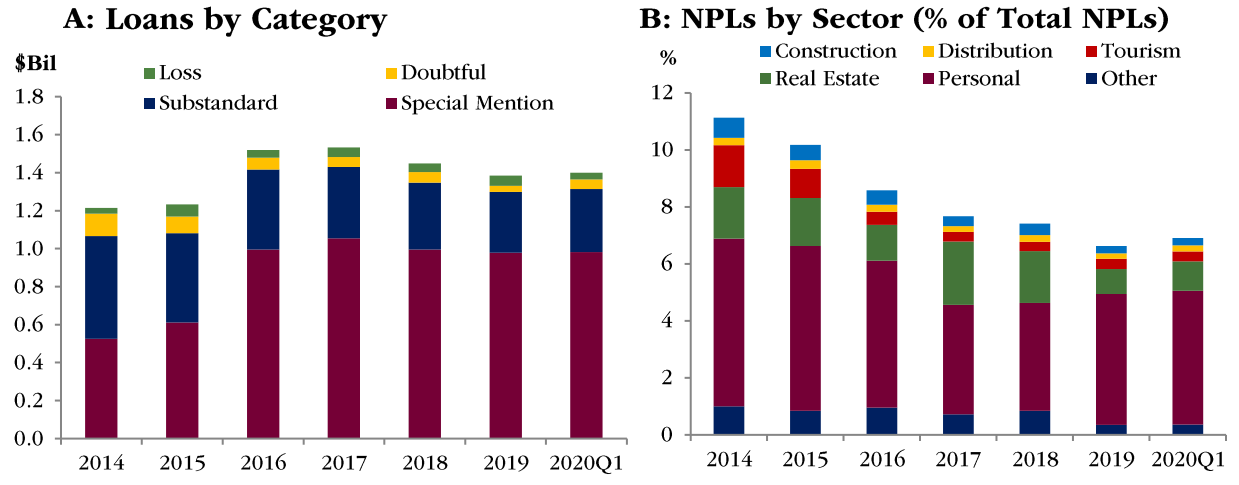



*Source: Central Bank of Barbados*

Up to the end of 2019, the non-performing loans to total loans ratio continued on a downward trajectory, trending towards the recommended benchmark of 5 percent of loans. The NPL ratio declined from 7.4 percent in 2018 to 6.6 percent, due to a reduction of non-performing loans in the construction and real estate sectors. The distribution of NPLs remained concentrated in the "substandard section" but the "loss" category recorded a modest uptick of 0.2 percent in 2019 **(Figure 18A)**.

During the first quarter of 2020, loans classified as non-performing, in the personal, real estate and "other" categories, together with the smaller loan base, raised the NPL ratio to 6.9 percent **(Figure 18B)**. Due to COVID-19, commercial banks have provided temporary cash flow relief to their customers, including loan moratoriums of up to six months. This has mitigated the impact of the crisis on loan arrears and NPLs but, based on the initial rise in unemployment in the services sectors, there is a risk of a significant expansion in non-performing loans as these programmes come to an end.

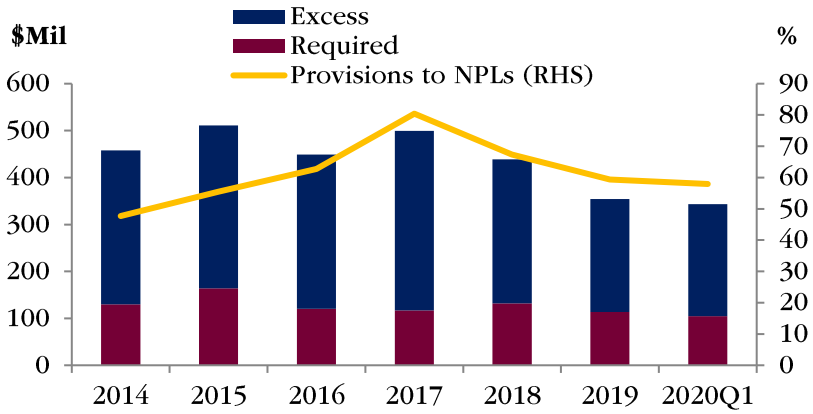
**Figure 18: Non-Performing Credit Portfolio**




*Source: Central Bank of Barbados*

Provisions held as a percentage of NPLs contracted from 67 percent to 59 percent in the year 2019 (**Figure 19).** The fall resulted from the decreased provisions by banks after adjusting for the 2018 debt restructuring and the contraction of NPLs.

**Figure 19: Provisions for NPLs**

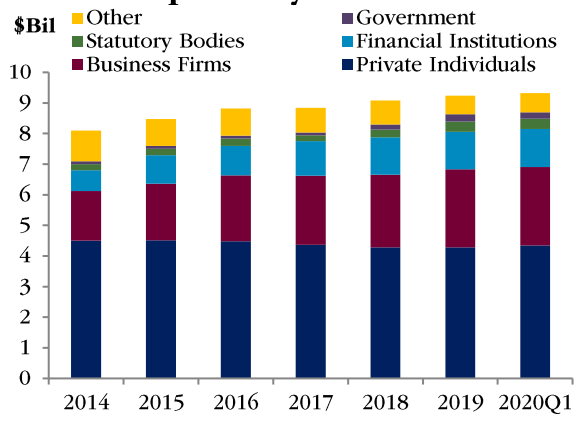



*Source: Central Bank of Barbados*

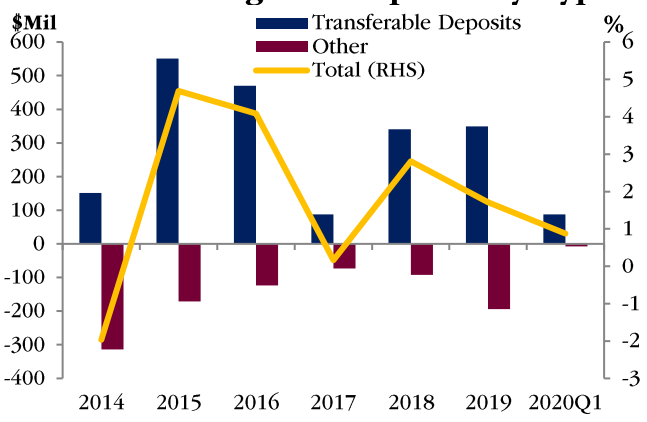
Domestic deposits grew by 1.7 percent in 2019, as deposits by credit unions in commercial banks expanded by 10.5 percent (**Figure 20A)**. However, deposits by private individuals remained stagnant, as individuals continued to shift some of their deposits to credit unions. Transferable deposits remain the most common form of deposits, as the lack of an interest rate differential between demand and longer-term deposits has significantly reduced the demand for the latter. These trends continued into the first quarter of 2020, with transferable deposits increasing by 1.0 percent, while "other deposits" declined by 1.5 percent from end-December, 2019 (**Figure 20B)**. Total deposits had a marginal growth of 0.9 percent during the same period.

**Figure 20: Domestic Deposits**

**A: Deposits by Holder**




**B: Changes in Deposits by Type**

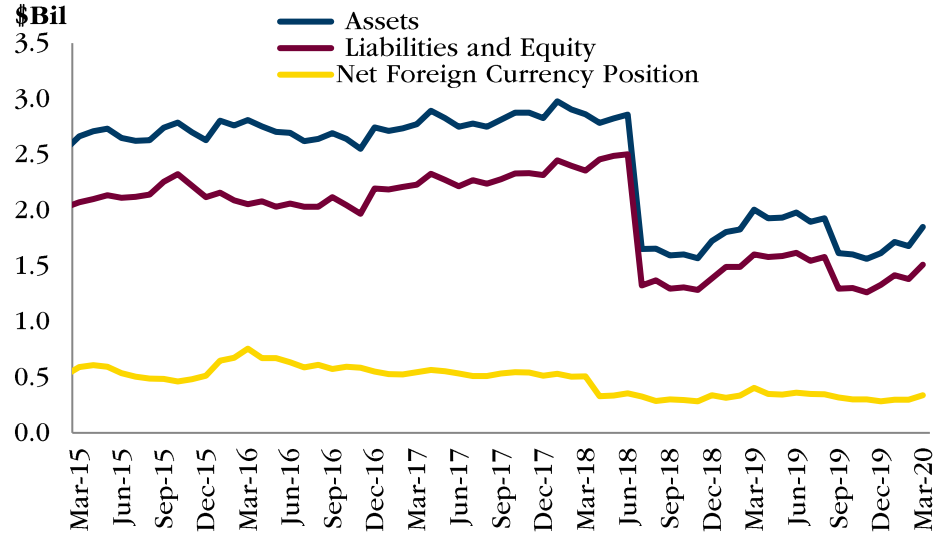



*Source: Central Bank of Barbados*

The net foreign currency asset position of banks deteriorated by approximately $52.3 million in 2019 **(Figure 21)** before recovering by March 2020. Banks reported adequate levels of foreign exchange availability in the foreign exchange market and made no significant purchases from the Central Bank in 2019. At year-end, foreign

currency loans represented 2.9 percent of the overall loan portfolio, while foreign currency deposits accounted for 6.7 percent of total balances.

**Figure 21: Net Foreign Currency Position**

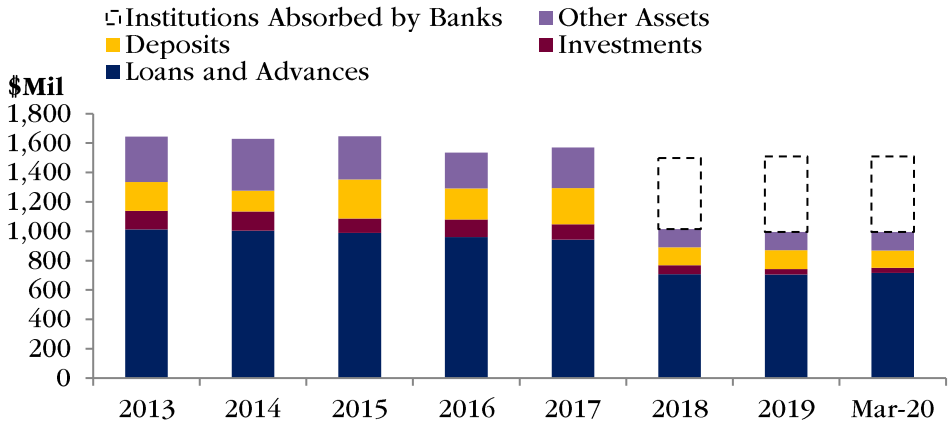



*Source: Central Bank of Barbados*

## 4.2 Deposit-taking Finance and Trust Companies

Consolidation has been the major thematic driver of activity in the deposit-taking finance and trust companies over the past three years. Following an amalgamation that occurred in 2018, there were two consolidations in 2019, one of which was the consolidation of a finance and trust company with an affiliated bank. Consequently, the total assets of deposit-taking finance and trust companies were 2 percent lower relative to the end of 2018. However, after taking account of the intra-group amalgamation, the underlying change in assets was an increase of 1.5 percent. During the first quarter of 2020, there was a marginal underlying decline in assets **(Figure 22)**.

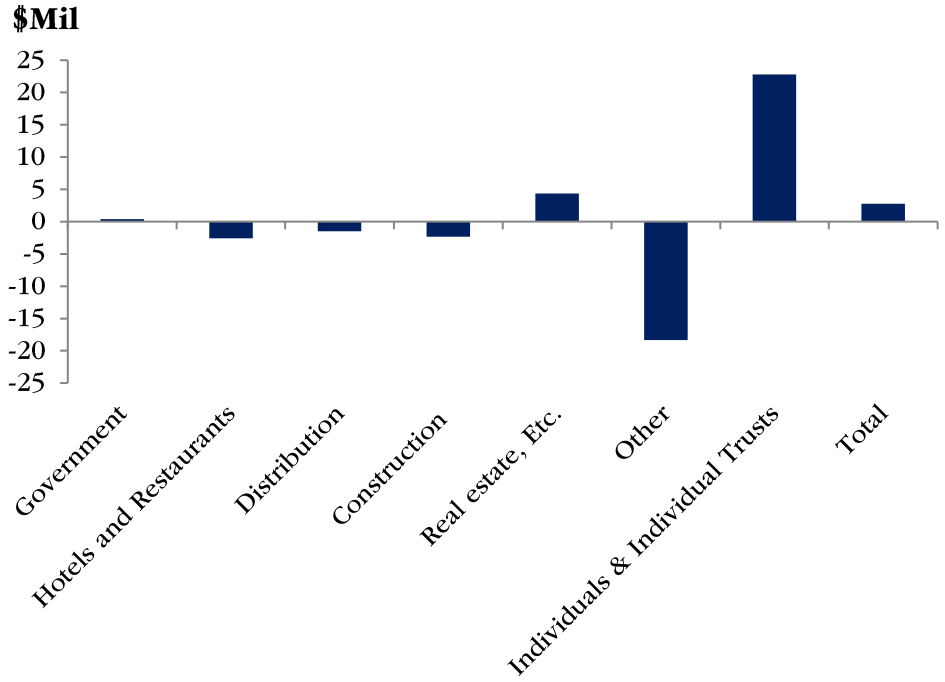
**Figure 22: Asset Distribution**




*Source: Central Bank of Barbados*

The underlying growth in loans and advances extended by deposit-taking finance and trust companies in 2019, albeit modest, was driven by increased lending to individuals. **(Figure 23).**

**Figure 23: Underlying Loan Growth by Sector**

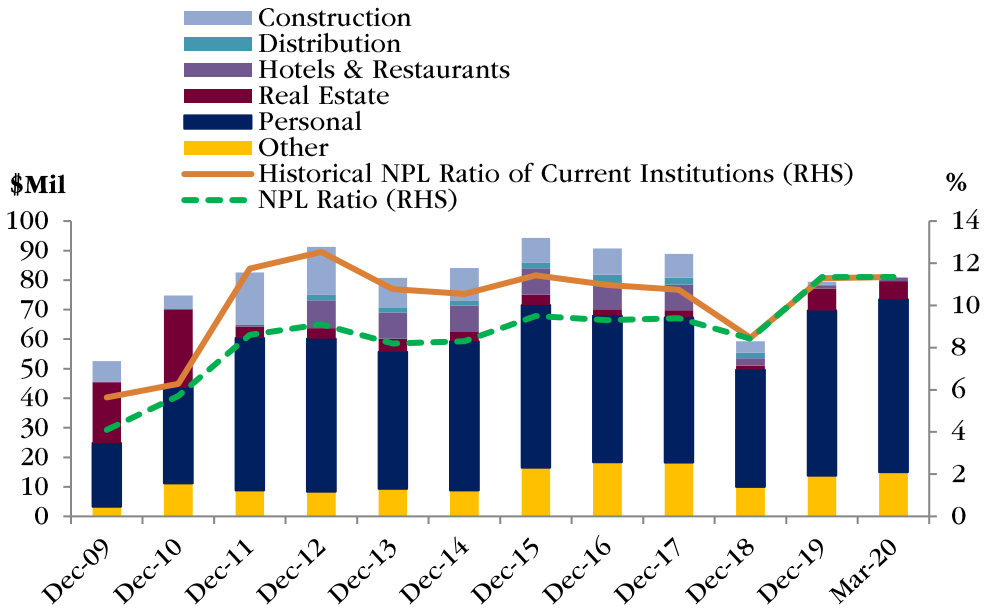



*Source: Central Bank of Barbados*

**Figure 24** shows that the historical non-performing loans (NPL) ratios of the remaining deposit-taking finance and trust companies are higher than that of the unadjusted ratios for the years prior to 2019. The adjusted and unadjusted NPL ratios for 2018 were separated by only 10 basis points, and in 2019, the rate of NPLs increased by 2.9 percentage points to 11.3 percent.

Non-performing loans rose by 2 percent during the first quarter of 2020, but increased lending contained the NPL ratio on par with that of December 2019 (**Figure 25**). However, there were noteworthy declines in non-performing loans for some of the sectors that recorded increases in 2019, namely, real estate and health and social work.

**Figure 24: Non-Performing Loans by Sector**

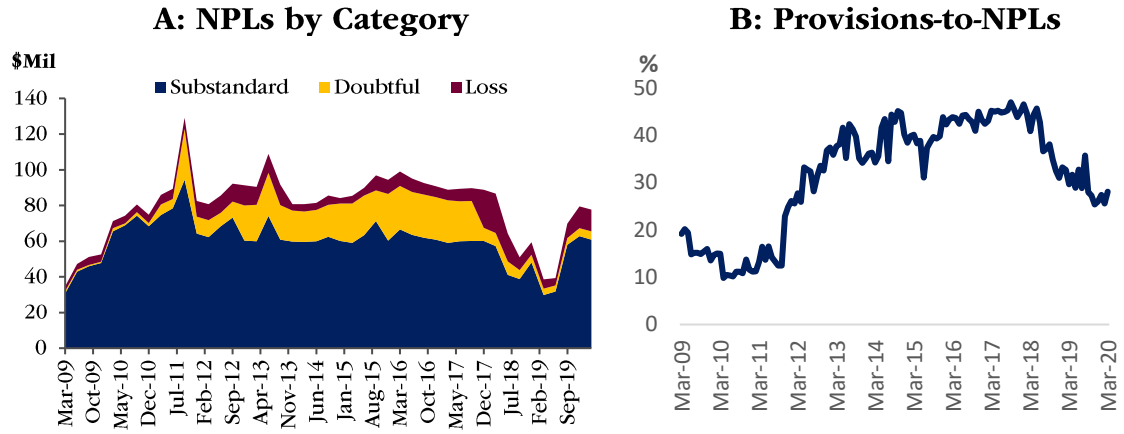



*Source: Central Bank of Barbados*

The broad distribution of non-performing loans across risk categorisations at the end of December 2019 was similar to that of end-2018, where the majority of impaired loans fell into the least risky category, "substandard" and the smallest portion was accounted for in the second-highest risk category, "doubtful" (**Figure 25A**). However, there was a shift in the share of "substandard" and "doubtful" non-performing loans to the "loss" category, which requires greater bad debt provisioning. Despite this change in composition towards the riskiest categorisation, provisions as a percentage of non-performing loans at the end of 2019 fell by five percentage points.

At March 2020, there was no noticeable change in the risk composition of impaired loans, but the provisions to non-performing loans ratio increased by 2.1 percentage points (**Figure 25B).**

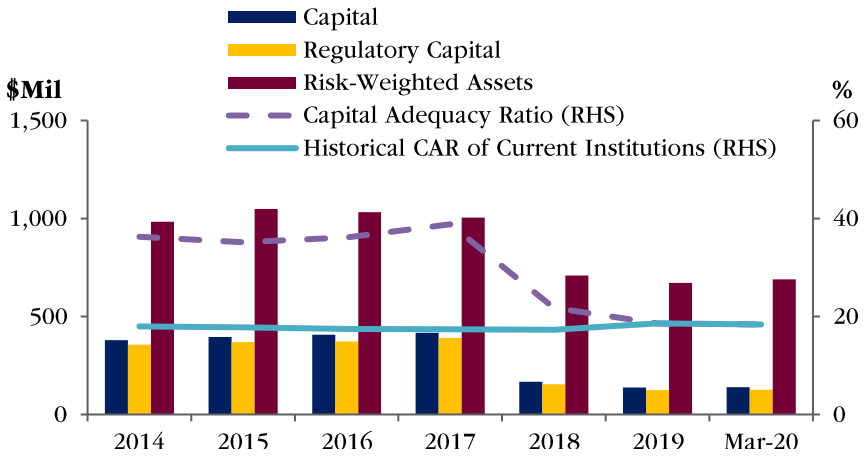
**Figure 25: Non-Performing Loans & Provisioning**




*Source: Central Bank of Barbados*

The unadjusted historical capital adequacy experience for deposit-taking trust and finance companies, are higher than the ratios that have been adjusted to account for institutions that have been absorbed by banks "Historical CAR of Current Institutions". For the currently existing companies in the subsector, the capital adequacy ratio at December 2019 rose by 1.3 percentage points relative to December 2018, due to a decline in risk-weighted assets and a pickup in regulatory capital. By the end of the first quarter of 2020, the capital adequacy ratio slipped by 21 basis points as a result of an increase in risk-weighted assets to 18.4 percent (**Figure 26**). The capital buffer, when calculated net of provisions, indicates that the the existing companies on aggregate, have a considerable smaller buffer of provisions than the historical norm, implying faster capital depletion in the event of a shock (Appendix C, Table 2 Finance and Trust Companies' Financial Stability Indicators (FSIs)).

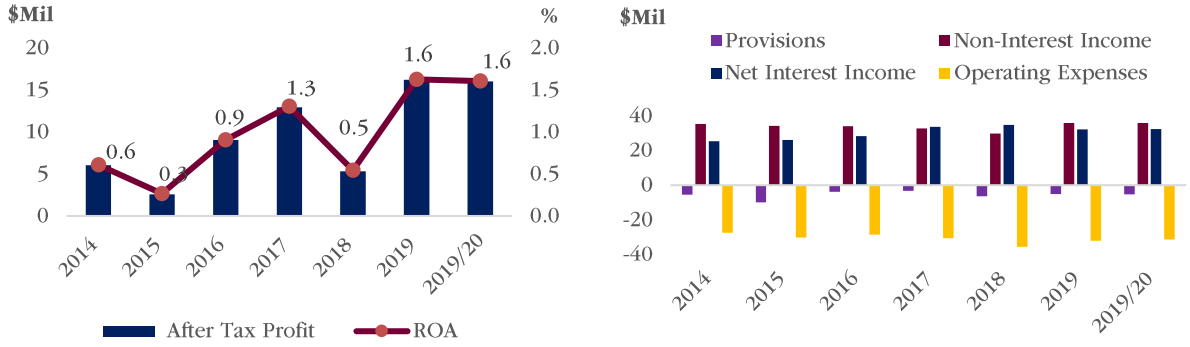
**Figure 26: Capital Adequacy**




*Source: Central Bank of Barbados*

Return on assets of the currently existing deposit-taking finance and trust companies increased from 0.5 percent in 2018 to 1.6 percent in 2019, due primarily to an increase in non-interest income and a reduction in operating expenses. For the twelve-month period ended March 31, 2020, profits and the return on assets were pretty much on par with that of 2019 (**Figure 27**).

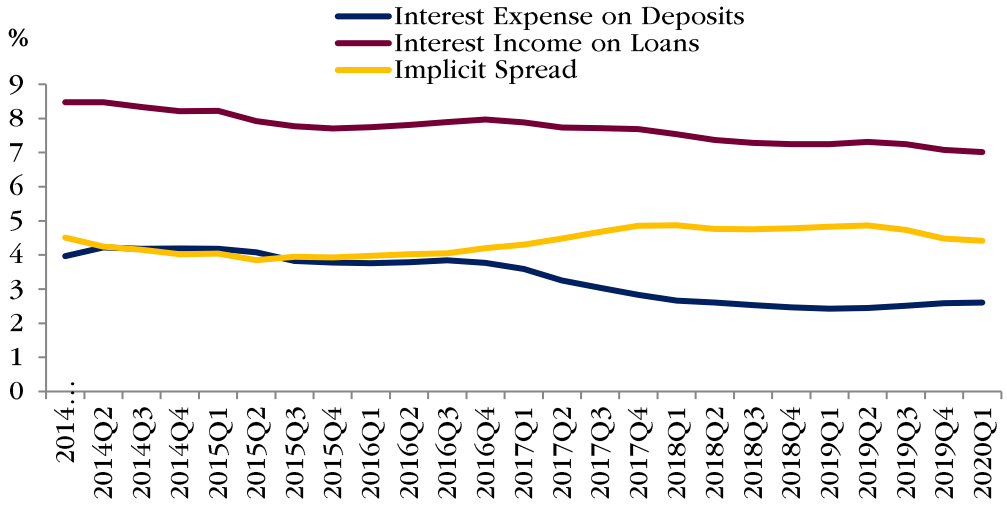
**Figure 27: Underlying Profitability**




*Source: Central Bank of Barbados*

The underlying implicit loan rates for finance and trust companies declined to 7.0 percent at March 2020 from 7.2 percent at December 2018. Over the same period, the implicit deposit rate increased by 14 basis points to 2.6 percent. As a result, the spread narrowed by 37 basis points (**Figure 28**).

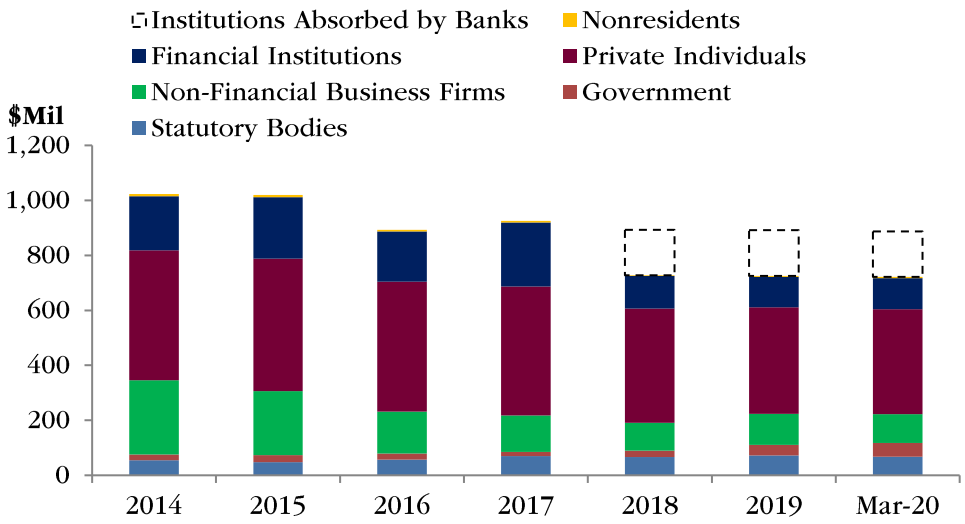
**Figure 28: Underlying Implicit Interest Rates**




*Source: Central Bank of Barbados*

Deposits at trust and finance companies decreased marginally in 2019, owing to reductions in deposits of individuals and financial institutions. During the first quarter of 2020, cash withdrawals of individuals and financial institutions edged down further **(Figure 29).**

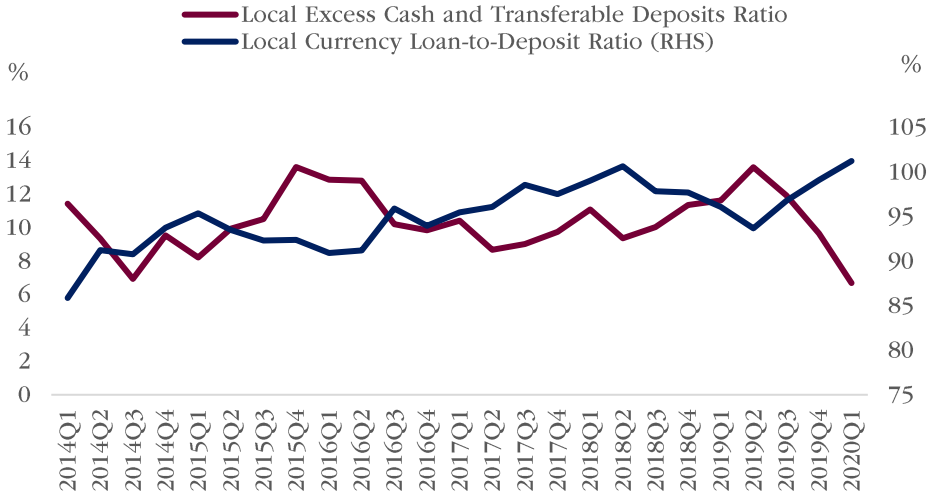
**Figure 29: Deposits by Holder**




*Source: Central Bank of Barbados*

**Figure 30** shows the decrease in liquidity among deposit-taking finance and trust companies in 2019 and the first quarter of 2020. Excess local cash and domestic-currency transferable deposits in other financial institutions as a percentage of domestic-currency deposit liabilities fell from 11.3 percent at the end of 2018 to 9.6 percent at end-2019. The loan-to-deposit ratio reflected a reduction in liquidity, rising from 97.7 to 99.1 percent over the period. During the first three months of 2020, cash liquidity continued to decline as the local excess cash and transferable deposits ratio fell to 6.7 percent.

**Figure 30: Liquidity Indicators**




*Source: Central Bank of Barbados*

## 4.3 Credit Unions

Total assets of the credit union sector grew by 7.5 percent (**Figure 31**). This increase reflects the continued steady growth of member savings, which rose by 8.2 percent (**Figure 32**). Gross loans continued to be the largest asset on the balance sheet, accounting for an estimated 70 percent of the assets. However, loan growth was only $60 million and most of the asset growth was in the form of cash and cash equivalents.

**Figure 31: Assets of the Credit Union Sector**

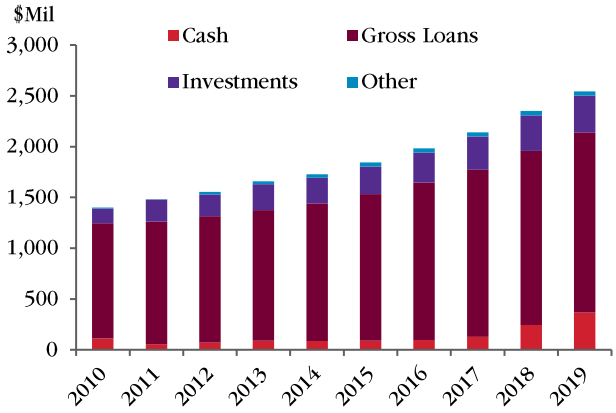
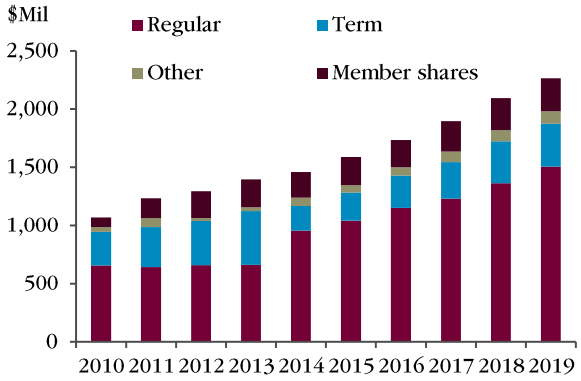


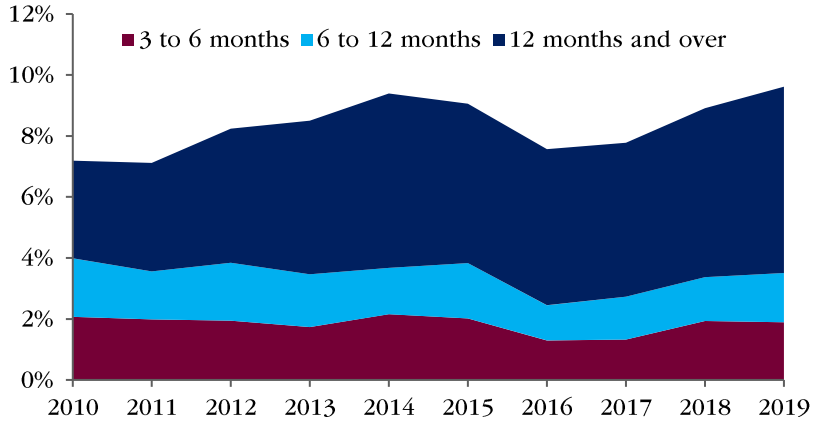

**Figure 32: Member Savings**




*Source: Financial Services Commission*

Non-performing loans (NPLs) accounted for 9.6 percent of the total loans at the end of 2019, an increase of 0.7 percentage points. This upward movement was mostly driven by a further deterioration in the twelve-month-and-over category of NPLs **(Figure 33)**. However, this category of NPLs is mostly comprised of collateral-backed mortgages and real estate, thus reducing the industry's net exposure.

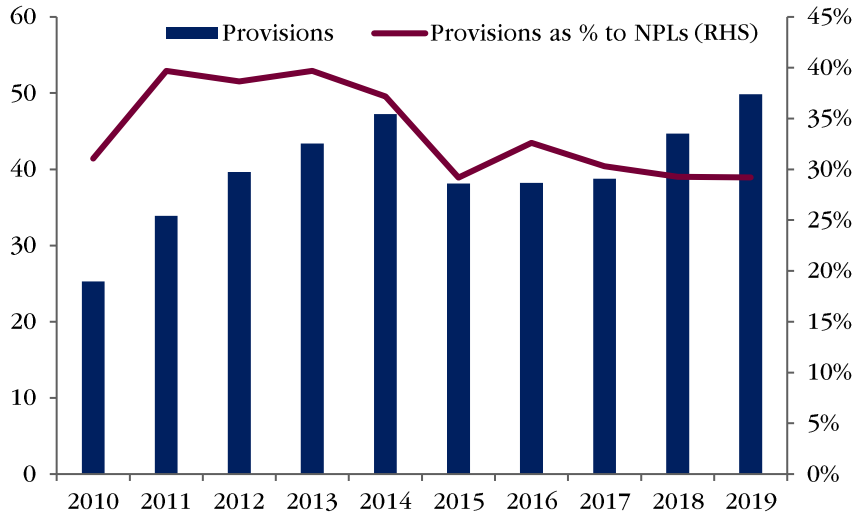
**Figure 33: NPLs (% of Total Loans)**




*Source: Financial Services Commission*

With the introduction of IFRS 9, credit unions continued to adapt to the new standard for provisioning for losses. For the year ended December 2019, the level of provisioning increased but the provision to NPLs ratio remained constant at 29.2 percent as the NPL levels also increased during the period **(Figure 34)**. As credit unions continue to implement IFRS 9, it is expected that the levels of provisioning will increase.

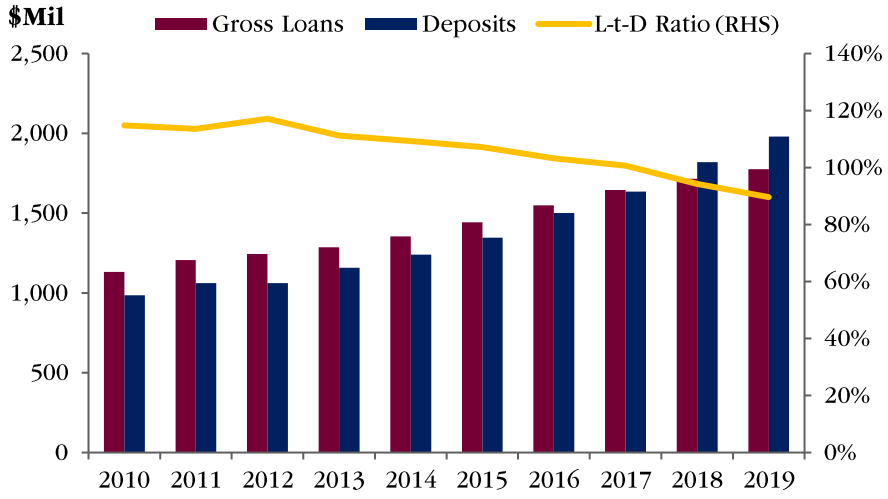
**Figure 34: Provisions (% of NPLs)**




*Source: Financial Services Commission*

Since 2012, there has been a steady decline in the loan-to-deposit ratio, as deposit growth accelerated. In 2019, with deposit growth outstripping that of loans, the ratio fell to 89.6 percent, down from 94.3 percent in 2018 **(Figure 35)**.

**Figure 35: Loan-to-Deposit Ratio**

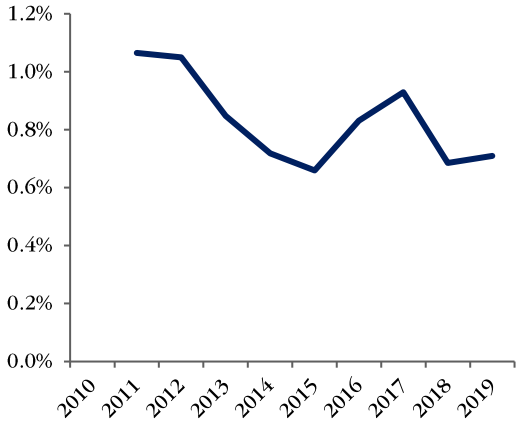



*Source: Financial Services Commission*

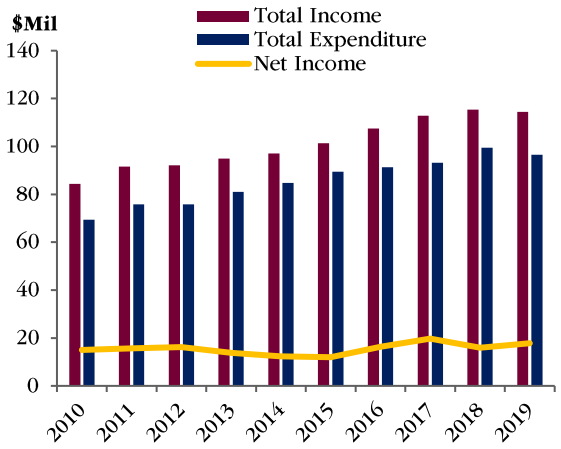
Profitability in the sector was stable, with credit unions recording a return on assets of 0.7 percent (**Figure 36A**). Total income was marginally lower, reflecting the impact of declining loan and investment income **(Figure 36B)**. However, a reduction in the interest paid on deposits resulting from lower interest rates compensated for the fall in interest income and contributed to a modest improvement in the net interest margin **(Figure 36C)**.

**Figure 36: Profitability**

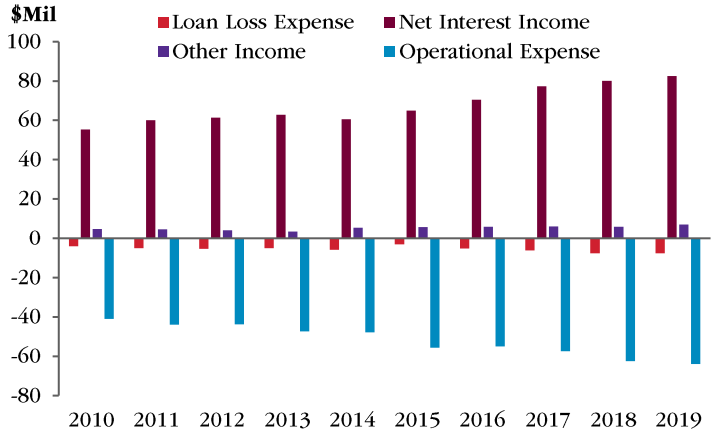
**A: Return on Average Assets**




**B: Net Income**



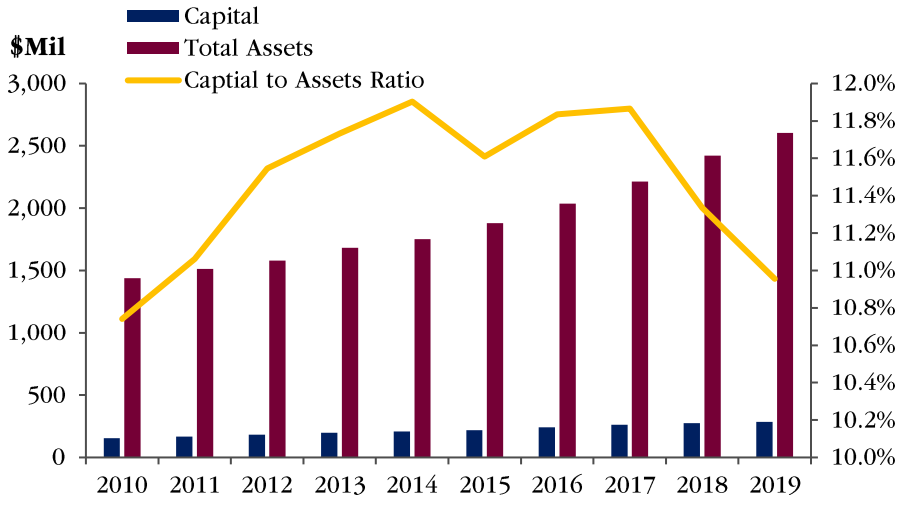

**C: Components of Net Income**




*Source: Financial Services Commission*

As at December 31, 2019, the capital-to-asset ratio fell to by 0.3 percentage points to reach 11.0 percent, as the provisioning requirements associated with the implementation of IFRS 9 slowed the pace of capital accumulation **(Figure 37)**.

**Figure 37: Capital-to-Asset Ratio**




*Source: Financial Services Commission*

## 4.4 Insurance Companies

### *The Life Insurance Sector*

Total assets of the life insurance sector increased by 0.4 percent during 2019 **(Figure 38)**. The combination of cash, loans and investments continue to account for over 90 percent of the assets held by the life sector. Investment in related parties remained the largest portion of investments, but this was concentrated in a major entity **(Figure 39)**. Total liabilities for the period fell by 0.3 percent to reach $1,346 million.

**Figure 38: Total Assets vs Total Liabilities**

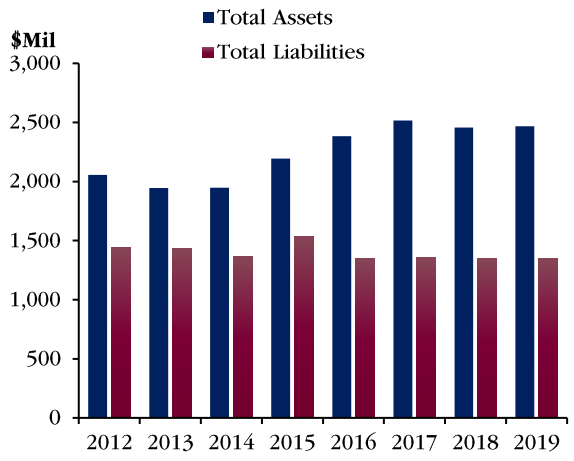
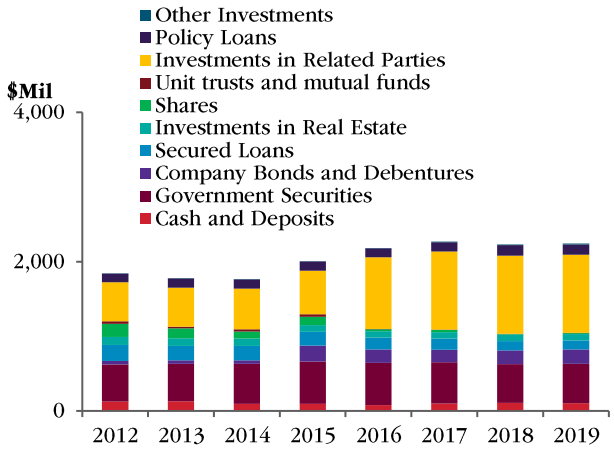



**Figure 39: Classes of Investments**

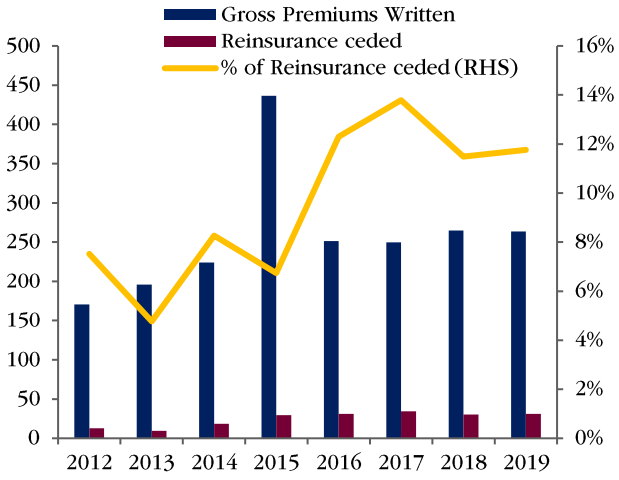



*Source: Financial Services Commission*

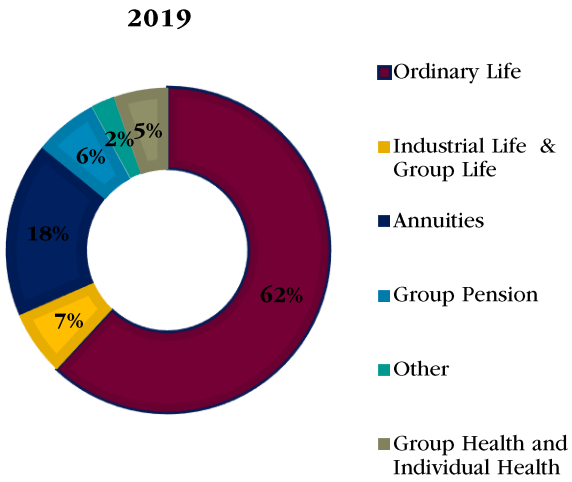
The sector recorded marginally lower gross premiums in 2019. Ordinary life premiums accounted for over half of the premiums written for the sector, as occurred in 2018. However, in 2019 ordinary life accounted for 62 percent of premiums, 11 percentage points higher than for the previous year. Reinsurance ceded remained relatively low, at 12 percent of gross premiums **(Figure 40)**.

**Figure 40: Gross Premiums**

**A: Gross Premiums Written vs Reinsurance Ceded**




**B: Distribution of Gross Premiums Written**




*Source: Financial Services Commission*

Profitability for the sector fell, mainly because of increased operating expenses **(Figure 41)**. Despite this, total capital and reserves for the period grew by 1.3 percent, resulting in the capital asset ratio increasing marginally to 45.4 percent **(Figure 42)**. Increases in retained earnings and reserves accounted for over 68 percent of the increase in capital.

**Figure 41: Net Income**

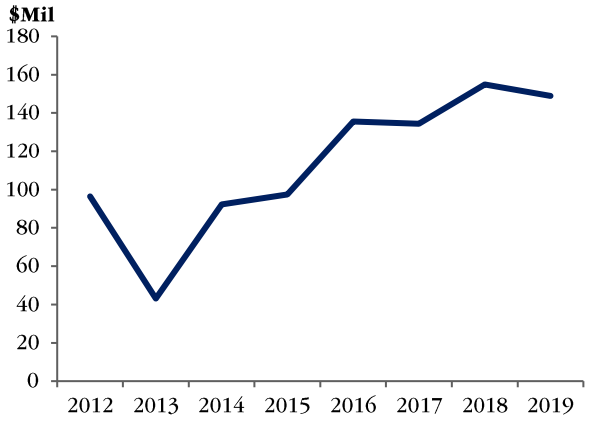
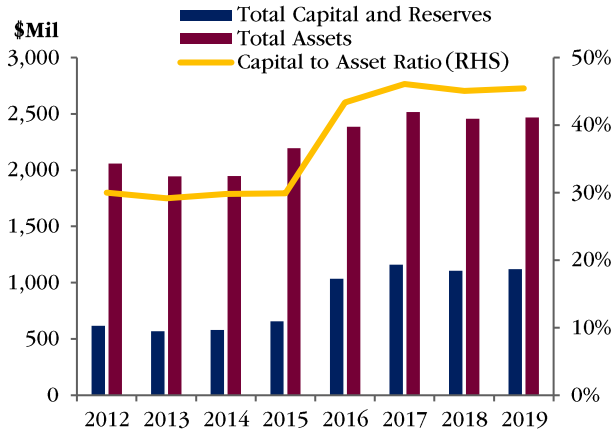



**Figure 42: Capital-to-Assets**




*Source: Financial Services Commission*

## Box 3: Insurance Sector Outlook in the face of COVID-19

Insurance companies globally continue to be affected by the COVID-19 pandemic. This impact has taken many forms whether it be increasing claims or increased pressure to have sustainable business continuity plans that ensured the continued operation of business as the world came to a stop.

The IMF's May 2020 Special Series on COVID-19, reported that the virus would affect insurers both directly, via health shocks (increases in mortality and morbidity), and indirectly, via financial shocks (lower equity prices, higher credit spreads, widespread downgrades, and lower short-term and long-term interest rates including due to quantitative easing).

***Life Insurance***

During a pandemic environment, it is expected that claims will rise due to increased mortality. However, it is also likely that future annuity payments will decline, partially balancing the increased mortality. Despite this, insurers who offer products with guarantees are now scrutinizing their investment portfolios as markets remain volatile.

***General Insurance***

General insurance is usually short-tailed in nature and provides protection against various kinds of losses to automobiles, home, liability and businesses. As lockdowns continue worldwide, it is expected that auto claims will fall significantly. However, general insurers which provide business-interruption coverage are expected to see an increase in claims once it is determined that a pandemic is covered. It is also expected that health insurers will see higher claims due to increased costs.

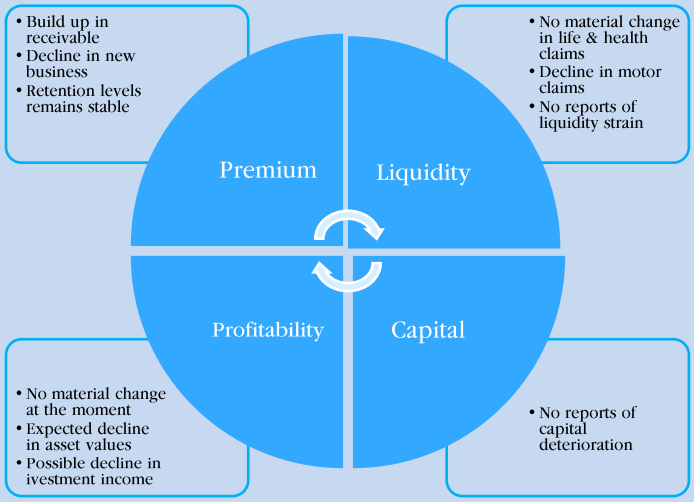
***Domestic Environment***

Insurers in Barbados who write short-term business, some of which is health insurance, have not reported any significant increase in claims. As the country remained on lockdown until July, and the spread of the virus was contained, the insurance companies have reported that they do not foresee any spike in claims at this point.

The main areas of vulnerability or concern are related to underwriting profitability as premium and investment income are expected to fall. The year 2020 has seen a record high for unemployment claims for the country. Higher unemployment is

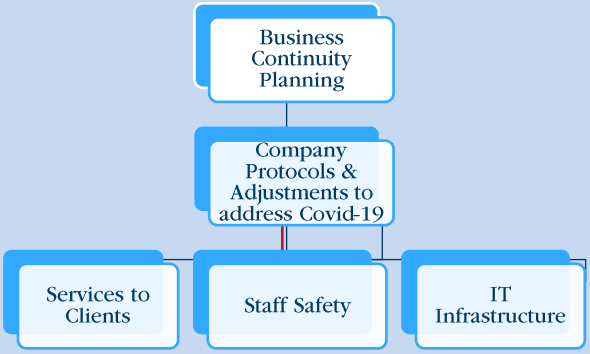
expected to lead to reduced premium collection (both from existing customers and due to reductions in new business) and may also affect pension products. In addition to reduced premiums, the life insurance sector also expressed concerns about policy surrenders and mortgage delinquencies.

**Figure 1: Financial Impacts**




One potential upside is that the lockdown has forced companies to review business continuity plans. As such, entities have indicated that the lockdown has improved their ability to function remotely and some companies reported that they will be transitioning some services to online systems and have placed increased emphasis on cyber security.

**Figure 2: Operational Impacts**




**References:**

Divya Kirti and Mu Yang Shin (2020). "Impact of COVID-19 on Insurers." International Monetary Fund Research, Special Series on COVID-19, May 2020.

### *The General Insurance Sector*

Total assets of the sub-group writing general insurance business were estimated at $985.3 million as at December 2019, a modest increase of 0.1 percent compared to December 2018. Total liabilities increased by 7.2 percent to reach $845.1 million, an increase that was driven by the short-term liabilities of one entity **(Figure 43)**.

Cash, loans and investments continued to account for over 57 percent of assets, as declines in company bonds and shares were partly offset by valuation gains in holdings of government securities and increased deposit balances **(Figure 44)**.

**Figure 43: Total Assets vs Total Liabilities**

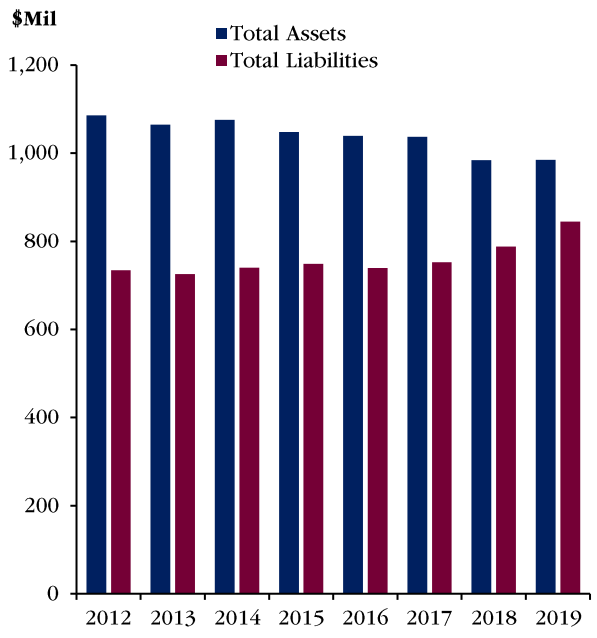
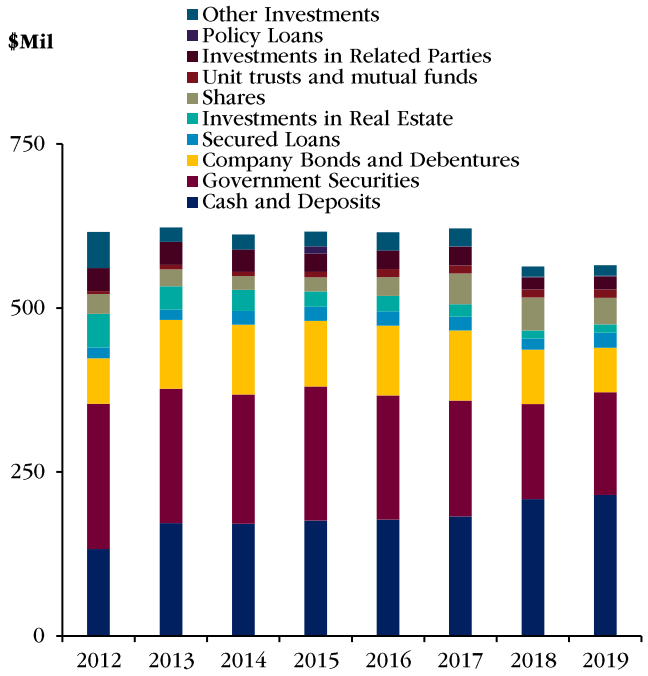



**Figure 44: Classes of Investments**



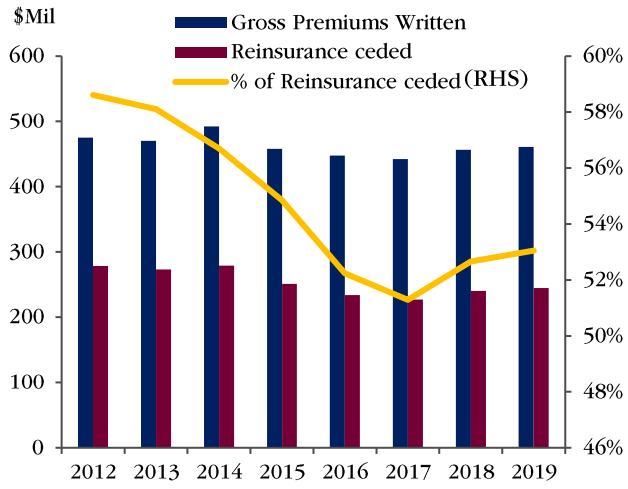

*Source: Financial Services Commission*

Gross premiums for the period were 0.9 percent higher than the previous year. Property insurance continued to be the largest line of business in the general insurance sub-sector, accounting for 37 percent followed by the motor category, which accounted for 33 percent.

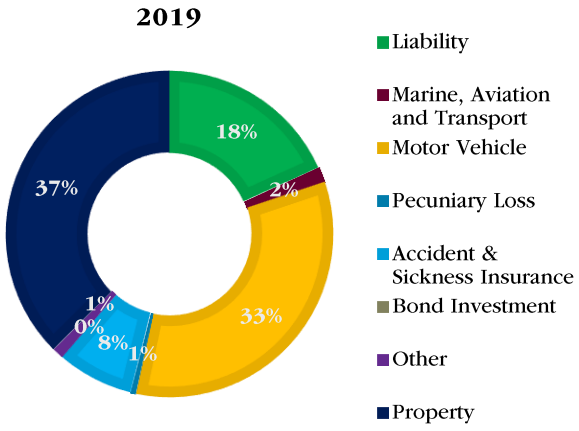
The sector continued to cede in excess of 50 percent of its gross premiums written, effectively shifting that ceded proportion of the insurance risk onto the books of reinsurers. In 2019, $244.5 million of the premiums written during the period were ceded to reinsurers, a marginal increase of 1.7 percent over the prior period. Property continued to be the highest ceded line of business followed by marine, aviation, and transport categories **(Figure 45)**.

**Figure 45: Gross Premiums**

**A: Gross Premiums Written vs Reinsurance Ceded**



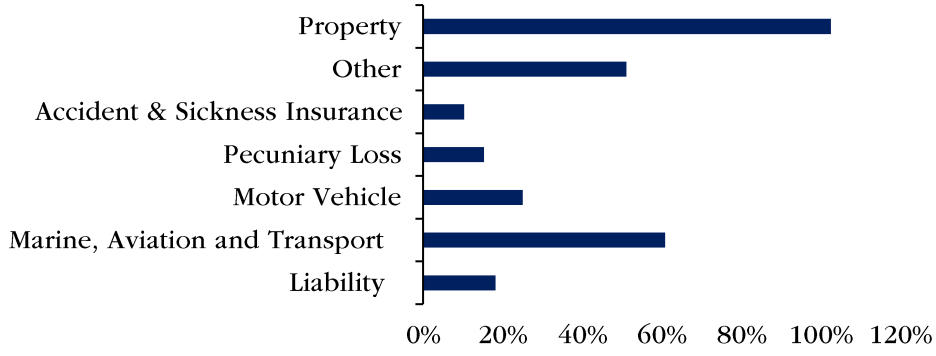

**B: Distribution of Gross Premiums Written**




*Source: Financial Services Commission*

The sector ceded in excess of 100 percent of the premiums written for its exposure to property **(Figure 46)**. Only 25 percent of exposure was ceded for the motor category, but the industry is still adequately accounting for its risk in this line of business as all companies writing motor and long-term business are required to hold assets in a statutory fund. The statutory fund for general insurance is only required to match motor insurance liabilities, but is in fact large enough to cover 26.6 percent of total insurance liabilities. Therefore, motor exposures are supported by a combination of reinsurance and the statutory fund's assets.

**Figure 46: Reinsurance Ceded as a Percentage of Premiums by Line of Business**




*Source: Financial Services Commission*

The profitability of the sector showed signs of improvement for the year under review with a net income of $2.2 million as of December 2019 **(Figure 47)**. The industry recorded lower underwriting expenses, which in turn resulted in a marginal improvement in the underwriting profitability. Investment income continued to be

lower than that recorded prior to the 2018 domestic debt restructuring, but was high enough to push the industry into profitability in 2019.

Total capital and reserves for the industry stood at $140.2 million as at the end of 2019. The sector recorded a significant decline of approximately $55.7 million in capital, due mainly to higher net head office outflows. Overall, this resulted in a lower capital-to-asset ratio of 14.2 percent, 5.7 percentage points lower than seen in the prior comparable period **(Figure 48)**.

**Figure 47: Net Income**

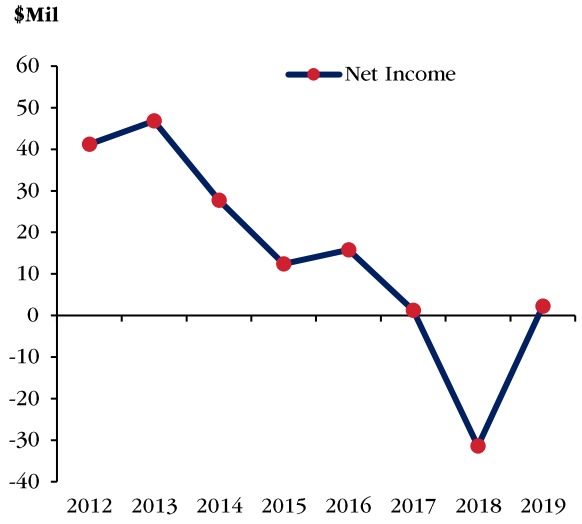
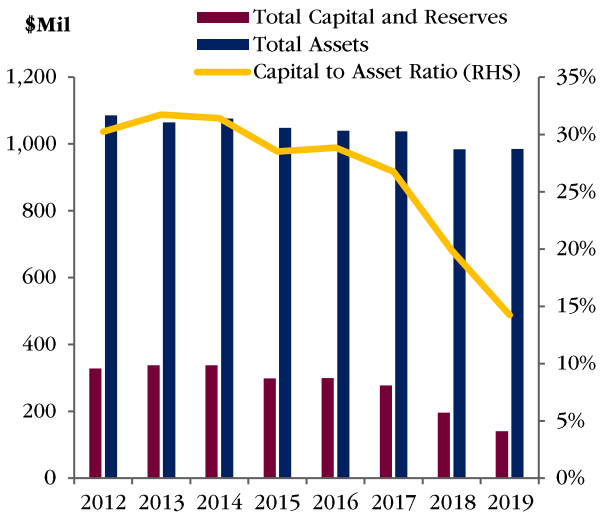



**Figure 48: Capital-to-Assets**




*Source: Financial Services Commission*

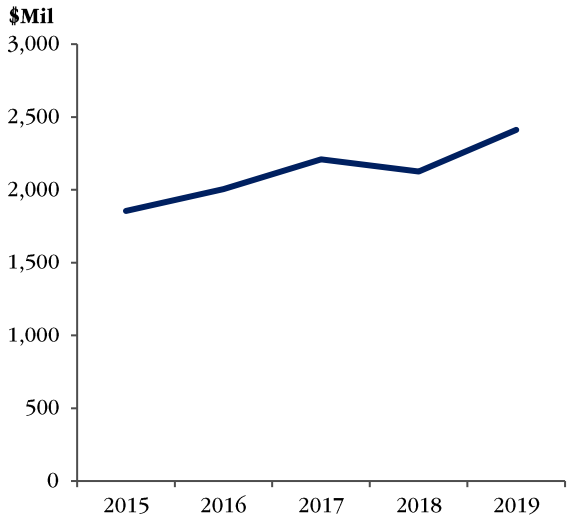
Solvency tests show that all market players remained solvent. On average, the solvency margin is five times larger than the statutory requirement, indicating that companies retain enough financial space to meet their financial obligations on future claims. Even in circumstances where the entities are highly exposed to particular types of risk, reinsurance and the statutory funds mitigate some risks.

## 4.5 Mutual Funds

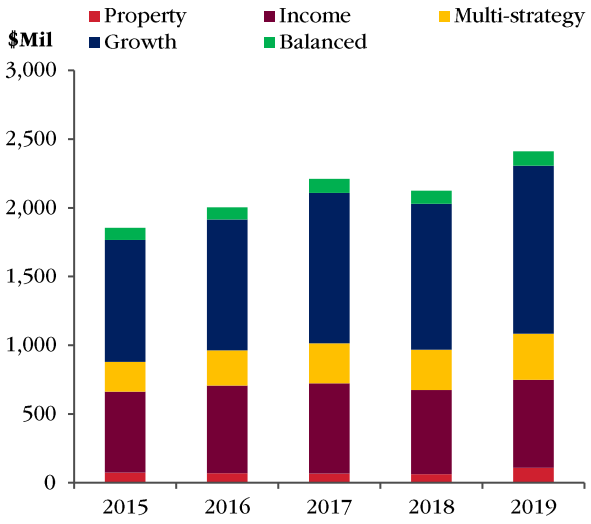
As of December 2019, the domestic mutual fund sector was comprised of 16 mutual funds (five growth funds, three property funds, one multi-strategy fund, two balanced funds, and five income funds). Net assets under management of the funds grew by 13.5 percent when compared to the previous year. This increase in assets was reflected in a 25.5 percent increase in real estate, a 21.3 percent increase in mutual funds and a 16.2 percent increase in cash and cash equivalents. Growth funds continued to dominate, accounting for 50.7 percent of the mutual fund market **(Figure 49)**.

**Figure 49: Assets**

**A: Net Assets**



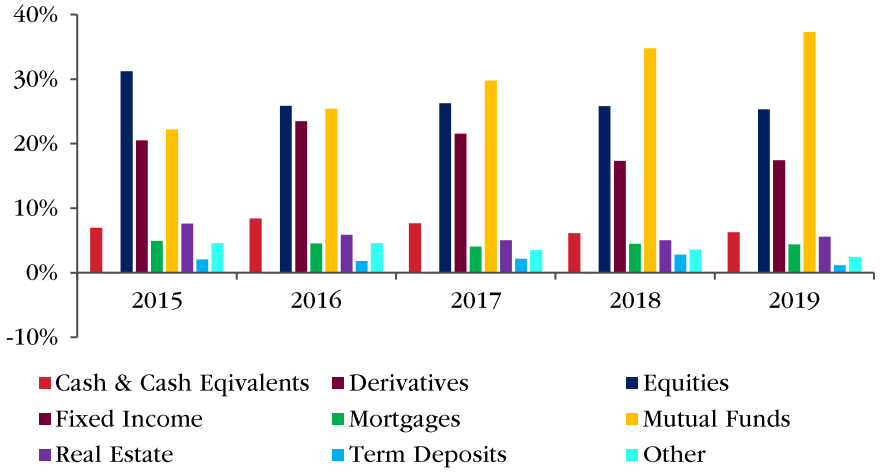

**B: Net Assets by Fund Type**




*Source: Financial Services Commission*

Overall, 37.3 percent of assets of domestic mutual funds were invested into other mutual funds, up from 34.8 percent in the previous year. This is primarily due to multi-strategy funds holding 97.5 percent of their assets in mutual funds, followed by growth funds holding 37.7 percent of their assets in the same (**Figure 50**).

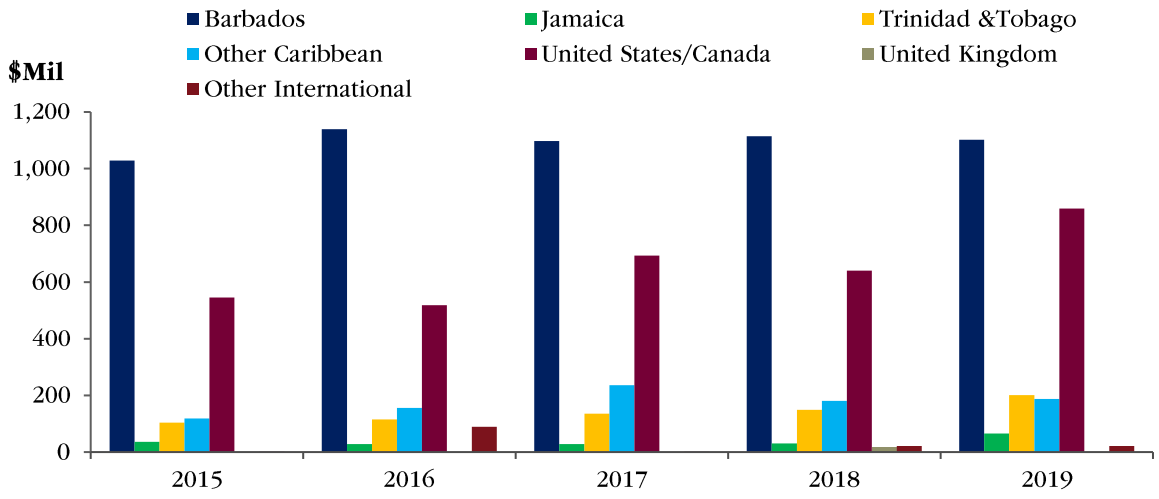
**Figure 50: Asset Allocation of Mutual Funds**




*Source: Financial Services Commission*

Barbados remains the country with the largest jurisdictional exposure to domestic mutual funds, accounting for 45.2 percent of the total exposure, followed by the United States and Canada, which accounted for 35.3 percent together (**Figure 51**).

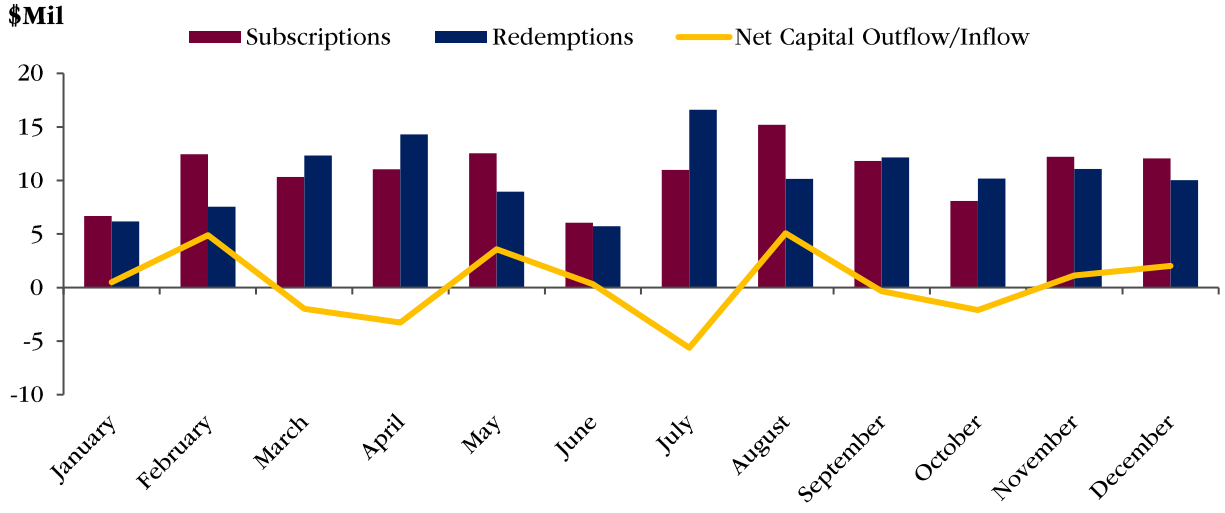
**Figure 51: Jurisdictional Exposure**




*Source: Financial Services Commission*

The months of March, April, July, September and, November had redemptions that were above the annual average of $10.4 million for the year. Redemptions were at their highest point in July whereas, August held the highest subscriptions. This may suggest investor movement among funds **(Figure 52).**

**Figure 52: Net Capital Flow, BDS Millions**



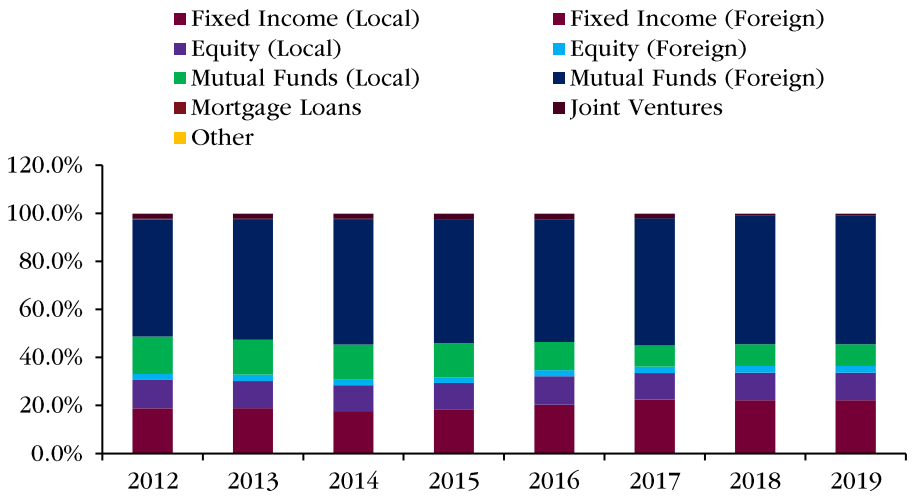

*Source: Financial Services Commission*

## 4.6 Occupational Pension Plans

The occupational pension sector continues to grapple with limited investment opportunities and marginal fund performances. This is evident by the mere 0.1 percent growth in assets recorded over the last year compared to the average 6 percent growth recorded for the period of 2012 to 2017.

Foreign mutual funds continued to dominate the asset base of the occupational pension sector in 2019, accounting for 53.7 percent of total investments. The second-largest contributor was local fixed-income, which was an estimated 22.2 percent of the total investment portfolio. Other investments such as mortgage loans, joint ventures and others, accounted for less than one percent of the portfolio **(Figure 53)**.

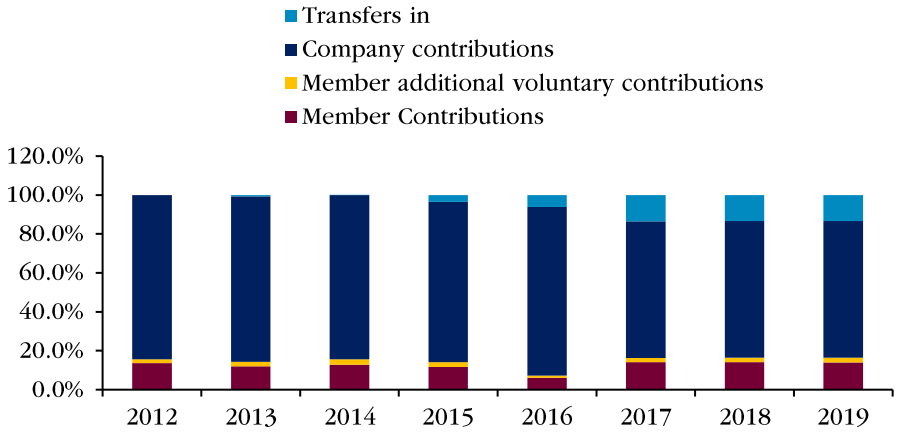
**Figure 53: Distribution of Pension Plans Investement Portfolio**




*Source: Financial Services Commission*

Company contributions ($56.0 million) continued to account for the majority of the pension plan contributions, totalling 70.3 percent of total contributions for the year ended 2019. Member contributions remained steady at approximately 16 percent over the three-year period ending 2019. During the year, contributions transferred accounted for 13.4 percent of total contributions **(Figure 54)**.

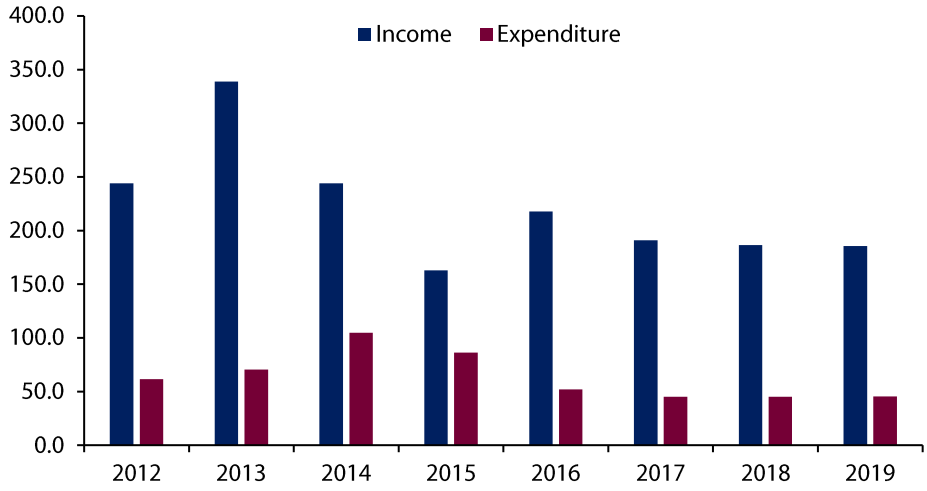
**Figure 54: Relative Share of Pension Plan Contributions**




*Source: Financial Services Commission*

Income for the sector declined by an estimated 0.4 percent in 2019, to reach $185.7 million, while expenditure increased by 0.7 percent and stood at $45.3 million. This expenditure encompasses expenses incurred during the period for items such as administrative fees and pension payments but excludes accrued pension liabilities **(Figure 55)**.

**Figure 55: Total Income and Expenditure**




*Source: Financial Services Commission*

# 5. Stress Testing

## 5.1 Deposit Taking Institutions

Barbados is highly dependent on the tourism sector, with an estimated 40 percent of employment being either directly or indirectly related to the industry, that has been hit hard by COVID-19. Following an approximate two-month period of lockdown, the country has reached a stage of substantial reopening of most economic activities. However, activity in the tourism sector remains weak and a gradual recovery is now anticipated. This will likely impact the servicing of loans by individuals and businesses, hence testing the resilience of deposit-taking institutions.

In this section, we explore the potential response of the financial system to macroeconomic and other adverse shocks. The simulations seek to determine the degree to which existing capital buffers can adequately absorb potential losses and are focused particularly on credit, large exposure, liquidity and interest rate risks. The impact of the shocks is directly transmitted either via the provisions buffer or directly to the institutions' capital. The results are assessed both on an institution-specific and system-wide basis.

### *5.1.1 Credit Risk*[7]

The credit exposure of banks and finance and trust companies is heavily concentrated in the personal sector, which accounts for 63 percent of their loan portfolios and 69 percent of total NPLs. Recent estimation efforts examining the impact of aggregate unemployment and NPLs, highlight that increasing unemployment to levels of the early 1990s could affect the banking system's capital if sustained over a significant period of time. However, in the scenario of a sustained 25 percent unemployment rate, coupled with a 50 percent provision of new non-performing loans, the system would still be above the 8 percent threshold, although some individual banks would fall below this regulatory standard.

Given the economic circumstances, credit risk has been heightened, with lending institutions providing three to six months moratoria on loan payments, and loan and debt restructuring programmes for credit customers affected by COVID-19. The moratoria are subject to review for possible extension at the end of the periods but there is risk of increased NPLs.

***Provisioning Shocks***

As at March 2020, the pre-shock provisions-to-NPL ratio stood at 53.6 percent for the combined banks and finance and trust companies. This means that slightly more than half of the industry's impaired loans are covered by provisions. However, at a subsector level, the distribution of provisions is uneven, with commercial banks' provisions representing 58.7 percent of their classified loans, whereas the finance and trust subsector had coverage of 28 percent of non-performing loans.

[7] Simulations conducted on March 2020 data.

Assuming no increase in existing NPLs and increasing provisioning on the existing stock of NPLs to 100 percent, the stress tests[8] indicated that the aggregate post-shock capital adequacy ratio (CAR) declined from 14.6 to 13.0 percent for the banks and from 18.4 to 10.9 percent for the deposit-taking trust and finance companies. The more rapid erosion in the trust and finance houses' CARs was due to their lower provisioning buffers on average, relative to the commercial banking industry. At the institutional level, the CAR of all five commercial banks remained above the 8 percent regulatory requirement, but one finance and trust company fell below this standard.

Pre-shock provisions for the credit union sector stood at 29.2 percent and the sector's capital-to-asset ratio was 11 percent. In the pre-shock scenario, the seven largest credit unions account for 93.0 percent of the sector, and three of these were below the non-risk weighted capital benchmark of 10 percent. Under a scenario with no increase in NPLs and a uniform 50 percent increase in the level of provisioning, the sector was significantly impacted. The capital-to-asset ratio declined by 100 basis points to reach 10.0 percent, with four of the seven largest credit unions now falling below the regulatory requirement. With the level of provisioning increased to 100 percent, the capital-to-asset ratio for the sector falls to 7.0 percent, but no additional credit union falls below the regulatory requirement.

***NPL Shocks***

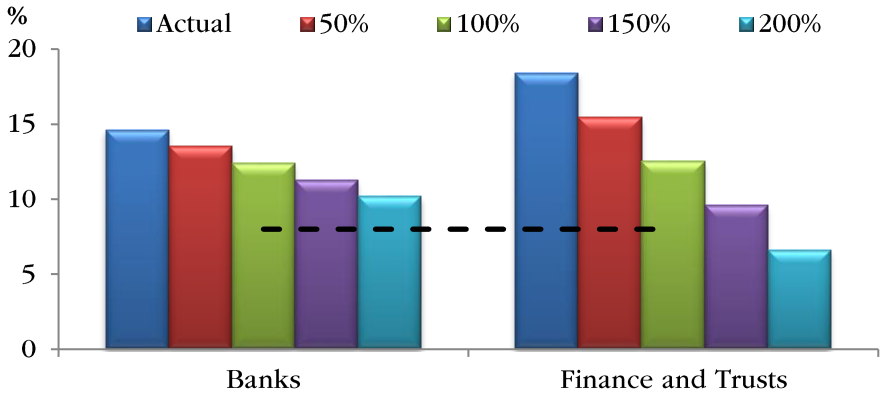
The second shock in the stress test assessed the impact of 50 percent incremental increases in NPLs on the capital buffers of commercial banks and finance and trusts companies.

At the subsector level, assuming 50 percent provisions for the new NPLs, commercial banks can withstand up to a 200 percent increase in NPLs, while maintaining an adequate aggregate CAR. With a lower existing provisioning coverage of 28 percent, the finance and trust companies' subsector could withstand the 150 percent increase in NPLs scenario, however, it fell below the 8 percent standard when a 200 percent increase is applied **(Figure 56)**.

Assuming that 10 percent of commercial banks' loans under moratoria at mid-year became non-performing, banks' CAR falls to 13.5 percent and the NPLs ratio would increase to 10.2 percent, which is equivalent to a 50 percent increase in NPLs. Similarly, finance and trusts' CAR decline to 17.2 percent and the NPLs grow to 15.0 percent, which is equivalent to a 25 percent increase in NPLs. Additionally, assuming that 20 percent of the loans under moratoria became non-performing, banks' CAR is reduced to 12.4 percent and the NPLs rise to 13.5 percent, which is equivalent to a 100 percent increase in NPLs. Whereas, finance and trusts' CAR fell to 15.4 percent and the NPLs increased to 17.6 percent, which is equivalent to a 50 percent increase in NPLs.

[8] Stress tests on credit, liquidity and interest rate risk for commercial banks and trust and finance companies were guided by the framework of Čihák, M. (2007). Introduction to Applied Stress Testing. IMF Working Paper WP/07/59.

**Figure 56: CAR Outcomes from Increasing NPLs**



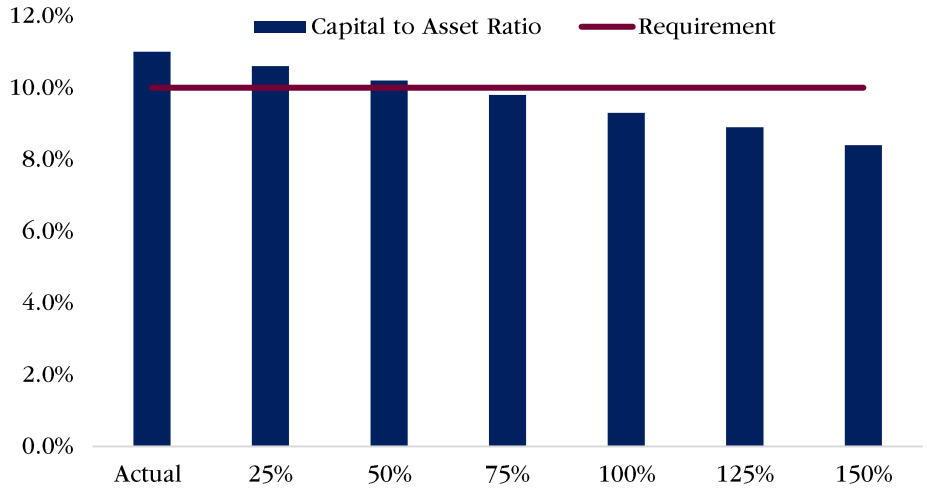

At the institutional level, with a 100 percent increase in NPLs, one finance and trust company falls below the 8 percent prudential standard, while two institutions (one bank and one finance and trust company) fail to maintain adequate capital buffers when a 150 percent increase to NPLs is induced. After a 200 percent increase, four institutions (two banks and two finance and trust companies) breach capital requirements, with one finance and trust company becoming insolvent **(Table 4)**.

**Table 4: CAR Outcomes from Increasing NPLs**

| | CAR < 8% | |
|---|---|---|
| **Scenario** | **No. of Banks** | **No. of Finance & Trust** |
| 50% NPL Increase | 0 | 0 |
| 100% NPL Increase | 0 | 1 |
| 150% NPL Increase | 1 | 1 |
| 200% NPL Increase | 2 | 2 |

For credit unions, this test assessed the impact that increasing NPLs have on capital levels. At the baseline, the capital-to-asset ratio was 11 percent, with three entities below the regulatory requirement. Assuming an increase of 25 percent on the existing NPLs with the provisioning held at 29 percent, the capital-to-asset ratio fell to 10.6 percent, with three entities remaining below the required 10 percent. In order for the sector to breech the non-risk weighted capital benchmark, the level of NPLs needed to increase by 75 percent **(Figure 57)**.

**Figure 57: Impact of 25% Step Increases in NPLs on Capital of Credit Unions**



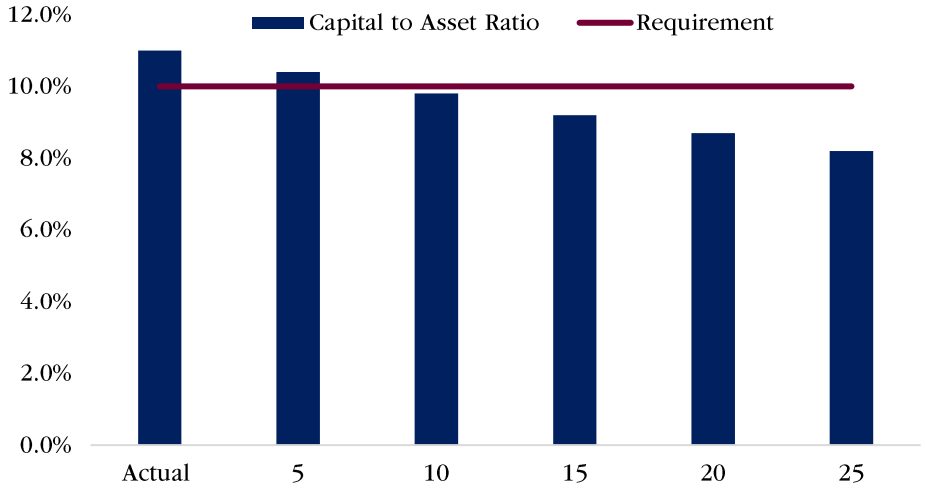

Large exposure tests indicated that the combined commercial banks' and finance and trusts' capital could withstand defaults from their five largest debtors with provisioning requirements up to 50 percent and remain above prudential standards (**Table 5**). It was assumed that the five largest loans sequentially became non-performing, 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 for all five rounds. However, with 50 percent provisioning one bank's CAR fell below the 8 percent after round three of the simulation. At 100 percent provisioning, one bank required more capital after the first round, and one finance and trust company required after the second round. Again, at 100 percent provisioning, three additional banks fell below the prudential requirement after the third round, with one of these banks becoming insolvent after the fourth round. Under 100 percent provisioning, by the fifth round, the aggregate CAR was still adequate for the non-banks due to the relatively small size of their largest exposures.

**Table 5: CAR Outcomes of Large Exposure Shocks**

| Scenario | CAR < 8% | | | | | |
|---|---|---|---|---|---|---|
| | 10% Provisioning | | 50% Provisioning | | 100% Provisioning | |
| | No. of Banks | No. of Finance & Trust | No. of Banks | No. of Finance & Trust | No. of Banks | No. of Finance & Trust |
| **Round 1** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Round 2** | 0 | 0 | 0 | 0 | 1 | 0 |
| **Round 3** | 0 | 0 | 1 | 0 | 1 | 1 |
| **Round 4** | 0 | 0 | 1 | 0 | 4 | 1 |
| **Round 5** | 0 | 0 | 1 | 0 | 4 | 1 |

The large exposures test on credit unions was conducted using the top 25 largest exposures for the largest seven credit unions. Provisioning at 100 percent, the shock was applied increasing the number of defaulting borrowers in increments of five until all 25 borrowers had defaulted **(Figure 58)**. After the top ten borrowers had defaulted from each credit union the capital-to-asset ratio fell to 9.8 percent. The post-shock capital ratio for a default on the top 25 borrowers from each credit union with 100 percent provisioning was approximately 8 percent.

**Figure 58: Impact of Increases in NPLs by the Largest Exposures on Capital**



### *5.1.2 Liquidity Risk*

Given that DTIs funding model is primarily through deposits, maintaining adequate liquidity is of major importance. Prior to the threat of COVID-19, combined commercial banks and finance and trusts companies continued to display high levels of liquidity with an approximate liquid assets-to-total assets ratio of 23.5 percent.

Liquidity stress tests indicated that the finance and trust companies were more resilient than the commercial banks in terms of potential resilience to liquidity shock, as the finance and trust companies relied less on demand deposits and more on term deposits for funding. In fact, the finance and trusts companies tested did not require any liquidity support under any of the stress conditions conducted.

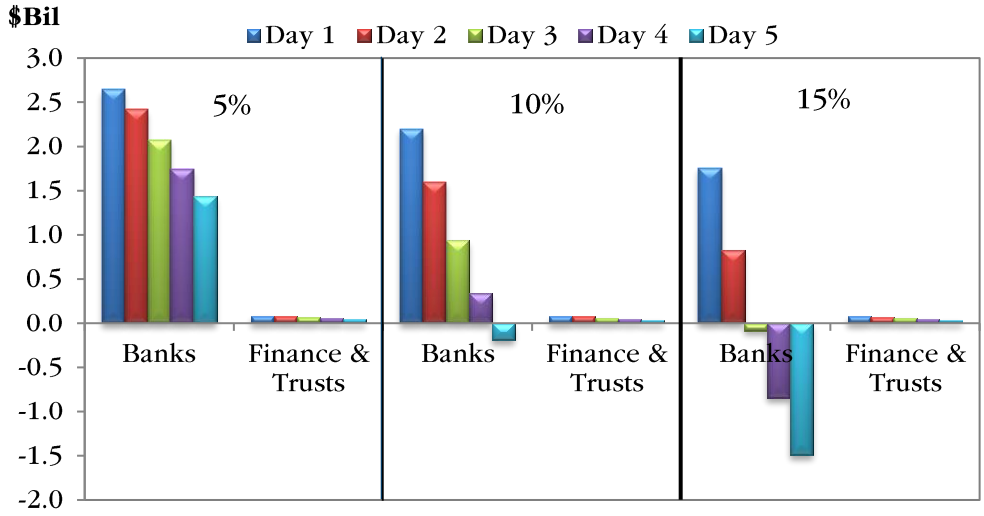
The scenarios were as follows: for banks and finance and trusts, withdrawals on time deposits were fixed at three percent and one percent per day on domestic and foreign accounts, respectively and drawdowns on foreign demand accounts were fixed at five percent per day. Assuming that 95 percent of all liquid assets and one percent of all other assets were fully convertible to cash on a given day, 5, 10 and 15 percent runs on domestic demand accounts were examined (**Table 6**).

**Table 6: Results of Deposit Runs: No. of Institutions Requiring Liquidity Support**

| | **At 5%** | | **At 10%** | | **At 15%** | |
|---|---|---|---|---|---|---|
| | *Banks* | *Finance and Trusts* | *Banks* | *Finance and Trusts* | *Banks* | *Finance and Trusts* |
| **Day 1** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Day 2** | 0 | 0 | 0 | 0 | 2 | 0 |
| **Day 3** | 0 | 0 | 1 | 0 | 2 | 0 |
| **Day 4** | 0 | 0 | 2 | 0 | 3 | 0 |
| **Day 5** | 0 | 0 | 2 | 0 | 3 | 0 |

With 5 percent runs on domestic demand deposits per day, no institution required liquidity support within the five days. Considering a 10 percent deposit run per day, one of the banks required support from day 2, while an additional bank required support from day 5. With 15 percent runs per day, two banks required support from day 2, and this increased to three banks by day four. On a subsector level, commercial banks required additional liquidity after day 4 in the 10 percent run scenario, and after day 2 when a 15 percent per day demand deposit run was administered **(Figure 59).**

**Figure 59: Results of Deposit Runs (Net Cash Flow)**




For credit unions, the most severe impacts were seen when the credit unions experienced a run of 15 percent a day. At 5 perecent per day, one credit union experienced liquidity challenges on day five. With 10 percent deposit runs, one credit union had challenges at day two, while six were impacted by day five. At 15 percent deposit run rate per day, one credit union required liquidity support on the first day, and by day five, seven of the institutions required support (**Table 7**).

**Table 7: Credit Unions' Deposit Runs**

| | **At 5%** | **At 10%** | **At 15%** |
|---|---|---|---|
| Day 1 | 0 | 0 | 1 |
| Day 2 | 0 | 1 | 4 |
| Day 3 | 0 | 2 | 6 |
| Day 4 | 0 | 5 | 7 |
| Day 5 | 1 | 6 | 7 |

### *5.1.3 Interest Rate Risk*

The short-term maturity gap was used to examine the impact of rising deposit rates on institutions' funding costs and ultimately their profitability, given the funding structure of depository institutions is typically mismatched in terms of the relative maturities of deposits and loans.

The results revealed that at the aggregate level, the CAR for both the banks and finance and trust companies could withstand a deposit rate increase of up to 20 percentage points before the regulatory capital levels are breached **(Figure 60)**. At an institutional level, only under the severe assumption of an increase of 1000 basis points (10 percentage points), would one bank fail to maintain adequate capital levels, while after 2000bps (20 percentage points), the capital of three banks and two finance companies become impaired **(Table 8)**.

**Figure 60: Interest Rate Impact on CAR**

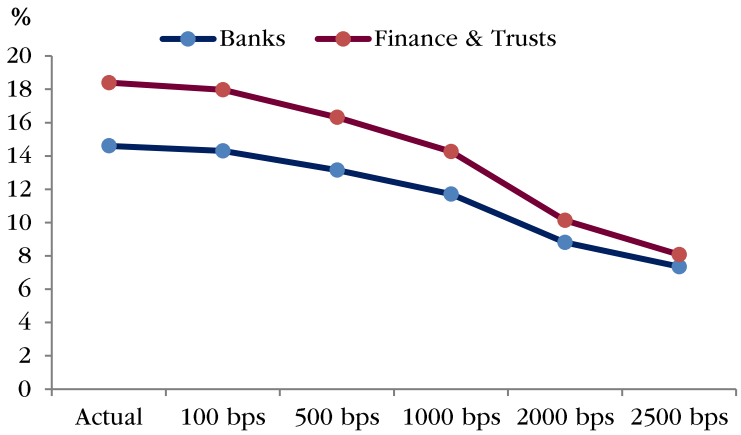



**Table 8: CAR Outcomes of Interest Rate Shock**

| | CAR < 8% | |
|---|---|---|
| **Scenario** | **No. of Banks** | **No. of Finance & Trust** |
| 100 bps | 0 | 0 |
| 500 bps | 0 | 0 |
| 1,000 bps | 1 | 0 |
| 2,000 bps | 3 | 2 |
| 2,500 bps | 3 | 2 |

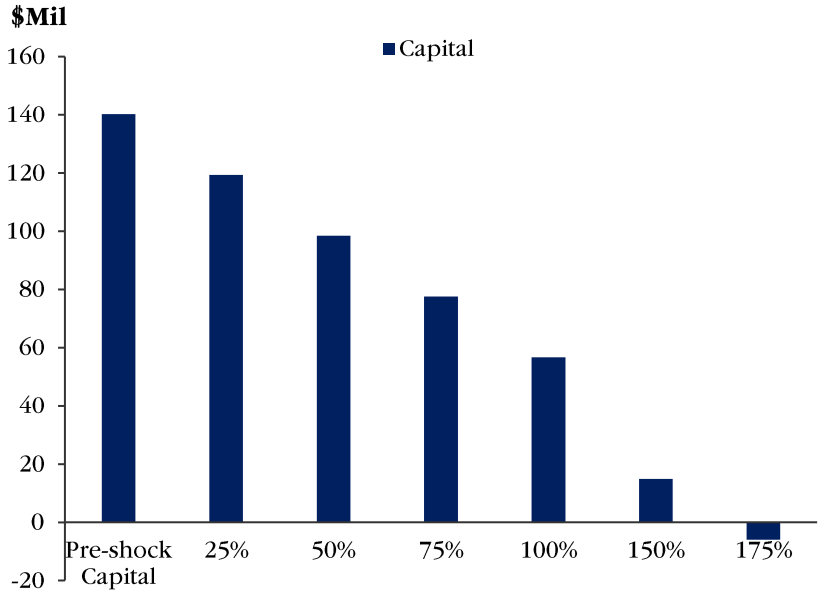
## 5.2 Insurance Companies

### *5.2.1 Underwriting Risks*

***General Insurance***

All companies are solvent under the baseline scenario, but capital falls under assumptions of increased claims. The scenario is conservative and does not take into account reinsurance recoveries. The first shock is a 25 percent increase in claims for all lines of business, but this scenario is gradually aggravated as claims are increased by 50, 75, 100, 150 and 175 percent **(Figure 61)**. These scenarios may reflect exposure to a storm or hurricane. In order for capital to be completely eroded, the level of claims must exceed 150 percent.

**Figure 61: Outcome of a 25-175 Percent Increase in Claims**




Taking into consideration the legislative requirement for the solvency margin of general insurers, **Table 9** shows the number of companies which became insolvent under the stressed scenarios as the level of claims rose.

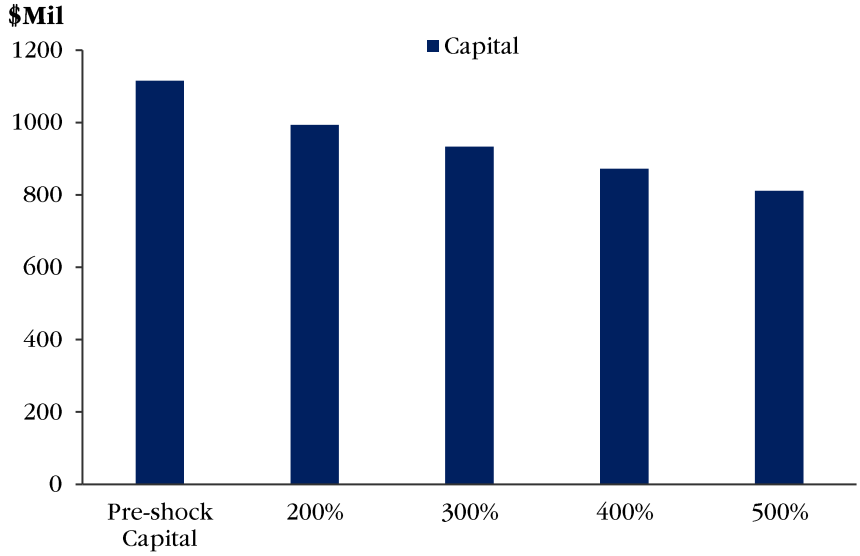
**Table 9: Number of Insolvent Companies**

| Percentage Increase in Claims | Number of Companies Insolvent |
|---|---|
| 25% | 2 |
| 50% | 3 |
| 75% | 3 |
| 100% | 3 |
| 150% | 3 |
| 175% | 4 |

***Life Insurance***

All companies are solvent under the baseline scenario. The first scenario considers a pandemic that results in an increase in both health and life insurance claims by 200 percent, with 100 percent increases thereafter. The assumption made for this test is that the ASM for life is 150 percent. It was shown that claims would need to exceed a 500 percent increase in order for capital to fall below the ASM **(Figure 62)**.

**Figure 62: Outcomes of a 200-500% Increase in Claims**




Taking into consideration the legislative requirement for the solvency margin of life insurers, **Table 10** shows impacts on the individual companies' solvency under the stressed scenarios.

**Table 10: Number of Companies Insolvent**

| Percentage Increase in Claims | Number of Companies Insolvent |
|---|---|
| 200% | 0 |
| 300% | 0 |
| 400% | 0 |
| 500% | 0 |

### *5.2.2 Economic Downturn*

The second shock is referred to as an economic downturn and is characterized by a downward shift in the yield curve of 300 basis points, a 25 percent fall in real estate and mortgages and a 30 percent decline in equity market values.

***General***

Post-shock results show that the net income of the companies was severely impacted, as sector income decreased by $44.6 million to reach -$42.4 million with seven companies unable to record profits. Capital levels were severely impacted, as the shock caused levels to fall by 31.8 percent to reach $95.6 million. Post-shock results show that only two companies were insolvent **(Table 11)**.

***Life***

Under this scenario, four of the six life insurance companies recorded losses. As a result net income post-shock fell to -$180.0 million, accompanied by a capital reduction of $331.7 million. Post-shock, one entity became insolvent **(Table 11)**.

**Table 11: Economic Downturn Results**

| Life | | | General | | |
|---|---|---|---|---|---|
| | **Pre-Shock** | **Post-Shock** | | **Pre-Shock** | **Post-Shock** |
| **Capital ($Millions)** | 1,115.9 | 784.2 | **Capital** | 140.2 | 95.6 |
| **Insolvent Companies** | 0 | 1 | **Insolvent Companies** | 0 | 2 |

### *5.2.3 Multiple Shocks: Pandemic + Economic Downturn + Hurricane*

The third scenario is the most extreme as it encompasses multiple risks. The stressors used are those in the economic downturn scenario in addition to an increase in claims (varying from 50 to 250 percent depending on the line of business), strengthening of technical provisions, increases in expenses and related party defaults.

***General***

The net income for the sector declined by $215.8 million reaching -$213.6 million and total capital for the sector was reduced by over 150 percent falling to -$75.6 million. Under this scenario, six companies became insolvent **(Table 12)**.

***Life***

Under this scenario, all six life companies made losses and capital declined by almost 50 percent. Post-stress results show however, that one company became insolvent **(Table 12)**.

**Table 12: Multiple Shocks Results: Pandemic + Economic Downturn + Hurricane**

| Life | | | General | | |
|---|---|---|---|---|---|
| | **Pre-Shock** | **Post-Shock** | | **Pre-Shock** | **Post-Shock** |
| **Capital ($Millions)** | 1,115.9 | 564.8 | **Capital** | 140.2 | (75.6) |
| **Insolvent Companies** | 0 | 1 | **Insolvent Companies** | 0 | 6 |

# 6. Research Note

## 6.1 The Economic Link Between Households and the Deposit-Taking Financial Sector in Barbados

Anton Belgrave and Carlon Walkes*

### Introduction

The household is a very important institution in the macroeconomy. Ultimately, much of the economic activity in Barbados is attributed to households, as their consumption represents over 70 percent of GDP. Consequently, the deposit-taking-institutions[9] (DTIs) are greatly impacted by the behaviour of households and, indeed, over the past year and a half, loans to households accounted for more than 50 percent of total credit (loans and investments in debt securities), while household deposits have consistently remained above 55 percent of the total stock of deposits in the system.

The penetration of the deposit-taking financial sector in Barbados is relatively high, as evidenced by the level of financial assets to GDP (147.9 percent at end-March 2020). In terms of financial inclusion according to the 2016-2017 Barbados Survey of Living Conditions (Beuermann et al., 2016), almost 100% of the people surveyed had a savings account.

Given its importance, the relationship between households, DTIs and financial stability has not been as widely covered in the economic literature on the Caribbean as might be expected. In terms of the few studies undertaken, Carter et al. (2012) found that economic growth, inflation and wages in Barbados were all positively correlated with household debt to DTIs, while negative relationships were revealed when growth in household debt was assessed against interest and unemployment rates. Pointing to the largely negative net indebtedness of households to DTIs and the stabilisation of the bad debts of households, the authors concluded that household debt was non-problematic. In the case of Trinidad and Tobago, Mahabir et al. (2014) using household budget survey data, found that changes in the unemployment rate had the largest potential impact on financial stability and that individuals are unlikely to default on their mortgages in spite of rising interest rates. Belgrave et al. (2017) also noted a positive relationship between economic growth and household debt for Barbados, while stressing the need for micro data in order to achieve a better understanding of household indebtedness.

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[9] Deposit-taking-institutions comprise commercial banks, deposit-taking trust and finance companies and credit unions.

The fallout from the subprime mortgage crisis of 2007 highlighted the potential risks households can pose to the financial system and the economy. More recently, the emergence of COVID-19 has depressed economic activity and resulted in a rise in unemployment as stay-at-home orders were enforced to contain the virus. In Barbados, new unemployment claims reached unprecedented heights between late March to end-June 2020, demonstrating that the country was not exempt from the economic woes of COVID-19.

It is against this backdrop, that the authors seek to explore how financial activities of households (also referred to as the personal sector) have influenced Barbadian DTIs and consider the potential impact on financial stability.

**Household Debt, Credit Quality and Savings**

Credit is generally used in situations when:

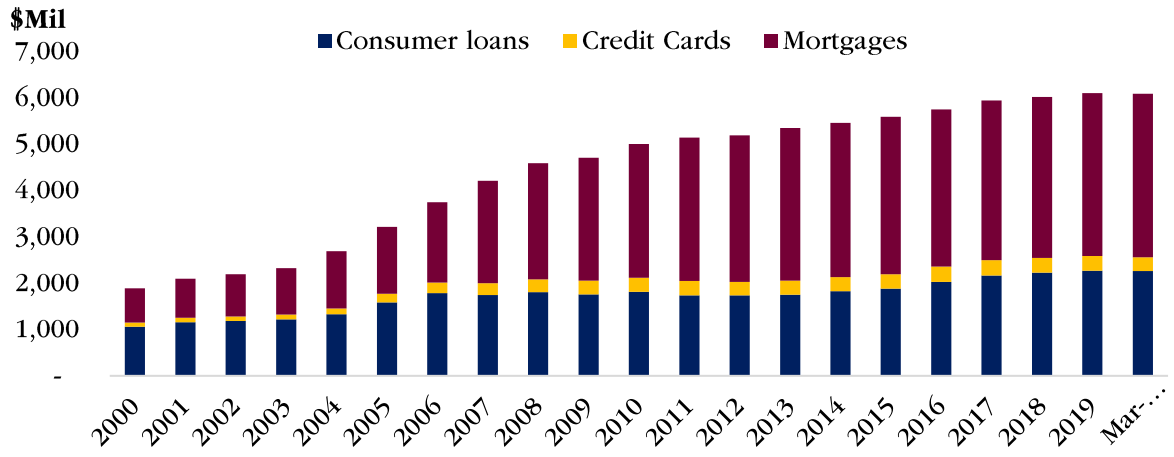
(1) the buyer does not have all the funds to obtain a desired resource;

(2) the buyer is unwilling to sacrifice current consumption in order to secure the resource; or

(3) the buyer wishes to avoid depletion of their savings so as to maintain a stock of reserves for precautionary purposes.

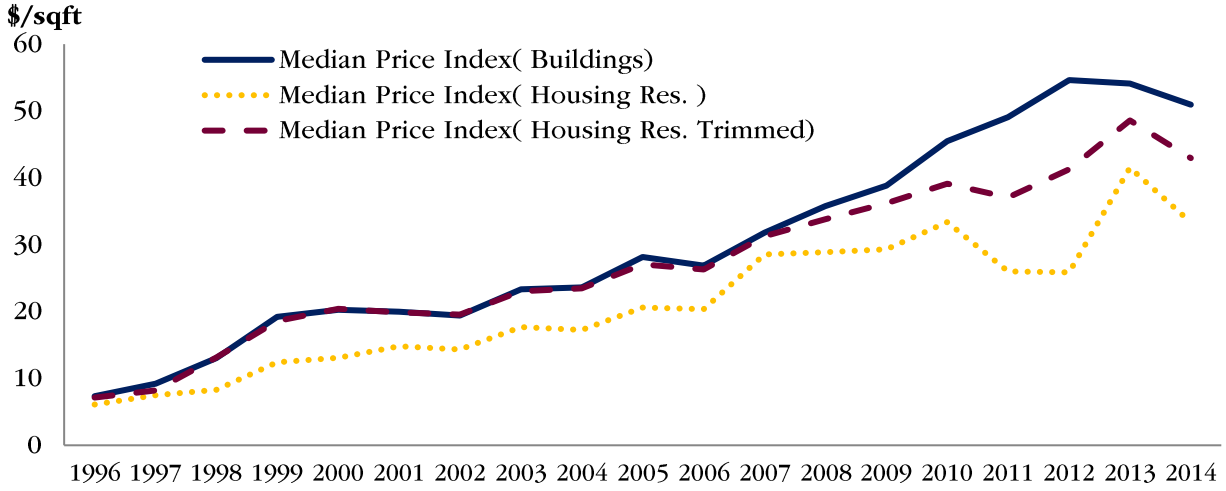
Household debt comprises mortgages, consumer loans and to a lesser extent, credit card debt (**Figure 1)**. The stock of outstanding household credit from DTIs has grown by about 221.7 percent between December 2000 and March 2020 to $6.1 billion. In 2007, mortgages began to account for the largest portion of household debt, in line with general median price increases for buildings and land between 2006 and 2012 (**Figure 2**) (Belgrave et al., (2016)). One possibility therefore, is that the increasing share of household debt in the form of mortgages was driven by the general increase in prices for these assets. Recently, the shares of mortgages and consumer loans in total credit to households averaged 58 percent and 37 percent, respectively.

**Figure 1: Composition of Household Debt by Loan Type**




***Source:*** *Central Bank of Barbados and Financial Services Commission*

**Figure 2: Barbados Median Price Indices for Buildings and Residential Housing**

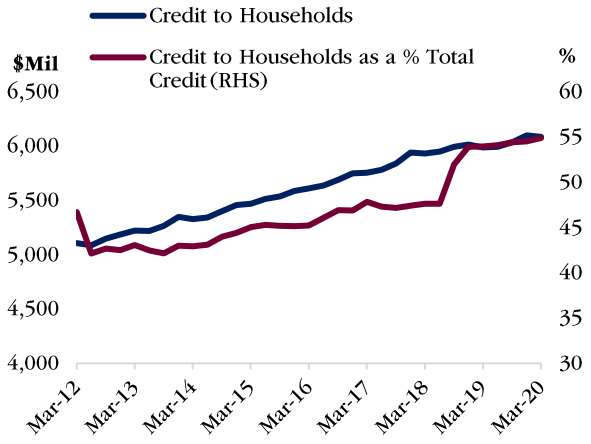



***Source:*** *Belgrave et al. (2016)*

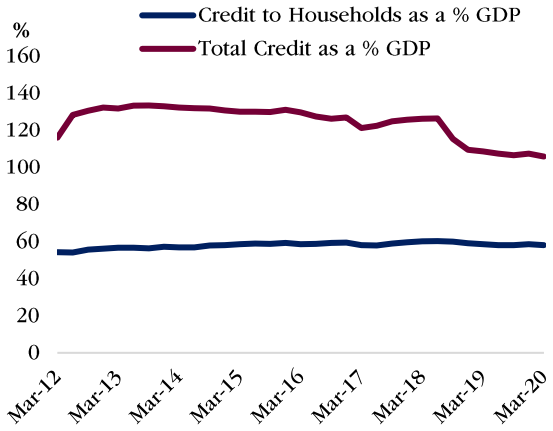
**Figure 3** shows the rising level of personal sector debt to DTIs[10] in Barbados and compares household credit to overall credit as ratios to GDP. Household credit from DTIs grew at an average quarterly growth rate of 0.55 percent since 2012. Indebtedness of households averaged around 58 percent of GDP over March 2012 to March 2020 and stood at 55 percent of total credit at the end of the review period. While the growth of household debt has not raised an alarm, the level of the debt warrants close attention given the shocks that can adversely affect household incomes. In addition, Barbados appears to be no higher than other countries in terms of household debt-to-GDP, as looking at a sample of mostly middle and higher-income countries Barbados' household debt ratio is actually slight below the average of 60.7 percent (**Figure 4**). One notable feature of the evolution of household debt globally is that household indebtedness has risen across most middle and high-income economies since the 1990s (Cecchetti et al., 2011).

**Figure 3: Household Debt and Total Credit from DTIs**

**A: Household Credit in Levels and % of Total**



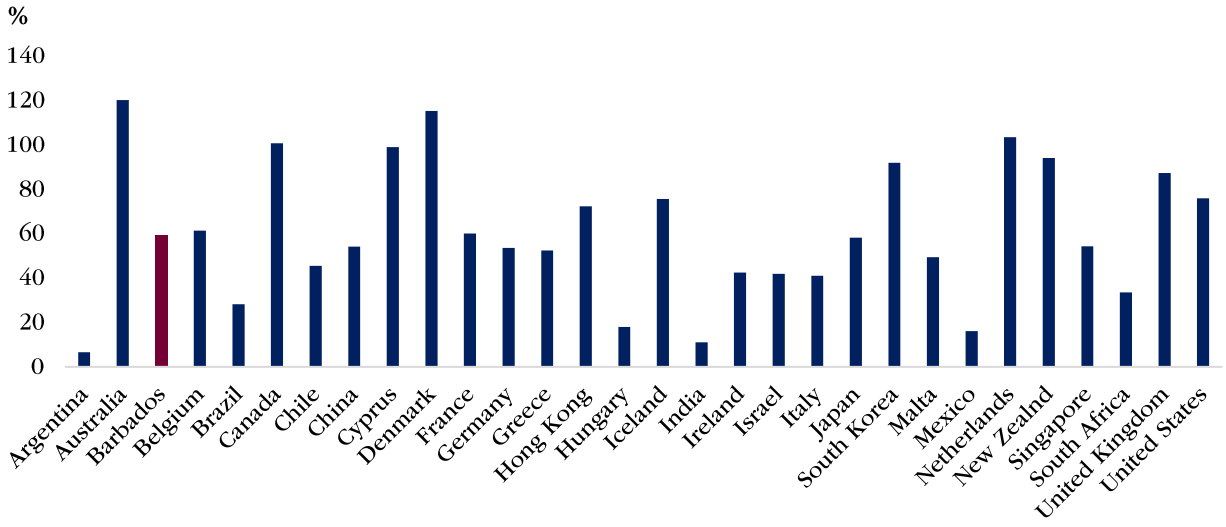

**B: Household and Total Credit as % of GDP**




***Source:*** *Central Bank of Barbados*

[10] Since the focus of this note is on the exposure of DTIs to households, personal sector debt is measured by individuals' liabilities to DTIs, which excludes hire purchase facilities and credit from non-deposit-taking lending institutions and nonresidents. However, though not a DTI, loans to households from the then Barbados Mortgage Finance Company Co Ltd (BMFC) are included in this measure of household debt since BMFC was essentially the mortgage arm of one the commercial banks.

**Figure 4: Household Debt-to-GDP Ratio for Select Counties at end-2018**



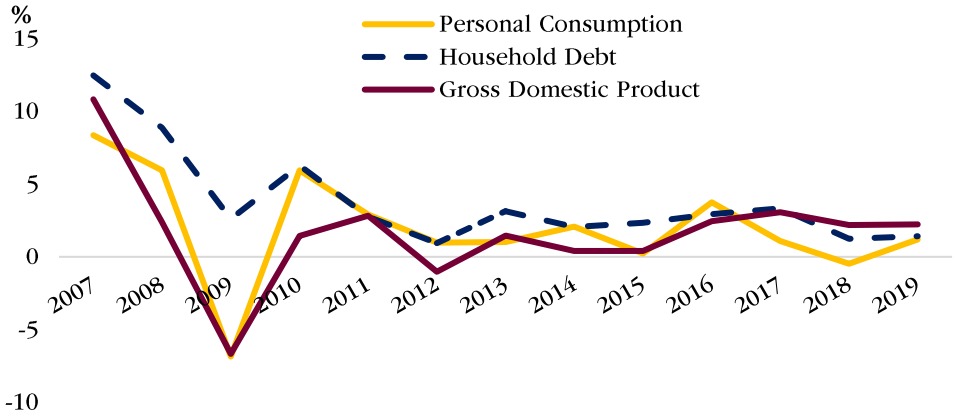

***Source:*** *IMF and Central Bank of Barbados*

From **Figure 5**, it appears that household debt is more closely related to personal consumption at current prices than nominal GDP. As confirmation, the correlation coefficient between growth in personal consumption and growth in household debt was 0.71 for the 13-year period, compared to 0.65 between the growth rates of household debt and GDP. This result is not surprising since:

(1) mortgages spur job creation through construction activity, which then leads to higher economic output and consumption; and

(2) over 35 percent of the value of personal sector loans is directly related to the purchase of consumer goods and services.

**Figure 5: Growth in Household Debt, Personal Consumption and GDP**

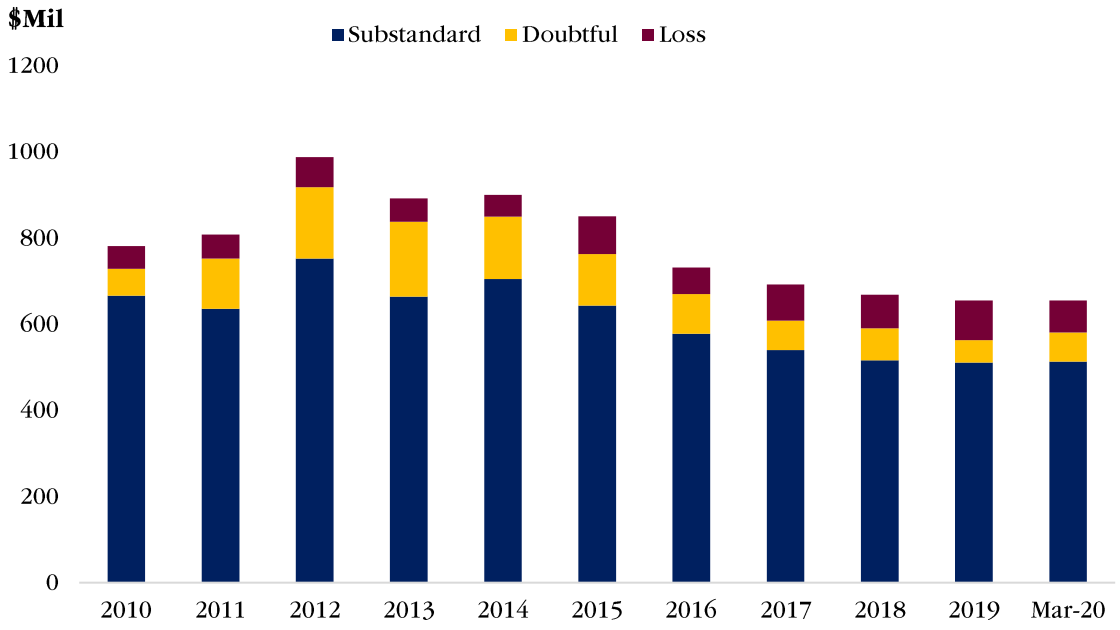



***Source:*** *Central Bank of Barbados and Barbados Statistical Services*

Although borrowing allows households greater consumption opportunities, rapidly growing and/or high household indebtedness poses potential threats to both economic and financial stability. Rapid growth of personal sector debt may be an indication of a credit bubble, while high household indebtedness can increase the duration and depth of a recession as debt service payments crowd out the personal consumption and investment needed to rekindle the economy. With high levels of credit to households on the balance sheets of DTIs, a reduction in households' ability to repay can deepen a recession and weaken the soundness of financial institutions. Moreover, sharp increases in credit to households in a fixed exchange rate economy can cause balance of payments problems, leading to a deterioration in financial sector stability.

The trajectory and risk profile of non-performing loans are key indicators of financial stability, as they provide a sense of the quality of the underlying portfolio. Indeed, for lending institutions, a consistently increasing NPL ratio can lead to insolvency over time. Loan defaults are also deleterious for the borrower as it can result in the repossession of assets and a poor credit score. **Figure 6** shows the distribution of non-performing household loans across three broad risk categories, which are based on the likelihood of the loans being recovered.

**Figure 6: Non-Performing Household Loans by Category**




***Source:*** *Central Bank of Barbados and Financial Services Commission*

The length of time a loan has been in arrears and the collateral associated with the debt are determining factors in the classification of NPLs for regulatory purposes[11]. For total NPLs, the bulk of impaired loans to household loans fall into the least risky category, "Substandard". The reason "Substandard" is large compared to the other two categories is due to the fact that mortgage defaults, the largest portion of household NPLs, remain in this category irrespective of the time in arrears because historically, the value of real estate collateral has tended to match or exceed the outstanding value of the mortgage.

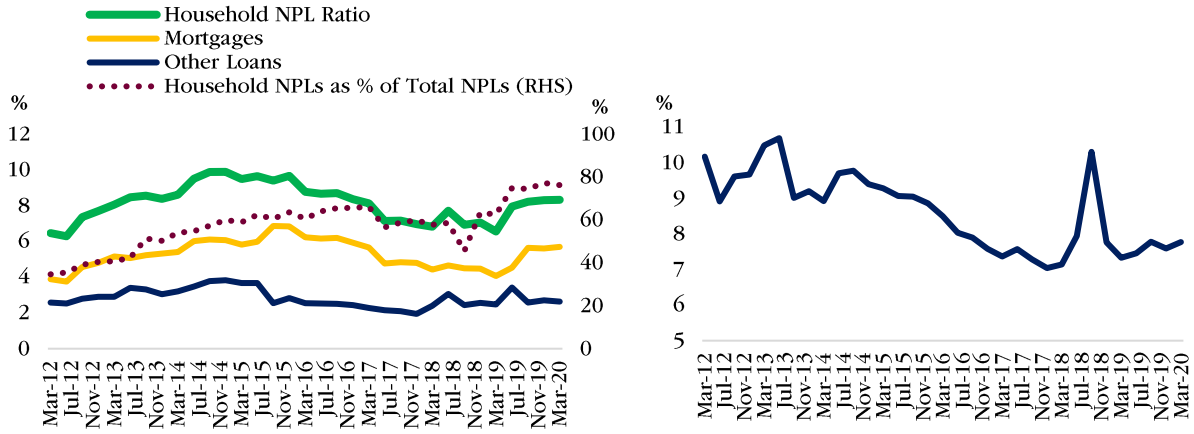
An average of 13 percent of household NPLs at the end of each year from 2010 to 2019 were classified as "Doubtful", while "Loss", the riskiest category, accounted for an average of 9 percent. Overall, household NPLs have been declining since 2015 and value of these impaired loans at the end of March 2020 is virtually on par with that of December 2019.

The contribution of household NPLs to total NPLs increased from 34.7 percent at the end of March 2012 to its highest point of 77.4 percent at the end of December 2019 (**Figure 7A**). The upward trend of the household NPLs to total NPLs ratio despite the downward slide in household NPLs since 2015, is attributed to the fact that total NPLs of DTIs have also been declining but at a faster rate than that of households. The sharp dip in the household to total NPL ratio at the end of September 2018, which corresponds with the large spike in the total NPL ratio shown in **Figure 7B**, was due to the classification of loans to Government as impaired by commercial banks, following the debt restructuring announcement but, before the end of 2018, these loans were restructured and converted to debt securities.

[11] The authors aligned the arrears categories of credit unions with the NPL classifications used by the Central Bank by grouping and labelling all mortgage NPLs of credit unions along with loans three to six months in arears as *Substandard*, then the remaining loans in the *Six to Twelve Months in Arrears* and *12 Months & Over in Arrears* categories were labelled as *Doubtful* and *Loss*, respectively.

**Figure 7: Non-Performing Loan Ratios**

**A: Household Ratios** **B: Total NPL Ratio of DTIs**



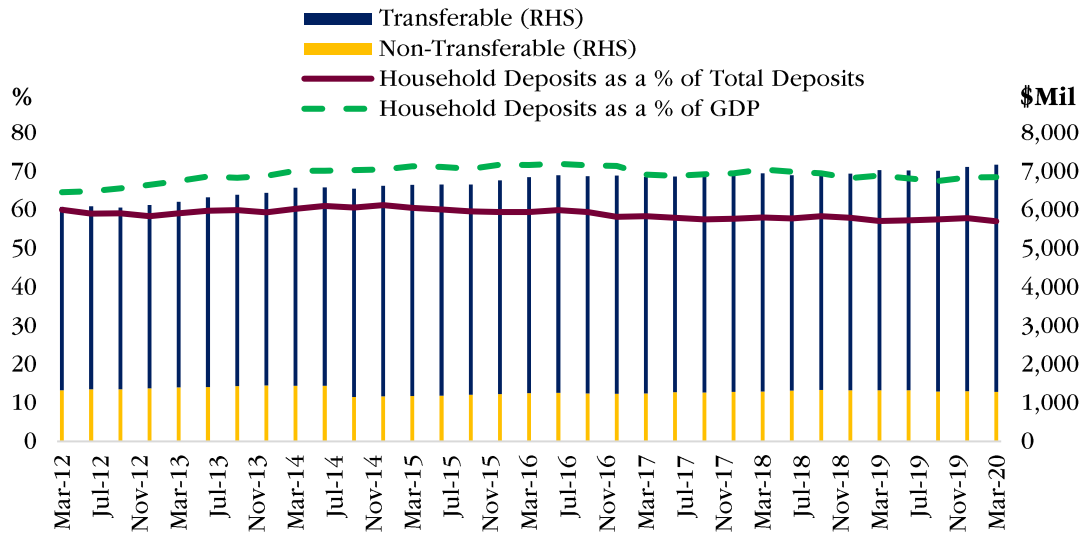

***Source:*** *Central Bank of Barbados and Financial Services Commission*

Compared to the ratio of household NPLs to total NPLs, a less clear pattern is observed for the household NPL ratio[12]. The rate of household loan defaults soared to near 10 percent in 2014, as the loan quality of both personal sector mortgages and other loans deteriorated. Mortgages currently represent about 65 percent of non-performing household debt and is the principal driver of the NPL ratio. The trajectories of the total NPL ratio and the household NPL ratio were somewhat different over the review period. After slowly declining from its peak in 2014, the household NPL ratio has started to climb again during 2019 and at the end of March 2020, had reached 8.3 percent, while the total NPL ratio of DTIs was 7.8 percent.

While the focus of this paper thus far has solely been on gross household debt, it is critical to also examine deposits of Barbadian households. **Figure 8** shows that households prefer to store the majority of their savings in DTIs as transferable deposits, that is, deposit accounts with unrestricted withdrawal privileges. Household deposits increased from $6.1 billion at the end of March 2012 to $7.2 billion at the end of March 2020, but its contribution to total deposits fell by 2.9 percentage points over the same period to a ratio of 57.1%. As a percent of GDP, household deposits rose by 3.9 percentage points from its position at end-March 2012 to 68.6 percent at end of the first quarter of 2020.

[12] The household NPL ratio is calculated as the ratio of Household NPLs to Total Loans to Households.

**Figure 8: Deposits of Households in BDS$M and in % of Total Deposits and GDP**



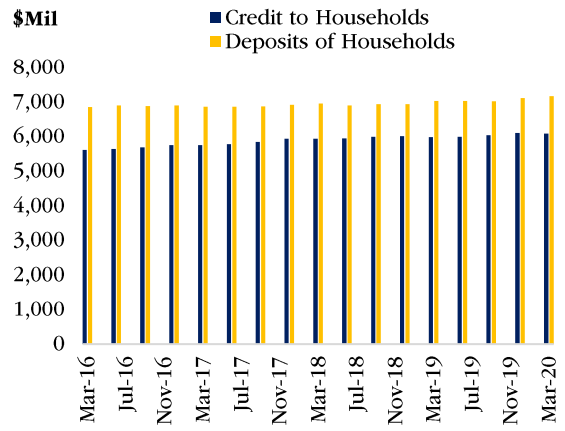

***Source:*** *Central Bank of Barbados*

To fully assess the relationship between households and DTIs, it is important to consider the net indebtedness of households. Deposits of households are consistently higher than their debt to DTIs, which indicates that the net debt of households to DTIs is negative. In **Figure 9**, the analysis is approached from the perspective of households' net claims on DTIs (deposits minus debt). Household net claims oscillated between 9 to 13.4 percent of GDP, where the majority of the increases were explained predominantly by growth in deposits, while reductions were mostly driven by increased borrowing by the personal sector. Unfortunately, data limitations prevent the matching of household deposits and loans to specific income cohorts, which most likely have different degrees of net claims on DTIs[13].

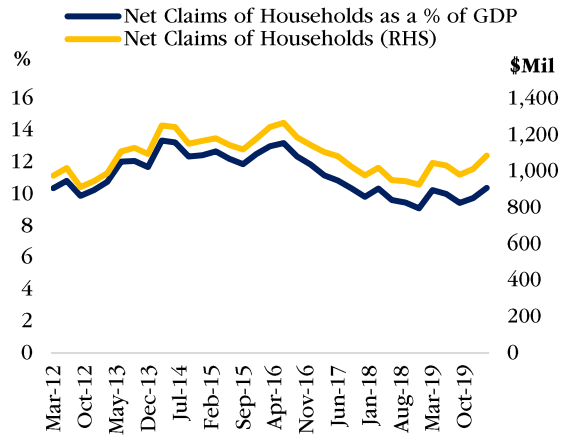
[13] The distribution of loans and deposits also has implications for financial stability (Zajączkowski et al., 2007).

**Figure 9: Household Debt vs. Deposits of Household**

**A: Household Debt and Deposits**



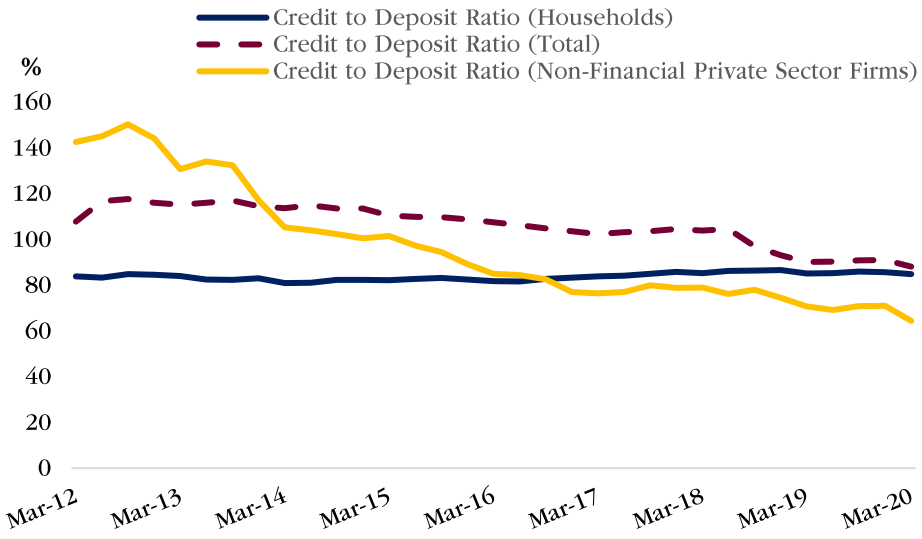

**B: Net Claims on DTIs**




***Source:*** *Central Bank of Barbados*

In addition to being an indication of the net worth of Barbadian households, changes in household net claims on DTIs reflect the personal sector's contribution to the level of liquidity in DTIs. A common measure of liquidity for deposit-taking institutions is the credit-to-deposit ratio, where a decline in the ratio signifies an increase in liquidity. That said, **Figure 9** shows that the overall increasing liquidity in DTIs was driven more by the non-household private sector than by households. The relatively steep downward trajectory of the credit-to-deposit ratio of non-financial private sector firms is evidence of their notable contribution to the build-up in liquidity.

**Figure 9: Households' Contribution to Liquidity**




**Source:** Central Bank of Barbados

## Conclusion

Several important observations have been made during the course of this note. Firstly, household debt seems to have a closer relationship with personal consumption than GDP. In addition, over the past 12 years, increases in household debt have been primarily due to mortgages and, in turn, household mortgages make up the majority of NPLs, suggesting a relative increase in vulnerability to developments in the housing sector. However, mortgage debt has historically shown signs of robustness. Thirdly, although deposits of households significantly outweigh their liabilities to DTIs, households have generally not been contributing as much to the mounting liquidity of DTIs when compared to the liquidity build-up attributed to non-financial private sector firms.

From a policy perspective, the growth rate of credit to the personal sector does not fall within the range considered to be problematic, but a sharp decline in household income might pose immense challenges for both DTIs and households. Consequently, efforts to support employment and assist the reskilling of displaced labour to enable re-entry to the labour force, are likely to assist in the maintenance of financial stability.

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# Appendix A: Macro-Prudential Indicators

### Table 1: Partial Indicators for Financial Stability Cobweb

| Partial Indicator | Variable | Systemic Risk Impact |
|---|---|---|
| *Domestic Environment* | Inflation Rate | + |
| | Total Fiscal Deficit to GDP | + |
| | Total Sovereign Debt to GDP | + |
| | Broad Money to Net International Reserves | + |
| *Domestic Financial Market Conditions* | Barbados T-Bill Rate[14] | + |
| | Return on Barbados Stock Exchange Main Index | - |
| *Global Financial Market Conditions* | MSCI World Index of Equity Returns | - |
| | CBOE Volatility Index | + |
| | JP Morgan Emerging Market Bond Index Spread | + |
| *Global Environment* | MSCI World Growth Index | - |
| | Crude Oil (petroleum) simple average Brent, West Texas Intermediate, and the Dubai Fateh | + |
| *Capital & Profitability Quality* | Capital Adequacy Ratio | - |
| | Return on Assets | - |
| *Funding and Liquidity* | Loan to Deposit Ratio | + |
| | Liquid Assets to Total Assets | - |

[14] Not applicable to calendar year 2018 nor fiscal year 2018/2019.

**Table 2: Partial Indicators for Aggregate Financial Stability Index**

| Partial Indicator | Weight | Variable | Systemic Impact of Financial Stability |
|---|---|---|---|
| *Financial Development* | 0.1 | Total Credit to GDP | + |
| *Financial Vulnerability* | 0.4 | Inflation Rate | - |
| | | Current Account Balance to GDP | + |
| | | Net Foreign Assets to Total Assets | - |
| | | Broad Money to Net International Reserves | - |
| | | Fiscal Balance to GDP | - |
| | | Real Effective Exchange Rate | - |
| | | Net International Reserves to External Debt | + |
| *Financial Soundness* | 0.4 | Capital to Total Risk-Weighted Assets (RWA) | + |
| | | Liquid Assets to Total Assets | + |
| | | NPLs to Total Loans | - |
| *World Economic Climate* | 0.1 | World Economic Growth | + |
| | | CBOE Volatility Index | - |
| | | World Economic Climate Index | + |

**Table 3: Partial Indicators for Banking Stability Index**

| Partial Indicator | Weight | Variable | Systemic Impact of Financial Stability |
|---|---|---|---|
| *Capital Adequacy* | 0.05 | Regulatory Capital to RWA | + |
| | | Tier 1 Capital to RWA | + |
| | | Tier 1 Capital to Total Assets | + |
| *Asset Quality* | 0.3 | NPLs to Total Loans | - |
| | | NPLs (net of provisions) to Tier 1 Capital | - |
| *Profitability* | 0.25 | Return on Assets | + |
| | | Return on Equity | + |
| *Liquidity* | 0.2 | Liquid Assets to Total Assets | + |
| | | Liquid Assets to Short-term Liabilities | + |
| | | Loans to Total Deposits | - |
| *Foreign Exchange Rate Risk* | 0.1 | Net Foreign-Currency Position to Tier 1 Capital | - |
| *Interest Rate Risk* | 0.1 | Spread between Commercial Bank Average Lending Rate to Average Deposit Rate | + |

# Appendix B: Financial Development Indicators

## Table 1: Keys Indicators of the Structure of the Financial System

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| **Number of:** | | | | | | |
| Total DTIs | 48 | 47 | 47 | 46 | 45 | 43 |
| Commercial Banks | 6 | 5 | 5 | 5 | 5 | 5 |
| Finance, Trust and Mortgage | 7 | 8 | 8 | 8 | 7 | 5 |
| Credit Unions | 35 | 34 | 34 | 33 | 33 | 33 |
| Non-DTI Trust Companies | 5 | 5 | 5 | 5 | 5 | 5 |
| Insurance Companies | 23 | 21 | 24 | 23 | 23 | 23 |
| Life | 7 | 6 | 8 | 7 | 7 | 8 |
| Non-Life | 16 | 15 | 16 | 16 | 16 | 15 |
| Pension Plans | 304 | 300 | 303 | 310 | 311 | 311 |
| Mutual Funds | 20 | 19 | 16 | 16 | 16 | 16 |
| | | | | | | |
| **Assets to Total Financial System Assets (%)** | | | | | | |
| Total DTIs | 70.1 | 69.9 | 68.9 | 68.0 | 67.2 | 66.0 |
| Commercial Banks | 55.1 | 54.8 | 54.3 | 53.1 | 52.9 | 51.5 |
| Finance, Trust and Mortgage | 7.2 | 7.1 | 6.3 | 6.2 | 4.2 | 4.0 |
| Credit Unions | 7.8 | 8.1 | 8.3 | 8.7 | 10.0 | 10.5 |
| Non-DTI Trust Companies | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Insurance Companies | 12.7 | 13.2 | 14.0 | 14.0 | 14.3 | 14.7 |
| Life | 7.9 | 8.7 | 9.7 | 9.9 | 10.2 | 10.4 |
| Non-Life | 4.8 | 4.5 | 4.2 | 4.1 | 4.1 | 4.3 |
| Pension Plans | 9.0 | 8.8 | 8.8 | 9.1 | 9.7 | 9.6 |
| Mutual Funds | 8.1 | 8.0 | 8.2 | 8.7 | 8.8 | 9.7 |
| | | | | | | |
| **Assets to GDP (%)** | | | | | | |
| Total DTIs | 168.5 | 172.9 | 174.4 | 173.3 | 159.3 | 157.8 |
| Commercial Banks | 132.5 | 135.5 | 137.5 | 135.3 | 125.5 | 123.2 |
| Finance, Trust and Mortgage | 17.4 | 17.5 | 15.9 | 15.8 | 10.0 | 9.6 |
| Credit Unions | 18.7 | 19.9 | 21.1 | 22.2 | 23.8 | 25.0 |
| Non-DTI Trust Companies | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
| Insurance Companies | 30.6 | 32.5 | 35.4 | 35.7 | 33.8 | 35.2 |
| Life | 19.1 | 21.4 | 24.7 | 25.3 | 24.2 | 25.0 |
| Non-Life | 11.5 | 11.1 | 10.8 | 10.4 | 9.7 | 10.2 |
| Pension Plans | 21.5 | 21.9 | 22.4 | 23.3 | 23.1 | 22.9 |
| Mutual Funds | 19.4 | 19.7 | 20.7 | 22.2 | 20.9 | 23.2 |
| | | | | | | |
| **Memo:** | | | | | | |
| Credit Union Membership (000's) | 168 | 176 | 186 | 195 | 206 | 216 |
| Pension Plans Membership (000's) | 29 | 29 | 29 | 29 | 29 | 29 |

*Source: Central Bank of Barbados and Financial Services Commission*

## Table 2: Key Indicators of the Payment System

| $ Millions | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| **RGTGs Transactions** | 27,334 | 30,731 | 33,561 | 36,781 | 27,001 | 11,668 |
| **ACH Transactions** | 19,028 | 18,689 | 18,501 | 19,584 | 19,559 | 19,293 |
| Cheques | 17,387 | 16,847 | 16,385 | 17,343 | 17,151 | 15,573 |
| Direct Payments | 1,641 | 1,842 | 2,116 | 2,241 | 2,408 | 3,719 |
| **Debit Card Transactions** | 1,019 | 1,067 | 1,136 | 1,197 | 1,248 | 1,324 |
| ATM Transactions | 607 | 620 | 639 | 660 | 675 | 698 |
| Point-of-Sale | 412 | 447 | 497 | 537 | 573 | 626 |
| **Credit Card Transactions** | 688 | 664 | 737 | 725 | 717 | 739 |
| Personal Sector | 586 | 559 | 615 | 615 | 607 | 604 |
| Business Sector | 102 | 105 | 122 | 110 | 110 | 135 |
| **Currency in Circulation** | 686 | 668 | 730 | 750 | 784 | 829 |

*Source: Central Bank of Barbados*

# Appendix C: Key Financial Soundness Indicators

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

| % | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 Q1 | 2019 Q2 | 2019 Q3 | 2019 Q4 | 2020 Q1 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Solvency Indicators** | | | | | | | | | | |
| Capital Adequacy Ratio (CAR) | 16.4 | 15.8 | 17.0 | 17.0 | 13.8 | 12.7 | 12.6 | 13.1 | 13.5 | 14.6 |
| Leverage Ratio | 8.1 | 7.9 | 8.5 | 8.6 | 7.5 | 6.5 | 6.6 | 6.8 | 7.0 | 9.5 |
| Non-performing loans net of provisions to capital | 28.8 | 19.6 | 12.7 | 6.0 | 10.5 | 10.8 | 14.4 | 14.0 | 11.5 | 12.3 |
| **Liquidity Indicators#** | | | | | | | | | | |
| Domestic Loans to domestic deposits | 72.2 | 68.0 | 65.1 | 66.5 | 65.0 | 63.0 | 63.0 | 63.5 | 64.3 | 63.1 |
| Transferable deposits to total deposits | 86.2 | 88.8 | 90.6 | 91.5 | 92.7 | 93.0 | 93.8 | 94.3 | 94.9 | 95.1 |
| Domestic liquid assets to domestic total assets | 24.7 | 29.9 | 32.5 | 32.6 | 17.4 | 18.8 | 19.4 | 19.8 | 19.3 | 20.2 |
| **Credit Risk Indicators (percent)** | | | | | | | | | | |
| Total assets | (1.4) | 4.2 | 3.7 | 1.3 | (5.0) | (5.0) | (7.1) | (0.5) | 2.2 | 1.3 |
| Domestic assets | (.8) | 4.2 | 3.5 | 0.9 | 4.0 | 2.1 | (0.3) | (0.6) | 3.3 | 2.9 |
| Total Loans and advances | (3.1) | (0.7) | (0.6) | 1.5 | (0.8) | (1.6) | (5.2) | (5.4) | (0.6) | (1.3) |
| Non-performing loans ratio | 9.6 | 8.7 | 7.4 | 7.7 | 7.4 | 7.2 | 7.1 | 7.1 | 6.6 | 6.9 |
| Substandard loans/ Total loans | 7.5 | 6.6 | 5.9 | 5.2 | 5.7 | 5.3 | 5.3 | 5.7 | 5.2 | 5.4 |
| Doubtful loans/ Total loans | 1.6 | 1.2 | 0.9 | 0.7 | 0.9 | 1.0 | 1.2 | 0.8 | 0.5 | 0.8 |
| Loss Loans/ Total loans | 0.4 | 0.9 | 0.6 | 0.7 | 0.7 | 0.9 | 0.7 | 0.6 | 0.9 | 0.6 |
| Provisions to non-performing loans | 47.7 | 55.5 | 62.7 | 80.4 | 67.3 | 69.1 | 56.4 | 56.0 | 59.4 | 58.0 |
| **Foreign Exchange Risk Indicators (percent)** | | | | | | | | | | |
| Deposits in Foreign Exchange to Total Deposits | 5.4 | 7.9 | 7.9 | 8.1 | 6.8 | 7.5 | 7.0 | 6.5 | 6.7 | 8.3 |
| Loans in Foreign Exchange to Total Loans | 18.6 | 19.3 | 19.2 | 18.3 | 4.0 | 3.9 | 3.5 | 3.1 | 2.9 | 2.1 |
| **Profitability Indicators** | | | | | | | | | | |
| Return on Assets (ROA) | 0.6 | 1.4 | 1.5 | 1.3 | (0.3) | (1.3) | (1.1) | (0.8) | 0.6 | 1.8 |
| Net Interest Margin | n.a. | 4.6 | 4.8 | 4.8 | 4.8 | 5.0 | 5.1 | 5.1 | 5.2 | 5.0 |
| Interest Rate Spread | 6.2 | 6.8 | 7.2 | 7.3 | 7.0 | 6.8 | 6.4 | 6.3 | 6.1 | 6.1 |

*Source: Central Bank of Barbados*

*# Includes foreign components unless otherwise stated*

## Table 2: Finance and Trust Companies' Financial Stability Indicators (FSIs)

| % | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 Q1 | 2019 Q2 | 2019 Q3 | 2019 Q4 | 2020 Q1 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Solvency Indicators** | | | | | | | | | | |
| Capital Adequacy Ratio (CAR) | 36.3 | 35.2 | 36.2 | 38.8 | 21.8 | 26.2 | 26.4 | 23.5 | 18.6 | 18.4 |
| Leverage Ratio | 19.2 | 19.7 | 21.3 | 22.0 | 11.5 | 10.6 | 10.7 | 10.7 | 11.2 | 11.4 |
| Non-performing loans net of provisions to capital | 14.1 | 14.4 | 13.8 | 12.5 | 26.6 | 18.9 | 17.8 | 31.7 | 47.0 | 46.0 |
| **Liquidity Indicators** | | | | | | | | | | |
| Domestic Loans to domestic deposits | 102.3 | 99.0 | 110.0 | 104.1 | 98.2 | 96.6 | 94.1 | 97.2 | 99.1 | 101.2 |
| Transferable deposits to total deposits | 17.4 | 15.0 | 12.1 | 18.6 | 1.4 | 2.1 | 1.9 | 2.6 | 2.7 | 3.5 |
| Domestic liquid assets to domestic total assets | 8.9 | 16.7 | 14.7 | 16.6 | 11.6 | 12.1 | 13.5 | 12.1 | 10.8 | 8.6 |
| **Credit Risk Indicators (percent)** | | | | | | | | | | |
| Total assets | (2.0) | 1.0 | (6.8) | 2.4 | (35.4) | (34.3) | 2.9 | 0.9 | (2.0) | (1.2) |
| Domestic assets | (1.8) | 2.5 | (7.1) | 2.8 | (35.5) | (34.6) | 2.0 | 1.0 | (3.8) | (3.4) |
| Total Loans and advances | (1.0) | (1.4) | (3.0) | (1.7) | (25.0) | (26.8) | (1.2) | 0.0 | (0.4) | 2.4 |
| Non-performing loans ratio | 8.4 | 9.6 | 9.5 | 9.4 | 8.4 | 6.8 | 6.9 | 9.9 | 11.3 | 11.3 |
| Substandard loans/ Total loans | 6.0 | 6.1 | 6.3 | 6.4 | 6.8 | 4.3 | 4.6 | 8.2 | 8.9 | 8.5 |
| Doubtful loans/ Total loans | 2.1 | 2.6 | 2.5 | 0.8 | 0.6 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 |
| Loss Loans/ Total loans | 3.8 | 0.8 | 0.6 | 2.3 | 1.0 | 0.7 | 0.6 | 1.1 | 1.7 | 1.7 |
| Provisions to non-performing loans | 40.2 | 43.8 | 43.3 | 44.9 | 31.0 | 29.7 | 32.8 | 28.0 | 26.0 | 28.1 |
| **Foreign Exchange Risk Indicators (percent)** | | | | | | | | | | |
| Deposits in Foreign Exchange to Total Deposits | 3.4 | 3.4 | 9.4 | 3.0 | 0.2 | 0.5 | 0.5 | 0.7 | 0.9 | 0.9 |
| **Profitability Indicators** | | | | | | | | | | |
| Return on Assets (ROA) | 0.8 | 0.8 | 1.4 | 1.2 | 0.4 | (0.1) | 0.0 | 0.4 | 1.2 | 1.6 |
| Net Interest Margin | 4.0 | 4.0 | 4.2 | 4.7 | 4.7 | 4.6 | 4.4 | 4.3 | 4.2 | 4.7 |
| Interest Rate Spread | 3.9 | 3.9 | 4.2 | 4.7 | 4.4 | 4.8 | 4.9 | 4.7 | 4.5 | 4.4 |

*Source: Central Bank of Barbados*

## Table 3: Credit Unions' Financial Stability Indicators (FSIs)

| % | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| **Solvency Indicator** | | | | | | |
| Capital to Assets | 10.9 | 10.7 | 10.9 | 11.0 | 10.5 | 10.1 |
| Reserves to Liabilities* | 12.4 | 12.1 | 12.4 | 12.5 | 11.9 | 11.4 |
| **Liquidity Indicators** | | | | | | |
| Loan to deposit ratio | 109.3 | 107.2 | 103.2 | 100.6 | 94.3 | 89.6 |
| **Credit risk indicators** | | | | | | |
| Total assets, annual growth rate | 4.1 | 7.3 | 8.3 | 8.7 | 9.5 | 7.5 |
| Loans, annual growth rate | 5.3 | 6.6 | 7.3 | 6.3 | 4.2 | 3.5 |
| Non-performing loans ratio | 9.4 | 9.1 | 7.6 | 7.8 | 8.9 | 9.6 |
| Arrears 3-6 months | 2.2 | 2.0 | 1.3 | 1.3 | 1.9 | 1.9 |
| Arrears 6-12 months | 1.5 | 1.8 | 1.2 | 1.4 | 1.4 | 1.6 |
| Arrears over 12 months | 5.7 | 5.2 | 5.1 | 5.0 | 5.5 | 6.1 |
| Provisions to loans | 3.5 | 2.6 | 2.5 | 2.4 | 2.6 | 2.8 |
| **Profitability indicator** | | | | | | |
| Return on Assets | 0.7 | 0.6 | 0.8 | 0.9 | 0.7 | 0.7 |

*Source: Financial Services Commission*
**Restated Values*

## Table 4: Life Insurance Performance Indicators

| % | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| **Capital Adequacy*** | | | | | | |
| Capital to Assets Ratio | 30 | 31 | 43 | 46 | 45 | 45 |
| **Asset Quality*** | | | | | | |
| Reinsurance Ceded to GPW | 8 | 7 | 12 | 14 | 11 | 12 |
| **Actuarial Risk*** | | | | | | |
| Risk Retention Ratio | 92 | 98 | 90 | 86 | 89 | 88 |
| **Earnings*** | | | | | | |
| ROA | 5 | 5 | 6 | 5 | 6 | 6 |

*Source: Financial Services Commission*
**Restated Values*

## Table 5: General Insurance Performance Indicators

| % | 2014 | 2015 | 2016 | 2017* | 2018* | 2019 |
|---|---|---|---|---|---|---|
| **Capital Adequacy** | | | | | | |
| Net Premium/Capital | 65 | 72 | 73 | 81 | 116 | 165 |
| Capital to Assets Ratio | 31 | 29 | 29 | 27 | 20 | 14 |
| **Asset Quality** | | | | | | |
| Reinsurance Ceded to GPW | 57 | 55 | 52 | 51 | 53 | 53 |
| **Actuarial Risk** | | | | | | |
| Risk Retention Ratio | 45 | 47 | 49 | 51 | 50 | 49 |
| **Profitability and Earnings** | | | | | | |
| Loss Ratio | 55 | 64 | 60 | 64 | 65 | 63 |
| ROA | 3 | 1 | 2 | 0 | (3) | (0) |

*Source: Financial Services Commission*
**Restated Values*

## Table 6: Mutual Funds Performance Indicators

| % | Property Funds | Income Funds | Multi-Strategy Funds | Growth Funds | Balanced Funds | Total |
|---|---|---|---|---|---|---|
| **Asset Concentration** | | | | | | |
| (Related Party Investments/ Gross Assets) | n.a. | 11.8 | 97.4 | 24.0 | 31.6 | 30.3 |
| **Liquidity** | | | | | | |
| (Liquid Assets/total assets) | 26.7 | 9.2 | 0.3 | 4.5 | 3.7 | 5.6 |
| **Asset Growth** | | | | | | |
| Return on Net Assets(Net Income/Net Assets) | 1.0 | 1.2 | 5.1 | 4.6 | 4.0 | 0.2 |
| **Growth in Net Assets Under Management** | 78.2 | 4.5 | 13.4 | 15.2 | 10.5 | 13.5 |

*Source: Financial Services Commission*