



CENTRAL BANK OF  
TRINIDAD & TOBAGO

# Financial Stability Report 2018

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**Financial**  
STABILITY REPORT  
2018

**Central Bank of Trinidad and Tobago**

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# Financial Stability Report

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## List of Abbreviations

ABBREVIATION	NAME
<b>ACH</b>	Automated Clearing House
<b>AML/CFIT</b>	Anti-Money Laundering and Combating the Financing of Terrorism
<b>ATM</b>	Automated Teller Machine
<b>AUM</b>	Assets Under Management
<b>BA</b>	British American Insurance Company (Trinidad) Limited
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>BPSP</b>	Bill Payment Service Provider
<b>CAR</b>	Capital Adequacy Ratio
<b>CARICOM</b>	Caribbean Community
<b>CBDC</b>	Central Bank Digital Currency
<b>CBR</b>	Correspondent Banking Relationship
<b>CEMAC</b>	Central African Economic and Monetary Community
<b>CEMLA</b>	Centre for Latin American Monetary Studies
<b>Central Bank</b>	Central Bank of Trinidad and Tobago
<b>CFATF</b>	Caribbean Financial Action Task Force
<b>CFWG</b>	CARICOM Fintech Working Group
<b>CI</b>	Carbon-Intensive
<b>CIS</b>	Collective Investment Scheme
<b>CLICO</b>	Colonial Life Insurance Company (Trinidad) Limited
<b>CPMI</b>	Committee on Payments and Market Infrastructures
<b>EC</b>	European Commission
<b>ECB</b>	European Central Bank
<b>ECCB</b>	Eastern Caribbean Central Bank
<b>ECCU</b>	Eastern Caribbean Currency Union
<b>EMDE</b>	Emerging Market and Developing Economy
<b>EU</b>	European Union
<b>FATF</b>	Financial Action Task Force
<b>FIA</b>	Financial Institutions Act, 2008
<b>Fintech</b>	Financial Technology
<b>FIU</b>	Financial Intelligence Unit
<b>FMI</b>	Financial Market Infrastructure
<b>FSAP</b>	Financial Sector Assessment Program
<b>FSI</b>	Financial Soundness Indicator
<b>FSR</b>	Financial Stability Report
<b>FSSA</b>	Financial System Stability Assessment
<b>FY</b>	Fiscal Year
<b>GDP</b>	Gross Domestic Product
<b>GFC</b>	Global Financial Crisis
<b>Global Forum</b>	Global Forum on Transparency and Exchange of Information for Tax Purposes
<b>GORTT</b>	Government of the Republic of Trinidad and Tobago
<b>IA</b>	Insurance Act, 2018
<b>ICRG</b>	International Co-operation Review Group
<b>IMF</b>	International Monetary Fund

## List of Abbreviations

ABBREVIATION	NAME
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ML/TF</b>	Money Laundering and Terrorist Financing
<b>MMOU</b>	Multilateral Memorandum of Understanding
<b>MOU</b>	Memorandum of Understanding
<b>NIF</b>	National Investment Fund Holding Company Limited
<b>Non-Bank</b>	Non-Bank Financial Institutions
<b>NPL</b>	Non-Performing Loan
<b>NPO</b>	Non-Profit Organization
<b>PFMI</b>	Principles for Financial Market Infrastructure
<b>POS</b>	Point of Sale
<b>RAM</b>	Risk Assessment Matrix
<b>ROA</b>	Return on Assets
<b>ROE</b>	Return on Equity
<b>ROSC</b>	Report on the Observance of Standards and Codes
<b>RTGS</b>	Real Time Gross Settlement System
<b>SIB</b>	Systemically Important Bank
<b>SIFI</b>	Systemically Important Financial Institution
<b>SOE</b>	State-owned Entity
<b>TTSEC</b>	Trinidad and Tobago Securities and Exchange Commission
<b>UK</b>	United Kingdom
<b>US</b>	United States



## PREFACE

The Central Bank of Trinidad and Tobago (the Central Bank) performs a vital role in maintaining financial stability and promoting confidence in the domestic financial system. Financial stability has been defined as the resilience of the financial system in the face of adverse shocks so as to enable the continued smooth functioning of financial intermediation and payments settlement. Effective financial intermediation, which involves the ability of households and businesses to channel savings into productive investments with confidence, is essential for sustainable economic growth and the welfare of Trinidad and Tobago.

The *Financial Stability Report (FSR)*, which is currently published annually, complements the biannual Central Bank *Monetary Policy Report* and other publications by providing an overview of developments in the financial sector and insights into vulnerabilities and risks to stability posed by domestic, regional and international factors. While financial system vulnerabilities increase susceptibility to shocks, effective governance and risk management, strong capital buffers and pro-active supervision and regulation help to enhance resilience. The FSR also highlights the on-going efforts of the Central Bank to strengthen these areas and aims to foster informed discussion on financial stability issues. For further information or comments on this Report, please contact [info@central-bank.org.tt](mailto:info@central-bank.org.tt)

The FSR is available on the Central Bank's website at <https://www.central-bank.org.tt/latest-reports/financial-stability-report>.



## OVERVIEW

### The External and Domestic Macro-Financial Setting

**In the decade following the 2008 global financial crisis, policymakers have focused on strengthening their financial regulatory and supervisory frameworks.** This has involved, inter alia, tightening prudential and accounting standards, enhancing oversight of systemically important financial institutions and groups, promoting risk-based supervision and expanding macro-prudential toolkits. For the most part, financial systems across the world have become more resilient, as banks in particular are better capitalized and possess healthier balance sheets. However, with the world economy slowing, the International Monetary Fund's (IMF) April 2019 *Global Financial Stability Report* has warned that downside risks to global financial stability are growing. Risk factors include the build-up of leverage in advanced economies, tighter financial conditions in emerging markets as well as vulnerabilities stemming from climate change, rapid financial innovation and cyber-attacks.

**With signs that global growth momentum may be waning, monetary and financial policies have broadly adopted a supportive stance.** After continuing its intended path towards monetary policy normalization in 2018, the United States Federal Reserve has since adopted a more cautionary tone in 2019, which has helped ease financial tensions that accumulated during the latter part of 2018. Likewise, weighed by uncertainty surrounding Brexit, high sovereign debt in some member countries and dimmed growth prospects, the European Central Bank (ECB) announced its intentions to maintain accommodative financial conditions throughout 2019. The ECB and Europe's regulatory authorities are paying close attention to high levels of sovereign debt and the spill-overs to the financial sector in certain jurisdictions. The Bank of England has been working with its financial institutions to prepare for the worst-case scenario of a hard Brexit. In China, after making progress in tightening financial regulations and reducing corporate sector leverage, authorities are renewing efforts to revive credit as there are rising concerns that the economy may be cooling too quickly in the midst of on-going trade tensions.

**With its international financial interconnections, the Caribbean region faces its share of risks and opportunities.** Several countries continue to experience low growth and high public sector debt levels, which have given rise to banking sector asset quality and profitability concerns. The region also remains vulnerable to correspondent banking relationship (CBR) withdrawals, climate change and natural disasters. In an effort to boost financial inclusion and spur development, there has been a thrust towards exploring new financial technology (fintech) applications, including the use of distributed ledger technologies and central bank digital currencies. Additionally, a few large regional financial institutions have continued to seek opportunities outside their home borders, as evidenced by several announcements of proposed acquisitions in 2018 and early 2019. While such actions can be beneficial, regulators are paying close attention to potential financial stability implications arising from interconnectedness, changes in competition dynamics and the rise of systemically important financial institutions.

**Domestically, available indicators point to some rebound in economic activity in 2018, but the recovery may not yet be fully entrenched.** The energy sector performed well in the first half of the year, spurred by higher natural gas production. Meanwhile, with low interest rates and comfortable liquidity levels, financial conditions remained largely supportive of the non-energy sector. Driven in the main by consumer demand, private sector credit expanded at a fair pace in 2018. Lending to businesses, however, grew more modestly and perhaps could be symptomatic of the general business climate. Reports of job losses related to company restructurings in some sectors combined with rising retrenchment notices filed at the Ministry of Labour and Small Enterprise Development suggest that labour market conditions may have slackened during the year. Further, domestic demand was subdued with inflation at just 1 per cent in 2018.

## The Performance of the Domestic Financial System

### The financial system remained sound and stable in 2018.

Financial Soundness Indicators (FSIs) for the various sectors in the financial system – commercial banks, non-bank financial institutions (non-banks) and insurance companies – point to adequate capital positions, liquidity levels and profitability across the sectors. Additionally, macro-prudential indices (Appendix B) as at December 2018, signalled minimal threat to financial stability due to a solid banking sector, low levels of systemic risk build-up and broadly supportive financial conditions.

### The banking sector continued to perform well in 2018.

In aggregate, commercial banks and non-banks maintained high capital positions, healthy balance sheets and recorded favourable profits. Consequently, and based on Basel II/III parallel reporting, the sector is poised for the full adoption of more robust international capital standards, with the sector's capital ratios expected to remain well above regulatory minimum thresholds. Additionally, recent stress tests showed that banks are well placed to withstand several severe but plausible shocks to interest rates, credit portfolios and liquidity positions. Notwithstanding, the stress tests did reveal that banks' exposures to the domestic sovereign warrant closer monitoring.

### FSIs for the insurance industry also point to stability within the sector.

In 2018, FSIs in the life insurance sector were broadly in line with past trends. Capital and asset quality remained at comfortable levels, and there was some improvement in the expense ratio. According to the return on equity ratio, the sector was also profitable, but less so than in the past year. Meanwhile, the non-life insurance sector has to date exhibited resilience following the disastrous 2017 hurricane season in the Caribbean as well as the flooding and earthquake experienced locally in 2018. This resilience was due in part to the reinsurance arrangements instituted by non-life insurers. Measures of asset quality and liquidity remained at acceptable levels in 2018, and there were improvements in the profitability ratios.

### Total assets of occupational pension plans grew in 2018, but challenges may lie ahead for the industry.

Total assets of occupational pensions plans ended 2018 at \$50.3 billion – 3.7 per cent higher than in 2017. However, nearly a decade

of low domestic interest rates and an aging population have led actuaries to increase their recommended contribution rates for defined benefit plans – which account for over 80 per cent of the industry's assets. As such, these plans should urgently consider appropriate adjustments to ensure long-run sustainability.

## Vulnerabilities and Risks

**Although the domestic financial system remains sound, there is no room for complacency, as history has shown that risk events can manifest suddenly.** This edition of the Financial Stability Report (FSR) has identified four vulnerabilities in the financial sector, two of which emerged in the past year, which can threaten financial stability in the event of negative shocks:

*Growing Household Indebtedness.* This vulnerability was discussed in the 2017 FSR but remains relevant given that household debt (measured mainly by credit extended by licensed financial institutions) continued to expand in 2018. Early evidence suggests that a few of the triggers identified – such as increasing unemployment levels – may be manifesting. Risks to the financial system from this vulnerability can include deteriorations in the quality of commercial banks' consumer loan portfolios.

*High sovereign concentrations in the financial system.* This concentration appears to be deepening. The domestic sovereign is the single largest exposure of the financial system, representing just under a third of banks, insurers and pension plans' combined assets. This vulnerability can be triggered by negative shocks to Government revenues and higher domestic interest rates.

*Keeping pace with evolving international standards on money laundering, terrorist financing (ML/TF) and tax transparency.* Despite making good progress, Trinidad and Tobago has still been assessed by some global standard setters as deficient in meeting some elements of these international requirements. The main issue is the potential triggering of a loss of CBRs – a threat which has hovered over the entire Caribbean region in recent years. The loss of CBRs can lead to settlement, liquidity and even default risks in the financial system.

*Rapid digitalization in the financial services industry.* After flagging digitalization developments in the 2017 FSR, this area has been deemed an explicit vulnerability in this edition of the FSR. It relates to the threats that can emerge if proper safeguards and controls are not implemented as the digitalization drive progresses. Cyber-attacks that are targeted against the information technology infrastructure of financial institutions, can lead to disruptions to financial services, identity and financial theft and fraud, resulting in settlement, liquidity, ML/TF and reputational risks.

### Promoting Financial Stability

**The Central Bank continued to make progress towards strengthening its regulatory and supervisory framework in 2018.** Much of this work is aligned to the financial stability objectives under the Central Bank's five-year Strategic Plan (2016/17 – 2020/21). A key supporting exercise is the IMF/World Bank Financial Sector Assessment Program which is scheduled to commence in late 2019 (Chapter 5). Some notable developments in 2018 and early 2019 were:

#### *Improving the Regulatory Framework and Ensuring Compliance with International Standards for AML/CFT and Tax Transparency*

The Insurance Act, which was assented to in 2018, is awaiting proclamation by the President of the Republic of Trinidad and Tobago. A Steering Committee has been established to prepare for the implementation of this new legislation. Meanwhile the Government, with input from the Central Bank, amended and/or introduced in the Parliament several pieces of legislation including: the Companies (Amendment) Act, 2019; the Non-Profit Organisation Act, 2019; the Civil Asset Recovery and Management and Unexplained Wealth Act, 2019; and the Income Tax (Amendment) Act No. 18 of 2018.

#### *Improving Risk-Based Supervision and Governance in Financial Institutions*

The Central Bank is awaiting enactment of new Capital Adequacy Regulations which will introduce the new Basel II/III rules and mark the end of Phase 1 of the Central Bank's Basel II/III project. Phase 2 will address Pillars II (Internal Capital Adequacy Assessment Process and Supervisory Review) and III (Market Disclosures) of the Basel II framework, together with some Basel III elements such as

the leverage ratio, the liquidity coverage ratio and the capital conservation buffer. These initiatives are designed to ensure that banks' capital positions are aligned to the risk they assume, and aim to enhance banks' resilience to negative shocks. The Central Bank also completed a Market Conduct Guideline which was issued in November 2018; drafts of Fit and Proper (revised) and Pension Plan Governance Guidelines were circulated for industry consultation.

#### *Strengthening Technical and Analytical Capability in Supervision and Resolution*

Improvements are underway with respect to the Central Bank's stress testing framework and a National Financial Crisis Management Plan is being developed.

#### *Review of Recent Developments in Payment Systems*





As developments in fintech offer new means of facilitating transactions, the Central Bank has been crafting policies to keep abreast with such developments, while also making necessary revisions to existing guidelines. The Central Bank completed revisions to its draft E-money Policy which was issued for public consultation in November 2018. It also drafted a Virtual Asset and Fintech Policy.

#### *Coordination with Other Supervisory Agencies*

The Central Bank continues to foster cooperation and coordination among domestic and regional supervisory agencies. A memorandum of understanding between the Central Bank, the Trinidad and Tobago Securities and Exchange Commission and the Financial Intelligence Unit pertaining to prudential and AML/CFT supervision is being drawn up. Additionally, the Central Bank is working alongside its regional counterparts to improve the understanding of regional financial interconnectedness.

## Summary Heat Map

### Key Vulnerabilities and Risks to Financial Stability in Trinidad and Tobago

VULNERABILITIES	RISKS	RISK RATING
Growing household indebtedness	Deterioration in the quality of consumer loan portfolios	
High sovereign concentrations in the financial system	Rise in public sector-related non-performing loans	
Keeping pace with evolving international standards on money laundering, terrorist financing and tax transparency	Delays in executing international payments	
Rapid digitalization in the financial services industry	Loss of confidence in digital transformation	

Low

Moderate

Elevated

High

Very High

Source: Central Bank of Trinidad and Tobago

## CHAPTER 1

### THE MACRO-FINANCIAL ENVIRONMENT



## CHAPTER 1

### THE MACRO-FINANCIAL ENVIRONMENT

**Global financial conditions tightened in the latter part of 2018 as the world economy lost some of its growth momentum<sup>1</sup>.** In the April 2019 *World Economic Outlook*, the International Monetary Fund (IMF) revised downwards its global growth estimate for 2018 to 3.6 per cent from 3.7 per cent and lowered the 2019 forecast. Several factors dampen growth sentiments, including trade tensions, spill-overs from United States (US) monetary policy normalization and uncertainty surrounding Brexit, while some countries faced more idiosyncratic setbacks. These factors and the associated dampened view for growth prospects had negative spill-overs to financial markets, as financial conditions tightened and volatility and risk premiums increased towards the end of 2018. In this context, global debt which is at record highs and growing, represents one of the main risks to global financial stability. The IMF's April 2019 *Global Financial Stability Report* also identified vulnerabilities in China's financial system, volatile capital flows to emerging markets and rising house prices in certain systemic jurisdictions as key threats to the global financial system. Meanwhile, weather-related shocks and cyber-attacks are being increasingly viewed as risks to financial stability.<sup>2</sup>

**Growth performances across advanced economies have varied, resulting in differing degrees of financial stability risk.** Supported by fiscal stimulus and a robust labour market, the US economy continued to expand at a faster pace than many of its counterparts. While the strong economy and nearly ten years of easy monetary conditions facilitated a build-up in leverage, regulatory reforms since the global financial crisis (GFC) have helped the US banking system maintain healthy capital levels and sound asset quality. On the other hand, many countries in the euro area experienced a moderation in economic activity in 2018 and the near-term outlook is for further easing. Risk concerns stemming from elevated sovereign debt in some euro area countries re-emerged, with the spreads (risk premiums) on high yield sovereign debt increasing at end-2018. Brexit continues to weigh on the United Kingdom (UK) and the euro area as the deadline for a deal was extended to October 31, 2019.

Many financial institutions have begun shifting assets or moving ownership of their subsidiaries out of the UK. Though the UK and the euro area face headwinds and downside risks are evident, financial soundness indicators (FSIs) point to comfortable liquidity and capital levels for banks, as the 2018 European Central Bank (ECB) stress tests indicated that euro area banks, in aggregate, held sufficient capital buffers to absorb financial shocks. Additionally, to support growth, the ECB announced that it will launch a new credit facility accessible to financial institutions aimed at boosting lending.

**Elsewhere in developed economies, financial stability concerns range from legacy issues and newly emergent factors.** Record low interest rates across several advanced economies have driven asset prices upwards in recent years, particularly house prices. In turn, higher house prices have led to a steady build-up in household debt. Regulators in countries such as Canada and Australia are paying particular attention to developments in their housing markets and have introduced measures such as loan-to-value ratio limits (in the former) and improving lending standards (in the latter). Japan's economy faced a major setback following the devastating natural disasters during 2018. As climate change threatens to increase the intensity and frequency of such occurrences, central banks across the world are becoming more cognizant of the risks natural disasters can pose and are more involved in promoting green financing. Global policymakers remain divided on the regulatory approaches to address advances in financial technologies (fintech) (Box 1). The debate centres around striking the right balance between managing the potential downsides of fintech developments while ensuring that innovation is not stifled.

**Growth in emerging market and developing economies (EMDEs) also shifted lower in 2018, according to the IMF.** A myriad of factors accounted for this, including tighter global financial conditions which reduced portfolio flows to EMDEs and trade tensions which do not only affect the principal countries involved – the US and China – but also others integrated in the global value chain. Public debt

<sup>1</sup> Figures 1 and 2 outline key financial stability developments and concerns by international bodies as well as some of the major risks highlighted in selected Financial Stability Reports (FSRs).

<sup>2</sup> World Economic Forum *Global Risks Report*, 2019.

levels in EMDEs have risen consistently since 2011, and stood at just under 50 per cent of Gross Domestic Product (GDP) as at 2018. Although EMDE debt levels are below those of their advanced market counterparts, the higher cost associated with the former's debt could begin to strain budgets if financial conditions tighten unexpectedly. In China, the world's second largest economy, strong credit growth combined with opaque ownership structures in the corporate sector and non-bank intermediation activity have given rise to asset quality concerns. As such, Chinese regulators took several measures to curtail financial stability risks in 2018, including regulatory tightening to reduce lending and non-bank financial activity. However, with signs that economic growth may be slowing too quickly, there has since been some relaxation in financial policy.

**Latin America and the Caribbean recorded the slowest growth among all EMDE regional sub-groupings.** The group continued to be weighed down by the turmoil in Venezuela, economic frailties in Argentina and lacklustre growth in Brazil. At the same time, the infamous 'Panama Papers' heightened tax transparency concerns surrounding the region, while tighter immigration controls to the US and social protests in Nicaragua negatively impacted Central America.

**Performances within the Caribbean were mixed in 2018.**

Aided by reforms implemented over the past few years, evidence suggests that the Jamaican economic recovery is continuing. Jamaica's 2018 Financial Sector Assessment Program indicated that the various sectors within the financial system – banks, insurance and pension funds – all appear sound, but the relatively high degree of interconnectedness among financial institutions should be closely monitored. In Barbados, saddled with high public debt and an economy in decline, the Government announced a major restructuring of public sector debt in 2018. This involved banks taking a haircut on Government paper – calling the traditional practice of zero risk-weighting of sovereign debt into question. However, without recent FSIs for the country (at the time of writing), it is uncertain how this restructuring has affected the financial system to date. On the other hand, prospects in Guyana are bright, as oil production is set to commence in 2020.

**Caribbean economies also share several common risks.**

The risk of correspondent banking relationship (CBR) withdrawals continues to occupy the attention of regional regulators. The recent inclusion of several Caribbean countries on 'blacklists' for reasons such as deficiencies in their anti-money laundering/combating the financing of terrorism (AML/CFT) frameworks and non-compliance with international tax transparency requirements has sparked renewed anxieties on CBR withdrawals. During 2018, there was a rise in acquisition announcements in the region (Box 2) as several financial institutions sought to expand their regional footprint and diversify their income streams. While such acquisitions can help build synergies and increase efficiency and profitability, systemic cross-border financial groups also present certain challenges for regulators such as ensuring adequate consolidated supervision, monitoring interconnectedness and managing contagion risks. Another common risk facing the region relates to natural disasters and climate change, with the threats more pronounced for the smaller island states. Finally, many countries in the region are progressively embracing fintech, given its potential to lower cost, enhance efficiency and promote financial inclusion. Regulators in several countries are exploring the use of distributed ledger technologies and crypto-assets, while boosting their cybersecurity supervision capacity.

### BOX 1: DEVELOPMENTS IN FINTECH

Financial technology (fintech) applications continued to gain attention in 2018. Fintech can be considered as the collection of technologies whose applications may affect financial services and includes artificial intelligence, big data, biometrics, and distributed ledger technologies (Zhang, 2018). The foundation of new fintech applications is built upon redefining financial services in terms of speed, access and usability. The Financial Stability Board reported in 2019 that technology giants such as Amazon and Apple have been making significant progress in financial services, given their access to technology and information, and noted that a number of other ‘bigtech’ firms could substantially impact the provision of financial services. Examples of these include US-based Google, Facebook and Microsoft, China-based Alibaba, Tencent and Baidu and UK-based Vodafone.

Traditional players in the financial services industry have been leveraging new technologies so as not to get left behind. SWIFT has been working on enhancing its services through, for example, lobbying for the standardization of message types, positioning itself to play a major role in application programming interfaces and piloting with payment systems to improve speed and efficiency. The Australia New Payments Platform developed in February 2018 and TARGET Instant Payment Settlement launched in November 2018 for the European Union are examples of recent achievements by SWIFT. Major global banks such as JP Morgan Chase and Mitsubishi UFJ Financial Group have been experimenting with digital currency. In February 2019, JP Morgan Chase announced that it had created and successfully tested a digital coin representing fiat currency, which could be used by its clients to settle obligations. The Mitsubishi UFJ Financial Group, which plans to launch its Coin before the end of 2019, hopes to see a reduction in the costs associated with handling cash in Japan.

Central banks, in an attempt to keep up with fast moving developments, are also exploring technology for enhancing their services. Several central banks have collaborated to produce detailed studies on various fintech solutions, such as distributed ledger technologies and its applicability for payment and settlement systems. In particular, the Bank of Canada, the Bank of England and the Monetary Authority of Singapore published findings of research on cross-border interbank payments and settlement. The European Central Bank and the Bank of Japan explored instantaneous securities settlement while the Canadian experiment, Project Jasper, showed how instantaneous clearing and settlement of securities using a distributed ledger platform could be achieved.

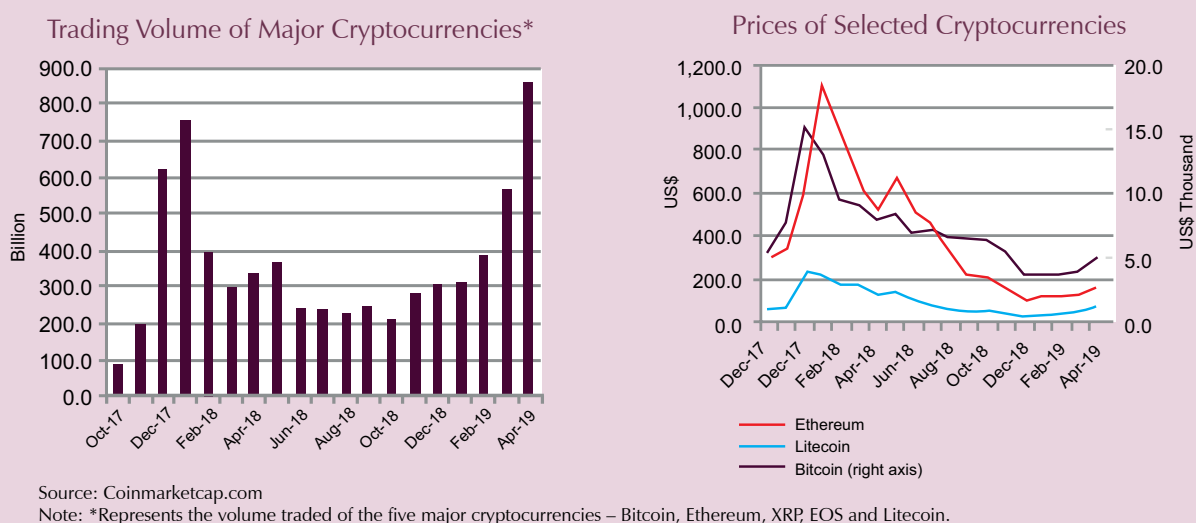
According to a January 2019 Bank for International Settlements Working Paper (See Barontini and Holden 2019), many central banks have continued to investigate central bank digital currencies (CBDCs) in 2018. The report however, confirmed that central banks were “proceeding with caution” and the majority did not plan to issue CBDCs in the near to medium term. In particular, while greater clarity has been obtained regarding the topic, most authorities still do not see the potential benefits as outweighing the costs. According to the World Economic Forum (2019), CBDC projects are being undertaken in Lithuania, Thailand, Brazil, the Organisation of Eastern Caribbean States, Germany, Hong Kong, Saudi Arabia, South Africa and Sweden. This report also mentioned potential downsides of CBDC such as financial exclusion and the instability of commercial bank deposits which must be carefully considered by authorities.

### BOX 1: Continued

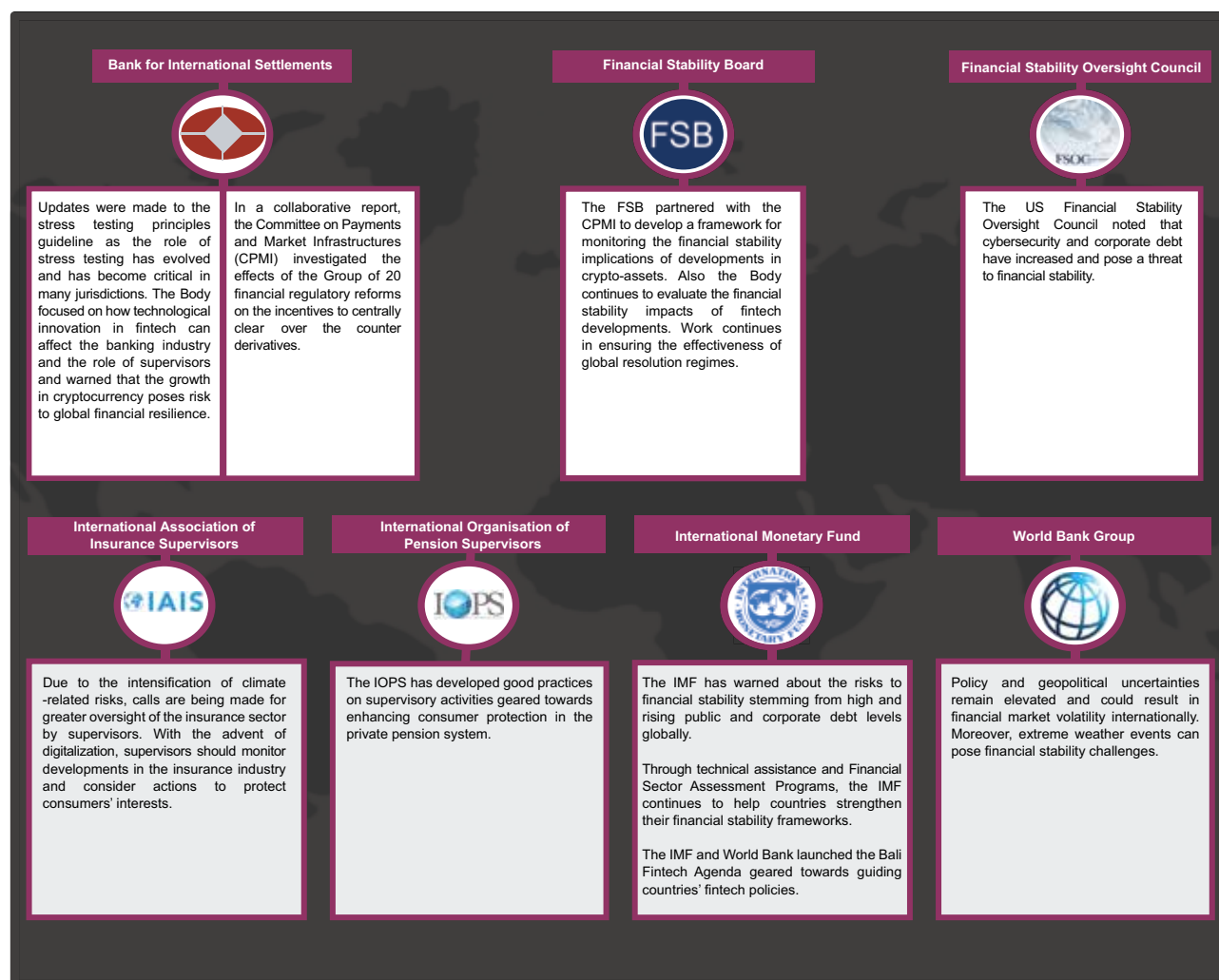
The Caribbean continues to explore the use of CBDCs. In August 2018 a memorandum of understanding was signed between the Central Bank of Curaçao and Sint Maarten and Bitt Inc. to explore the feasibility of a CBDC for the territory. Further, in March 2019, the Eastern Caribbean Central Bank (ECCB) in collaboration with Bitt Inc. announced that it would be undertaking a pilot for a blockchain-based CBDC. If successful, the ECCB would issue the world's first blockchain-based digital currency. In early 2019, the Central Bank of The Bahamas announced 'Project Sand Dollar' – a pilot for its blockchain-based CBDC.

While increased focus has been given to CBDCs, privately-issued crypto-assets have withstood bouts of volatility and there has been a fair amount of activity on cryptocurrency platforms. Data show that trading volume on crypto-exchanges remained buoyant, even as cryptocurrency prices have trended downward (Figure 1). These assets, however, continue to present risks which transcend the traditional ones associated with investment. For example, the unexpected death in 2018 of the founder of one of Canada's largest cryptocurrency exchanges left millions of dollars' worth of cryptocurrency inaccessible to customers, since the founder had not shared passwords with any other party. This event highlighted the consumer protection risks which accompany private crypto-assets.

**Figure 1:**  
Selected Cryptocurrency Statistics, October 2017 – April 2019

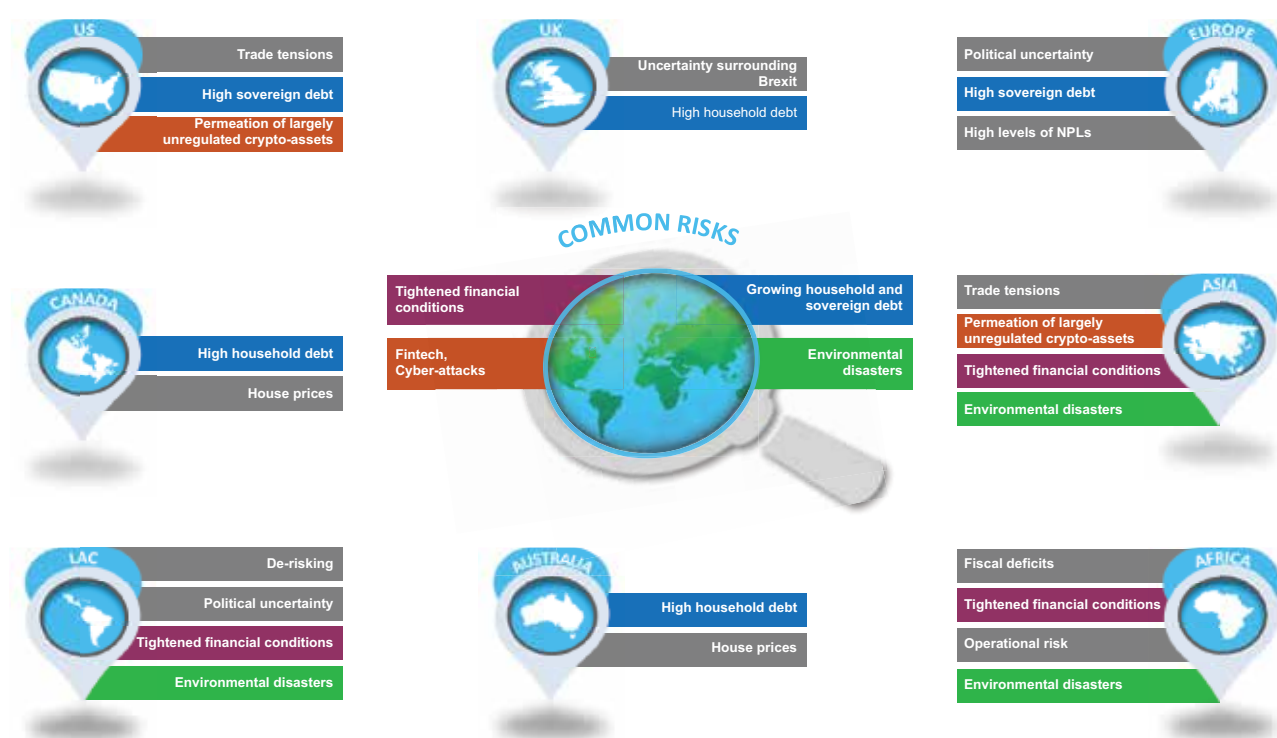


**Figure 1**  
**Key International Financial Regulatory Developments and Perspectives**  
**in 2018 and Early 2019**



Source: Various international regulatory and supervisory bodies' reports.

**Figure 2**  
**Summary of Global Financial Stability Risks**



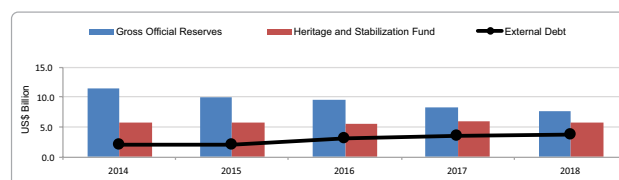
Source: Various countries' FSRs.

## THE DOMESTIC SETTING

After two consecutive years of decline, available information suggests some turnaround in economic activity in 2018. This rebound was driven for the most part by the energy sector, in particular, by higher natural gas production in the first half of the year. Positive spill-overs from the energy sector to the non-energy sector can usually be expected over time, but activity in the latter may have still been subdued during 2018. At just over 1 per cent, inflation was very low in 2018. Further, while official labour market data for 2018 is not available, job losses in Petrotrin and other corporate entities as well as a 38 per cent increase in the number of persons retrenched during the year (Ministry of Labour and Small Enterprise Development) suggest growing slack in the labour market.

**Although Trinidad and Tobago still holds significant buffers, its official reserves declined in 2018.** Despite higher energy production and prices for most energy commodities, the country's gross official reserves fell to US\$7.6 billion at end-2018 (Figure 3) or 8.8 months of import cover. The strong reserve levels, in combination with the assets in the Heritage and Stabilization Fund (US\$5.7 billion) and the relatively low level of external debt (US\$3.8 billion), provide important buffers. During 2018, the domestic financial system benefited from higher inflows of foreign exchange, particularly from the energy sector, but demand for foreign exchange was also relatively robust. To assist in balancing supply and demand in the domestic foreign exchange market, the Central Bank sold US\$1.5 billion to authorized dealers in 2018 – roughly the same as in the previous year. The TT/US dollar exchange rate was stable, ending the year at TT\$6.7861/US\$ – little changed from 2017.

**Figure 3**  
**External Sector Dynamics, 2014 – 2018**  
**(Calendar Year, End of period)**



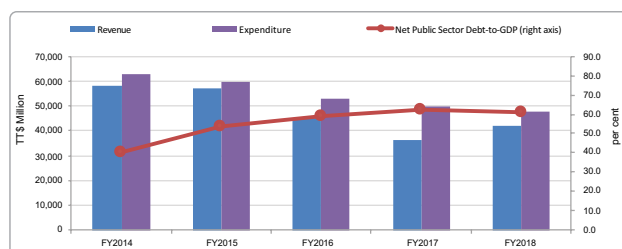
Source: Central Bank of Trinidad and Tobago.

**Government's fiscal position improved in fiscal year (FY)<sup>3</sup> 2018 (Figure 4).** Government revenues were bolstered by higher energy earnings as well as the sale of assets related to the recouping of funds that had been earlier provided in support of a distressed insurance company (Colonial Life Insurance Company (Trinidad) Limited, CLICO). Concurrently, expenditure shrank by 4.2 per cent due to lower transfers and subsidies, wages and salaries and interest payments. As such, the overall fiscal deficit narrowed to 3.4 per cent of GDP in FY 2018 from 9.1 per cent in FY 2017. The deficit was financed by a mixture of domestic and external borrowings, with the Government borrowing approximately \$6.3 billion from the local market in FY 2018. At the end of September 2018, public sector debt-to-GDP stood at 61 per cent compared with 62.7 per cent in the corresponding period a year ago.

**Domestic financial conditions remained supportive of economic activity.** The Central Bank's policy rate hike in June 2018, in the context of adverse TT/US treasury rate differentials, pushed yields on domestic Government securities marginally higher during the second half of the year. However, liquidity levels in the financial system remained easy which, together with heightened competition in the sector, prompted commercial banks to reduce their lending rates during the year.

<sup>3</sup> October 1, 2017 to September 30, 2018.

**Figure 4**  
**Fiscal Operations, FY 2014 – FY 2018**



Source: Central Bank of Trinidad and Tobago.

## CHAPTER 2

### FINANCIAL SECTOR DEVELOPMENTS



## CHAPTER 2

### FINANCIAL SECTOR DEVELOPMENTS

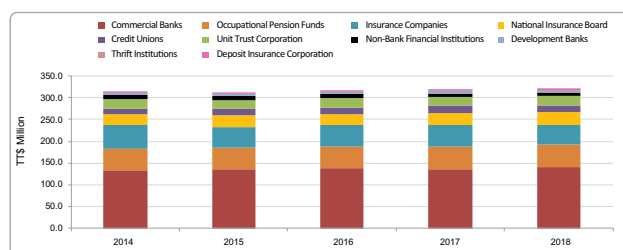
**The financial sector remained resilient and robust in 2018.** There were general improvements in the FSIs, reflecting the generally strong and consistent performance of regulated financial institutions. This chapter will discuss in detail the 2018 performance for the key sub-sectors in the financial system and highlight areas where some added focus may be required. The domestic financial sector is dominated by the banking, insurance and pension sectors which collectively account for approximately 80 per cent of total domestic financial sector assets, as at December 2018 (Figure 5).

#### FINANCIAL SOUNDNESS INDICATORS (FSIs)<sup>4</sup>

##### Banking Sector<sup>5</sup> Financial Soundness

FSIs point to a relatively stable banking sector (Table 1). The sector possesses high capital buffers and healthy balance sheets as reflected by, among other things, a low non-performing loan (NPL) ratio and a stable funding profile. Profitability as measured by return on equity (ROE) remained robust, ending 2018 at 20.2 per cent.

**Figure 5**  
**Composition of Assets in the Financial Sector,**  
**2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

Note: The data for Credit Unions are estimated.

<sup>4</sup> Trinidad and Tobago is an FSI Reporting Country to the IMF's Statistical Department: <https://www.imf.org/external/np/sta/fsi/eng/fsi.htm>.

<sup>5</sup> The banking sector includes the licensed commercial banks and non-bank financial institutions (non-banks) in Trinidad and Tobago licensed pursuant to the Financial Institutions Act, 2008 (FIA).

**Table 1**  
**Banking Sector: Financial Soundness Indicators, 2014 – 2018**  
 /Per cent/

	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18
<b>Capital Adequacy</b>					
Regulatory capital-to-risk-weighted assets	24.6	24.1	23.8	23.4	23.3
Regulatory tier I capital-to-risk-weighted assets	24.3	25.0	23.0	23.1	23.5
Regulatory capital-to-total assets	12.5	12.6	12.5	12.9	12.7
Net open position in foreign exchange-to-capital	6.6	9.7	13.8	16.9	14.4
<b>Asset Composition</b>					
Sectoral distribution of loans-to-total loans					
Households	44.2	44.0	45.7	46.7	47.2
Public sector	14.0	16.8	14.1	13.5	13.1
Financial sector	15.1	13.1	14.4	16.0	16.2
Oil and gas sector	2.8	2.6	3.5	3.1	4.9
Construction	9.8	9.5	6.1	4.5	4.1
Transport and communication	2.9	3.2	2.8	2.8	3.1
Non-residents	4.0	2.6	2.9	3.4	4.1
Foreign currency loans-to-total loans	16.6	15.2	15.5	16.0	17.0
<b>Asset Quality</b>					
Non-performing loans-to-gross loans	4.4	3.7	3.2	3.0	3.1
Non-performing loans (net of provisions)-to-capital	7.3	6.3	6.3	5.9	5.1
Total provisions-to-impaired loans*	53.0	54.3	60.3	65.6	68.6
Specific provisions-to-impaired loans	42.3	42.1	37.4	37.8	53.4
General provisions-to-gross loans*	0.5	0.4	0.7	0.8	0.5
Specific provisions-to-gross loans	1.9	1.6	1.2	1.1	1.7
<b>Earnings And Profitability</b>					
Return on assets	2.1	2.9	2.9	2.9	3.0
Return on equity	13.7	18.4	19.9	19.0	20.2
Interest margin-to-gross income	57.0	58.3	62.0	64.7	62.9
Non-interest income-to-gross income	43.0	41.7	38.0	35.3	37.1
Non-interest expenses-to-gross income	67.0	61.7	60.0	58.1	57.0
<b>Liquidity</b>					
Liquid assets-to-total assets	25.0	23.1	21.8	19.7	19.0
Liquid assets-to-total short-term liabilities	32.5	30.6	27.8	25.3	24.4
Customer deposits-to-total (non-interbank) loans	174.3	159.8	164.6	154.7	153.2
Foreign currency liabilities-to-total liabilities	23.8	25.4	26.0	26.4	26.4

Source: Central Bank of Trinidad and Tobago.

\* These ratios are not the typically used measures of financial soundness, but are included for comparison purposes.

## LIFE INSURANCE SECTOR FINANCIAL SOUNDNESS

The life insurance sector's FSIs remained broadly favourable in 2018. The sector continues to have a strong capital base and good asset mix (Table 2). As a whole, the sector is profitable with the investment yield holding relatively stable since its decline in 2015. Additionally, the expense ratio fell slightly during 2018, signalling the efforts made by institutions to efficiently manage expenses. On the other hand, though still comfortable, liquidity was reduced further due to an increase in policyholder liabilities and the conversion of short-term assets into longer-term bonds, specifically over the last couple years.

**Table 2**  
**Life Insurance Sector: Financial Soundness Indicators<sup>6</sup>, 2014 – 2018**  
**/Per cent/**

	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18
<b>Capital Adequacy</b>					
Capital-to-total assets	21.3	20.7	20.3	21.5	20.9
Capital-to-technical reserves	29.4	28.5	27.6	29.8	29.0
<b>Asset Quality</b>					
(Real estate + unquoted equities + debtors)-to-total assets	7.4	7.8	8.0	8.6	8.8
<b>Earnings and Profitability</b>					
Expense ratio = expense (incl. commissions)-to-net premium	33.6	33.1	28.9	31.0	30.7
Investment yield = investment income-to-investment assets	4.8	4.5	4.7	4.7	4.7
Return on equity = pre-tax profits-to-shareholders' funds	10.7	11.3	15.4	13.8	13.1
<b>Liquidity</b>					
Liquid assets-to-current liabilities	34.0	37.5	27.3	24.9	22.0

Source: Central Bank of Trinidad and Tobago.

## NON-LIFE INSURANCE SECTOR FINANCIAL SOUNDNESS

The general insurance sector has shown a fair degree of resilience in the face of the heightened natural disaster activity in the regional market over the past couple years. This resilience was partly due to the reinsurance arrangements that were in place to manage the adverse effects of such catastrophes. During 2018, measures of asset quality (Table 3) were in line with past trends, while indicators such as return on assets (ROA) and ROE suggest that the sector was profitable – though less so than in previous years. The catastrophic hurricanes in the Caribbean in 2017 resulted in an increase in the number

of claims and pay-outs, which contributed to the decline in the ratio of net technical reserves-to-average net claims paid over the past three years. Additionally, in the last two years, the increased loss ratios negatively affected ROE and ROA.

<sup>6</sup> Figures exclude data from CLICO and British American Insurance Company (Trinidad) Limited (BA) which remained under the emergency control of the Central Bank.

**Table 3**  
**Non-Life Insurance Sector: Financial Soundness Indicators, 2014 – 2018**  
 /Per cent/

	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18
<b>Asset Quality</b>					
(Real estate + unquoted equities + accounts receivables)-to-total assets	13.8	16.4	17.9	18.0	18.3
Debtors-to-(gross premiums + reinsurance recoveries)	11.0	14.1	16.0	11.0	14.9
<b>Reinsurance and Actuarial Issues</b>					
Risk retention ratio = net premiums written-to-total gross premiums	42.5	43.0	45.8	45.2	45.9
Net technical reserves-to-average of net claims paid in the last three years	164.4	167.0	155.9	146.3	140.4
<b>Earnings and Profitability</b>					
Combined ratio	95.7	100.8	102.8	110.4	107.6
Expense ratio = expense (incl. commissions)-to-net premiums	51.4	52.2	55.5	56.8	56.4
Loss ratio = net claims-to-net earned premiums	44.3	48.6	47.2	53.6	51.2
Investment income-to-net premium	5.8	5.8	6.1	6.6	7.4
Return on equity = pre-tax profits-to-shareholders' funds	14.2	10.1	12.7	4.5	6.6
Return on assets	6.4	4.8	5.8	2.0	2.8
<b>Liquidity</b>					
Liquid assets-to-current liabilities	61.2	58.9	49.3	49.8	45.7

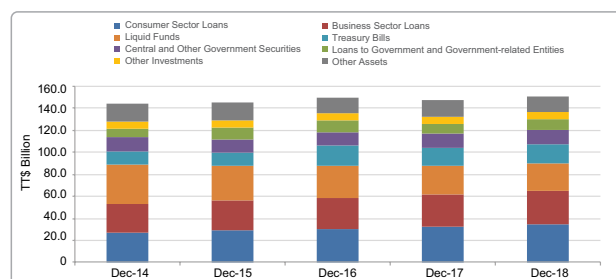
Source: Central Bank of Trinidad and Tobago.

## BANKING SECTOR (COMMERCIAL BANKS AND NON-BANKS)

### Assets

The banking sector's balance sheet expanded in 2018. Following a decline of 1.5 per cent in 2017, assets grew by 2.7 per cent in 2018, ending the year at \$151.1 billion (Figure 6). The asset composition of the banking sector has seen minimal changes over the last year, with loans and investments accounting for 49 per cent and 24 per cent of total banking sector assets, respectively. This reflects the preference over the years for higher holdings of loans and investments with more moderate liquidity positions. Notwithstanding this, liquid funds remained at healthy levels with the ratio of liquid assets<sup>7</sup> to total assets at 19 per cent at the end of 2018. During the year, there was a broad-based expansion in credit to the major sectors – government, businesses and consumers – with the most significant increase reported in the latter.

**Figure 6**  
**Asset Composition, 2014 – 2018**



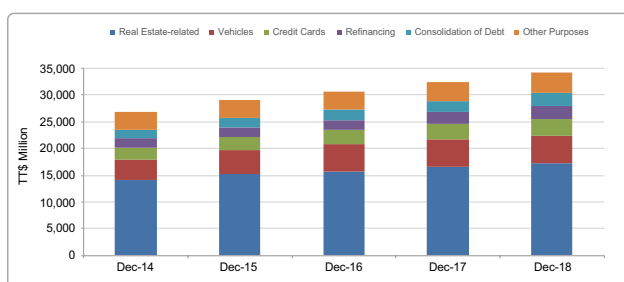
Source: Central Bank of Trinidad and Tobago.

<sup>7</sup> 'Liquid Assets' refers to: cash; deposits at central bank (primary deposits and special deposits); due from banks; cash items in process of collection; deposits by banks in other institutions; inter-bank funds sold; and time deposits.

## Consumer Sector Loans

Consumer loans grew by 5.5 per cent in 2018 to \$34.2 billion (46.2 per cent of total loans) (Table 4). Much of these loans were concentrated in real estate-related<sup>8</sup> debt, motor vehicles, credit cards and debt refinancing<sup>9</sup> and consolidation (Figure 7). The largest exposure banks faced with respect to the consumer sector remains loans for residential mortgages which accounted for 41.3 per cent (\$14.1 billion) of all consumer loans. Meanwhile, total loans for debt refinancing and consolidation have risen strongly over the past few years and comprised 14.4 per cent of total consumer loans at end-2018. Against the backdrop of sluggish economic conditions, this trend may suggest that consumers are continuing to rationalize their loan obligations.

**Figure 7**  
**Consumer Loans by Purpose, 2014 – 2018**

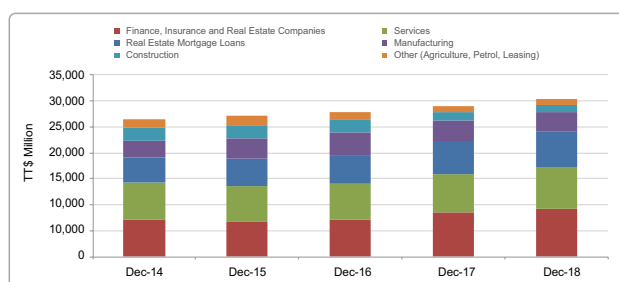


Source: Central Bank of Trinidad and Tobago.

## Business Sector Loans

Lending to businesses expanded at a steady pace during the year. At end-2018, total business loans outstanding stood at \$30.4 billion (Figure 8) – 4.6 per cent higher than in the previous year. Growth was concentrated in real estate mortgages as well as loans to the finance, insurance and real estate sub-sector. In contrast, significant decreases in lending to the manufacturing sector, in particular, the chemicals and non-metallic minerals sub-sector as well as the construction sector were reported. Lending to the hotels and guest houses and leasing sub-sectors also fell, although most of the fall-off in net advances to these sub-sectors occurred within the latter half of 2018.

**Figure 8**  
**Business Loans by Activity, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Table 4**  
**Growth in Consumer Loans by Purpose<sup>10</sup>, 2014 – 2018**  
**/Year-on-Year Per cent Change/**

CATEGORIES	Dec -14	Dec -15	Dec -16	Dec -17	Dec -18
Real Estate (including mortgages)	10.2	7.5	4.1	5.5	4.1
Vehicles	18.7	21.8	7.5	3.0	0.6
Credit Cards	7.8	3.9	13.7	6.1	7.6
Refinancing	5.7	5.3	5.2	10.4	11.4
Consolidation of debt	2.0	4.5	10.1	16.0	18.4
Other Purposes	0.3	2.9	2.6	3.0	6.4
<b>TOTAL GROWTH IN CONSUMER LOANS</b>	<b>8.9</b>	<b>8.3</b>	<b>5.7</b>	<b>5.8</b>	<b>5.5</b>

Source: Central Bank of Trinidad and Tobago.

<sup>8</sup> 'Real estate-related loans' of the consumer sector refers to: real estate mortgages; bridging finance; land and real estate loans; and home improvement or renovation loans.

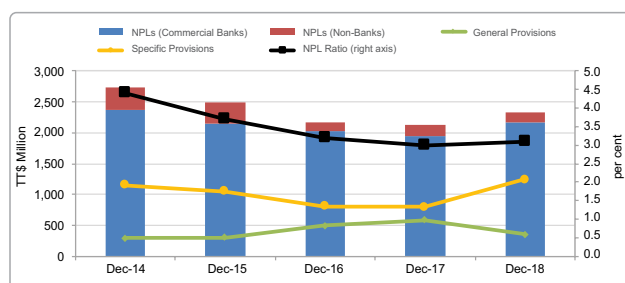
<sup>9</sup> Refinancing is the replacement of an existing debt obligation with another debt obligation under different terms.

<sup>10</sup> Absolute values are available in Appendix A.

### Performance of the Loan Portfolio

The banking sector's loan portfolio remained healthy in 2018. The NPL ratio, a key indicator of credit quality, stood at 3.1 per cent as at December 2018 – little changed from the previous year (3 per cent). This indicates that the banking sector continued to manage its credit risk and loan delinquency effectively (Figure 9). The sector's provisioning for bad loans continued to increase, perhaps reflecting the impact of IFRS 9<sup>11</sup> on banks' provisioning practices. With respect to commercial banks in particular, there

**Figure 9**  
**Banking Sector NPLs, 2014 – 2018**

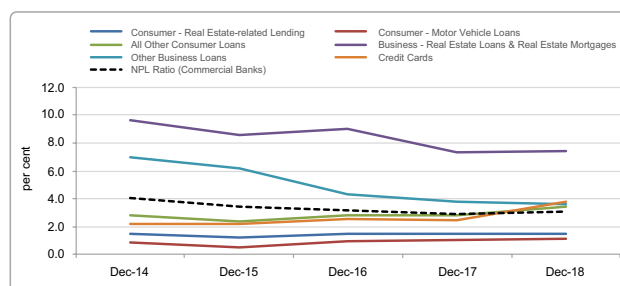


Source: Central Bank of Trinidad and Tobago.

was a slight uptick in business NPLs over the past year which reflected in part exposure to the real estate sector as well as problems faced by some businesses in servicing commercial mortgages. Accordingly, business real estate loans recorded the highest NPL ratio in the commercial banking sector (Figure 10). In addition, there was an uptick in NPLs in the credit card and other consumer loans segments. This may be attributed to challenging conditions in the labour market as private and public entities retrenched workers during the review period. Notwithstanding, the consumer NPL ratio remained relatively low at 2.2 per cent.

### Sovereign Exposure

**Figure 10**  
**Sector Specific NPL Ratios in the Commercial Banking Sector, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

The banking sector's credit exposure to sovereigns increased on account of borrowing by the Government of the Republic of Trinidad and Tobago (GORTT) and state-owned entities (SOEs). Total sovereign credit exposures, which include loans and investments in government (such as Treasury bills<sup>12</sup> and bonds) and government-related entities, totalled \$39.6 billion or 26.2 per cent of banking sector assets. Of this, domestic sovereign exposures<sup>13</sup> amounted to \$30.8 billion (77.8 per cent of total sovereign exposure) which represented an increase of \$1.3 billion over the past year.

In the second half of 2018, loans to state-owned energy firms in the domestic petroleum sector ramped up by approximately \$1.1 billion, in part to finance working capital. Over the same period, investments in GORTT and state-owned securities increased by a similar amount (\$1.2 billion). From the foregoing, there is building concentration of domestic sovereign exposure in the banking sector which may have a potentially adverse impact on the sector if public sector cash flows are impaired.

### LIABILITY PROFILE AND FUNDING

<sup>11</sup> The introduction of the IFRS 9 accounting standard from January 1, 2018 requires financial institutions to consider, inter alia, lifetime expected credit loss and will necessitate revision of loan provisioning methodologies.

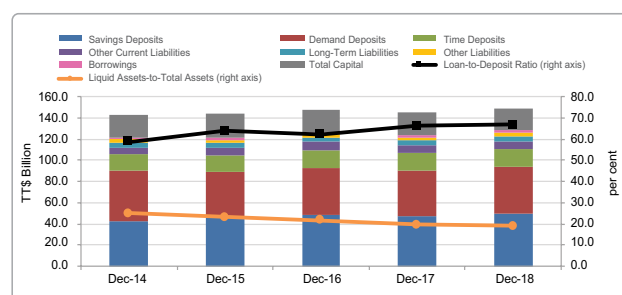
<sup>12</sup> Exposure to the US Government as at December 2018 was \$6.5 billion (16.4 per cent of total sovereign exposures).

<sup>13</sup> The financial stability risks posed by high sovereign exposures are discussed in Chapter 3.

Total banking sector deposits stood at \$110.8 billion at the end of December 2018 (Figure 11), which was an expansion of 3.5 per cent over the year. Deposits, particularly savings and demand deposits, continue to represent the lion's share of the sector's funding resources. Liquid asset buffers remained high and banks were well placed to respond to liquidity shocks. The liquid assets-to-total assets ratio held steady at 19 per cent. Additionally, the loan-to-deposit ratio<sup>14</sup>, which averaged a conservative 62.8 per cent over 2014 – 2017, has been trending upwards, and stood at 66.9 per cent for December 2018. This demonstrated that the system had a capacity and willingness to lend.

### SOURCES OF EARNINGS AND PROFITABILITY

**Figure 11**  
**Deposits, Other Liabilities and Capital,**  
**2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

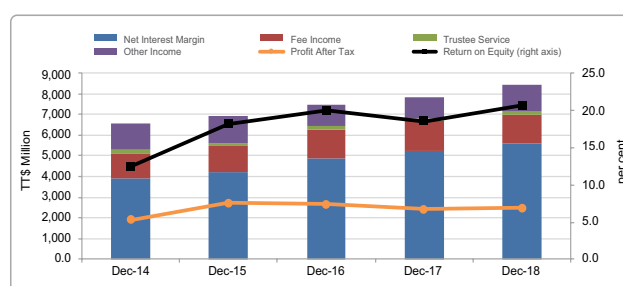
Banks sustained robust profitability levels over the last year. Profit before tax for the four quarters ending December 2018 amounted to \$4.4 billion, which represented an increase of 4.4 per cent (\$186.6 million) from the previous year. The sector's performance was largely driven by core business operations, with interest income continuing to drive operating income. This was particularly true for commercial banks, where their ROE (20.6 per cent) rose when compared with the previous year.

While the commercial banking sector's profitability

(Figure 12) remained driven by interest income, the non-bank sector derived a larger share of its profits from fees since it engages predominantly in trustee, asset management and merchant banking business lines (Figure 13). Over the year, ROE for non-banks declined by 2.9 per cent, but this was mainly on account of one institution adjusting its investment portfolio.

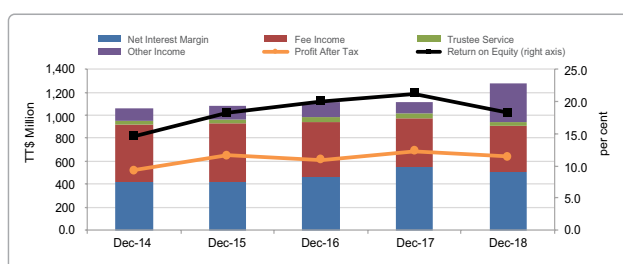
### CAPITAL ADEQUACY

**Figure 12**  
**Commercial Banks' Contribution to Profit**  
**by Source, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Figure 13**  
**Non-Banks' Contribution to Profit by**  
**Source, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

<sup>14</sup> The loan-to-deposit ratio is the ratio of a bank's total outstanding loans for a period to its total deposit balance over the same period. A loan-to-deposit ratio of 67 per cent indicates that a bank lends 67 cents to customers for every dollar that it brings in deposits.

Over the past five years, capital adequacy, as measured by regulatory capital-to-risk-weighted assets (capital adequacy ratio (CAR)) under Basel I requirements, has exceeded 20 per cent. Capital adequacy for the banking sector stood at 23.3 per cent in December 2018. On an individual basis, all institutions reported Basel I CARs over the minimum of 8 per cent with most ratios exceeding 20 per cent.

The Central Bank is awaiting enactment of the new Capital Adequacy Regulations by Parliament to fully implement its Basel II capital rules<sup>15</sup>. Notwithstanding, all commercial banks and non-banks have been reporting under the new capital rules on a parallel basis since April 2018. All licensees have consistently reported healthy and robust capital buffers in excess of regulatory requirements and are therefore well positioned for the roll-out of the new Basel II/III capital standards.

## LIFE INSURANCE SECTOR

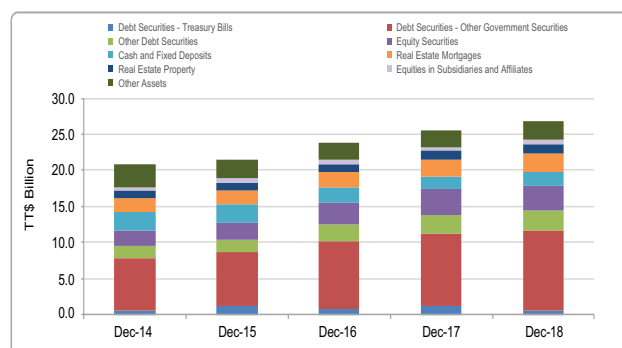
### Asset Base

Total assets in the life insurance sector (net of CLICO/BA) grew at an annual average rate of 6.5 per cent over the last five years and totalled \$26.8 billion<sup>16</sup> as at December 2018. The preference for investments in debt securities by the local insurers has been fairly high, amounting to approximately half of the assets in the life insurance sector (Figure 14). The stable returns in this class of investments over the years, when compared to the performance of equity-type investments, make fixed income instruments more attractive to life insurers. Notably, around 80 per cent of these debt securities are government-issued or government-guaranteed.

For the life insurance sector, there are two systemically important and regionally active market players which together account for 60.6 per cent of the sector's assets and 67.4 per cent of annual gross premium income.

### Lines of Business

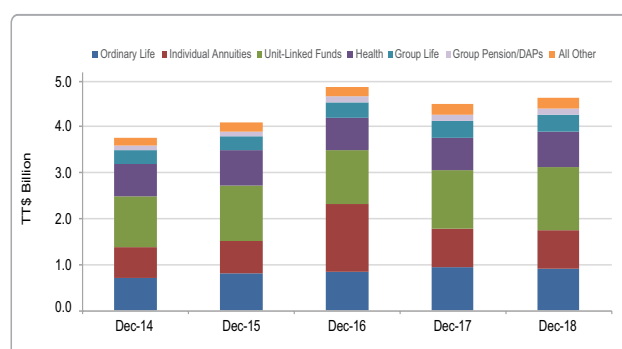
**Figure 14**  
**Assets – Life Insurance Sector, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

There were no significant changes to the types of products being offered in the life insurance industry. Unit-linked products, which are primarily offered by one of the largest companies in the sector, continued to dominate the market in terms of premiums. Despite economic challenges, the life insurance sector showed signs of growth though at a slower rate than in previous years. Overall gross premiums moved from \$3.8 billion as at end-2014 to \$4.6 billion as at December 2018 (Figure 15). In 2016, there was a significant one-off increase of \$0.8 billion in annual premium income which resulted from the acquisition of the annuity business of one pension fund plan by two companies in the industry.

**Figure 15**  
**Gross Premium Income – Life Insurers, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

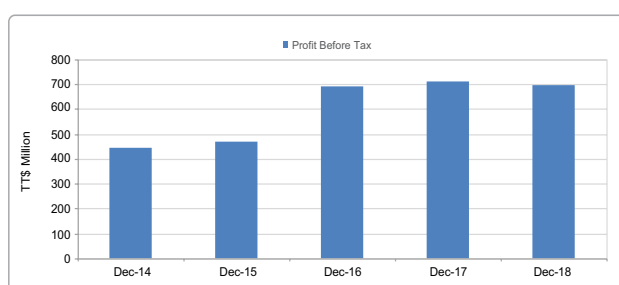
<sup>15</sup> See Chapter 4 for the update on the Basel II/III Implementation Project.

<sup>16</sup> Total assets in the life insurance sector including CLICO/BA amounted to \$41 billion as at December 2018.

## Reported Profits

Since 2016 profits have maintained a measure of stability, (Figure 16) with some decline observed in the last two quarters of 2018. The slight volatility in profits has been mainly due to the impact of foreign exchange fluctuations and more recently, realized and unrealized gains and losses on assets.

**Figure 16**  
**Profits Before Taxes – Life Insurers,**  
**2014 – 2018**

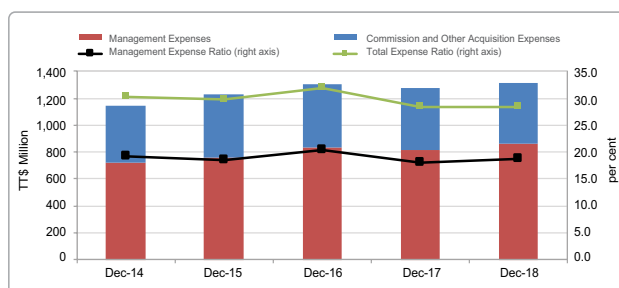


Source: Central Bank of Trinidad and Tobago.

## Expenses

Total expenses have been relatively stable over the last two years (Figure 17). While management expenses have been on the rise during this same period, the impact was offset by a decline in commissions and other acquisition expenses. After some volatility in past years, the total expense ratio (management expenses plus commission and other acquisition expenses as a percentage of premium income) was fairly stable between 2017 and 2018.<sup>17</sup>

**Figure 17**  
**Expenses and Expense Ratios –**  
**Life Insurers, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

## NON-LIFE INSURANCE SECTOR

Total assets in the non-life sector stood at \$5.9 billion as at December 2018, growing at an annual average of 2.4 per cent over the last five years. The latter half of 2017 saw a \$250 million increase in assets, reflecting the funds advanced from the reinsurers for claims stemming from the hurricanes in the region. As these claims were paid and settled in 2018, these assets were released, resulting in a decline in assets of approximately 5 per cent over the year.

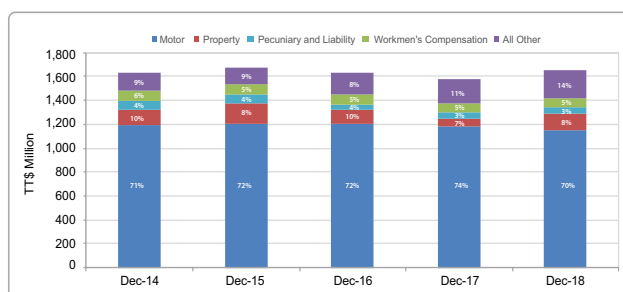
Annualized gross premium income for the non-life insurance sector totalled \$3.6 billion for the year ending December 2018. After experiencing declines in 2016 and 2017, due to softening premium rates and decreased demand for insurance coverage from the energy sector, gross premiums rebounded by approximately 3 per cent. Notably, one institution with a regional presence controls approximately one-third (32.9 per cent) of the market share based on annualized gross premiums, while the next three largest institutions total 30.1 per cent.

## Lines of Business

Following a two-year period of decline, net retained premiums totalled \$1.6 billion for the year ending December 2018 - an increase of 4.8 per cent from the previous year. The gross premiums written for the motor and property lines of business accounted for 37.7 per cent and 44.7 per cent of total gross premiums written, respectively. However, after the deduction of reinsurance premiums the composition of total net premiums retained shifted to 70 per cent for motor business and 8.4 per cent for property business (Figure 18). This disparity is due to the fact that a large proportion of property risk underwritten is reinsured, whereas for motor vehicle business most of the risk is retained by the local insurers.

<sup>17</sup> Note that the one-off increase due to the acquisition of annuities in late 2016 was removed to avoid significantly skewing the total expense ratio.

**Figure 18**  
**Net Retained Annual Premiums Income –**  
**General Insurers, 2014 – 2018**



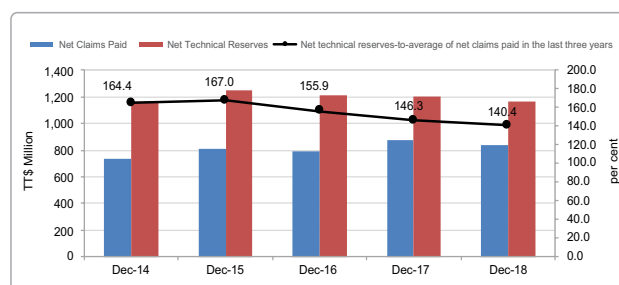
Source: Central Bank of Trinidad and Tobago.

### Claims Adequacy

Catastrophic natural disasters and other weather-related events such as heavy rainfall and flooding have increased the number and value of frequency and severity of claims on the non-life insurance sector in recent years. The companies impacted have competently managed the consequences of these events as claims that emanated from the 2017 hurricanes have been fully paid and settled. Over the latter part of 2018, an earthquake and heavy rainfall in Trinidad and Tobago resulted in increased claims. While not yet reflected in the data for net claims paid for the period, companies have reported that such claims are being processed in a timely manner.

Claim reserves have been contracting since 2016 as greater focus was placed on the claims management process and quicker settlements of claims. The reduction in claim reserves combined with the increasing trend in the amount of claim payments, have resulted in net technical reserves falling to 140.4 per cent of the three-year average of net claims paid as at December 2018 (Figure 19).

**Figure 19**  
**Net Technical Reserves<sup>18</sup>/Three year**  
**Average Net Claims Paid, 2014 - 2018**

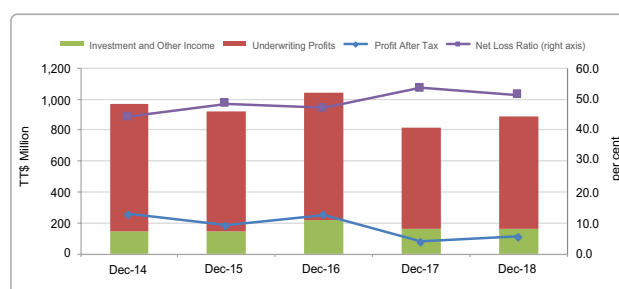


Source: Central Bank of Trinidad and Tobago.

### Loss Ratios And Profitability

In 2018, the industry showed signs of recovery from the catastrophic events that took place in the prior year. This was evidenced by the improvement in the underwriting profits and net loss ratio (Figure 20) and is further testament to the robust reinsurance arrangements for the companies impacted by the hurricane-related claims.

**Figure 20**  
**Contribution to Profit and Expenses –**  
**General Insurers, 2014 – 2018**



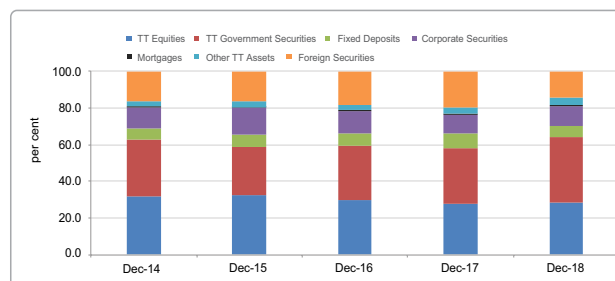
Source: Central Bank of Trinidad and Tobago.

<sup>18</sup> Technical Reserves = Claims Reserves + any Other Transfers from Funds.

## OCCUPATIONAL PENSION PLANS

As at December 2018, there were 185 (Table 5) active registered occupational pension plans, with another 80 in the process of being wound up. Total membership in these plans was approximately 96,000 persons at end-2018. Total occupational pension plan assets increased marginally over the year from \$48.5 billion at end-December 2017 to \$50.3 billion as at December 2018. Corporate Trustees licensed to do trust business under the FIA, managed approximately 81 per cent of all pension plan assets (\$40 billion).

**Figure 21**  
**Assets as a Proportion of Funds – Pension Plans Asset Mix, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Table 5**  
**Pension Plan by Type, 2018**

	Sponsored by Government / Government Related Entities		Private Company Sponsored	
	Defined Benefit	Defined Contribution / Hybrid	Defined Benefit	Defined Contribution or Hybrid
<b>Number of Plans</b>	35	8	72	70
<b>Total Assets (TT\$ Billion)</b>	29.9	0.3	12.7	7.4

Source: Central Bank of Trinidad and Tobago.

Notably, of the 185 plans, 43 are sponsored by Government or Government-related entities. These plans accounted for:

- 60 per cent of the total assets in the pensions sector (\$30 billion); and
- 48 per cent of total membership (46,000 persons).

For the plans managed by corporate trustees, the pension plans' asset mix remained steady with TT equities and TT Government securities dominating, accounting for approximately 28 per cent and 36 per cent, respectively (Figure 21).

Defined benefit pension plans continued to be challenged by the low interest rate environment. As such, the actuaries' interest rate assumption has declined from, on average, 6.8 per cent per annum in the 2009-2011 period to 5.2 per cent per annum in the 2015-2017 period. This has impacted the overall contribution rates recommended by the plans' actuaries. These rates have increased from, on average, 14 per cent of pensionable earnings in the period 2009-2011 to 17 per cent in the period 2015-2017. The Central Bank continued to actively engage trustees and plan sponsors to encourage effective and timely implementation of the actuaries' recommendations. However, the challenging macroeconomic environment increases the risk that sponsors may be unwilling or unable to meet the cost to provide promised benefits.

## BOX 2: CAPITAL MARKET DEVELOPMENTS IN TRINIDAD AND TOBAGO

The development of domestic capital markets supports economic growth by facilitating more efficient allocation of capital to the real economy and providing enhanced risk sharing within the financial sector (Laeven 2014). According to the Securities Act, 2012, the Trinidad and Tobago Securities and Exchange Commission (TTSEC) has been tasked with promoting this development without compromising the health of the industry. The continuous evaluation of industry risk exposures is therefore a core function of the TTSEC. At the same time, the interconnections between the capital markets and the wider financial system warrant continued monitoring as they present potential channels for systemic risk transmission. Additionally, recent discussions surrounding regional acquisitions involving several companies listed on the domestic stock exchange have increased the focus on systemic risks.

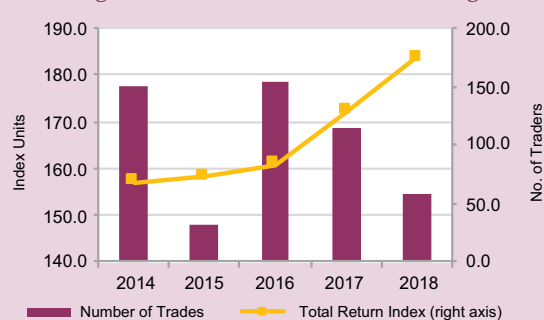
The domestic capital market is comprised primarily of the fixed income security market, equity market and collective investment schemes (mutual funds). This Box highlights developments in the industry over the twelve months ended December 2018.

### Fixed Income and Equity Markets

There were 21 issues on the primary fixed income security market in 2018 (\$14.8 billion), compared to 18 issues in 2017 (\$12.8 billion). The total value issued included a \$4 billion bond raised in three series by the National Investment Fund Holding Company Limited (NIF)<sup>1</sup> in August 2018. With the NIF issue helping to bolster Government's financial position, the Central Government was less active on the primary market during the year. Trading on the secondary Government bond market halved over the period but growth in the total return<sup>2</sup> index remained robust (Figure 1).

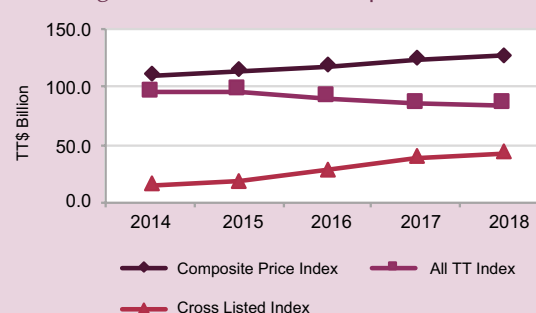
### Fixed Income and Equity Markets Developments, 2014 – 2018

Figure 1: Government Bond Trading



Source: Trinidad and Tobago Stock Exchange.

Figure 2: Stock Market Capitalization



Source: Trinidad and Tobago Stock Exchange.

Performance indicators of the domestic equity market in 2018 were mixed (Figure 2). Market capitalization rose by 2.3 per cent, reflecting the strong performance of companies on the Cross Listed Index (10.2 per cent). The latter was driven by financial conglomerates. On the other hand, the market capitalization of the All TT Index continued to decline, albeit at a slower pace than in 2017.

<sup>1</sup> The NIF was incorporated in May 2018 for the purpose of monetizing the assets transferred to the Government as repayment of the debt owed by CL Financial and its subsidiaries.

<sup>2</sup> Total return consists of capital gains and interest.

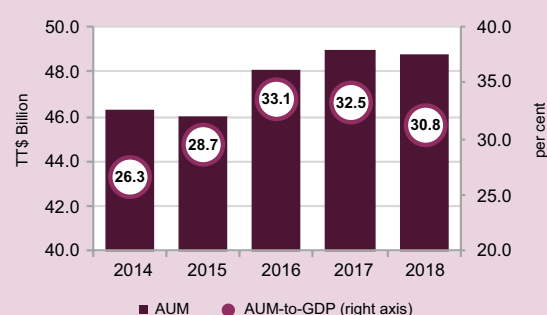
## BOX 2: Continued

### Collective Investment Schemes (CISs)

The TTSEC reported \$48.8 billion in assets under management (AUM) for the CIS industry<sup>3</sup> at the end of December 2018 (Figure 3), a marginal decline of 0.4 per cent over the year. The Central Bank captures information from four mutual fund providers<sup>4</sup> which accounted for roughly 91 per cent of total industry funds under management as at end 2018. AUM for these institutions grew by 2.5 per cent during 2018. With respect to the investment structure (Figure 4), income funds continued to dominate the portfolio but their share has decreased in recent years in favour of liquid, shorter-term money market funds.<sup>5</sup>

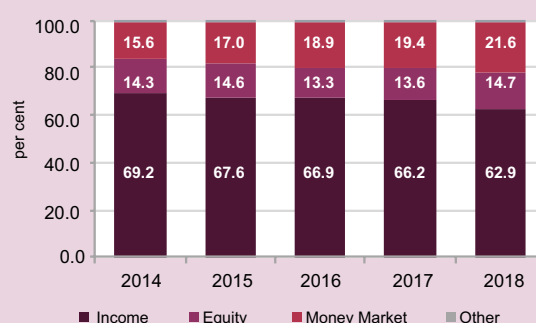
### CIS Industry Developments, 2014 – 2018

Figure 3: AUM



Source: TTSEC.

Figure 4: Portfolio Investment Structure



Source: Central Bank of Trinidad and Tobago.

Note: CIS data by fund type refers to information collected by the Central Bank from the four mutual fund providers.

### Regional Developments

The domestic capital market has been described as shallow and narrow given the limited number of listings and low trading volatility. This is characteristic of capital markets in small, developing economies and is similar to the rest of the Caribbean. Acquisitions among regional conglomerates, if materialized, could increase share prices of the acquiring companies in the short term. However, these events could further reduce market depth, constrain liquidity and increase market concentration.

The establishment of a single, regional capital market may counteract these risks by facilitating the deepening of the financial market through greater private sector financing opportunities and increased liquidity. A regional capital market, perceived as more resilient to shocks than local markets, could also boost confidence which can encourage activity by regional investors as well as attract foreign investment. At CARICOM's Council for Finance and Planning meeting in June 2018, it was agreed that the integration of regional capital markets could fuel economic growth. As such, the decision was made to develop the requisite legislation by mid-2019.

<sup>3</sup> There were 67 CISs registered with the TTSEC at the end of 2018.

<sup>4</sup> The Central Bank collects mutual fund information from the Trinidad and Tobago Unit Trust Corporation, RBC Investment Management (Caribbean) Limited, Republic Bank Limited and First Citizens Asset Management Limited.

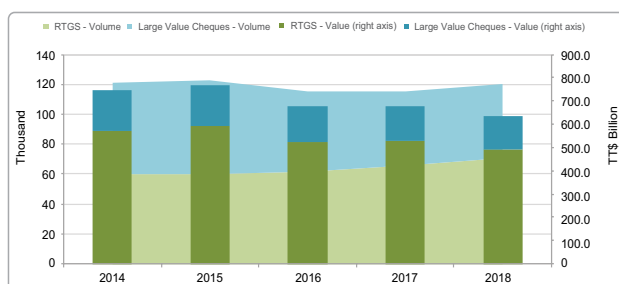
<sup>5</sup> In 2018, a re-classification of the mutual fund types was conducted to more accurately represent characteristics of the local industry. This was done for all historic periods in an effort to maintain consistency.

## PAYMENTS SYSTEMS

### Payments System Activity (Local Currency Payments)

The usage of electronic payment methods continued to expand in 2018 as reflected in the increased activity across the various payment systems. As in previous years, the volume of wholesale (large value) transactions settled over the Real Time Gross Settlement System (RTGS) grew by 8 per cent in 2018, while the volume of transactions for large value cheques<sup>19</sup> continued its downward trend declining by 1.3 per cent in 2018. In value terms, RTGS transactions and large value cheque payments decreased by 7 per cent and 2.6 per cent, respectively (Figure 22). As a percentage of GDP, the value of RTGS transactions stood at 310.5 per cent in 2018.

**Figure 22**  
Share of Wholesale Payments – Volumes and Values, 2014 – 2018



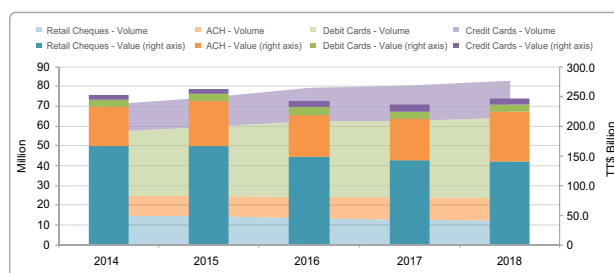
Source: Central Bank of Trinidad and Tobago.

In terms of retail payments, the volume and value of electronic payments maintained an upward trajectory, while simultaneously the volume and value of retail cheque<sup>20</sup> payments continued along a declining path. The Automated Clearing House (ACH) processed a higher volume and value of transactions in 2018, 11.6 million transactions valued at \$83.4 billion when compared to the previous year. Although the value of retail cheques maintained its dominance at \$140.9 billion in 2018, there was a decrease in the volume of retail cheques payments to 12 million, representing a 6.9 per cent fall from last year (Figure 23).

The volume of card payments outstripped the other retail payments instruments in 2018. More specifically, debit card transactions dominated as in past years; accounting for 49.2 per cent of the total volume of retail payments and largely reflected increased activity at the point of sale (POS) terminals. Credit cards transactions were the second highest at 22.2 per cent, followed by retail cheques at 14.5 per cent and ACH transactions at 14 per cent.

Notwithstanding the trends in transaction volumes, in terms of value, retail cheques continued to account for the largest share of retail payments at 57.2 per cent, followed by the ACH at 33.5 per cent, debit cards at 5.3 per cent and credit cards 4.1 per cent.

**Figure 23**  
Share of Retail Payments – Volumes and Values, 2014 – 2018



Source: Central Bank of Trinidad and Tobago.

### Payments Infrastructure

At the end of 2018, the number of Automated Teller Machines (ATMs) and POS Terminals rose to 476 and 22,901, respectively. This growth in POS services has been linked to commercial banks' business strategies and objectives to increase electronic payments by inter alia expanding the network of merchants and encouraging customers' use of digital channels to conduct transactions. Consequently, where some banks reduced their footprint via closure of selected bank branches, additional ATMs were commissioned to improve access to banking services in certain geographical locations.

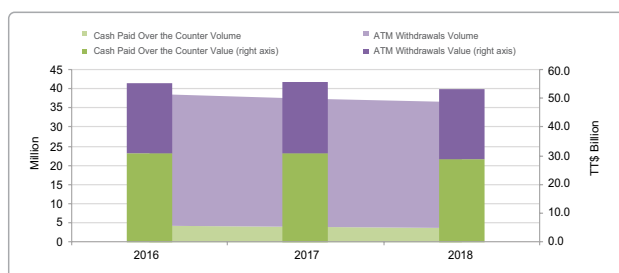
<sup>19</sup> Large value cheques are those that are greater than \$500,000 in value.

<sup>20</sup> Retail cheques are those that are less than \$500,000 in value.

### Cash Withdrawals

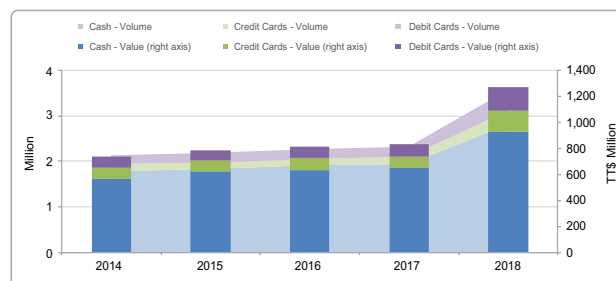
Although cash remains the preferred payment instrument, banks' strategies to increase electronic payments may be partly responsible for declines in both the volume and value of cash paid over-the-counter at commercial banks and cash withdrawals at ATMs. The volume of cash paid over-the-counter reduced to 3.6 million from 4 million, and ATM withdrawals declined from 33.3 million to 32.8 million. The value of ATM withdrawals fell from \$24.8 billion in 2017 to \$24.4 billion in 2018, while cash paid over-the-counter fell from \$30.9 billion to \$28.9 billion for the same period (Figure 24).

**Figure 24**  
**Cash Withdrawals – Volumes and Values, 2016 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Figure 25**  
**Trends in Domestic Retail Payments – Bill Payments, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

### BILL PAYMENT SERVICE PROVIDERS (BPSPS)

In 2018, the three registered BPSPs processed a total of 3.6 million transactions valued at \$1.3 billion, compared with 2.3 million transactions valued at approximately \$800 million in 2017. This significant expansion in 2018 was due to a BPSP acquiring the contract to process payments for a large telecommunications provider. Cash remained the most popular means of making payments at BPSPs (Figure 25), however the use of debit and credit cards exhibited significant increases in 2018.



## CHAPTER 3

### VULNERABILITIES AND RISKS

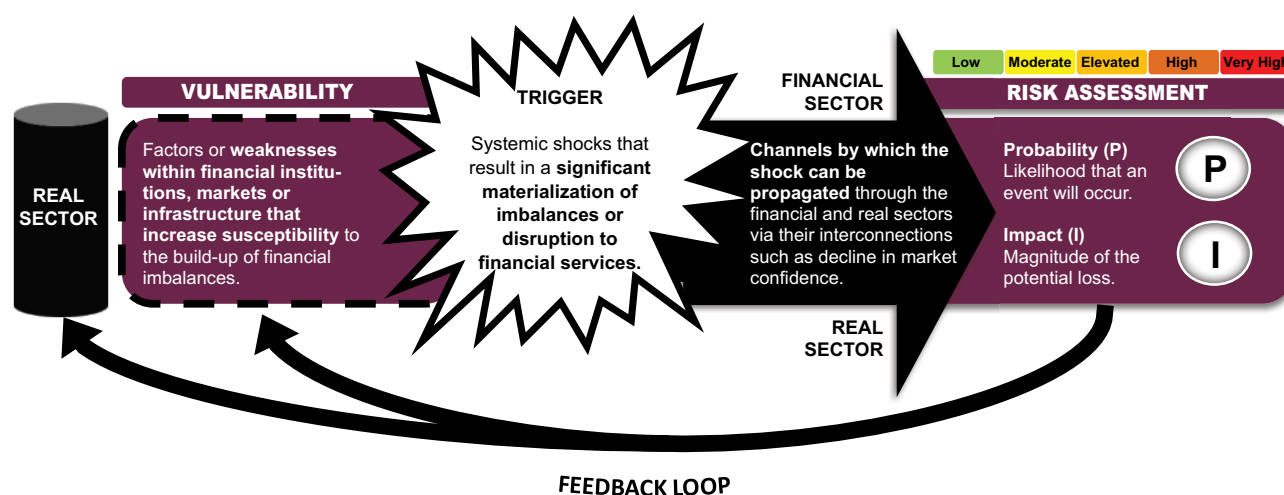


## CHAPTER 3

### VULNERABILITIES AND RISKS

This chapter adopts an integrated approach<sup>21</sup> to discuss the transition of vulnerabilities to risks in the macro-financial system (Figure 26). The risk assessment continues to be based primarily on expert judgement complemented by an analysis of domestic macro-prudential indicators (Appendix B). The risk rating categories are defined in Appendix C. Complementing the customary single-factor stress tests of the commercial banking sector is a scenario which examines the possible impact on the banking sector of a deterioration in public sector debt fundamentals (Box 3).

**Figure 26**  
**Vulnerabilities and Risks Assessment Framework**



Source: Central Bank of Trinidad and Tobago.

While most of the financial system vulnerabilities identified in the 2017 report remain relevant, a few additional vulnerabilities emerged in 2018. These new vulnerabilities: (i) limited institutional capacity to keep pace with evolving international standards; and (ii) rapid digitalization in the financial services industry – join those which emanate from the financial sector's interaction with the household and public sectors. The 2017 FSR also highlighted the following key risks to financial stability:

1. Deterioration in the quality of consumer loan portfolios;
2. Rise in public sector-related non-performing loans; and
3. Unfavourable movements in investment portfolios.

For 2018, the first two risks persist, but the third has dissipated. Instead, two additional risks have arisen in light of the newly identified vulnerabilities. These risks are:

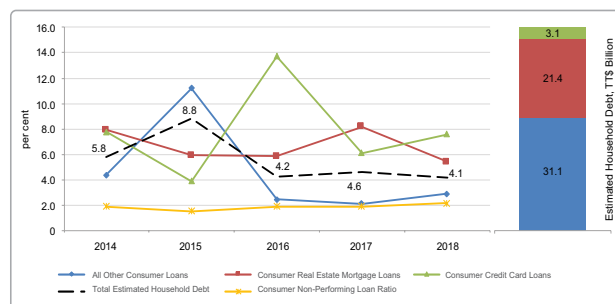
- i. Delays in executing international payments; and
- ii. Loss of confidence in digital transformation.

<sup>21</sup> The framework was adapted from the approach used by the Bank of Canada and is based on work undertaken by Adrian, T, D Covitz, and N Liang. "Financial Stability Monitoring." Federal Reserve Board Finance and Economics Discussion Paper, 2013 and the 2013 Annual Reports of the US Department of the Treasury and the Office of Financial Research.

## GROWING HOUSEHOLD INDEBTEDNESS

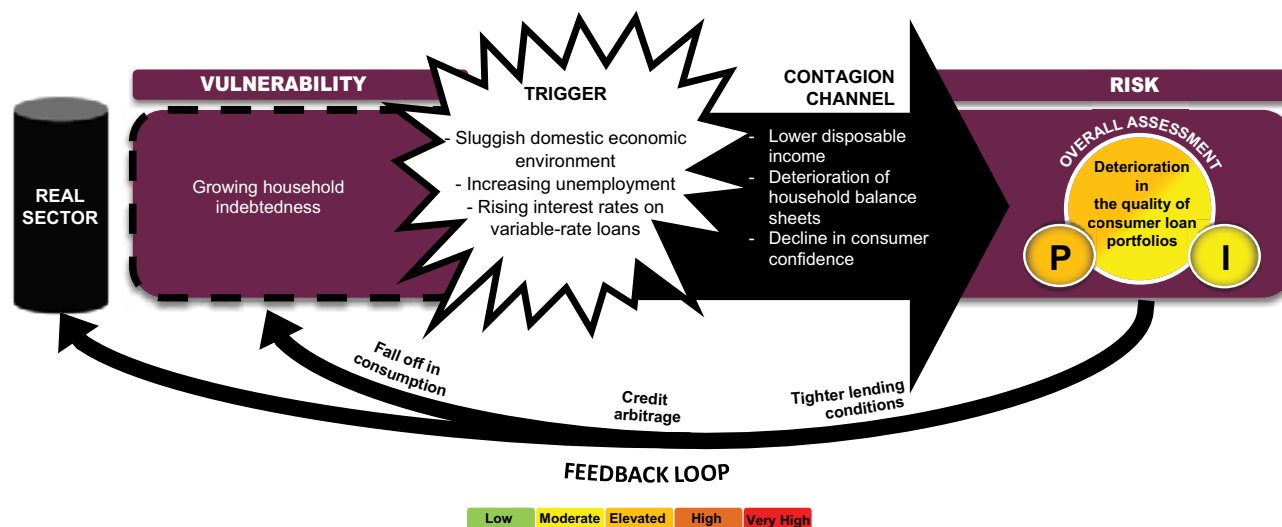
Household debt has risen consistently over the past few years and continues to be a potential source of vulnerability to the financial system (Figure 27). The estimated household debt burden<sup>22</sup> (Figure 28) stood at \$55.6 billion in 2018, which was 4.1 per cent higher than in the previous year and represents roughly 35 per cent of GDP. The banking sector accounts for 60 per cent of total estimated household debt and, in turn, the sector's exposures to households are not insignificant at 22.6 per cent and 160.5 per cent of its assets and capital, respectively. Given the sheer size of outstanding household debt, negative economic shocks and further labour market softening which may impact households' ability to service their loans, can have adverse repercussions for the financial system.

**Figure 28**  
**Estimated Household Debt<sup>23</sup> Growth, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Figure 27**  
**Vulnerabilities and Risks Assessment Framework – Household Indebtedness**



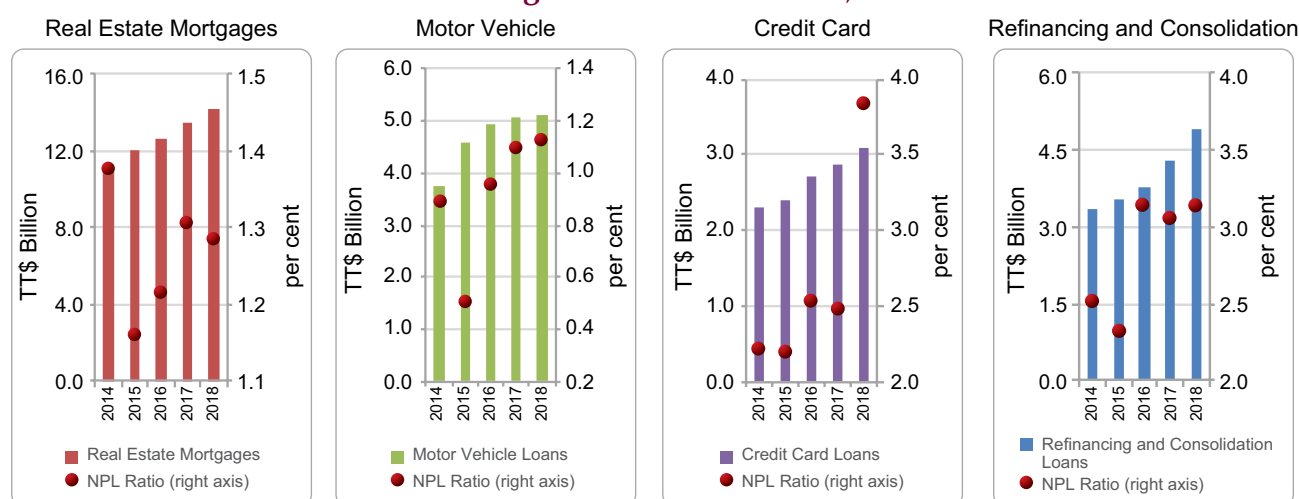
Source: Central Bank of Trinidad and Tobago.

<sup>22</sup> Household debt comprises credit extended to households from: commercial banks; non-banks; insurance companies; credit unions; the Home Mortgage Bank; the Trinidad and Tobago Mortgage Finance Co. and other retail merchants.

<sup>23</sup> All Other Consumer Loans comprises of those loans made to households for: purchasing motor vehicles; refinancing and consolidation; education; medical; travel; and other miscellaneous expenses.

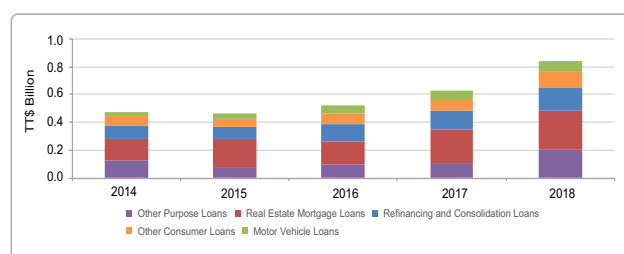
**Financial stability risks from the household sector appear contained, but challenges may be ahead.** The consumer NPL ratio remained relatively low, at just 2.1 per cent in 2018, with the associated NPL ratios for real estate mortgage and motor vehicle loans – two of the larger consumer loan categories – also well contained (Figure 29). The NPL ratio for credit card loans, on the other hand, rose from around 2.5 per cent in 2017 to just under 4 per cent in 2018. Additionally, a pick-up in past due (not yet considered non-performing) consumer loans was also observed in 2018 (Figure 30), which may portend future challenges for asset quality if not regularized.

**Figure 29**  
**Selected Loan Categories and NPL Ratios<sup>24</sup>, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Figure 30**  
**Loans Past Due (over 30 days – 89 days) by Selected Loan Categories<sup>25</sup>, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

Prudential authorities across the globe have gauged the possible financial stability risks from the household sector by mapping the channels through which key triggers of household financial stress may originate from the real economy or through financial policies. In the current context, some of these triggers include a negative shock to the domestic economy, a sharp rise in unemployment and higher interest rates, all of which can lead to a decline in household disposable income. Although the latter may be less likely given the recent shifts in the international monetary policy landscape, it is nevertheless worthwhile to consider given that over 90 per cent of commercial banks' outstanding residential real estate mortgages are

<sup>24</sup> NPL ratios are based on commercial bank data only.

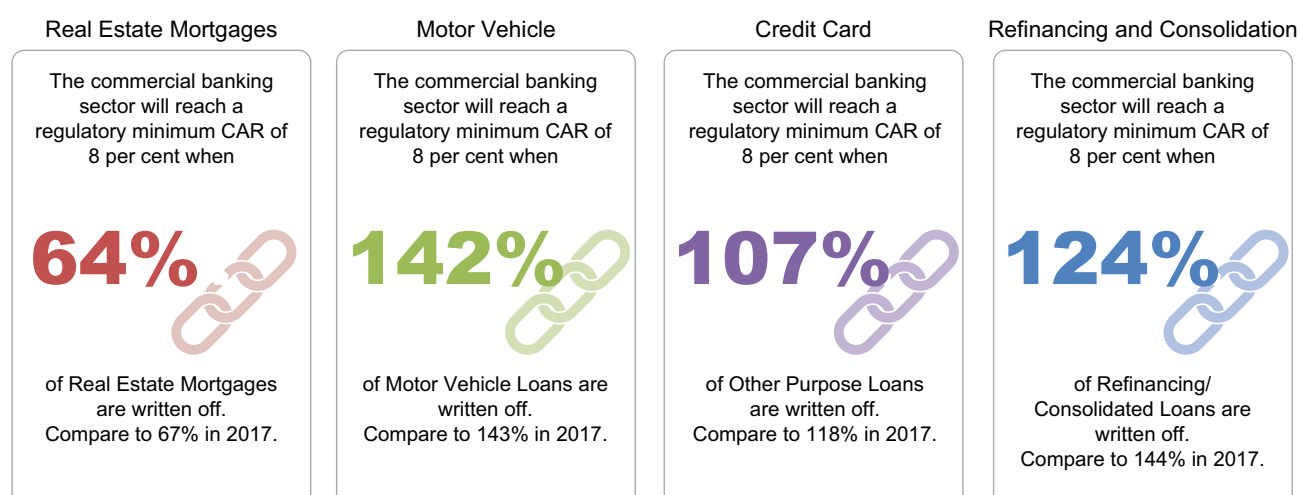
<sup>25</sup> 'Other Purpose Loans' includes credit card loans and other miscellaneous expenses, where credit card loans account for over 50 per cent of the total.

variable-rate, thus making consumers particularly susceptible to upward interest rate adjustments. Taken together, these triggers could restrict households' debt-servicing capabilities and present downside risks to the banking sector's asset quality, profitability and capital adequacy.

**Second round effects and negative feedback loops to the real economy can be expected if this vulnerability is triggered.** All else being equal, higher NPLs can lead to a fall in the banking sector's capital which increases its susceptibility to negative shocks. To mitigate/manage these risks, and considering the advent of the new accounting standard which calls for an estimation of expected credit losses (IFRS 9), banks may adopt more conservative lending practices at the expense of lending to potentially riskier borrowers such as small and medium size enterprises which could undermine financial inclusion, increase credit disintermediation and stymie investment. At the same time, these actions may push some borrowers to unregulated or under-regulated areas of the financial system and may lead to a build-up of other vulnerabilities. For example, there is anecdotal evidence of an increase in shadow banking activity, as the number of retailers granting credit to customers increased over the years.

**As the foregoing developments can have detrimental effects on the real economy, the timely recognition of credit risks can help promote a safe and sound banking system.** With this in mind, a breaking point<sup>26</sup> stress testing exercise was conducted on the main segments of the commercial banking sector's<sup>27</sup> consumer loan portfolio. This was done to gauge the impact of a shock to households' debt-servicing capacity on the CAR of these institutions. The results below (Figure 31) bode well for commercial banks' resilience as they suggest that these institutions are well placed to withstand large and in some cases complete write-downs in their main consumer loan portfolios. Notwithstanding evidence which suggest that licensed financial institutions are well capable of managing significant shocks to their consumer loan portfolios, given measured economic activity, evidence of labour market slackening and the fact that there is an uncaptured portion of household debt, the overall risk is assessed as **'moderate to elevated'**. The probability of this risk occurring is assessed as **'elevated'** and its impact can be **'moderate'**.

**Figure 31**  
**Stress Testing to the Breaking Point**



Source: Central Bank of Trinidad and Tobago.

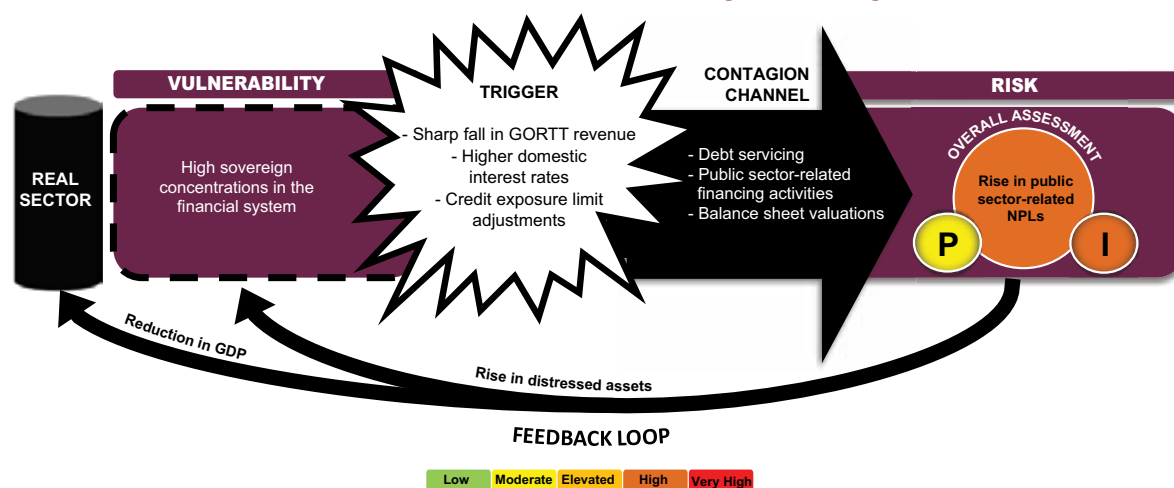
<sup>26</sup> The breaking point refers to the point at which the CAR reaches the regulatory minimum of 8 per cent in response to a shock to the particular loan sector.

<sup>27</sup> The commercial banking sector accounts for approximately 95 per cent of total banking sector consumer loans.

## HIGH SOVEREIGN CONCENTRATIONS IN THE FINANCIAL SYSTEM

The domestic financial system's relatively high and growing exposure to sovereign debt represents a latent vulnerability to financial stability (Figure 32). The GORTT has chosen to finance the majority of its borrowings domestically (Figure 33). As such public sector debt has increased, driven by both the Central Government and contingent liabilities related to SOEs (Figure 34). For the most part, the domestic sovereign remains an attractive investment, given its significant financial buffers, strong track record of repayment and limited alternative local investment opportunities. Financial regulatory guidelines such as the zero-risk weights applied to Government (or Government-backed) securities by commercial banks and foreign investment limits for insurance companies add to the 'home bias' for sovereign paper. As a result, domestic sovereign exposures in the banking, insurance and pension sectors<sup>28</sup> have built-up over the years and accounted for 30.7 per cent of their combined assets at end-2018. A negative shock which reduces the sovereign's ability to service its debt obligations (such as a sharp decline in energy prices) can lead to asset quality, liquidity and solvency issues for domestic financial institutions.

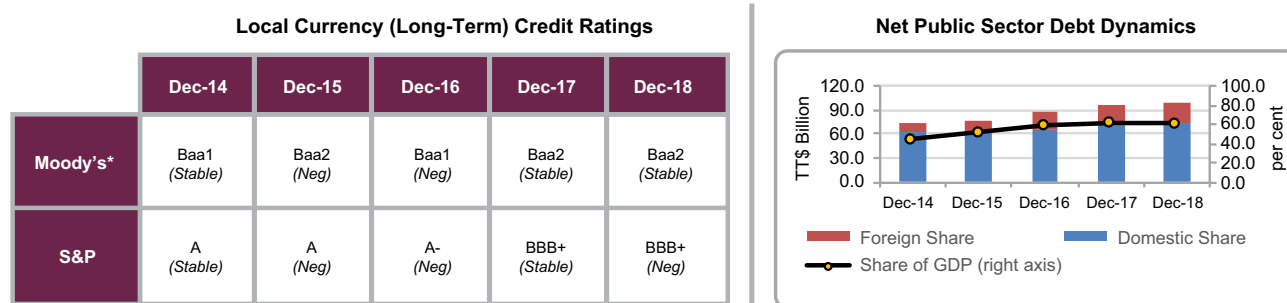
**Figure 32**  
**Vulnerabilities and Risks Assessment Framework – High Sovereign Concentrations**



Source: Central Bank of Trinidad and Tobago.

<sup>28</sup> These sectors collectively account for 74.6 per cent of total financial system assets, as at December 2018.

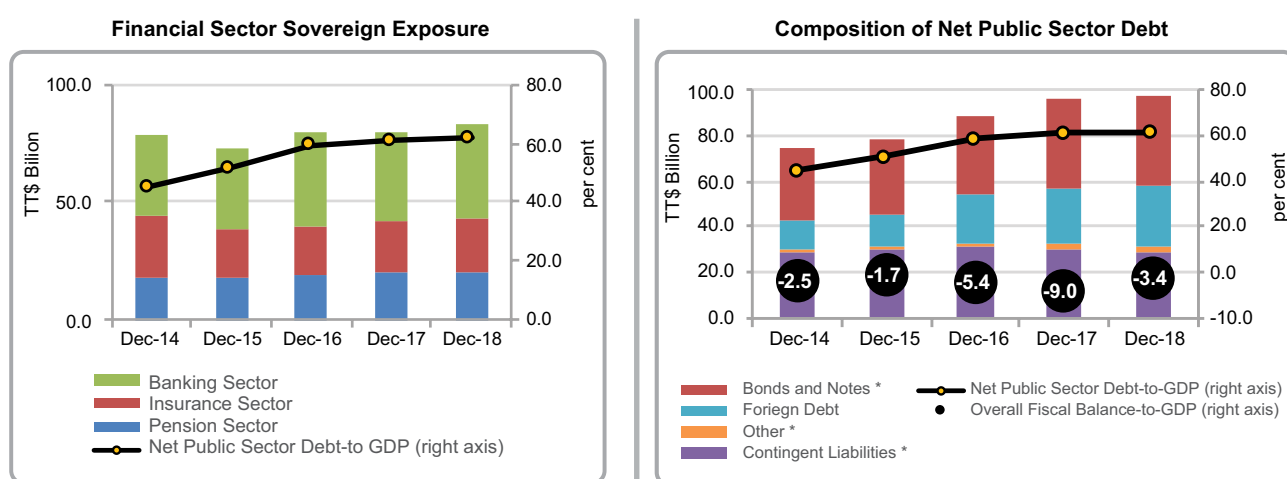
**Figure 33**  
**GORTT Debt Profile<sup>29</sup>, 2014 – 2018**



Source: Moody's Investor Service, Standard & Poor's Global Ratings and Central Bank of Trinidad and Tobago.

Note: \*Represents the short-term local currency ratings as a proxy for long-term ratings.

**Figure 34**  
**Financial Sector Exposure to Public Sector Debt, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

Note: Sovereign exposures comprise treasury bills and loans and investments to the central government, local government, SOEs and statutory bodies.

Source: Central Bank of Trinidad and Tobago.

Note: \*Represents domestic debt.

### Several factors can threaten sovereign debt sustainability.

A sharp decline in revenues precipitated by a fall in energy prices and/or weak non-energy revenue collections can hinder the public sector's ability to service its debt. On the supply side, adjustments to institutions' risk management practices and a reduction in appetite for sovereign paper on the whole could also constrain the Government's ability to re-finance existing debt. These factors pose direct impacts on financial institutions' balance sheet health and reduce profitability through foregone interest revenue

and possible impairment costs. Second round effects can come from higher interest rates as markets begin to price in the sovereign's elevated risk profile, resulting in mark-to-market valuation write-downs on institutions' investment portfolios.

**Stress testing results highlight the vulnerability posed by heavy exposures to the sovereign in the commercial banking sector.**<sup>30</sup> Results from the December 2018 large exposure stress test showed that banks' CAR fell by roughly

<sup>29</sup> According to the IMF Guidance on Debt Sustainability for emerging market economies, it is assumed that debt-to-GDP ratios exceeding 60 per cent are considered unsustainable.


<sup>30</sup> See Box 3 for scenario for sovereign concentrations in the commercial banking sector.

15 percentage points to below the minimum threshold of 8 per cent when a shock (that is, 50 per cent of Government loans and securities become impaired) was applied to the domestic sovereign group (Table 6). As discussed in detail in past editions of the FSR, sovereign debt concerns can create negative feedback loops between the economy and the financial system.

**In light of the above discussions, the risk from the high sovereign exposure vulnerability continues to be assessed as ‘high’, consistent with last year’s FSR.** The probability of a rise in public sector-related NPLs remains ‘moderate’ while the associated impact of this risk on the domestic financial system and real economy continues to be rated as ‘high’. This assessment highlights the importance of sound fiscal management and the need to pay close attention to sovereign exposures in the financial system.

**Table 6**  
**Large Exposure Stress Test – GORTT Shock, 2014 – 2018**

Adjusted CAR (per cent)	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18
PRE-Shock CAR	20.8	20.4	20.5	20	19.9
POST-Shock CAR	10.4	9.4	5.2	5.2	5.2
Change in POST-Shock CAR (percentage points)	-10.4	-11.0	-11.0	-14.8	-14.7



Source: Central Bank of Trinidad and Tobago.

Note: The minimum CAR is 8 per cent under Basel I and 10 per cent under Basel II.

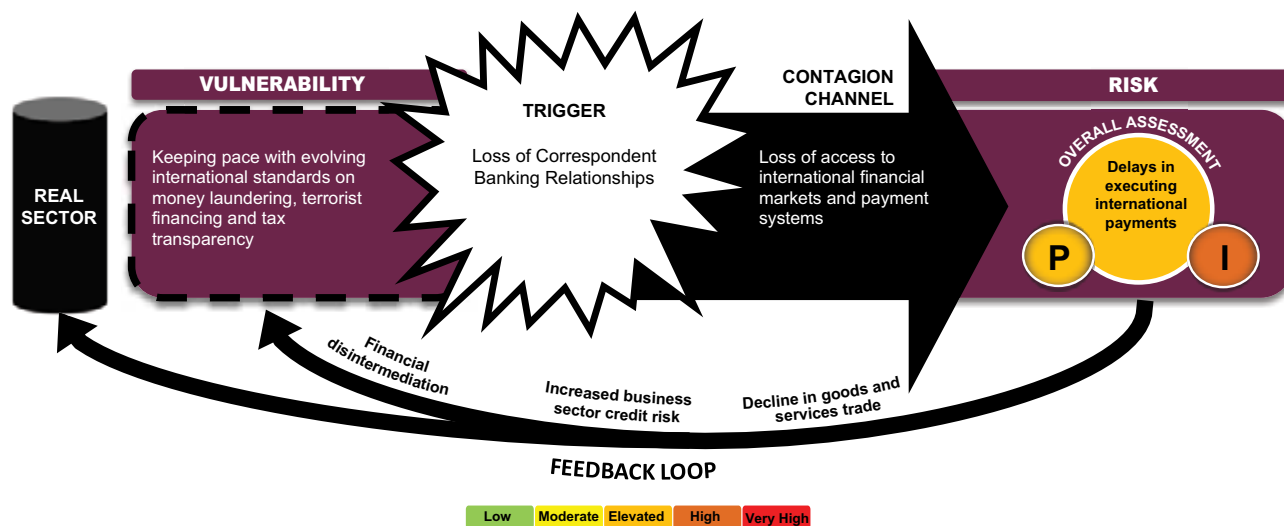
## KEEPING PACE WITH EVOLVING INTERNATIONAL STANDARDS

**Spearheaded by the advanced economies, global efforts to reduce illicit activities and tax avoidance practices have intensified.** Trinidad and Tobago, as part of the global community, endorses such initiatives and has made great strides towards strengthening its AML/CFT framework and facilitating tax cooperation with the US and other jurisdictions. However, developing countries such as Trinidad and Tobago sometimes face institutional, legislative or other capacity constraints which may impact their

ability to keep pace with evolving international standards on AML/CFT and tax transparency. These developments have birthed a new vulnerability for the financial system, as failure to adequately comply with the international standards can have adverse consequences (Figure 35). One such consequence is the potential loss of CBRs. Despite acknowledging Trinidad and Tobago’s progress, some international standard-setting agencies have rated the country as non-compliant due to ‘strategic deficiencies’<sup>31</sup> and ‘major transparency concerns’ in AML/CFT and tax avoidance areas respectively (Figure 36).

<sup>31</sup> Financial Action Task Force (FATF) Statement, ‘Improving Global AML/CFT Compliance: On-going Process’ (February 22, 2019) and PricewaterhouseCoopers Tax Update Newsletters, ‘Latest revised EU list of third country non-cooperative jurisdictions in tax matters’ (March 14, 2019).




**Figure 35**  
**Vulnerabilities and Risks Assessment Framework – Keeping Pace with**  
**Evolving International Standards on Money Laundering, Terrorist Financing**  
**and Tax Transparency**



Source: Central Bank of Trinidad and Tobago.

<sup>31</sup> Financial Action Task Force (FATF) Statement, 'Improving Global AML/CFT Compliance: On-going Process' (February 22, 2019) and PricewaterhouseCoopers Tax Update Newsletters, 'Latest revised EU list of third country non-cooperative jurisdictions in tax matters' (March 14, 2019).

**Figure 36**  
**Trinidad and Tobago's Deficiencies in Financial Crime Measures, as at April 2019**

	SCOPE	NON-COMPLIANT COUNTRIES	REMEDIAL ACTION (TRINIDAD AND TOBAGO)
FINANCIAL ACTION TASK FORCE	 <p>The Financial Action Task Force (FATF) sets standards and promotes policy combating money laundering, terrorist financing (ML/TF) and other related threats to the integrity of the international financial system.</p>	 <p>The Bahamas, Botswana, Cambodia, Democratic People's Republic of Korea, Ethiopia, Ghana, Iran, Pakistan, Serbia, Sri Lanka, Syria, <b>Trinidad and Tobago</b>, Tunisia, Yemen.</p>	 <p>Trinidad and Tobago is required to continue to work on: enhancing international cooperation; addressing transparency and beneficial ownership issues; implementing legislation to enhance prosecution of ML charges; and ensuring monitoring of non-profit organizations.</p>
GLOBAL FORUM ON TAX TRANSPARENCY	<p>The Global Forum on Transparency and Exchange of Information for Tax Purposes (Global Forum) is a multilateral framework which monitors tax compliance risks posed by non-cooperative jurisdictions.</p>	<p>There are six categories of compliance. <b>Trinidad and Tobago is the only country listed as non-compliant.</b> Trinidad and Tobago did not demonstrate sufficient progress in the second round of peer reviews in 2017 to justify an upgrade of the rating beyond Non-Compliant.</p>	<p>Trinidad and Tobago is required to address legislative and operational issues surrounding the sharing of information regarding the ownership and control of legal entities in the country.</p>
EUROPEAN COMMISSION	<p>The European Commission (EC) outlined a list of 23 jurisdictions with the aim of protecting the European Union (EU) financial system from ML/TF flows. These high-risk countries are subject to increased scrutiny by European banks.</p>	<p>Afghanistan, American Samoa, The Bahamas, Botswana, Democratic People's Republic of Korea, Ethiopia, Ghana, Guam, Iran, Iraq, Libya, Nigeria, Pakistan, Panama, Puerto Rico, Samoa, Saudi Arabia, Sri Lanka, Syria, <b>Trinidad and Tobago</b>, Tunisia, US Virgin Islands, Yemen.</p>	<p>The EC lists 'high-risk countries' as those identified by the FATF. Once the FATF removes the country from its list of monitored jurisdictions, the EC will review the risks to the EU financial system and remove them accordingly.</p>

Source: FATF, Global Forum and EC.

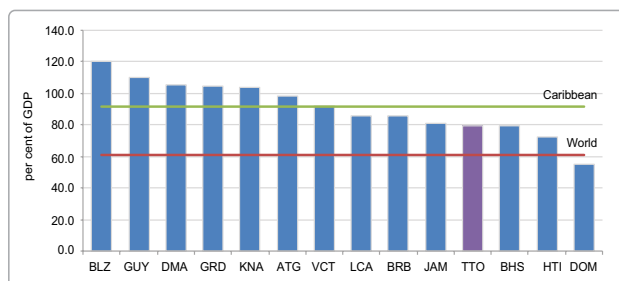
Note: 'Remedial Action' refers to recommendations from the various agencies which Trinidad and Tobago must implement to be considered fully compliant.

**Trinidad and Tobago's inability to fully comply with these international standards in accordance with externally-imposed deadlines can affect international banks' perceptions of risk in the domestic financial system.** Money laundering, terrorist financing and tax avoidance risks have led to increased regulatory scrutiny and penalties for international banks found complicit in financial crime. As a result, many institutions are increasingly wary of doing business with countries which are labelled as 'high-risk' by the supervisory agencies. CBRs are the services provided by international banks to domestic banks which allow the latter to make and receive payments from the rest of the world on behalf of

their customers. Therefore, they are extremely important to a small, open economy such as Trinidad and Tobago (Figure 37), as they facilitate trade, remittances, access to international credit markets and other financial flows (for example, portfolio investments). IMF studies<sup>32</sup> showed that the drivers of CBR withdrawals are multifaceted and include AML/CFT concerns, reputational risks and profitability considerations. To date, domestic banks have been largely successful at maintaining their CBRs with no significant disruption to cross-border transactions. However, some businesses operating in sectors considered high-risk have been de-risked by commercial banks.

<sup>32</sup> IMF Policy Paper, 'Recent Trends in Correspondent Banking Relationships: Further Considerations' (April 2017) and IMF Working Paper, 'Loss of Correspondent Banking Relationships in the Caribbean: Trends, Impact, and Policy Options' (September 2017) prepared by Alleyne et. al.

**Figure 37**  
**Caribbean Trade Openness, 2013 – 2017**



Source: World Bank.

Note: Belize (BLZ), Guyana (GUY), Dominica (DMA), Grenada (GRD), St. Kitts Nevis (KNA), Antigua and Barbuda (ATG), St. Vincent and the Grenadines (VCT), St. Lucia (LCA), Barbados (BRB), Jamaica (JAM), Trinidad and Tobago (TTO), The Bahamas (BHS), Haiti (HTI), Dominican Republic (DOM).

**Some of Trinidad and Tobago's non-compliant areas outlined by standard setting agencies require legislative and institutional reforms, which the national authorities are working to address.** Deficiencies under the Caribbean Financial Action Task Force (CFATF) Mutual Evaluation Report 2016 included the low level of money laundering investigation and prosecution, inadequate non-profit organization (NPO) policies and legislation, as well as the issuance and implementation of Economic Sanction Orders. In the area of tax transparency, the primary requirement by the Global Forum Secretariat for Trinidad and Tobago is the amendment of the Income Tax Legislation. Legislative amendments and other efforts to improve compliance are discussed in Chapter 4.

**With respect to AML/CFT and tax compliance recommendations, the Central Bank is responsible for the compliance of licensed financial institutions.** The competent authority for AML/CFT recommendations is the National Committee on AML/CFT and the competent authority for compliance in tax matters is the Board of Inland Revenue. The Central Bank is a member of the Committee and has commented on amendments to the income tax legislation.

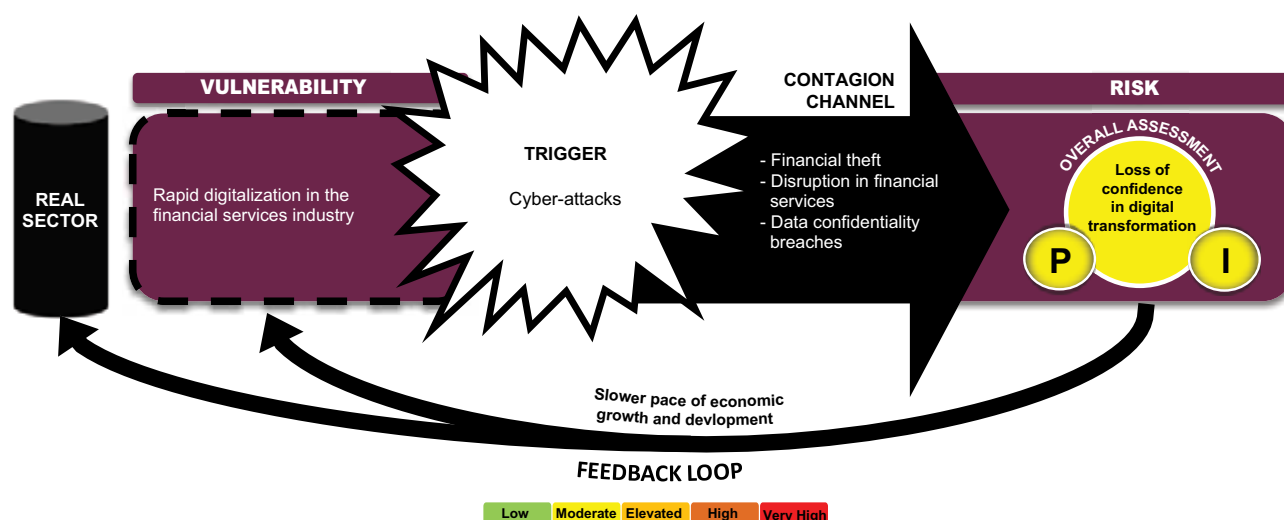
**Persistent apprehension on the part of international banks can lead to disruptions in access to international financial payment systems.** These disruptions risk delays in executing international transactions which can have a

negative impact on trade and the economy. Additionally, some businesses' access to financial services may be adversely affected, potentially driving activity beyond the Central Bank's regulatory perimeter. The overall risk to the financial system from this vulnerability is considered '**elevated**', given its '**elevated**' probability of occurrence and the potentially '**high**' impact on the financial system.

## **RAPID DIGITALIZATION IN THE FINANCIAL SERVICES INDUSTRY**

**The increasing adoption of digital platforms and services is altering the operating landscape of the domestic financial sector.** Digitalization in the financial services industry refers to the use of available technology by institutions to enhance the provision of products and services in an online or non-physical space. For the most part, digitalization is widely seen as a positive development as it can lower transaction costs, reduce processing time, promote financial inclusion and in general create efficiency gains for both financial institutions and their customers. Common examples include online banking and mobile phone applications. However, if the adoption of digitalization occurs too quickly and without the necessary safeguards being in place, the financial system may become increasingly vulnerable to threats such as cyber-attacks (Figure 38).

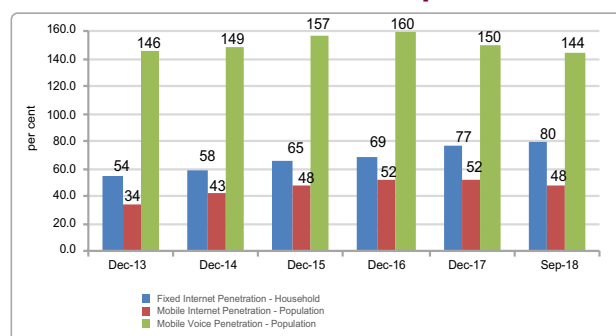
**Figure 38**  
**Vulnerabilities and Risks Assessment Framework – Rapid Digitalization**



Source: Central Bank of Trinidad and Tobago.

The increasing rate of digitalization observed domestically over the past few years has been made possible by an overall increase in access to technology. In Trinidad and Tobago, participation in the digital sphere is evidenced by relatively high internet subscription rates, and in particular, mobile internet penetration which is close to half of the population (Figure 39). Recent data imply that the banking sector has been capitalizing on this advancement by increasing expenditure on software development (Figure 40). In this regard, financial institutions have been offering a variety of digital services to their customers such as online and mobile banking, contactless payments, and mobile POS services to name a few.<sup>33</sup> While not linked to the recent wave of digitalization, financial institutions also utilize financial market infrastructure (FMI) such as the RTGS and the ACH facility to make and receive payments on behalf of their customers.

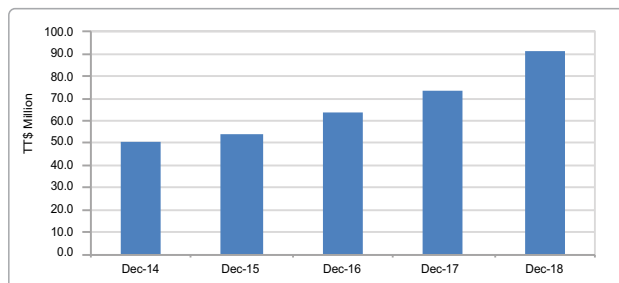
**Figure 39**  
**Internet Subscriptions (Subs) Penetration Rates, Dec 2013 – Sep 2018**



Source: Telecommunications Authority of Trinidad and Tobago.

<sup>33</sup> Various financial institutions' Annual Reports and websites.

**Figure 40**  
**Banking Sector Software Development**  
**Expenses, 2014 – 2018**



Source: Central Bank of Trinidad and Tobago.

**Although digitalization brings several benefits, it can also introduce potential threats, namely cybersecurity concerns.** In fact, the World Economic Forum's 2019 *Global Risks Report* ranked cyber-attacks in the top five risk categories due to the increasing incorporation of digital technologies throughout the world. Cyber-attacks aim to do two main things: (i) disable or disrupt financial services; and (ii) gain administrator privileges to access confidential information, commit fraud and theft. Cyber-attacks can target individuals, financial institutions or FMIs. Depending on the scale of the incident, the effects of cyber-attacks could be channelled through the payment system to third-party financial institutions, amplifying the impact of the initial event.

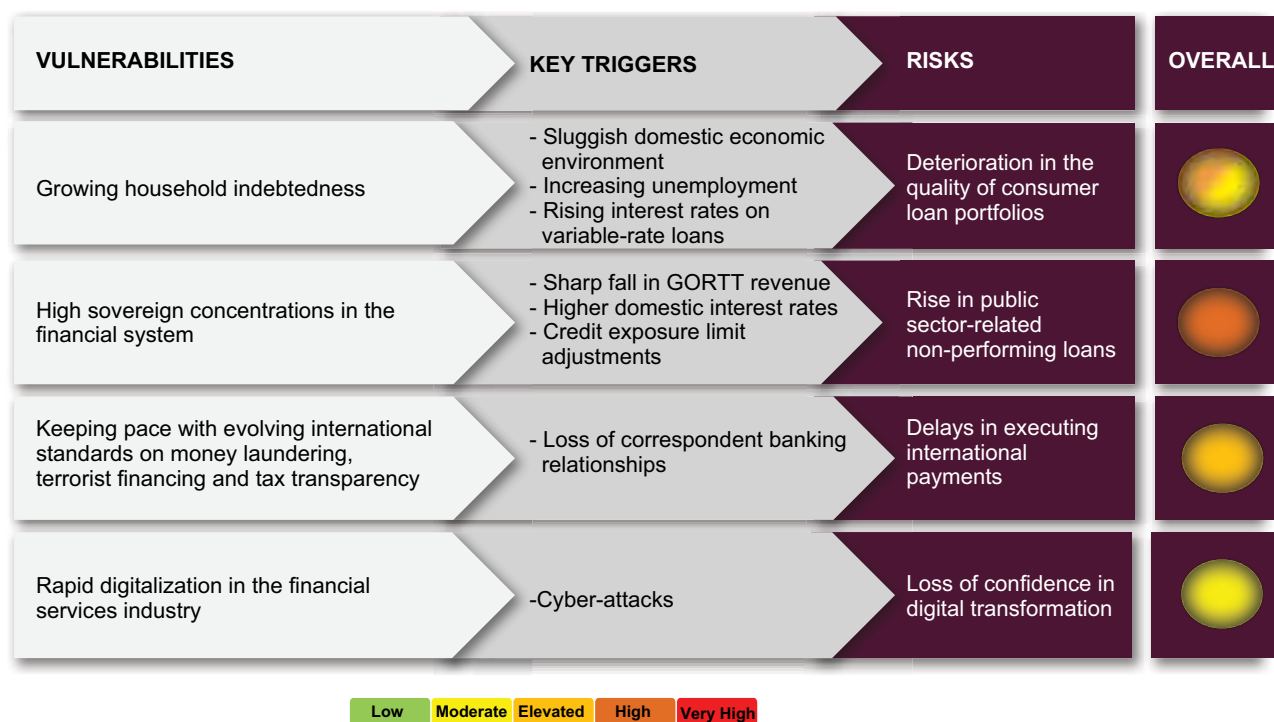
**Cyber-attacks, in turn, pose several risks to the financial system.** Cyber-attacks which attempt to disrupt financial services can impede the financial system's ability to settle transactions (settlement risks) and temporarily reduce the funding available to financial institutions (liquidity risk). Meanwhile, cyber-attacks aimed at acquiring access to administrator privileges can lead to financial losses (through theft and fraud) and create reputational damage. Moreover, a loss of confidence in the safety and security of financial products may result in customers shunning new digital services. Frictions in settlements, reversals in financial deepening and lower appetite for digital services can stymie growth opportunities for both the financial sector and the economy.

At present, the probability of this risk manifesting is **'moderate'**, given the presence of mitigating controls (such as internal risk management policies and frequent

testing of their information technology infrastructures) adopted by major financial institutions. With the impact also being assessed as **'moderate'**, the overall risk is **'moderate'**. Though cyber-attacks have not proliferated domestically, a tangential concern is the use of commercial banks' infrastructure to facilitate malfeasance (particularly skimming activities). In order to minimize this risk among licensees, the Central Bank includes as part of its on-site examinations, when necessary, a review of operational risk frameworks to ensure that adequate controls are in place to reduce risk. Additionally, the Central Bank recently issued a survey on cyber risks to 'gather information on the adequacy of financial institutions' cyber security frameworks to ascertain security measures currently in place by institutions to lower the risk of loss.'

The heat map below (Figure 41) summarizes the key vulnerabilities and associated risks along with an overall risk assessment.

**Figure 41**  
**Summary Heat Map –**  
**Key Vulnerabilities and Risks to Financial Stability in Trinidad and Tobago**



Source: Central Bank of Trinidad and Tobago.

### BOX 3: STRESS TEST SCENARIO: SOVEREIGN CONCENTRATIONS IN THE COMMERCIAL BANKING SECTOR

A few major central banks, such as the Bank of England, have considered financial stability risks from the sovereign debt channel. This risk has become more material, with the International Monetary Fund (IMF) noting in its October 2018 *Global Financial Stability Report* that the global banking system, though stronger, is exposed to more heavily indebted borrowers. In the rollout of the April 2019 IMF *Fiscal Monitor*, the IMF warned that countries that wanted to run much higher levels of public debt, risk facing severe difficulties in financing their borrowing.

In the context of Trinidad and Tobago, the commercial banking sector is a major facilitator of Government's domestic debt financing. Loans to the public sector accounted for 13.2 per cent of commercial banks' gross loans as at December 2018, but the General Government (includes Government-guaranteed debt of state-owned enterprises and statutory bodies) as a group – the Government of the Republic of Trinidad and Tobago (GORTT) – accounts for 62 per cent of the commercial banking sector's large exposures. In this regard, the 2018 stress test scenario (Figure 1) examines the risks to financial stability posed by public sector debt vulnerabilities. The adverse scenario (based on extreme but plausible assumptions) considers that lower energy prices over the short run cause Government energy revenue receipts to fall below budgeted levels for fiscal year 2019. Additional fiscal consolidation measures are not incorporated. The ensuing larger-than-programmed fiscal deficit would be financed domestically, with the banking sector serving as a major funding source. Net public debt is assumed to grow faster than the five-year average (2014 – 2018) of 4.5 per cent of GDP and Central Government debt service to move closer to 30 per cent of tax revenue.

Dynamic modelling estimates suggest that there are statistically significant relationships between fiscal variables (public debt, fiscal balance and debt service) and the following banking indicators: the capital adequacy ratio (CAR); profitability (Return on Equity); and liquidity (liquid assets-to-total assets). Of these, causality was established and strong negative correlations were observed between net public debt-to-GDP and CAR, and central government debt service and CAR. Similar relationships were detected between the aforementioned fiscal variables and bank liquidity. For example, the scenario revealed that when public debt accumulation accelerates and exceeds acceptable thresholds for developing economies, CAR declines disproportionately. With domestic sovereign debt instruments carrying a risk weight of zero and with no exposure limits for investment in GORTT issues by the banking sector, these benefits are assumed to generate an implicit sovereign subsidy on one hand and conditions for systemic risk accumulation on the other due to heightened concentrations. The sovereign subsidy measure assumes that sovereign credit exposures are not risk-free and that the application of appropriate weights will improve the loss-absorbing capital needs of banks. However, using hypothetical sovereign risk weights to recalibrate the risk-weighted assets, the commercial banking sector was able to withstand this shock, as the CAR remained above the regulatory minimum (8 per cent) with a considerable buffer. Nonetheless, these buffers could erode quickly if public debt and its current mode of financing are not kept on a sustainable path.

From a policy perspective, the application of risk weights for domestic sovereigns may have broader implications. Domestically, Government securities are the lifeblood of a still developing domestic capital market and commercial banks are an integral channel for the conduct of monetary policy operations. In this regard, an appropriate approach to mitigating any risk posed by excessive exposures to the domestic sovereign is through improved fiscal governance. Prudent debt management, as expressed through the design and implementation of medium-term fiscal and debt strategies, can ensure that sovereign risk is reduced and vulnerabilities posed by the sovereign-bank nexus are effectively contained.

Figure 1: Shock to Public Sector Debt Fundamentals



Source: Central Bank of Trinidad and Tobago.

## BOX 4: SUSCEPTIBILITY TO CLIMATE CHANGE-RELATED EVENTS

The climate change phenomenon has become a pressing concern for financial regulators in light of the accelerated pace of global warming<sup>1</sup> and its implications for economic and financial stability. The warmest 20 years on record have occurred within the last 22 years, with the four highest annual global temperatures occurring in 2015 to 2018 (World Meteorological Organization 2019). Projections from the Intergovernmental Panel on Climate Change (IPCC) (2018) suggest that if this long-term trend were to continue unabated, climate-related risks would become more challenging to address and some human, environmental and socio-economic impacts may become irreversible. Knock-on effects for the financial sector are brought about by two major aspects of climate change risk, namely physical risk and transition risk, and these can pose short- to medium-term challenges to financial stability, particularly for small island economies such as Trinidad and Tobago. The 2017 FSR considered a scenario of an environmental shock on the local financial sector. This Box broadens the dialogue by examining the main channels through which climate change risks could manifest.

Physical risks of climate change emanate from weather-related events including flooding, storms and extreme heat. The concern is critical for the small island developing states of the Caribbean which are among the 25 most vulnerable nations in terms of disasters per capita and where damages have exceeded GDP in the most destructive cases<sup>2</sup> (Ötger and Srinivasan 2018). While relatively insulated from the direct effects of hurricanes, Trinidad and Tobago has not been immune to severe floods associated with excessive rainfall which have triggered insurance pay-outs and Government relief. The intensification of weather-related stresses due to climate change can manifest as risks to the local financial sector via a number of channels (Figure 1).

Transition risks of climate change relate to developments in policy, technology and public perception amidst the movement to a low-carbon economy. Achieving nationally determined contributions in line with IPCC targets will necessitate the introduction of legislation, regulation and other policies designed to minimize greenhouse gas emissions. It is estimated that 80 per cent of known global carbon reserves will have to remain unburned in order to stay within IPCC targets (Carbon Tracker Initiative 2014). Trinidad and Tobago has committed itself to reducing its carbon footprint by 15 per cent from a business-as-usual baseline in the local power generation, industrial and transportation ('carbon-intensive' (CI)) sectors by 2030 (GORTT 2018). This could significantly deplete the value of CI assets with knock-on effects for asset holders. Financial sector risks may also emanate from the development of 'green' technologies alongside public support of climate change mitigation and adaptation efforts. These developments can trigger transition risk via the channels in Figure 1.

The insurance industry faces direct and indirect vulnerabilities from the physical risks related to climate change. Non-life and life insurers are expected to be affected through similar channels, but with different impacts on their financial statements. Infrastructural damage can spur an increase in property insurance claims in the non-life sector, but the impact is expected to be moderated as over 90 per cent of non-life premiums were ceded to reinsurers as at December 2018. However, such events can trigger increases in reinsurance rates. Life insurers may face challenges with respect to reduced life expectancy and unexpected health problems. While

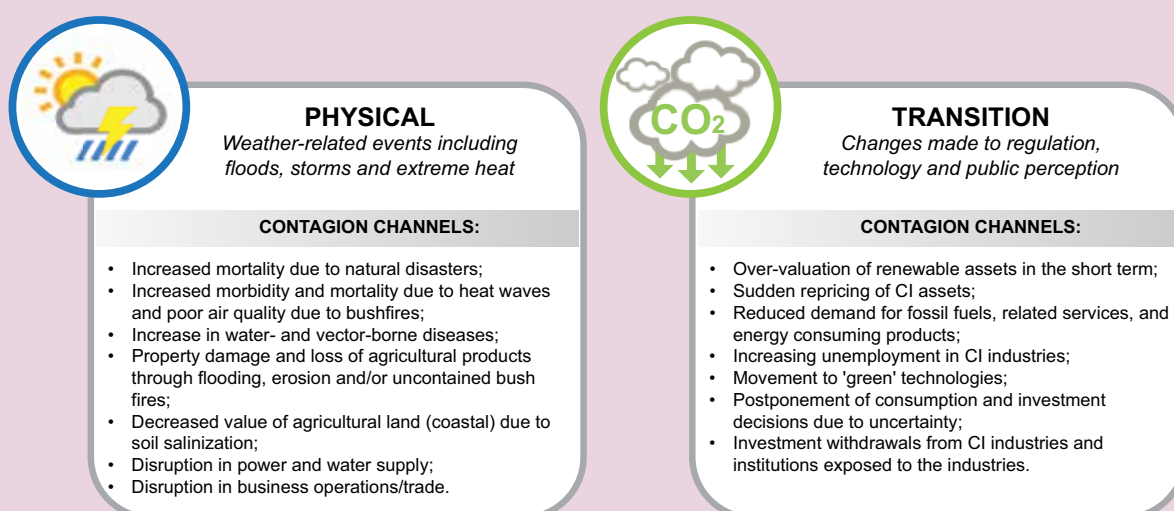
<sup>1</sup> The Intergovernmental Panel on Climate Change (2007) asserts that "most of the observed increase in global average temperatures ... is very likely due to the observed increase in anthropogenic greenhouse gas concentrations". Cook, et al. (2016) found that 90 to 100 per cent of published climate change research endorses the IPCC conclusions.

<sup>2</sup> For example, Hurricane Maria (2017) resulted in losses of approximately 225 per cent of GDP in Dominica. Similarly, Hurricane Ivan (2004) cost Grenada an estimated 200 per cent of GDP.

**BOX 4: Continued**

death and illness will result in pay-outs sooner than anticipated, mortality and morbidity risks are naturally hedged (to some extent) by longevity-related products such as pensions and annuities.

**Figure 1: Contagion Channels of Physical and Transition Risks of Climate Change**



Source: Bank of England (2015, 2018), GORTT (2011) and Central Bank of Trinidad and Tobago.

Similar shocks can manifest in the banking sector. Natural disasters, through their ability to disrupt business and government operations (operational risks), can lead to credit risk as institutions become strained to service their debt obligations in a timely manner. Also, credit risks can stem from households' loss of income due to inability to work. Market risk can arise from devaluations in property due to damages, while moral hazard concerns arise if property values are assessed (post disaster) as lower than outstanding loan values providing a disincentive for customers to repay their debts. There may also be negative feedback loops to the economy, as banks are unwilling or unable to extend credit lines to businesses, households and the public sector and thereby further impede the recovery and rebuilding efforts.

Transition risks of climate change are more medium-term in nature and are expected to affect the insurance and banking sectors primarily through credit and/or investment exposures to CI industries. Organization distress associated with transition could hamper debt-servicing capabilities and lead to increased credit risk in banks' loan portfolios. Additionally, limits on production, the disorderly repricing of CI assets and changing investor preferences can directly affect the performance of both banks' and insurers' investment portfolios. It must be noted that potential losses may be offset by new sources of premium, as well as new lending and investment opportunities from the emergence of renewable energy companies and industries offering energy-efficient products and services. From a macro-economic view, new jobs will be created and greater efficiency should result in long-term cost reductions and revenue growth.

The extent to which climate change-related events can impair the balance sheet and profitability of the local financial sector is difficult to quantify, but it is important to gauge the financial stability threat posed by this phenomenon. As such, forward-looking tools such as stress testing are continuously being explored to strengthen technical and analytical capacity in macro-prudential supervision as it pertains to climate-related risk.

## BOX 5: EXPLORING REGIONAL FINANCIAL INTERCONNECTEDNESS

The global financial crisis (GFC) and the local CL financial failure illustrated the importance of understanding the negative externalities associated with financial interconnectedness, that is, the cross-sectional dimension of systemic risk<sup>1</sup>. While greater connectivity facilitated an expansion in global trade and resulted in efficiency gains in financial intermediation, complex linkages between institutions were found to strengthen channels for the transmission and amplification of (cross-border) macro-financial shocks. The traditional approach to regulation, namely the prevention of individual institution failure and the focus on singularly large institutions, was deemed insufficient to safeguard against threats to the aggregate financial system which spilled over to the wider economy. Regionally, large financial institutions cast footprints across most of the Caribbean, a phenomenon that is set to continue given announcements of proposed acquisitions over the past year. The increasing size and complexity of regional financial conglomerates underscore the need to understand the structure of inter-institutional relationships and the potential vulnerabilities posed by financial interconnect- edness via cross-border exposures.

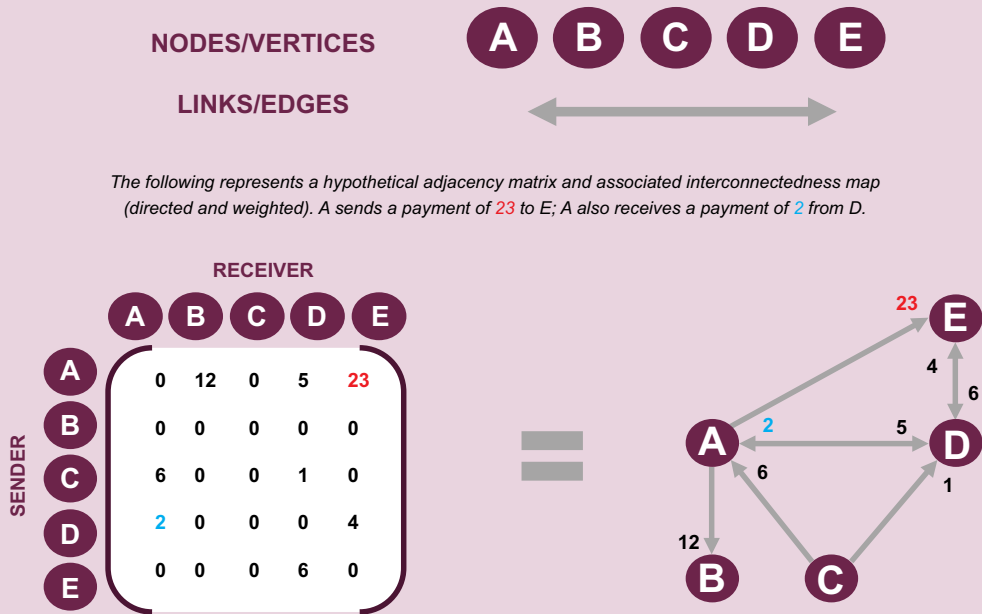
Post-GFC, the literature on financial interconnectedness has expanded to incorporate methodologies to visualize and quantify the significance of market interactions between macro-financial agents (Chen, Zhang and Li 2016). Among the approaches to studying interconnectedness, network analysis has been preferred for its practicality in tracing potential paths of contagion within the macro-financial system, as well as for its compatibility with stress testing techniques (Espinosa-Vega and Solé 2012). It hinges on the input of an adjacency matrix or interconnectedness map (Figure 1) which is developed through the application of network theory. Both representations depict a collection of ‘nodes’ or ‘vertices’ (for example, financial institutions) and the links or ‘edges’ between them (for example, payments between financial institutions). They can capture those exposures that are explicitly reported and observable (direct) and exposures to common risk factors (indirect). The direction of the relationships (for example, sender or receiver of payment), as well as the weight of the link (numeric value) may or may not be represented (Depository Trust and Clearing Corporation 2015).

The architecture of a financial network, that is, the connective and hierarchical structure, contributes to a system’s robustness, fragility and resilience to external shocks. The quantitative output of network analysis can aid in the designation of systemically important financial institutions by revealing those nodes that are ‘too-connected-to-fail’. Such an exercise can therefore support a comprehensive assessment of systemic risk at the regional and domestic level. A preliminary exercise for the region along these lines was reported in the 2015 *Caribbean Regional Financial Stability Report*, with successive rounds to target greater coverage of the financial system. However, success is heavily dependent on the availability of granular financial datasets. Given the size and complexity of the domestic financial sector, preliminary research is being undertaken to identify a feasible network model that can facilitate the analysis of financial interconnectedness within Trinidad and Tobago. Conclusions drawn can guide the implementation of policy tools to manage contagion risk and mitigate costly spill-overs in the macro-financial system.

<sup>1</sup> The cross-sectional dimension of systemic risk is a structural approach which considers the allocation of systemic risk at a given point in time. This contrasts with the time dimension of systemic risk which considers the build-up of macro-financial imbalances over a given period (Smaga 2014).

BOX 5: Continued

Figure 1: Adjacency Matrix and Interconnectedness Map



Source: Central Bank of Trinidad and Tobago.



## CHAPTER 4

### PROMOTING FINANCIAL STABILITY



## CHAPTER 4

### PROMOTING FINANCIAL STABILITY

The Central Bank (2016/17 – 2020/21) Strategic Plan identifies a number of key initiatives aimed at promoting financial stability. This chapter summarizes the main strides made in 2018 and in early 2019 with respect to the strategic initiatives. In addition, developmental and operational initiatives that have contributed to financial stability are highlighted.

#### IMPROVING THE REGULATORY FRAMEWORK

##### 1. Amendments to AML/CFT legislation

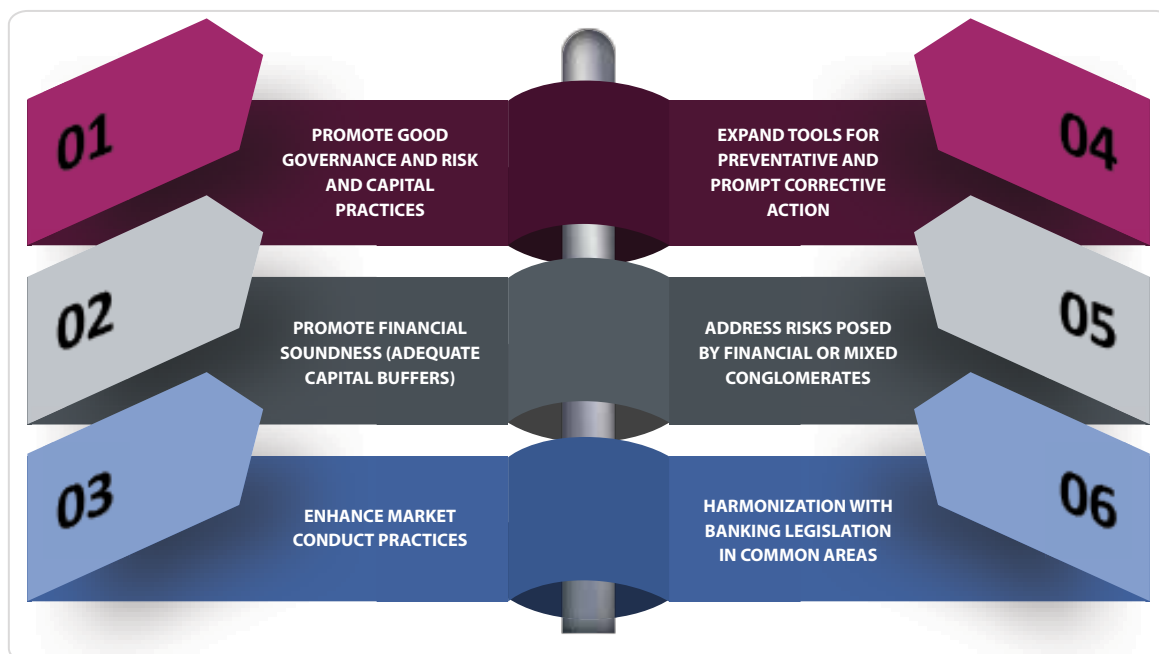
Between July 2018 and March 2019, the GORTT introduced into Parliament or enacted a number of laws aimed at addressing the country's strategic deficiencies in AML/CFT. New or amended legislation were aimed at, inter alia, addressing beneficial ownership, NPOs, and gaps in the AML/CFT laws and regulations. In addition, amendments to the Miscellaneous Provisions (Proceeds of Crime, Anti-Terrorism and Financial Intelligence of Trinidad and Tobago) Act No. 20 of 2018 which were passed on December 31, 2018 permit:

- the National Committee on AML/CFT to be constituted in law;
- certain classes of insurance business identified by the Central Bank as being low risk for AML/ CFT (term life, non-life and health) to be exempted from AML/CFT requirements;
- the National Insurance Board to be excluded from AML/CFT requirements; and
- a Compliance Officer to be appointed to more than one financial institution within a financial group, subject to the Central Bank's approval.

##### 2. Insurance Act, 2018 (IA)

The Insurance Bill, 2016 was passed in the House of Representatives on February 16, 2018 and was passed in the Senate on May 18, 2018. This Bill was assented to on June 4, 2018 and the IA shall come into operation when proclaimed by the President of the Republic of Trinidad and Tobago. Following the assent of the IA in June, the Central Bank commenced preparations for its implementation and reviewed and finalized a number of Regulations and Guidelines to give effect to the IA. The amended draft Regulations and Guidelines were issued to the insurance sector for consultation in December 2018 prior to submission to the Minister of Finance for enactment. The new IA includes the provisions outlined in Figure 42.

**Figure 42**  
**Primary Objectives of the Insurance Act, 2018**



Source: Central Bank of Trinidad and Tobago.

A Steering Committee has been established to prepare for the implementation of this new legislation and the Central Bank has employed several initiatives aimed at strengthening the framework for insurance regulation including:

- sensitization of the insurance industry to best practice with respect to various operational aspects. The Central Bank regularly distributes circular letters to the industry providing guidance/clarification on issues and reminding companies of the new requirements under the IA. The Central Bank is in the process of issuing five guidelines for the insurance industry in the following areas: (i) Reinsurance; (ii) Credit Ratings; (iii) Complex Claims; (iv) Financial Condition Reports; and (v) Form of Disclosure;
- consultations and collaboration with the insurance industry on key issues such as preparation for IFRS 17 including formation of a steering committee comprising the key stakeholders;
- development of policies and procedures for monitoring and risk-based supervision in accordance

with the requirements of the IA. This involves strengthening technical capability in regulation, new capital adequacy and cyber risk management; and

- stress testing for insurance companies through the Financial Condition Report regulations.

## **IMPROVING RISK-BASED SUPERVISION AND GOVERNANCE IN FINANCIAL INSTITUTIONS**

### **1. Basel II/III Implementation**

The Central Bank has substantially completed Phase 1 of its Basel II/III project implementation plan, that is, the implementation of minimum capital adequacy requirements. The Central Bank is awaiting enactment of the revised capital adequacy regulations by the Ministry of Finance to fully rollout the framework and cease the institutional reporting under Basel I as the licensees are currently reporting on both Basel I and Basel II bases.

The Central Bank commenced work on Phase 2 of the Basel II/III implementation project which involves Pillar 2 (that is,

the licensees' Internal Capital Adequacy Assessment Process and Supervisory Review) and Pillar 3 (Market Disclosures). To this end, the Central Bank obtained technical assistance from the Caribbean Regional Technical Assistance Centre (CARTAC) to train examiners in these Pillars in January 2019. Phase 2 policy proposals for the implementation of Pillars II and III will be issued in September 2019. In the interim, the Central Bank is developing a number of risk management guidelines which are needed to give effect to Pillar II.

## 2. Guideline for the Use of Credit Ratings by Regulated Entities

Given the introduction of new capital adequacy standards for banks and insurers that are aligned to international standards, the Central Bank developed a Guideline that would ensure consistency in the treatment of credit ratings used by different credit rating agencies. In this regard, the Guideline introduces a Credit Rating Equivalency Table that maps the credit ratings of commonly known and used credit rating agencies. The Guideline also specifies guidance on the criteria to be used by a credit rating agency which seeks to have its credit rating used by a financial institution. The draft Guideline was issued in December 2018 for comment and is being finalized.

## 3. Revised Fit and Proper Guidelines

In February 2019, the Central Bank issued a revised draft Fit and Proper Guideline for comment by financial institutions. The revised Fit and Proper Guideline seeks to improve governance of financial institutions by enhancing the criteria to be considered by financial institutions and the Central Bank when assessing whether or not key persons of financial institutions are fit and proper. Some new requirements include assessment of conflicts of interest, time commitment and collective suitability of the board of directors. The Guideline is expected to be finalized by July 2019.

## 4. Draft Guideline on Pension Plan Governance

A Draft Guideline on Pension Plan Governance was issued to pension sector stakeholders for consultation in March 2019. The purpose of this Guideline is to provide a framework for the prudent governance of pension plans based on

international best practices. The Guideline is to be used as a tool by which trustees, management committees and plan sponsors can assess their own operations and determine whether changes are required.

## 5. Market Conduct Guideline

A Market Conduct Guideline<sup>34</sup> was issued in November 15, 2018. The purpose of the Market Conduct Guideline is to set the expectations of the Central Bank regarding banks' market conduct practices. Among other things, the Guideline encourages banks to ensure that their products and services are financially inclusive and suited to consumers' needs. In addition, marketing material should be transparent, plain language should be used in contracts and written agreements and there should be adequate disclosure of fees, interest rates and terms and conditions of the product or service.

## ENSURING COMPLIANCE WITH INTERNATIONAL STANDARDS FOR AML/CFT AND TAX TRANSPARENCY

### FATF/International Co-operation Review Group (ICRG) Monitoring

The country's progress reports on implementing its action plan to address the recommendations of the ICRG were presented at the February 2019 FATF Plenary. The Plenary determined that the country has taken steps towards improving its AML/CFT regime, which includes: enacting additional criminal justice reforms to speed up consideration of ML cases in courts; issuing Economic Sanction Orders to address proliferation financing; and ensuring that TF sanctions are implemented without delay.

#### • Companies (Amendment) Act, 2019

The Companies (Amendment) Act No. 6 of 2019 was introduced on November 23, 2018 and assented to on April 4, 2019. The amendments to the Companies Act were necessary to address the deficiencies identified in the Mutual Evaluation Report on Trinidad and Tobago and fully implement the international requirements of the FATF, such as on transparency and beneficial ownership of legal persons.

<sup>34</sup> <https://www.central-bank.org.tt/news-centre/latest-news/market-conduct-guideline-november-2018>.

- **Non-Profit Organisations Act, 2019**

The Non-Profit Organisations Act No. 7 of 2019 was introduced on March 22, 2019 and assented to on April 23, 2019. This Act provides for the establishment and maintenance of a register for NPOs, as well as details the obligations of NPOs.

- **Civil Asset Recovery and Management and Unexplained Wealth Act, 2019**

On April 23, 2019 the Civil Asset Recovery and Management and Unexplained Wealth Act, 2019, was assented into law. Among other things, this Act provides for the establishment of the Civil Asset Recovery and Management Agency for the recovery of criminal property.

- **Other Legislative Amendments**

The Financial Obligations (Amendment) Regulations, 2018 were laid in Parliament on December 14, 2018, subject to negative resolution. Additionally, the Miscellaneous Provisions (Proceeds of Crime, Anti-Terrorism and Financial Intelligence of Trinidad and Tobago) Act No. 20 of 2018 was assented to on December 31, 2018. These amendments sought to address deficiencies identified in the CFATF June 2016 Mutual Evaluation Report on Trinidad and Tobago and the country's National Risk Assessment, and include the following:

- o changes to the definition of "financial institution" to exempt insurance agents, as well as insurance companies and brokers conducting non-life insurance business, from AML/CFT requirements;
- o provisions for the sharing of information related to unusual or suspicious transactions within financial groups; and
- o clarification on the identification and verification requirements regarding beneficial ownership information for Trusts.

### **CFATF Enhanced Follow-up Process**

Given the passage of new or amended legislation aimed at addressing the deficiencies identified in the CFATF's 2016 mutual evaluation report, the country has submitted a request to CFATF for the re-rating of 22 related FATF Recommendations. These Recommendations were

previously rated as either partially or largely compliant or non-compliant. The re-ratings submission is being reviewed by the assessors who will present their findings and recommendations on the re-ratings to the CFATF Plenary in Trinidad and Tobago in May 2019.

### **Central Bank of Trinidad and Tobago's AML/CFT Policy**

Although not required by law, the Central Bank sought to improve its own governance standards by implementing an internal risk-based AML/CFT Policy. The Policy seeks to strengthen processes and controls for establishing and conducting business relationships with, or on behalf of, customers and service providers of the Central Bank. The Policy was approved by senior management in September 2018 with an effective date of January 2, 2019.

### **Global Forum on Transparency and Exchange of Information for Tax Purposes**

The Global Forum on Transparency and Exchange of Information for Tax Purposes (the Global Forum) is the international body established to ensure the implementation of internationally agreed standards of transparency and exchange of information related to tax compliance. As at December 2018, Trinidad and Tobago has been identified as the only jurisdiction, which has not yet made sufficient progress towards satisfactory implementation of the standards of transparency and exchange of information for tax purposes.

In December 2017, Trinidad and Tobago was also named as one of 17 tax haven countries by the European Union (EU), noting that the country is attractive to tax crimes and exposed to a higher threat of ML linked to tax crime as a predicate offence. Trinidad and Tobago was identified as a high-risk third country with deficiencies in its AML/CFT regime. As a result of the listing, the EU would require obliged entities to apply enhanced due diligence when conducting transactions with Trinidad and Tobago. The recently passed Income Tax (Amendment) Act No. 18 of 2018 is intended to address the EU's and Global Forum's concerns in respect of improving tax transparency and sharing of information. The competent authority for compliance in tax matters is the Board of Inland Revenue; however as a key stakeholder for maintaining the stability of the financial system, the Central Bank was consulted on the amendments to the Income Tax Act.

## STRENGTHENING TECHNICAL AND ANALYTICAL CAPABILITY IN SUPERVISION AND RESOLUTION

### National Crisis Management Plan

The preparation of a national crisis management plan is an objective of the Central Bank's current Strategic Plan. A project team, comprising various departments (Financial Institution Supervision, Legal and Research), was established to review the draft National Crisis Management plan. Upon completion of the internal review, other key stakeholders would be engaged for their input.

### Stress Testing

Stress testing results continue to be incorporated in supervisory assessments of the eight banks on a quarterly basis. A stress testing team was established to examine the current methodology and assumptions as well as to provide proposals for expanding the current stress tests. Draft proposals have been developed for the enhancement of the banking stress test framework. Research is also on-going in the area of payment systems stress tests. In the second half of 2019, the Central Bank will benefit from further technical assistance from the CARTAC in these areas.

## REVIEW OF RECENT DEVELOPMENTS IN PAYMENT SYSTEMS

Technology-led innovations such as e-money, crypto-assets and niche market payment service providers are becoming prevalent. To this end, the Central Bank has drafted and consulted on an E-money Policy as well as a Virtual Asset and Fintech Policy to address these developments.

### E-money Policy

The Central Bank completed its draft E-money Policy and distributed it for public consultation in November 2018. The E-money Policy puts forward recommendations for the Minister of Finance to allow a category of non-bank non-financial institutions to issue e-money as well as the regulatory framework that is appropriate to mitigate the risks that can arise from such institutions. The Policy is being finalized for submission to the Minister of Finance mid-2019.

### Virtual Asset and Fintech Policy

The emergence and adoption of fintech internationally and regionally as well as the expressions of interest received by the Central Bank have served as a catalyst for the development of a Virtual Asset and Fintech Policy. The Policy aims to promote an accommodating environment to facilitate on-going financial innovations while mitigating associated risks.

Over the last two years, the Central Bank received a number of expressions of interests and has engaged a number of fintech firms desirous of using technology in financial services to facilitate payments, remittances and international trade. These expressions of interest include cryptocurrency exchanges, digital wallets, bitcoin ATMs, Initial Coin Offerings, central bank digital currency (CBDC) and blockchain/distributed ledger technology to improve retail payments.

The Central Bank is concerned about the potential risks these new financial innovations pose to the financial system but at the same time does not want to stifle innovation. As such, the Central Bank issued a public Policy Statement on November 15, 2018 advising of its position on fintech and virtual currency. Given the multi-dimensional and multi-jurisdictional nature of fintech products and services, an important element of the Policy calls for collaboration with domestic and regional regulators. On January 25, 2019 the Central Bank issued a joint public statement with the Trinidad and Tobago Securities and Exchange Commission (TTSEC) and the Financial Intelligence Unit (FIU) on virtual currencies.

### Oversight using the Principles for Financial Market Infrastructures (PFMIs)

With the adoption of the PFMIs in October 2014, the Payment System Oversight Division of the Central Bank conducted baseline assessments on the RTGS, as well as the Significant Retail Payment Systems which include the Cheque Clearings Arrangement, the debit card switch system (LINX) and the ACH. The baseline assessments were conducted to identify the extent to which the national payment systems are in alignment with the PFMI requirements.

The Assessment Reports were submitted to all operators in 2018 and they were required to submit implementation plans showing how they will achieve compliance with the PFMLs. The Central Bank will be working with the operators of these systems to provide guidance on the implementation of their PFML compliance program.

## **COORDINATION WITH OTHER SUPERVISORY AGENCIES**

### **The Caribbean Association of Insurance Regulators (CAIR)**

The CAIR issued a Multilateral Memorandum of Understanding among Regional Regulatory Authorities for the Exchange of Information and Cooperation and Consultation (MMOU) in 2018 for its members to enhance cross-border supervision of regulated entities. The MMOU seeks to establish a framework for members to consult, cooperate and exchange information for the purpose of regulatory enforcement regarding insurance entities and also sets out specific requirements in respect of confidentiality of the information exchanged. It will further enhance cooperation in the harmonization of Laws, Regulations and Rules used by authorities in the conduct of their functions as well as in the identification of financial criminal activities as it relates to insurance business. Additionally, the framework facilitates and supports insurance education for the authorities.

### **Issuance of a tri-lateral Memorandum of Understanding (MOU)**

The Central Bank has issued a draft tri-lateral MOU for consultation with domestic AML/CFT supervisors, the TTSEC and the FIU. The tri-lateral MOU will replace the bi-lateral MOUs Operating Protocols and strengthen domestic collaboration and cooperation in areas such as information sharing. Joint on-site examinations have also been drafted and are being reviewed by the supervisory authorities.

### **CARICOM Fintech Working Group (CFWG)**

The CFWG was established by the CARICOM Central Bank Governors in November 2016. The working group is chaired by the Deputy Governor of the Bank of Jamaica and communicates usually by teleconference. A proposal document for treating with digital currencies in the Caribbean is to be revised and submitted in 2019. Other projects include: concept notes on 'Reducing Currency in Circulation by 50 per cent in 5 years'; 'Exploring Cross-Border Payments'; and 'Draft Guidelines for treating with Digital Currency'.

### **Centre for Latin American Monetary Studies (CEMLA) Fintech Forum**

The CEMLA Fintech Forum was launched in Argentina in March 2018 and seeks to address strategic challenges that financial innovation entails for monetary and financial stability, and for the proper functioning of central banks of Latin America and the Caribbean. Two working groups have been formed and have been tasked with producing two research documents: one is focused on the regulatory approach to fintech and the other on CBDCs.

## BOX 6: THE DESIGNATION OF SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS (SIFIS): ADDRESSING THE TOO-BIG-TO-FAIL DILEMMA

Lessons from the global financial crisis in 2008 and closer to home, the failure of a large financial conglomerate, have highlighted the need to identify, assess the risks involved and resolve institutions deemed too-big-to fail (TBTF)<sup>1</sup>. In 2011, the Basel Committee on Banking Supervision (BCBS) initiated the first move by creating an indicator-based assessment framework that can be used to determine an institution's contribution to systemic risk. The methodology prescribed five main categories of indicators – size, interconnectedness, substitutability, complexity and cross-jurisdictional activity – that can be weighted and combined to produce scores that will enable regulators to determine the systemic importance of an institution (Table 1). The framework also issued guidelines that outlined the use of special loss absorbers needed once institutions were identified as systemic.<sup>2</sup>

Table 1: BCBS SIFI Criteria

CRITERIA	DESCRIPTION	SELECTED SUB-INDICATORS
SIZE	the degree of dominance an institution poses by its size in relation to other entities in the financial system	assets, exposures, equity, etc.
INTERCONNECTEDNESS	the degree to which an institution is connected to other entities, markets and/or instruments in the financial system	intra-financial system assets and liabilities, large exposures, etc.
SUBSTITUTABILITY	the degree to which an institution lacks readily available substitutes for the service(s) it provides	payment activity, assets under custody, etc.
COMPLEXITY	the degree of intricacy of an institution's business, organizational and operational structure	number of depositors, branches, subsidiaries, etc.
CROSS-JURISDICTIONAL ACTIVITY	the extent of an institution's ties to territories outside its borders	cross-border claims.

Source: BCBS (2018).

Though this framework was initially tailored for global systemically important banks (SIBs), it was later (2012) extended to accommodate unique structural characteristics of individual jurisdictions. As such, the framework has been expanded to cover other possible systemic institutions, markets and instruments that can compromise the integrity of the financial system. These include insurance companies, 'non-bank non-insurer' entities and payment systems. Further modelling techniques have also been developed to complement the primary indicator-based framework.<sup>3</sup>

<sup>1</sup> This problem arises when public authorities are forced to prevent the failure of a SIFI to avoid the possibility of financial instability and economic damages (Australian Prudential Regulation Authority 2013).

<sup>2</sup> The total loss-absorbing capacity (TLAC) refers to the additional capital and leverage required for SIFIs during times of distress (Financial Stability Board 2015).

<sup>3</sup> These complementary techniques attempt to estimate (model) an institution's contribution to systemic losses from the perspective that these institutions are too-connected-to-fail. In most cases the use of Network Analysis is applied.

## BOX 6: Continued

### Global SIFI Regulatory Updates

Globally, a number of regulators have made important steps to mitigate threats from such large and connected institutions (Table 2). On a regional level, though the development and further harmonization of these frameworks are still on-going, a number of territories have used these post-crisis prescriptions to devise resolution frameworks for their financial entities. Further, lessons from prior financial failures have also shown that deepening financial integration in the region requires a uniform methodology. Following technical assistance received from the International Monetary Fund's Caribbean Regional Technical Assistance Centre in December 2018, Trinidad and Tobago has embarked on a review and update of its SIFI designation framework.

Table 2: BCBS SIFI Criteria

	JURISDICTION (Year)	STATUS OF DOMESTIC SIFI ASSESSMENT METHODOLOGY
GLOBAL	United States (2010)	The enactment of the Dodd-Frank Act in 2010, by the Financial Stability Oversight Council, allowed authorities to impose additional regulatory requirements and examinations on entities, markets and activities considered systemically important. These include higher capital requirements and periodic stress tests.
	Australia (2013)	In 2013, the Australian Prudential Regulation Authority published a report that outlined the country's domestic SIB framework. The framework came into effect in January 2016. Currently these SIBs are subject to capital surcharges.
	Europe (2014/2016)	The SIB frameworks came into effect through the Capital Requirements Regulation and the Capital Requirements Directive in the region. These laws were supplemented by the European Banking Authority Regulations. Accordingly, the authorities have the ability to identify systemic institutions, impose special requirements on exposure limits and capital buffers.
	Canada (2016)	In 2016, the Canadian Bank Act was amended, as part of the implementation of the statutory Bail-in Regime and the Office of the Superintendent of Financial Institution's TLAC guideline. Following this, six large Canadian banks were legally designated as SIBs. These institutions are subject to a capital surcharge, enhanced supervision, recovery and resolution planning, and increased disclosure.
	South Africa (2019)	The enactment of the South African Financial Sector Regulation Act 9 of 2017 granted the South African Reserve Bank and its Prudential Authority the right to designate institutions as systemic. The country's regulatory and supervisory measures for SIFIs will allow for the implementation of higher loss absorbency requirements and intensified supervision. The methodology is expected to be republished in May 2019 to reflect any modifications made.
REGIONAL	Trinidad and Tobago (2013)	In 2013, eleven institutions were deemed SIFIs: four commercial banks, two life insurance companies and five non-bank non-insurance entities by the Central Bank. The SIFI designation framework is currently being updated.
	Guyana (2014)	In 2014, the Bank of Guyana published its three-year 2015-2017 Strategic Plan which set out to determine SIFIs in their jurisdiction. To date no formal identification of SIFIs has been publicly announced.
	Jamaica (2017)	Jamaica has not formally designated SIFIs. However, in 2017 the country released a consultation paper by Members of the Jamaican Financial Regulatory Committee (the Ministry of Finance and the Public Service, Bank of Jamaica, Financial Services Commission and Jamaica Deposit Insurance Corporation) detailing a number of proposals for a special resolution regime for Jamaican financial institutions (financial holding companies, deposit-taking institutions, securities dealers and insurance companies).
	The Bahamas (2018)	In 2018, the Central Bank of The Bahamas published a discussion paper that detailed its SIFI designation of seven domestic SIBs (all domestic retail banks). The Central Bank has proposed a single capital buffer regime, in which the domestic banks would be subject to a higher capital buffers.

Sources: Various national legislation, consultation papers and regulatory publications.

## BOX 7: CYBERSECURITY

Cyber risk remains one of the highest risks faced by any institution that uses technology to perform its daily activities. This risk is dynamic, growing in frequency and sophistication, with varying motivation for the attackers. With monetary authorities also being vulnerable to attacks, the Central Bank is increasingly mindful of the expanding attack surface which comes with growing reliance on technology. At the same time, the Central Bank recognizes the need to balance the benefits of efficiency and convenience that technology offers with the risks that come with it.

The Central Bank has embarked on a multi-year information security programme to strengthen its defences against cyber-attacks. Several defences have been implemented over the last year, which were tested through internal and independent assessments. Revisions have also been made to the Central Bank's Information Security policies and established Information Security Standards that govern the acceptable use of technology, automation and other related activities. Recognizing the fact that this risk may not be fully avoided or mitigated, incident response policies and procedures have been developed. In 2019, the Central Bank plans to evaluate the suitability of these procedures by conducting comprehensive tests involving licensees that interface with the Central Bank's systems. These exercises are designed to test recoverability of the Central Bank's systems as well as better understand the channels of risk transmission across the financial sector.

The growth of financial technology (fintech) adds further complexity to the management of this risk particularly given the interconnections that tie institutions together in the financial sector. Firstly, not all fintech developments fit the traditional regulatory framework, thereby rendering the establishment and enforcement of threshold requirements and standards difficult. Most impacted is the area of payments which plays a critical role in the efficiency of a financial system and has traditionally been regulated by supervisory authorities. However, traditional payment models are expensive and due to increasing compliance requirements, inflexible. This is driving the growth of peer-to-peer payments facilitated by mobile wallets and distributed ledger technology. These emerging models expand the attack surface for cyber-attacks and require adjustment to the regulatory and legal frameworks to bring them within the regulator's purview.

Secondly, through increased outsourcing of technology services – particularly to the Cloud – operational risk is shifting. Not only is it moving to firms that are outside the regulatory perimeter, but it is also increasing concentration risks with a handful of tech giants. Outsourcing of this nature improves flexibility and scalability and to some extent risk mitigation as service providers have deeper expertise and more resources (than any single user institution) to implement effective security controls. However, as it is outside of the financial supervisor's purview, establishment and enforcement of threshold requirements become difficult.

**BOX 7: Continued**

In 2019 the Central Bank undertook the following:

1. In collaboration with the Caribbean Regional Technical Assistance Centre, developed and hosted a cybersecurity conference to create awareness of the risk amongst regional supervisors and build capacity to effectively assess resilience of the financial sector. The impact of fintech in this regard was debated and insights and lessons were shared by subject matter experts from central banks across Europe, the US, Canada and the Caribbean; and
2. Issued a self-assessment survey to banks to evaluate the adequacy of mechanisms designed to safeguard their systems and data. Results will assist supervisors in assessing individual and collective resilience of the sector and in developing guidance on areas of concern.

## CHAPTER 5

### THE IMF AND WORLD BANK FINANCIAL SECTOR ASSESSMENT PROGRAMS



## CHAPTER 5

### THE IMF AND WORLD BANK FINANCIAL SECTOR ASSESSMENT PROGRAMS

#### INTRODUCTION

Trinidad and Tobago is scheduled to participate in a Financial Sector Assessment Program (FSAP) conducted by the IMF and the World Bank in 2019/2020. FSAPs have been a medium for an in-depth examination of a country's financial stability and development issues. In the last five years FSAPs have been conducted regionally in Jamaica, Suriname and The Bahamas. Given the significant evolution of the domestic financial system on several fronts since the last full assessment in 2005, an FSAP is a welcomed development at this juncture.

The scope and objectives of the FSAP exercise can be far reaching and comprehensive. It covers the core elements of a financial system, including the banking, insurance and pension sectors, and also takes a broader perspective by examining other financial stability concerns including, but not limited to, crisis management, institutional and legislative frameworks, payment systems, AML/CFT and interconnectedness. The objectives of an FSAP review include an assessment of a financial sector's stability, which involves examining its strengths and areas of potential vulnerability, as well as an evaluation of the level of financial sector development. The latter usually forms part of the World Bank's mandate and is conducted mainly for developing and emerging market economies.

FSAPs provide national authorities with valuable insights into the nature of the macro-financial vulnerabilities and can guide policy measures to enhance resilience. FSAPs are scheduled at the request of the country authorities and are conditional on the IMF's Executive Board-guided criteria and available resources. Criteria for scheduling FSAPs consist of the systemic importance, external sector vulnerability, significant structural changes and ensuring there is balance in the types of financial sectors reviewed on both a geographic and developmental basis.

#### COUNTRY COVERAGE

Since inception in 1999, the IMF has covered approximately 140 countries and conducts an average of 14 to 16 FSAPs annually (IMF 2014). FSAPs are conducted for developed and developing countries, and are spread across the various regions. Learning from the 2008 GFC, in 2010 the IMF introduced mandatory FSAPs for 25 systemically important jurisdictions scheduled for every five years. As the GFC showed, challenges in major financial centres can threaten global financial stability and growth. Therefore, it was deemed important to closely monitor the financial systems of large systemically important countries. In 2013, the list of systemically important countries was expanded to 29 (Table 7).

The IMF performs regional assessments for small, closely-related countries. The primary focus in regional evaluations includes harmonization of consolidated supervision, cross-border connections in insurance markets and systemically important payment and securities systems. The Eastern Caribbean Currency Union (ECCU) received the first regional financial stability assessment in 2004. Coming out from this exercise, broad recommendations for strengthening the ECCU's financial stability regulatory infrastructure and improving the banking supervision of the offshore financial sector were made. To date the IMF has published six regional Financial System Stability Assessment (FSSA) reports, pertaining to these areas. Three reports related to the Central African Economic and Monetary Community (CEMAC), while the remaining two were conducted in Europe and focused on policies regarding macroprudential oversight, crisis management frameworks, liquidity stress testing and systemic risk analysis (Figure 43).

**Table 7**  
**Mandatory Financial System Stability Assessments – S29**

Americas (4)	Europe (18)		Asia- Pacific (7)
Brazil	Austria	Netherlands	Australia
Canada	Belgium	Norway	China
Mexico	Denmark	Poland	Hong Kong, SAR
US	Finland	Russia	India
	France	Spain	Japan
	Germany	Sweden	Korea
	Ireland	Switzerland	Singapore
	Italy	Turkey	
	Luxembourg	UK	

Source: IMF (2013).

**Figure 43**  
**Published Regional Financial System Stability Assessments**



Source: IMF.

Note: **ECCU** (Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines); **CEMAC** (Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Republic of the Congo); **Euro area** – 19 of 28 members of the EU for which the Euro is the official currency (Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, Spain), **Non-euro area EU countries** (Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden and the UK).

## FEATURES OF AN FSAP

Four main documents can be expected after the completion of an FSAP exercise: the Aide-Mémoire; the FSSA; technical notes on critical topics; and detailed assessment reports on financial sector standards. Aide-Mémoires are a direct communication from the IMF mission to the country's authorities and are not published. FSSAs provide a systemic risk assessment while technical notes are thematic and both are published on a voluntary basis. Financial sector development reports take the form of a Financial Sector Assessment and are produced by the World Bank for presentation to its Executive Board.

FSAP missions examine financial system soundness, development levels and compliance with international standards in the financial sector analysis process. Soundness is examined through the analysis of financial system weaknesses which increase vulnerability to a crisis. Given the importance of FMI to the development of a country, FSAPs assess the reliability of payment and settlement systems, the effectiveness of legal and regulatory institutions and operational markets. Financial stability is closely related to access to financial infrastructure. Compliance is assessed through the Report on the Observance of Standards and Codes (ROSC) which includes the Basel Core Principles for Effective Bank Supervision framework, the International Association of Insurance Supervisors core principles and the International Organization of Securities Commissions principles for securities regulation. In some cases, missions also consider public debt management guidelines as this can influence external vulnerabilities. For developing countries, FSAP missions may look at compliance with FATF standards on AML/CFT given the implications for CBRs.

FSAPs employ a broad range of analytical tools to assess financial systems and supervisory frameworks. Some of these tools include a Risk Assessment Matrix (RAM), stress testing, supervision and crisis management framework assessments. The RAM is a significant post-crisis modification to the FSAP framework which prioritizes country-specific risks according to the relative likelihood and expected impact on the financial sector and transmission to the real economy. Results from the RAM tailor FSAP stress tests to more appropriately assess the country's macro-financial risks. The evaluation of a country's supervisory framework considers

both the macro- and micro-prudential supervisory quality. Macro-prudential oversight assessments examine the organizational framework, the quality of systemic risk surveillance, the communication of these risks to the public and the effectiveness of macro-prudential policy instruments. Micro-prudential policy analysis covers the systemically significant sub-sectors of the financial system. These sectors can include banking, insurance, securities, credit unions and payment systems.

In 2017, the IMF amended the FSAP framework to further integrate the micro-prudential supervisory standard with macro-financial risk assessments. A three-stage process identifies the most relevant financial stability risks in the primary sectors (banking, insurance and securities), then attaches grades across the principles and using factor analysis, identifies correlations between the principles and risk. This provides a more robust means of assessing risk transmission channels and recommending mitigating measures.

FSAPs were also redesigned to provide clearly defined components of risk in stability assessments. Assessments of vulnerabilities were accompanied by an estimation of the resiliency of the country through an evaluation of the regulatory and supervisory framework as well as financial safety nets. In addition to the RAM, modular FSAPs were proposed to economize on the IMF's resources as they would be able to meet critical financial stability requirements with a narrower scope than a full FSAP. Stress tests have also been amended to incorporate a broader and more bespoke set of financial risks. These measures are expected to improve FSAP outcomes so that they are more appropriate and useful to national authorities given the extensive resources required by such assessments.

## THE TRINIDAD AND TOBAGO FSAP EXPERIENCE

Trinidad and Tobago has benefitted from one full FSAP in 2005, which was published in January 2006. The 2005 FSAP also produced a detailed ROSC for banking supervision and payment systems. In 2011, Trinidad and Tobago was included among a select group of countries to pilot a FSSA module. The FSSA module was structured to complement the 2005 financial sector assessment. Generally, Trinidad and Tobago's financial stability assessment results were positive. The 2005 FSAP indicated that the credit, market and liquidity risks in the banking sector were low and that both banking and insurance sectors have shown resilience to financial shocks. However, the report highlighted the need to address supervisory, regulatory and legislative gaps to mitigate risk as the financial system evolves. The 2005 FSAP provided a wide range of structural and sector-specific recommendations to improve the resilience of the domestic financial system.

The Central Bank has worked assiduously on the 2005 FSAP recommendations. Some recommended actions based on IMF guidance in the report have been implemented, for example the introduction of stress testing, improvements in the legislative framework for licensed financial institutions and building the Central Bank's capacity in credit risk management and AML/CFT. More recently, the Central Bank has introduced macro-prudential surveillance and is actively preparing to implement risk-based supervision for insurance companies following the passage of the IA.

framework, mapping interconnectedness and guidance on implementing selected Basel principles.

The joint IMF/World Bank mission team would conduct meetings with major financial sector stakeholders, including the banking and insurance sectors, financial sector regulators and the GORTT in order to conduct these assessments. The initial scoping mission would be conducted in June 2019 followed by the full mission later in the year and into early 2020.

## WHAT TO EXPECT FOR THE 2019/2020 FSAP

For the upcoming FSAP, in addition to the standard sub-sector analysis – banks, insurance companies, credit unions and pension funds – it is anticipated that the 2019/2020 mission could consider more detailed reviews of AML/CFT compliance, payment systems and FMs, as well as the domestic financial crisis management framework. FSAP assessments provide recommendations which can aid supervisors in reforming the financial stability infrastructure and improving the quality of regulation and supervisory oversight. For Trinidad and Tobago, areas of particular importance include further work on risk-based insurance supervision, enhancing the stress testing

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## APPENDIX



## APPENDIX A

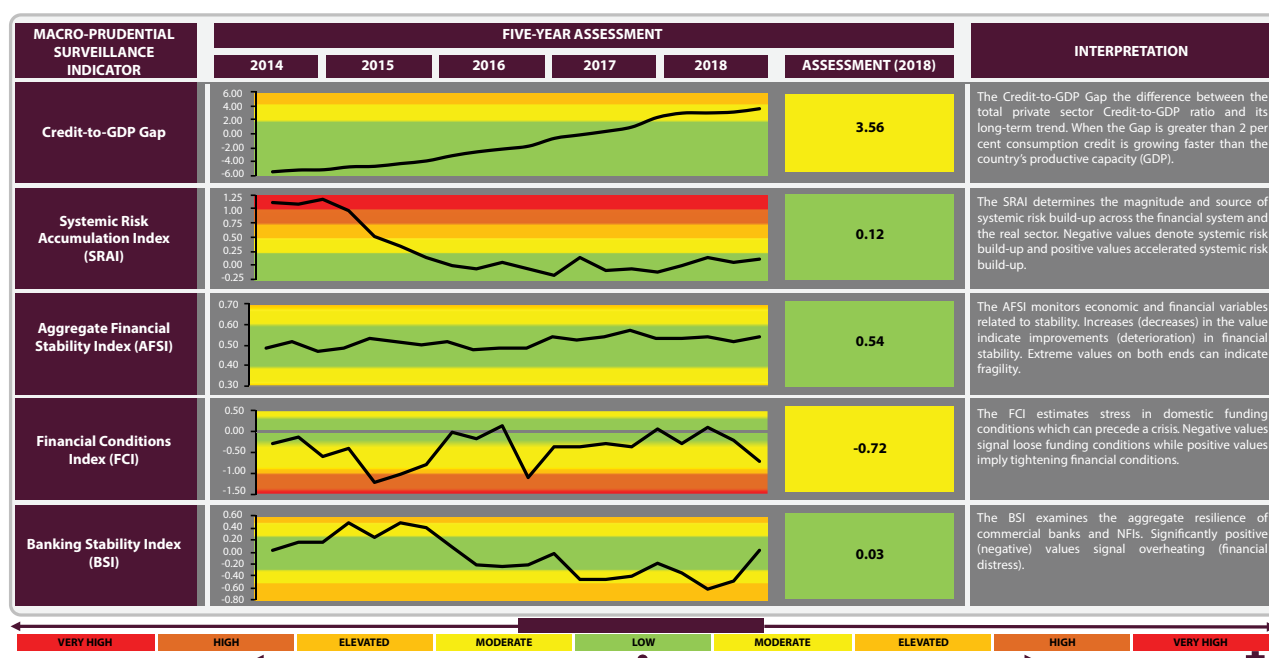
### Banking Sector Loans by Sector, 2013 – 2018

PUBLIC SECTOR CREDIT ACTIVITIES	TT\$ Millions (Absolute values)						TT\$ Millions (Change)						Percentage Change (per cent)					
	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-13 Dec-14	Dec-14 Dec-15	Dec-15 Dec-16	Dec-16 Dec-17	Dec-17 Dec-18	Dec-13 Dec-14	Dec-14 Dec-15	Dec-15 Dec-16	Dec-16 Dec-17	Dec-17 Dec-18	Dec-13 Dec-14	Dec-14 Dec-15
Petroleum	723	790	660	1,545	1,553	2,995	67	(130)	885	8	1,442	9.2	-16.4	134.1	0.5	92.8		
Construction	1,463	3,130	3,630	1,593	1,418	1,517	1,667	501	(2,037)	(175)	98	113.9	16.0	-56.1	-11.0	6.9		
Transport, Storage and Communication	999	738	1,223	1,120	1,178	1,244	(261)	485	(103)	57	66	-26.1	65.7	-8.4	5.1	5.6		
Finance, Insurance and Real Estate	1,105	1,872	2,026	2,555	2,585	2,139	767	153	530	30	(446)	69.4	8.2	26.1	1.2	-17.2		
Electricity and Water	1,059	1,128	3,069	2,555	2,639	1,045	69	1,941	(514)	83	(1,594)	6.5	172.0	-16.7	3.3	-60.4		
Other	265	491	456	616	25	169	226	(35)	160	(591)	144	85.4	-7.2	35.0	-95.9	573.5		
<b>TOTAL</b>	<b>5,614</b>	<b>8,150</b>	<b>11,065</b>	<b>9,985</b>	<b>9,398</b>	<b>9,110</b>	<b>2,535</b>	<b>2,915</b>	<b>(1,079)</b>	<b>(587)</b>	<b>(288)</b>	<b>45.2</b>	<b>35.8</b>	<b>-9.8</b>	<b>-5.9</b>	<b>-3.1</b>		
BUSINESS CREDIT ACTIVITIES	TT\$ Millions (Absolute values)						TT\$ Millions (Change)						Percentage Change (per cent)					
	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-13 Dec-14	Dec-14 Dec-15	Dec-15 Dec-16	Dec-16 Dec-17	Dec-17 Dec-18	Dec-13 Dec-14	Dec-14 Dec-15	Dec-15 Dec-16	Dec-16 Dec-17	Dec-17 Dec-18	Dec-13 Dec-14	Dec-14 Dec-15
Real Estate Mortgage Loans	4,206	4,748	5,290	5,552	6,161	6,841	542	542	262	610	680	12.9	11.4	4.9	11.0	11.0		
Finance, Insurance and Real Estate Companies	6,249	7,243	6,622	7,580	8,515	9,206	994	(621)	958	935	691	15.9	-8.6	14.5	12.3	8.1		
Services	7,260	7,268	6,982	6,936	7,447	8,148	8	(287)	(45)	511	701	0.1	-3.9	-0.6	7.4	9.4		
Manufacturing	3,416	3,150	3,869	4,328	4,044	3,602	(266)	719	460	(284)	(442)	-7.8	22.8	11.9	-6.6	-10.9		
Construction	2,915	2,796	2,605	2,475	1,715	1,846	(120)	(191)	(130)	(760)	131	-4.1	-6.8	-5.0	-30.7	7.6		
Other (Agriculture, Petroleum, Leasing)	1,523	1,556	1,729	913	1,186	1,156	33	173	(816)	273	(30)	2.2	11.1	-47.2	29.9	-2.6		
<b>TOTAL</b>	<b>25,569</b>	<b>26,761</b>	<b>27,096</b>	<b>27,785</b>	<b>29,069</b>	<b>30,799</b>	<b>1,192</b>	<b>335</b>	<b>689</b>	<b>1,284</b>	<b>1,730</b>	<b>4.7</b>	<b>1.3</b>	<b>-2.5</b>	<b>4.6</b>	<b>6.0</b>		
CONSUMER LOAN BY PURPOSE	TT\$ Millions (Absolute values)						TT\$ Millions (Change)						Percentage Change (per cent)					
	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-13 Dec-14	Dec-14 Dec-15	Dec-15 Dec-16	Dec-16 Dec-17	Dec-17 Dec-18	Dec-13 Dec-14	Dec-14 Dec-15	Dec-15 Dec-16	Dec-16 Dec-17	Dec-17 Dec-18	Dec-13 Dec-14	Dec-14 Dec-15
Real Estate including Mortgages	12,790	14,091	15,151	15,775	16,645	17,321	1,301	1,060	624	870	677	10.2	7.5	4.1	5.5	4.1		
Vehicles	3,162	3,754	4,573	4,914	5,063	5,092	591	819	341	148	30	18.7	21.8	7.5	3.0	0.6		
Credit Cards	2,137	2,303	2,392	2,720	2,886	3,105	166	90	328	166	219	7.8	3.9	13.7	6.1	7.6		
Refinancing	1,653	1,748	1,842	1,938	2,140	2,384	95	93	96	202	244	5.7	5.3	5.2	10.4	11.4		
Consolidation of Debt	1,572	1,603	1,675	1,844	2,139	2,532	31	72	169	295	393	2.0	4.5	10.1	16.0	18.4		
Other Purposes	3,255	3,264	3,358	3,446	3,549	3,776	9	94	89	103	227	0.3	2.9	2.6	3.0	6.4		
<b>TOTAL</b>	<b>24,570</b>	<b>26,762</b>	<b>28,991</b>	<b>30,638</b>	<b>32,422</b>	<b>34,212</b>	<b>2,193</b>	<b>2,229</b>	<b>1,647</b>	<b>1,784</b>	<b>1,790</b>	<b>8.9</b>	<b>8.3</b>	<b>5.7</b>	<b>5.8</b>	<b>5.5</b>		

Source: Central Bank of Trinidad and Tobago.

## APPENDIX B

### Macro-prudential Surveillance Indicators Results and Heat Map



Source: Central Bank of Trinidad and Tobago.

Note: Risk summaries for each index are based on end of period values. A negative Credit-to-GDP gap does not suggest evidence of systemic risks. Instead, it implies that there is room for additional borrowing.

## APPENDIX C

### Overall Risk Rating Framework Scale

<b>Low</b>	implies generally stable macro-financial conditions with little threat to financial stability
<b>Moderate</b>	refers to building macro-financial imbalances with minimal levels of systemic risk build-up that do not yet pose a threat to financial stability
<b>Elevated</b>	refers to macro-financial conditions which signal high levels of systemic risk build-up that suggest the need for closer monitoring but not an immediate policy response
<b>High</b>	indicates potentially disruptive levels of systemic risk to the point where policy intervention should be seriously contemplated
<b>Very High</b>	denotes that materialization of systemic risk is imminent with a significant threat to the real economy which requires immediate policy intervention

Source: Central Bank of Trinidad and Tobago.

## APPENDIX D

### Commercial Banking Sector Stress Testing Results, 2017 – 2018

		Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	
Pre-Shock CAR		21.0	22.2	22.3	22.2	20.9	
Pre-Shock CAR Adjusted for Provisions		20.0	21.1	21.2	21.1	19.9	
<b>SINGLE FACTOR TESTS</b>							
						Post-Shock CAR	Change from Pre-Shock Adjusted CAR
Interest Rate Risk	Interest Rate ↑ 700 basis points	9.8	11.2	10.9	12.1	10.3	-9.6
	Interest Rate ↓ 100 basis points	21.3	22.5	22.6	22.3	21.2	1.3
Foreign Exchange Risk	TT Dollar depreciates 40 per cent	21.6	23.0	23.1	22.8	21.4	1.5
Credit Risk	Credit Portfolio worsens on account of 20 per cent decline in GDP	17.9	19.0	19.1	19.0	17.8	-2.1
Credit Risk - Property Prices	Property Prices ↓ 30 per cent	17.8	18.9	18.9	18.9	17.1	-2.2
<b>SCENARIO TESTS</b>							
						Post-Shock CAR	Change from Pre-Shock Adjusted CAR
Energy Price Shock	Price ↓ 50 per cent - No Policy Response	11.7	13.0	12.8	13.6	11.8	-8.1
	Price ↓ 50 per cent - Policy Response	21.0	22.2	22.3	22.0	20.6	0.7
Regional Disaster Scenario		19.0	20.1	20.0	20.0	18.7	-1.2
<b>DAYS UNTIL ILLIQUID</b>							
Liquidity Risk	Bank Run	64	64	68	66	64	

Source: Central Bank of Trinidad and Tobago.





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