

2023



FINANCIAL STABILITY **REPORT**

Central Bank of Trinidad and Tobago P.O. Box 1250 Port of Spain Republic of Trinidad and Tobago www.central-bank.org.tt

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Central Bank of Trinidad and Tobago Financial Stability Report 2023





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FOREWORD

In 2023, the domestic financial system remained stable, despite global and domestic challenges. Financial institutions continued to focus on improving operations and operational resilience, through the greater use of digital technologies, and advances in the areas of governance, risk mitigation and policy compliance helped to contribute to the overall financial system soundness.

Globally, financial stability conditions have improved in the latter half of 2023. However, the overall risk to stability is weighted towards the downside due to ongoing geopolitical conflicts and election outcomes in major economies, which are likely to materially influence the future paths of trade and foreign policies. Escalation in conflicts or the crystallisation of election risks could further accelerate de-globalisation and raise global prices, reversing the current downward trajectory of global inflation. In such a risk scenario, the expected easing of monetary policy stances in advanced economies is likely to be delayed, adding to the financial stress of households and firms and weakening global output. An extended period of high global interest rates and inflation can adversely impact macro-financial conditions in emerging and developing economies by weakening their debt-servicing capabilities and increasing financing costs for much needed growth.

Trinidad and Tobago's energy sector experienced production issues over the



first nine months of 2023; however, these were countered by gains in non-energy sector activity. Short-term energy sector activity could be hampered by unanticipated shutdowns or delays in new production. Sovereign concentrations and high interconnections in the financial system continue to be weak points.

This year's Financial Stability Report highlights the key risks facing the local financial system: sovereign exposure; cybersecurity; lower liquidity buffers; and higher climate-related insurance costs. The Report also notes the Bank's regulatory and supervisory actions taken in 2023 to improve the risk absorption capacity and operational resilience of the financial system. These include: the roll-out of Basel Pillar II leverage ratios and capital buffers for regulated entities; and the Cybersecurity Best Practices Guideline for the sector.

Mr. Patrick Solomon
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APPENDIX A

APPENDIX B

LIST OF ABBREVIATIONS

ABBREVIATION

NAME

ACH Automated Clearing House

AE Advanced Economy

AFSI Aggregate Financial Stability Index

All T&T All Trinidad and Tobago

AML/CFT Anti-Money Laundering/Combating the Financing of Terrorism

ATM Automated Teller Machine

BIS Bank for International Settlements
BPSP Bill Payment Service Provider

BSI Banking Stability Index
CaaS Cybercrime as a Service
CAR Capital Adequacy Ratio

CFATF Caribbean Financial Action Task Force

CIF CLICO Investment Fund

CIS Collective Investment Scheme

CLICO Colonial Life Insurance Company (Trinidad) Limited

COVID-19 Coronavirus Disease

CRED Centre for Research on the Epidemiology of Disasters

CSO Central Statistical Office
DOW Dow Jones Industrial Average

D-SIB Domestic Systemically Important Bank ECCS Electronic Cheque Clearing System

ECLAC Economic Commission of Latin America and the Caribbean

EMDE Emerging Market and Developing Economy

EM-DAT Emergency Events Database
EMI Order E-Money Issuer Order (2020)
EFT Electronic Funds Transfer

E-Money Electronic Money

EMI Electronic Money Issuer

EMV Europay, MasterCard® and Visa®

EU European Union

EWI Early Warning Indices
FCI Financial Conditions Index

LIST OF ABBREVIATIONS

ABBREVIATION

NAME

FSB Financial Stability Board

FSI Financial Soundness Indicators

FSR Financial Stability Report

FY Fiscal Year

Gap Credit-to-GDP Gap

GDP Gross Domestic Product

GFSR Global Financial Stability Report

GoRTT Government of the Republic of Trinidad and Tobago

HHI Herfindahl-Hirschman Index
HSF Heritage and Stabilisation Fund

IA 2018 Insurance Act, 2018

IAIS International Association of Insurance Supervisors
IOPS International Organisation of Pension Supervisors

IDB Inter-American Development Bank

IFRS 17 International Financial Reporting Standard for Insurance Contracts

IMF International Monetary Fund
LAC Latin America and the Caribbean

LCR Liquidity Coverage Ratio

ML Money Laundering

MSCI Morgan Stanley Capital International

NASA National Aeronautics and Space Administration

Nasdag National Association of Securities Dealers Automated Quotations

NAV Net Asset Value

NDFI Net Domestic Fiscal Injection
NFC Non-Financial Corporations

NGFS Network of Central Banks and Supervisors for Greening

the Financial System

NPL Non-Performing Loan
OMO Open Market Operations

ORSA Own Risk and Solvency Assessment

OTC Over-the-Counter

PF Proliferation Financing

LIST OF ABBREVIATIONS

ABBREVIATION

NAME

PSP Payments Service Providers

POS Point of Sale

QIS Quantitative Impact Study

ROA Return on Assets
ROE Return on Equity

RTGS Real Time Gross Settlement System

RWA Risk-Weighted Assets S&P Standard and Poor's

SRAI Systemic Risk Accumulation Index

TA Technical Assistance
TF Terrorist Financing

TSTT Telecommunications Services of Trinidad and Tobago Limited

TTSE Trinidad and Tobago Stock Exchange

TTSEC Trinidad and Tobago Securities and Exchange Commission

UK United Kingdom

UNCDF United Nations Capital and Development Fund

US United States

USSEC United States Securities and Exchange Commission

VaR Value-at-Risk VAT Value-Added Tax

PREFACE

Financial stability refers to the smooth functioning of financial intermediation, financial markets, and payments and settlement systems, even in the face of adverse shocks. Efficient financial intermediation promotes sustainable economic growth and advances the socioeconomic welfare of citizens. Accordingly, the Central Bank of Trinidad and Tobago (the Central Bank) plays a vital role in fostering stability and soundness and maintaining confidence in the domestic financial system (Financial Institutions Act, 2008 Part II 5[2] and Insurance Act, 2018 Part II 7[2]).

The Financial Stability Report (FSR), which is currently published annually, complements the Central Bank's biannual Monetary Policy Report and other publications by providing insights into recent developments and vulnerabilities of the financial system and risks to its stability from domestic, regional, and international factors. Financial system vulnerabilities can increase a country's susceptibility to adverse shocks by undermining its risk absorption capacity. However, appropriate governance, risk and compliance framework, adequate risk capital, and effective surveillance and monitoring help strengthen the lossabsorbing capacity of the financial system and enhance its resilience to shocks. The FSR also highlights the Central Bank's ongoing efforts to strengthen these areas and aims to facilitate informed discussion on financial stability issues.

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

OVERVIEW¹

In 2023, global financial stability risks eased as inflation receded and economic recessions were avoided in a number of economies. Major central banks appear more confident about loosening monetary policies in 2024 as high interest rates, falling energy prices, and supply-chain expansions slowed inflation in 2023 and early 2024. This optimism was reflected in global financial markets, where volatility subsided, and equity and bond markets achieved significant gains. However, inflation rates remained above central bank targets in several economies. Any upside surprises could delay policy rate cuts, which can weigh on global economic activity and trigger financial instability. According to the International Monetary Fund (IMF), in its July 2024 World Economic Outlook Update, global growth slowed to 3.2 per cent in 2023 and is projected to hold steady at this rate in 2024. Factors that could impact global growth and inflation include geopolitical tensions stemming from the ongoing Russia-Ukraine war and the growing conflict in the Middle East, and a slew of national elections in some advanced and emerging countries, which have implications for the future paths of trade and foreign policies.

The global financial system was generally resilient to higher interest

rates and tepid growth in 2023 due regulatory authorities' timely interventions on the emergence of destabilising risk pockets, but budding fragilities threaten financial stability. In early 2023, financial stability authorities in the United States and Switzerland quickly intervened to contain a few banking failures, preventing the propagation of systemic risk. Further, in advanced economies, households and corporates experienced diminished debt-servicing abilities on account of high interest rates. Growing debt and high interest rates also challenged some emerging markets and developing economies, which faced increased risk of a public debt crisis. In its April 2024 Global Financial Stability Report, the IMF highlighted compressed spreads and stretched valuations across asset markets, stress in the commercial and residential real estate sectors, and the accumulation of private and public sector debt as emerging risks to financial stability. Geopolitical conflicts, climate change, and cyberattacks were also featured in international and regional financial stability reports as increasing concerns over the medium-term.

On the domestic front, economic indicators were mixed. According to the Central Statistical Office, growth in real Gross Domestic Product (GDP) held steady over the first nine months of 2023, compared to the same period in 2022.

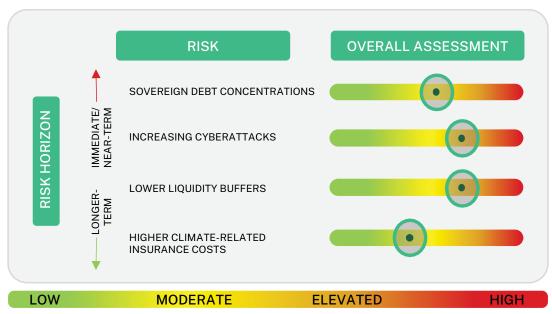
¹ This Report includes economic developments up to July 2024, while financial industry data are as at December 2023.

This outturn was primarily attributed to an expansion of 2.3 per cent in the non-energy sector, which neutralised a contraction of 5.3 per cent in the energy sector. The improved non-energy activity supported a slight decline in the unemployment rate, from 4.7 per cent in 2022 to 4.1 per cent in 2023. Moreover, although non-energy revenue increased, higher spending on transfers and subsidies contributed to a fiscal deficit of 1.7 per cent of GDP in Fiscal Year (FY) 2023, compared to a surplus of 0.7 per cent in FY2022. As a result of higher government borrowing, adjusted General Government debt rose to 72.1 per cent of GDP in FY2023, from 66.6 per cent of GDP one year earlier. Household and corporate sector credit-to-GDP ratios also increased over 2023, as favourable financial conditions supported strong credit demand. However, the levels do not suggest, at the present time, significant systemic risk build-up.

Financial stability risks in Trinidad and Tobago emanating from elevated international interest rates subsided in the latter half of 2023, but other risks came further into the foreground. The 2022 Financial Stability Report highlighted three sources of risk to the domestic financial sector: rising international interest rates; increased cyberattacks; and tighter liquidity conditions. Though global interest rates remain elevated, risks have abated owing to improved financial market sentiments and less restrictive monetary policy from major central banks.

The Summary Heat Map below highlights the key risks to the health of the domestic financial sector in 2023:

GRAPHIC 1SUMMARY HEAT MAP-RISKS TO FINANCIAL STABILITY IN TRINIDAD AND TOBAGO



Source: Central Bank of Trinidad and Tobago

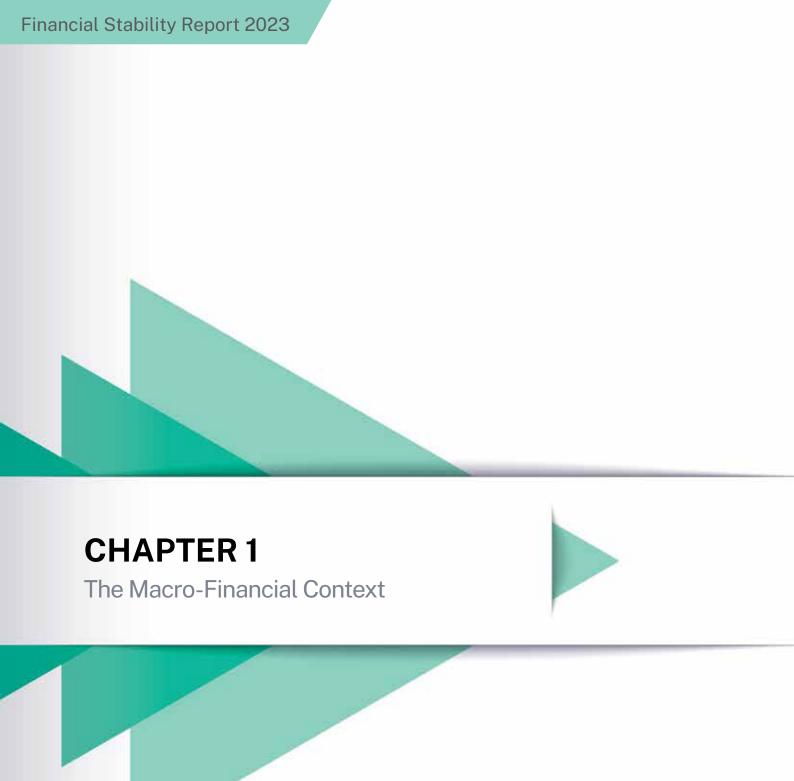
- Sovereign debt concentrations in the banking and insurance sectors. Domestic sovereign exposures in the major regulated financial institutions were elevated in 2023. Fiscal shortfalls resulted in increased domestic financing, particularly through the commercial banks. In light of frequent and sizeable government borrowing, large sovereign exposures on financial institutions' balance sheets remain a source of vulnerability.
- cyberattacks. Increasing Cyberrelated incidents posed a challenge to the operations of firms in 2023. Fortunately, these events did not result in any systemic outcome during 2023. Looking forward, the probability of a systemic event arising from a cyberattack is more than likely to increase as cyberattacks continue to evolve into a 'cybercrime as a service' (CaaS) business model, expanding the potential pool of cybercrime actors, and with the increased migration of financial services to the digital space, expanding the attack vector for cybercriminals.
- Lower liquidity buffers. A negative liquidity surprise event may morph into a systemic risk event if structural liquidity in the banking sector is very slow to recover from the initial shock. In light of the increase in the volatility

- of excess reserves towards the end of 2023, a closer examination was paid to the structural liquidity in the banking sector. In December 2023, liquidity stress tests were conducted for banking system and individual commercial banks. The results of the stress tests revealed that both the system and individual banks had satisfactory survival horizons to liquidity shocks but the survival horizons were slightly shorter in 2023 than in 2022. So while liquidity in the banking sector was not a major issue in 2023, its contribution to financial stability risk increased from 2022.
- Higher climate-related insurance costs. Climate-related risks currently do not pose an immediate risk to financial stability. However, a rise in either acute or chronic physical climate-related risks may increase the reinsurance costs for local insurers and/or raise the costs of insurance on climate-relevant assets held by firms and households, resulting in an overall system that is likely to be underinsured. In a such scenario, the occurrence of a larger-than-expected climate loss event is likely to negatively impact financial stability as insurers incur sizeable insurance pay-outs and banks face higher loan defaults on climate-relevant assets.

The domestic financial sector remains sound and resilient, and appears able to withstand adverse macro-financial shocks in the short term. At the end of 2023, the individual segments of the financial sector were in relatively healthy positions, despite a domestic economy that was still in recovery mode. Commercial banks and non-bank financial institutions continued to be well capitalised and profitable. The long-term insurance industry's financial soundness indicators were overall satisfactory, while higher earnings in the general insurance industry were reflected in profitability ratios. In the pension sector, the number of plans that reported improved funding positions increased in 2023, compared to 2022.

The Central Bank continues to promote financial stability through various initiatives. In 2023, the Central Bank activated additional Basel II/III capital buffers, including add-ons for newlyidentified domestic systemicallyimportant banks. Following technical assistance from the IMF, the Central Bank also issued a cybersecurity guideline for regulated financial institutions, which requires institutions to conduct annual self-assessments and develop action plans to mitigate cyber risks. Amended statutory regulatory forms and associated instructions were issued during the year to obtain additional information relating to the International Financial Reporting Standard for Insurance Contracts (IFRS 17). More recently, in March 2024, a revised guideline was issued pertaining to the approval of insurance products under the Insurance Act 2018. Efforts to strengthen the Anti-Money Laundering/Combating the Financing of Terrorism framework progressed with other national stakeholders. Further, the Central Bank is shoring up its capacity to meet the demands of expanded supervision and regulation of the national payments system, and to allow the safe on-boarding of financial technology firms (fintechs).





THE MACRO-FINANCIAL CONTEXT

High interest rates and moderating economic growth in many economies generated challenging financial stability risks in 2023. Since late 2023, receding inflation fuelled optimistic sentiments about the direction of monetary policy, which in turn drove improved conditions in financial markets in major economies. Notwithstanding, escalating geopolitical tensions, cyberattacks and climate-related events could threaten global and domestic financial stability.

GLOBAL MACRO-FINANCIAL STABILITY

Global economic conditions stabilised amid relatively improved financial conditions. Aggressive monetary policy declining tightening. coupled with commodity prices and supply-side expansion, tamed inflationary pressures in 2023 and early 2024. The better-thanexpected reduction in inflation fuelled market optimism of monetary policy rate declines in 2024, which improved financial volatility and drove financial markets higher. Despite rate cuts by a few central banks in 2024, borrowing costs in Advanced Economies (AEs) remain high as inflation is above target in some instances. Still-high interest rates,

reduced government spending due to limited fiscal space and elevated debt, and geopolitical tensions are weighing on global economic activity. Against this backdrop, the International Monetary Fund (IMF), in its July 2024 World Economic Outlook (WEO) Update, estimated steady global economic growth of 3.2 per cent in 2023 and 2024.²

Although the global financial system fared well in 2023 amid higher interest rates, financial fragilities remain. The financial system was resilient as bank failures in early 2023 did not morph into systemic threats due to timely interventions by authorities. Further, soundness indicators of the financial sectors in major economies were healthy.

² IMF. "World Economic Outlook Update July 2024:." International Monetary Fund. July 2024. https://www.imf.org/en/Publications/WEO/Issues/2024/07/16/world-economic-outlook-update-july-2024

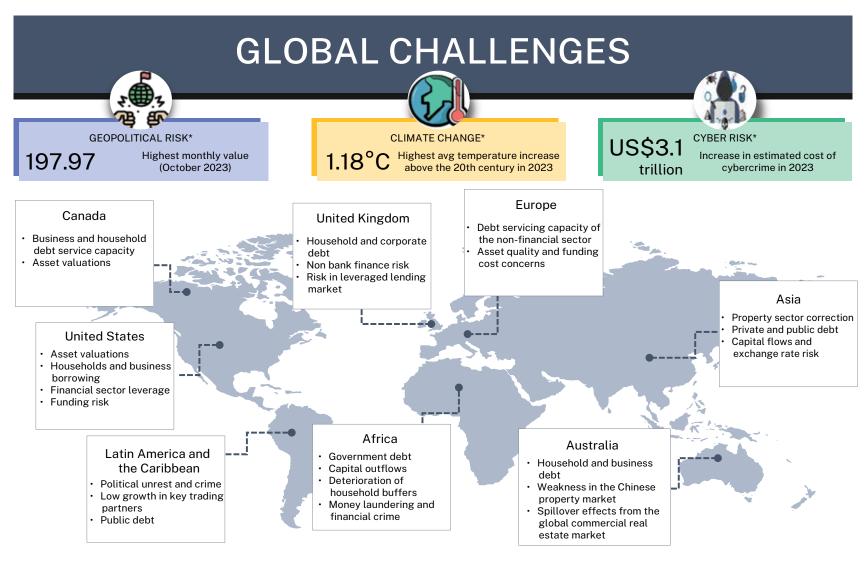
While some near-term risks to financial stability have receded, the IMF's April 2024 *Global Financial Stability Report* (*GFSR*)³ highlighted that the risks to the outlook are stresses in the commercial and residential real estate sectors and high correlation across asset markets. Over the medium term, the GFSR noted that vulnerabilities are related to the accumulation of private and public sector debt and higher volatility in bond markets. Other risks, such as geopolitical conflicts, climate change, and cyberattacks, were pinpointed in regional financial stability reports (FSRs) (**Figure 1**).

International financial and regulatory bodies have moved swiftly to safeguard financial stability (Figure 2). The Financial Stability Board (FSB) continued to advance its work on the resolvability of banks, central counterparties and insurers. Also, in light of volatility and failures in the crypto market, the organisation is finalising global regulatory framework for crypto-asset activity. During its financial year (May 2022 to April 2023), the IMF conducted 126 Article IV consultations and invested US\$337 million in capacity development. On the global warming front, the Bank for International Settlements (BIS) and the International Association of Insurance Supervisors (IAIS) committed to improve the oversight of climate-related risks for banks and insurers. Meanwhile, the Network for Greening the Financial System continued to update its climate scenarios and provide guidance on climate and nature-related financial risks.

Adverse global macro-financial shocks can negatively affect the domestic financial system, requiring appropriate supervisory responses. The domestic financial system has been robust to exogenous events, such as legacy issues stemming from the pandemic and escalating geopolitical risk. However, risks arising from sovereign exposures, increased cyberattacks, lower excess liquidity in the banking system, and higher climate-related insurance costs threaten financial stability (Chapter 2). The Central Bank of Trinidad and Tobago (the Central Bank) continued to monitor and strengthen its oversight of the financial system in order to mitigate significant threats to its stability (**Chapter 4**).

³ IMF. "Global Financial Stability Report April 2024: The Last Mile: Financial Vulnerabilities and Risks." International Monetary Fund. April 2024. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

FIGURE 1
SUMMARY OF GLOBAL FINANCIAL STABILITY RISKS, 2023 – HY1 2024



Sources: Various countries' FSRs

Note: * Sourced from the Caldara and Iacoviello (2022), National Oceanic and Atmospheric Administration, and World Economic Forum.

FIGURE 2

KEY DEVELOPMENTS AND PERSPECTIVES AT SELECTED MULTILATERAL ORGANISATIONS, 2023 – HY1 2024



BANK FOR INTERNATIONAL SETTLEMENTS (BIS)

Disclosure Framework for Climate-Related Financial Risk (NOVEMBER 2023)

 The Basel Committee is exploring a Pillar 3 disclosure framework for climate-related financial risks with the intention to enhance regulation, supervision and practices of banks globally.

Targeted Adjustments on Banks' Exposures to Crypto-Assets (DECEMBER 2023)

 The Basel Committee issued a consultation document proposing targeted alterations to tighten its standard on banks' exposures to crypto-assets.

Revisions to Basel Core Principles (FEBRUARY 2024)

 Following discussions with stakeholders, the Basel Committee approved revisions to core principles for effective bank supervision.



FINANCIAL STABILITY BOARD (FSB)

Global Regulatory Framework for Crypto-Assets (JULY 2023)

 The FSB is in the finalisation stage of the framework to ensure consistency in the regulation and supervision of crypto-asset activities.

Climate-Related Disclosure (OCTOBER 2023)

 All FSB jurisdictions were highlighted as having either requirements, guidance, or expectations to implement climate-related disclosures.

Enhancing Banks and Insurers Resolvability (DECEMBER 2023)

 The FSB intends to promote the implementation of the bail-in resolution tool globally, and will publish the first list of insurers subject to resolution planning standards in 2024



INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS (IAIS)

Insurance Capital Standard (IUNE 2023)

 The IAIS issued its final public consultation on the insurance capital standard as a capital requirement for internationally active insurance groups. In December 2024, the standard is expected to be adopted by the IAIS.

Consultation on Climate Risk Supervisory Guidance (NOVEMBER 2023)

 In an attempt to ensure consistent supervisory approaches on climate-related risks globally, the IAIS engaged in a second round of consultations. These consultations aim to address issues related to market conduct supervision and climate scenario analysis.



INTERNATIONAL MONETARY FUND (IMF)

Climate Reforms and Private Sector Resources for Climate Action (IUNE 2023)

 The IMF, in collaboration with the Inter-American Development Bank, is seeking to promote climate financing for countries via policy reforms, capacity development aid, and tailored financing.

Annual Report, Financial Year 2022/23 (OCTOBER 2023)

For the period May 1 to April 30, the report indicated that:

 (i) 126 country health checks were conducted; and (ii)
 US\$337 million was used to facilitate capacity development. Financial assistance was also provided, amounting to US\$294 billion to 96 countries.



INTERNATIONAL ORGANISATION OF PENSION SUPERVISORS (IOPS)

Supervision of Pension Funds' Investment Activities (APRIL 2024)

 The August 2023 survey focused on four investment activities by pension funds and corresponding regulatory practices: (i) leverage; (ii) lending; (iii) trading (including short selling); and (iv) indirect investments. Results indicated that leverage was most commonly used.



NETWORK FOR GREENING THE FINANCIAL SYSTEM (NGFS)

Conceptual Framework on Nature-Related Financial Risks (SEPTEMBER 2023)

 The framework intends to guide policies and actions by central banks and supervisors. It seeks to provide an initial step towards an integrated assessment of climate and nature-related risks.

Conceptual Note on Short-Term Scenarios (OCTOBER 2023)

 The note suggests five climate scenarios to support the short-term dynamics associated with various transition and physical risk impacts.

NGFS Scenarios (NOVEMBER 2023)

 The NGFS scenarios were updated to reflect the latest GDP and population pathways and country-level commitments until March 2023.

Sources: Various reports of international regulatory and supervisory bodies, central banking groups, and other multilateral organisations

REGIONAL DEVELOPMENTS

Financial performance in AEs improved as economic and financial uncertainty receded. Government bond yields in major AEs were relatively high, but they declined somewhat in 2023, driven by the sanguinity that policy rates have peaked and monetary policy may ease. Though some central banks opted to keep policy rates "higher for longer" to bring inflation to target, risk appetites generally improved, thereby lowering risk premiums. Equity prices in the United States, Canada, Japan, and Australia reached record highs in the first half of 2024, in anticipation of rate cuts as inflation edged closer to policy targets. However, given the still-high interest rate environment, households and businesses continued to face challenges servicing their debt and became reliant on funding from private credit and leveraged loans. Consequently, higher credit risks can emerge, reducing investors' risk appetite and limiting access to credit. In addition, the ongoing quantitative tightening can drain liquidity.

Divergent policy rate stances and escalating debt were major risks for Emerging Markets and Developing Economies (EMDEs). As flows to the bond and equity markets improved towards the end of 2023, several EMDEs subsequently began policy rate cuts. While this

strengthened credit growth in some countries (Brazil and Mexico), narrowing interest rate differentials between AEs and EMDEs could pose exchange rate and capital flow issues.4 Further, EMDEs continued to encounter fiscal concerns, with several economies facing large interest payments and high refinancing costs (relative to economic growth). In addition, China - an important source of growth spillovers—faced a downturn in its housing market. This disrupted the country's stock market and resulted in significant losses to its asset management industry. Nonetheless, contagion effects on banks' balance sheets were contained due to the implementation of a mortgage rate adjustment mechanism and the protracted use of forbearance measures for developers.

Inflation ebbed in Latin America and the Caribbean (LAC), but risks still loom. Several LAC countries raised interest rates to curb inflation. However, as inflation descended, there were concerns that softening the policy stance could trigger capital flight and exchange rate challenges, given the still-restrictive interest rate environment in AEs. Risks are compounded due to mounting geopolitical tensions, which can create supply chain challenges, and the intensification of weather-related events. On the latter, the Inter-American Development Bank

⁴ IMF. "Global Financial Stability Report April 2024: The Last Mile: Financial Vulnerabilities and Risks." International Monetary Fund. April 2024. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

(IDB) highlighted that climatic events associated with El Niño (last episode identified in 2023) could worsen LAC fiscal conditions and exacerbate debt sustainability challenges.⁵ According to the Economic Commission of Latin America and the Caribbean (ECLAC), public debt-to-GDP remains high. However, from end-2022 to September 2023, the ratio declined by 1.7 percentage

points to 49.8 per cent for Latin America, and 6.7 percentage points to 69.7 per cent for the Caribbean.⁶ Nonetheless, to improve fiscal space, the region has been adopting fiscal consolidation programs. Countries were also enhancing financial stability. For example, The Bahamas and Belize issued guidelines on digital assets and anti-money laundering, respectively.

Average gross debt-to-GDP was projected to increase by 3.0 percentage points over a three-year period, in response to an El Niño shock. IDB. "Ready for Take-Off? Building on Macroeconomic Stability for Growth." Inter-American Development Bank. March 2024. https://flagships.iadb.org/en/MacroReport2024/ready-for-take-off-building-on-macroeconomic-stability-for-growth

⁶ ECLAC. "Preliminary Overview of the Economies of Latin America and the Caribbean." Economic Commission of Latin America and the Caribbean. December 2023. https://www.cepal.org/en/publications/type/preliminary-overview-economies-latin-america-and-caribbean

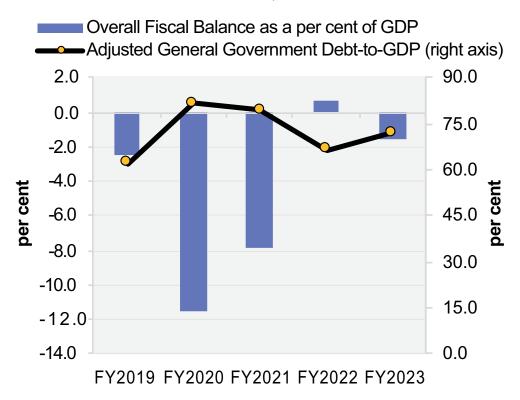
THE DOMESTIC SETTING

Domestic economic activity was relatively steady in 2023, while inflation and labour market conditions improved. The Central Statistical Office (CSO) reported that real GDP growth was flat in the first nine months of 2023, compared to the same period prior. Labour market conditions were favourable, as the unemployment rate fell from 4.7 per cent in 2022 to 4.1 per cent in 2023. Further, daily job advertisements in print media increased by 1.3 per cent, suggesting the demand for labour persisted. Additionally, declining food and energy prices globally partially accounted for the easing of pressures. On inflationary average, headline inflation fell from 5.8 per cent in 2022 to 4.6 per cent in 2023.

The fiscal accounts returned to deficit in Fiscal Year (FY) 2023, resulting in an uptick in government borrowing and the public debt ratio. The overall fiscal balance as a share of GDP declined from 0.7 per cent in 2022 to -1.7 per cent in 2023 (Figure 3), on account of expenditure outpacing the expansion in non-energy revenue. Additional spending on transfers and subsidies drove the increase in expenditure. Adjusted General Government debt (which excludes sterilised debt) increased from 66.6 per cent of GDP in FY2022 to 72.1 per cent of GDP in FY2023. Further, the external accounts recorded a deficit, and gross official reserves stood at US\$6.3 billion in 2023 (US\$574.5 million lower than in 2022) (**Figure 4**).

The Central Bank's policy stance has been aimed at keeping inflation moderate, while supporting economic and financial stability. Accordingly, the Monetary Policy Committee kept the repo rate unchanged at 3.50 per cent in 2023. The median prime lending rate was also constant at 7.50 per cent throughout 2023. However, the 91-day Treasury bill increased by 52 basis points between January 2023 (0.6 per cent) and December 2023 (1.1 per cent), as governmentrelated capital market activity quickened. Favourable financial conditions continued to fuel private sector credit, which increased by 7.3 per cent in 2023. On average, growth in consumer lending exceeded the expansion in business and real estate mortgage lending (Figure **5**). Notably, in 2023, household debtto-GDP and corporate sector credit-to-GDP ratios rose to an estimated 35.5 per cent and 40.6 per cent, respectively (**Figure 6**). These movements represented increases of 470.6 and 342.9 basis points, respectively, over 2022. Notwithstanding, the commercial banking sector's consumer and corporate non-performing loan (NPL) ratios suggested that credit risk appeared contained.

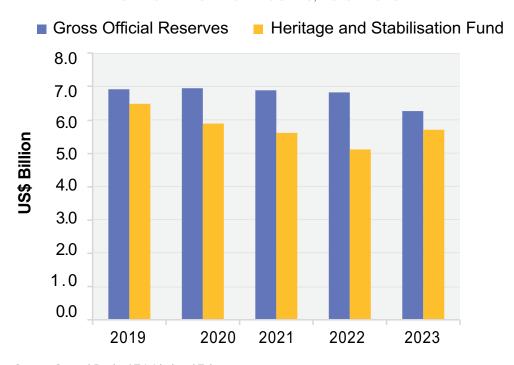
FIGURE 3
FISCAL OPERATIONS, FY2019 - FY2023



Source: Ministry of Finance

Note: Nominal GDP data used for ratios prior to 2023 are sourced from the CSO; ratios for 2023 are computed using Central Bank estimates.

FIGURE 4
OFFICIAL FOREIGN ASSETS, 2019 – 2023



Source: Central Bank of Trinidad and Tobago

FIGURE 5

PRIVATE SECTOR CREDIT GRANTED BY THE

CONSOLIDATED FINANCIAL SYSTEM – AVERAGE, 2019 – 2023

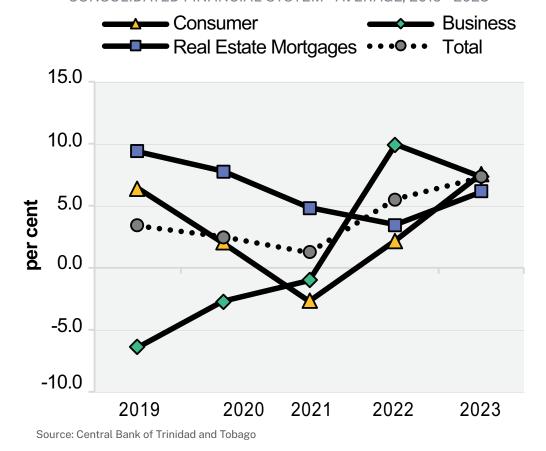
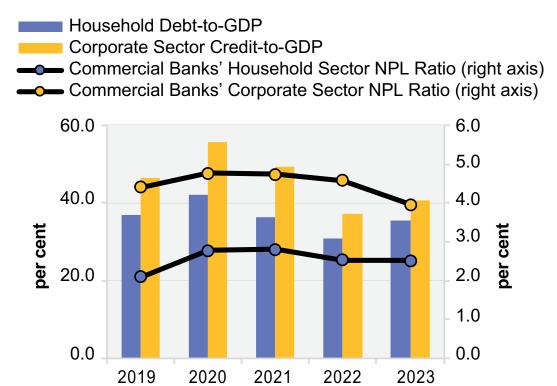
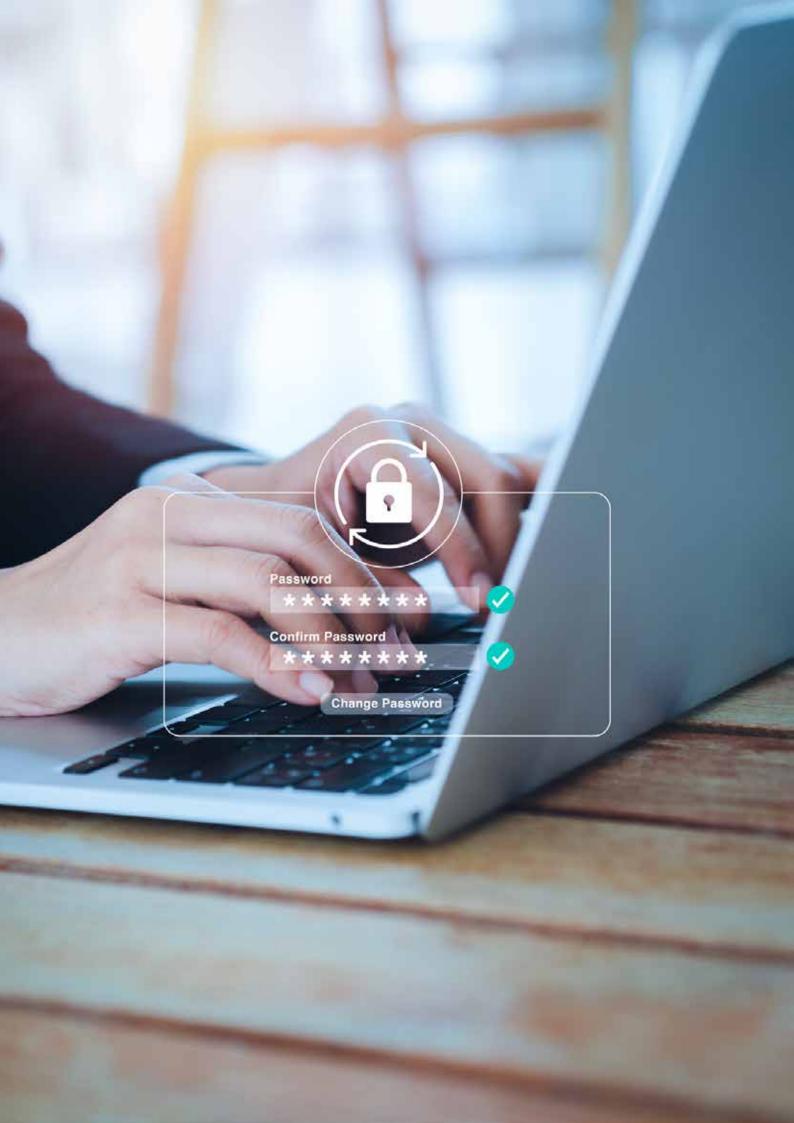


FIGURE 6
HOUSEHOLD AND CORPORATE SECTOR CREDIT, 2019 – 2023



Source: Central Bank of Trinidad and Tobago

Note: Nominal GDP data used for ratios prior to 2023 are sourced from the CSO; ratios for 2023 are computed using Central Bank estimates.



FINANCIAL STABILITY RISKS IN TRINIDAD AND TOBAGO

In 2023, domestic financial stability faced a challenging global macro-financial environment owing to high interest rates, moderating but stubborn inflation, and geopolitical tensions. These developments could threaten domestic financial stability through sovereign, liquidity, and cyber risks over the short term. However, early warning indicators suggested some moderation of systemic risks.

Chapter 2 examines the short-term hazards to the domestic financial system and assesses its shock resilience. Financial Soundness Indicators (FSIs) remained favourable in 2023, with noted improvements in the Banking Stability Index (BSI), despite declining liquidity in the domestic banking system. Financial stability risks in Trinidad and Tobago were assessed as "moderate."

Despite concerns about the growing sovereign exposure within the financial sector, buffers such as the Heritage and Stabilisation Fund (HSF) remain available. However, the stability of the domestic financial system faces additional threats from the rising frequency and severity of cyberattacks, lower liquidity buffers, and higher climate-related insurance costs.

The rapid expansion of the digital economy necessitates the implementation of robust cybersecurity resilience policies. Cybercrimes are constantly evolving, posing imminent risks to the financial system through financial and non-financial channels.

Meanwhile, the reduction in excess reserves, coupled with increased credit demand, has tightened the market for short-term liquidity, leading to a rise in domestic Treasury yields for 2023. With outstanding open market treasuries falling, the Central Bank may have to deploy the full range of its liquidity management tools to facilitate the smooth functioning of markets.

Additionally, increasing economic losses from natural disasters have raised the cost of insurance, particularly in the reinsurance market, reflecting the escalating physical risks associated with climate change.

MACROPRUDENTIAL EARLY WARNING INDICES (EWIs)

Risks to financial stability appeared moderate as the performance of several composite measures of systemic stress improved over 2023 (Figure 7). The Aggregate Financial Stability Index (AFSI) increased from 84.3 in 2022 to 89.8 in 2023. The movement reflected an improvement in financial stability—the soundness of the sector benefited from improvements in domestic economic conditions, particularly non-energy sector activity. The strong surge in private sector credit—at an average rate of 7.3 per cent over 2023—stimulated the non-energy recovery.

Although rapid increases in credit can potentially pose stability risks, the credit-to-GDP gap was well below its long-term trend, reflecting stable credit and economic growth recovery from the pandemic. Favourable financial conditions were central in supporting the appetite for credits; however, the December 2023 movement in the Financial Conditions Index (FCI) suggested that funding conditions were becoming overly accommodating, increasing the probability of credit risks from moral hazard and adverse selection.

While the Systemic Risk Accumulation Index (SRAI) improved over the year, the softening in energy prices and declining domestic banking system liquidity adversely affected the domestic risk profile. All-in-all, overall risk to financial stability, as measured by the BSI, appeared low as the financial sector continued to be profitable, liquid and adequately capitalised. As a result, the BSI recorded a moderate improvement in 2023.

FIGURE 7

DOMESTIC MACROPRUDENTIAL EARLY WARNING INDICES, 2019 - 2023

Aggregate Financial Stability Index (AFSI)

The AFSI monitors macro-financial variables related to stability. Increases (decreases) in the value indicate improvements (deterioration) in financial stability.



Financial Conditions Index (FCI)

The FCI estimates stress in domestic funding conditions. Negative values signal loose funding conditions while positive values imply tightening financial conditions.



Credit-to-GDP Gap (Gap)

The Gap is the difference between private sector credit-to-GDP and its long-term trend. When it is greater than 2 per cent, consumption credit is growing faster than GDP.



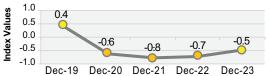
Systemic Risk Accumulation Index (SRAI)

The SRAI determines the degree of systemic risk build-up in the financial system. Increases (decreases) indicate accelerated (decelerated) systemic risk accumulation.



Banking Stability Index (BSI)

The BSI is a consolidated measure of the financial soundness of commercial banks and non-banks. Significantly positive (negative) values signal overheating (higher vulnerability).



Benchmarks*

	AFSI	SRAI	FCI	BSI	Gap
Low	90-100	0-0.2	0-0.4	0-0.3	0-2.0
Moderate	85-90	0.2-0.4	0.4-0.8	0.3-0.5	2.0-4.0
Elevated	80-85	0.4-0.6	0.8-1.0	0.5-0.8	4.0-6.0
High	75-80	0.6-0.8	1.0-1.5	0.8-1.0	6.0-8.0
Very High	≤75	0.8-1.0	≥1.5	≥1.0	≥8.0

Source: Central Bank of Trinidad and Tobago

Note: *These thresholds are intended only as a general guide and are not unconditional statements on the risk levels. Also, the indices are part of a broader financial stability surveillance framework (**Appendix A**). They should not be viewed in isolation, but complemented with evaluations from stress tests, FSIs, network maps, and other useful risk measurement tools.

RISKS IN THE REGULATED DOMESTIC FINANCIAL SECTOR

During 2023 and thus far in 2024, the domestic financial sector has operated in a global macro-financial environment characterised by still-high international interest rates, moderate inflation, and heightened geopolitical tensions. In response, domestic financial institutions have been adapting to stay competitive and profitable. In recent years, institutions have embraced digitalisation to improve efficiency and meet customers' needs. Also, as Trinidad and Tobago seeks to meet its climate commitments, the sector's products and services may have to adapt. Country-specific factors can also shape the financial stability outturn. Fiscal shortfalls have resulted in greater recourse to domestic financing by the Government, mainly through the commercial banks. This has led to an uptick in sovereign exposures. These aforementioned factors underpin some of the potential risks to domestic financial stability: (i) sovereign concentrations in the banking and insurance sectors; (ii) increasing cyberattacks; (iii) lower liquidity buffers; and (iv) higher climaterelated insurance costs.

This section analyses the abovementioned risks to assess their impact on financial stability.

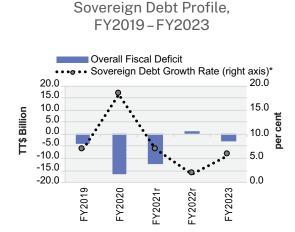
Sovereign Concentration in the Banking and Insurance Sectors

Sovereign exposure in the financial sector increased in 2023 due to lower fiscal revenues, which amplified budget financing needs. Given the magnitude of the exposures in relation to sectoral balance sheets, the stability of financial institutions is inextricably linked to the health of the sovereign. While a gradual economic recovery is in train, any volatility in the global energy markets could add further strain to government finances.

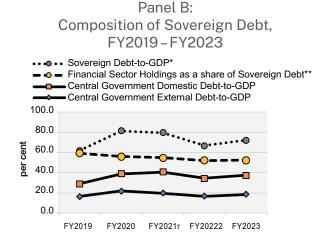
Sovereign debt expanded in 2023 as the fiscal accounts returned to deficit (Figure 8, Panel A). Adjusted general government debt expanded by 5.8 per cent (\$7.4 billion) in FY2023, following a growth of 1.7 per cent (\$2.2 billion) in FY2022. New borrowings were utilised to refinance existing facilities, support budgetary needs, and settle outstanding value-added tax (VAT) refunds.

Financing needs have been largely met by domestic creditors. At the end of FY2023, domestic debt was twice as large as external debt (Figure 8, Panel B). Domestic banks and insurers held 52.4 per cent of the total debt stock.

FIGURE 8
SOVEREIGN DEBT DYNAMICS



Panel A:



Sources: Ministry of Finance, Central Statistical Office, and Central Bank of Trinidad and Tobago

Note: Ratios prior to 2023 are based on Nominal GDP data from the Central Statistical Office. Ratios for 2023 are computed using Nominal GDP estimates from the Central Bank.

*Adjusted General Government Debt (represents outstanding balances at the end of the fiscal year and excludes all securities issued for Open Market Operations). **Calendar Year. r (Revised).

Central Government domestic and external debt exclude sterilised debt.

High sovereign concentrations amplify the financial sector's vulnerability to adverse economic shocks. Sovereign holdings (domestic and foreign) accounted for 31.4 per cent of aggregate banking and insurance sectors' assets in 2023 (Figure 9, Panel A). This represented an increase of 1.3 percentage points over the previous year, mainly attributable to banking sector loans to the Government and Government-related entities.

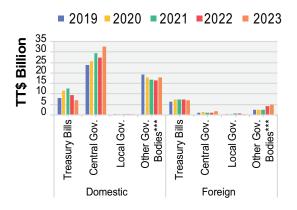
Financial institutions continued to exhibit a strong preference towards domestic holdings (79.6 per cent of total exposures), particularly longer-term exposures (Figure 9, Panel B). However, the composition of domestic debt shifted over the year. A decline in Treasury bill holdings in 2023 was more than offset by a higher stock of central government securities. The share of domestic central government securities and loans climbed from 38.6 per cent of total sovereign holdings in 2019, to 45.0 per cent in 2023.

FIGURE 9
FINANCIAL SECTOR SOVEREIGN EXPOSURE, 2019 – 2023

Panel A: Financial Sector Sovereign Holdings



Panel B: Composition of Sovereign Exposures



Sources: Central Bank of Trinidad and Tobago and Ministry of Finance

Note: Sovereign holdings refer to Treasury bills, and securities and loans from the Central Government, local government, and other state-owned financial and non-financial institutions.

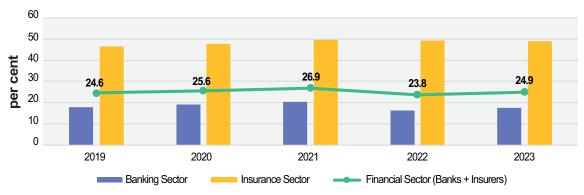
- * Financial sector refers to the banking and insurance sectors.
- ** Ratios prior to 2023 are based on Nominal GDP data from the Central Statistical Office. Ratios for 2023 are computed using Nominal GDP estimates from the Central Bank.
- *** Exposures from state-owned non-financial institutions, public utilities, statutory boards, and state-owned other financial institutions.

While domestic sovereign exposures relative to total assets increased over the year, the five-year trend showed that it remained lower than during the pandemic years (2020 and 2021), and only slightly above pre-pandemic (2019) levels (Figure 10). On a sectoral basis, banks were responsible for the majority of domestic sovereign holdings in the financial sector (54.5 per cent). These direct financial linkages accounted for 17.7 per cent of banking sector assets in 2023,

strengthening the sovereign-bank nexus. High sovereign debt loads could crowd out lending to the private sector, limiting economic expansion and deepening the financial sector's sovereign vulnerabilities. Notwithstanding, the insurance sector may be more susceptible to sovereign distress due to the higher relative share of exposures to assets — domestic sovereign holdings in the insurance sector were 49.1 per cent of sector assets at the end of the year.

FIGURE 10

DOMESTIC SOVEREIGN EXPOSURE TO ASSETS BY SECTOR, 2019 – 2023



Source: Central Bank of Trinidad and Tobago

Given the magnitude of these exposures, sovereign distress may negatively affect financial institutions' balance sheets via a rise in public sector NPLs and a deterioration in market values. Knockon effects include higher funding costs, disorderly asset sales, lower income and profitability, liquidity pressures, or windups.

In particular, commercial banks are susceptible to credit risk emanating from large exposures⁷ to the Government and Government-related entities, that is, those exposures that are in excess of 10 per cent of a bank's capital base. In December 2023, these exposures accounted for 62.6 per cent of the commercial banking sector's total reported large credit exposures. When

these exposures were stressed⁸, the sector's capital adequacy ratio (CAR) fell by 9.6 percentage points. This resulted in a post-shock CAR of 6.2 per cent, well below the regulatory minimum CAR of 10 per cent.

Exposures to the Government and Government-related entities also dominated large exposures in the Other Services sector, the greatest sectoral exposure (70.9 per cent). Thus, stress tests indicated that a shock to large credit exposures in the Other Services sector had a material impact on the commercial banking sector. The CAR fell by 6.7 percentage points, resulting in a post-shock CAR of 9.1 per cent-lower than the regulatory minimum of 10 per cent.

Large exposures include all exposures reported under Section 79(1) of the Financial Institutions Act, 2008, that is, credit exposures to persons, borrower groups or related groups amounting to 10 per cent or more of the commercial bank's capital base.

⁸ The stress test assumes that 50 per cent of the loan exposures become impaired at the same time that the security exposures suffer a 50 per cent loss in market value.

The gradual economic recovery expected to continue, but a few challenges may strain the fiscal position in the short term. Reduced energy sector receipts (due to declining international prices and curtailed domestic production), may alongside higher expenditure, increase sovereign financing needs and lead to higher debt-servicing requirements. The March 2024 increase in borrowing limits9 could also contribute to the higher trajectory for the debt stock.

Volatility in international energy markets and the movement from fossil fuels add uncertainty to the medium- to long-term domestic economic and fiscal outlook. Short-run fiscal pressures are contained, but could be exacerbated by several factors which can increase sovereign borrowing costs. Given available buffers such as the HSF, sovereign concentrations in the banking and insurance sectors pose 'moderate' risk to financial stability.

Increasing Cyberattacks

Geopolitical turmoil, cybercrime as a service (CaaS)10, and growing digitalisation made cyber incidents more possible in 2023. Publicly available reports indicate that businesses have been victims of ransomware, phishing, and other cybercrimes that resulted in large financial and data losses. Cyber threats and problems have increased in Trinidad and Tobago, in tandem with the country's growing digital economy and greater adoption of technology. Cyber threats can compromise macro-financial stability in several ways, emphasising the need for financial institutions to develop and enforce policies that promote cyber resilience.

Increased digitalisation, CaaS, and geopolitical tensions have exacerbated the risk of cyber incidents in 2023.

Three factors accounted for an increase in cyberattacks since 2020, and a surge in 2023. Firstly, the rapid growth of digital connectivity since the COVID-19 pandemic has led to an increased dependence on technology and financial innovation, which expanded the vector space for cyberattacks. Secondly, geopolitical tensions, particularly after Russia invaded Ukraine in February 2022, have resulted in a surge of cyberattacks. Thirdly, CaaS business model has increased the potential pool of cybercriminals. The April

⁹ In March 2024, the statutory limit of borrowings under the Developmental Loans Act was increased from \$65 billion to \$75 billion.

¹⁰ In the CaaS model, cyber criminals provide various hacking and cybercrime services to other individuals or groups for financial gain.

IMF. "Global Financial Stability Report, April 2024: The Last Mile Financial Vulnerabilities and Risks." International Monetary Fund. Accessed May 7,2024. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

2024 GFSR revealed that cyber incidents from 2020 to 2023 resulted in global costs estimated at US\$28 billion. These attacks resulted in the theft or compromise of billions of records. The financial industry accounted for almost 20 per cent of all reported cyber incidents between 2020 and 2023, making it especially vulnerable to cyberattacks¹². Banks are the most frequent targets of these attacks, followed by insurers and asset managers.

While data on cyber risk is limited, evidence and public reports suggest that firms have been experiencing various types of cybercrime leading to significant losses, including ransomware, phishing, and data breaches. Trinidad and Tobago witnessed a surge in cyberattacks affecting public and private sector organisations in 2023. The country's increased adoption of digital technologies and the growing number of connected devices have amplified the vulnerability to such attacks. The Trinidad and Tobago Cybersecurity Incident Response Team of the Ministry of National Security reported a notable increase in successful attacks, particularly ransomware. Between 2019 and 2023, there were 205 successful cyberattacks, of which 52 occurred in 2023. Although specific details of the attacks were not available, some were publicly reported in 2023.

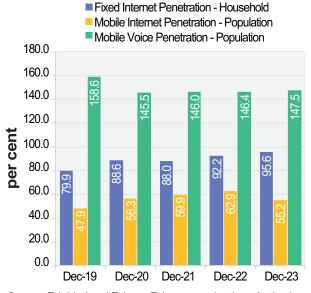
Locally, the insurance sector appeared to be the main target of cyberattacks, with four insurance companies reporting incidents during 2019-2023. These ranged from a ransomware attack in 2019, a malware attack in 2021, a data breach in 2022 involving less than five per cent of accessed client-related information, and the detection of ongoing ransomware activity in 2023 with no evidence of data loss.

IMF. "Global Financial Stability Report, April 2024: The Last Mile Financial Vulnerabilities and Risks." International Monetary Fund. Accessed May 7,2024. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

The increased digitalisation of financial services, and the rise in e-payments and e-commerce in Trinidad and Tobago have led to greater exposure to cyber risks and challenges. In 2023, there was a 0.6 per cent increase in mobile voice penetration and a 3.7 per cent rise in fixed internet subscriptions. However, during the same year, there was a 4.5 per cent decrease in mobile internet subscriptions (Figure 11). The launch of the Government's TTWi-Fi¹³ initiative in December 2022 has led to

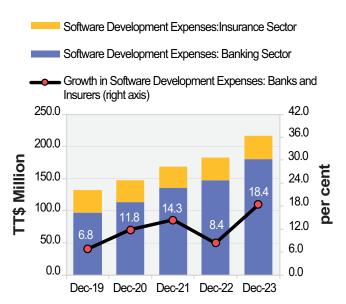
increased public access to the internet. Cybersecurity is becoming a growing concern for financial institutions as they expand their digital banking operations. This is evident from the significant growth in software development spending for banks and insurers — spending growth increased from 8.4 per cent in 2022 to 18.4 per cent in 2023 (**Figure 12**). In 2023, the banking sector invested \$180.6 million in software development, while the insurance sector spent \$35.6 million.

FIGURE 11 INTERNET AND VOICE PENETRATION RATES. DEC 2019 - DEC 2023



Source: Trinidad and Tobago Telecommunications Authority Note: Mobile Internet Penetration represents data as at September 2023.

FIGURE 12 FINANCIAL SECTOR SOFTWARE DEVELOPMENT EXPENSES, DEC 2019 – DEC 2023



TTWi-Fi is an initiative of the Government of the Republic of Trinidad and Tobago to provide free Wi-Fi access to the public. The Government's vision is to provide services and easy access to broadband internet in public spaces at no cost https://tatt.org.tt/announcement/ttwi-fi-is-now-available/.

Financial institutions need to take steps to reduce their exposure to cyber risks, as these risks can undermine macro-financial stability through various channels. The number of local cyberattacks reported has increased, leading to increased public awareness of the threats associated with cybersecurity. Financial and non-financial institutions are putting in continuous efforts to improve their cybersecurity posture for operational resilience. Understanding the factors that influence and mitigate cyber incidents is important to the development of effective cybersecurity policies and strategies. A cyber event at a financial institution could macro-financial compromise stability through interconnectedness, lack of substitutes for vital services, and loss of confidence¹⁴.

Cybercrimes are constantly evolving and present an imminent risk to the financial industry's stability. Building cyber resilience requires a whole-of-society response and this entails creating a national cybersecurity plan, suitable regulatory and supervisory frameworks, a skilled cybersecurity workforce, and domestic and international information-sharing agreements with supporting

cyber intelligence sharing infrastructure^{15.} Important domestic developments in 2023 that contributed to the development of cyber resilience in Trinidad and Tobago were the release of the Cybersecurity Best Practices Guideline¹⁶ and accompanying documentation¹⁷ by the Central Bank in September, and the announcement of the Cybersecurity Investment Tax Allowance¹⁸ in October. The Cybersecurity Best Practices Guideline applies to institutions regulated by the Central Bank. While not compelled to report to the Central Bank, other organisations are urged to use the Guideline as a tool for controlling their cybersecurity risks (see Chapter 4). The Government of Trinidad and Tobago proposed the introduction of a Cybersecurity Investment Tax Allowance as an incentive for organisations implement and strengthen their cybersecurity systems. Institutions that spend money on cybersecurity software and network security monitoring equipment can claim a Cybersecurity Investment Tax Allowance of up to \$500,000. To qualify for this allowance, the expenditure must be certified by the National Information and Communication Technology Company Limited. measure required amendments to the

IMF. "Global Financial Stability Report, April 2024: The Last Mile: Financial Vulnerabilities and Risks." International Monetary Fund. Accessed May 7,2024. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

IMF. "Global Financial Stability Report, April 2024: The Last Mile: Financial Vulnerabilities and Risks." International Monetary Fund. Accessed May 7,2024. https://www.imf.org/en/Publications/GFSR/Issues/2024/04/16/global-financial-stability-report-april-2024

This Guideline was developed with IMF Technical Assistance in November 2022.

¹⁷ The Central Bank issued Cybersecurity Best Practices Guideline is available online at: https://www.central-bank.org.tt/core-functions/supervision/cybersecurity

The 2024 Budget Statement and related documents of Trinidad and Tobago can be downloaded at: https://www.finance.gov.tt/2023/09/07/national-budget-2024-building-capacity-for-diversification-and-growth/

Corporation Tax Act, Chap. 75:02 and is envisioned to incentivise companies to invest in cybersecurity for two years from January 1, 2024 to December 31, 2025.

The overall risk to domestic financial stability is characterised as **'elevated'** given the pick-up in the number of cyberattacks and the ongoing expansion of the digital economy.

Lower Liquidity Buffers

For some time, the banking system has been characterised as being highly liquid. However, following the COVID-19 pandemic, heightened credit demand and a pick-up in government borrowing have fuelled a decrease in excess reserves. Given the increase in liquidity demand, a 'negative liquidity surprise event' could tighten short-term liquidity markets. With conditions unlikely to materially change in the near term, increased monitoring is warranted.

Liquidity refers to liquid assets held by commercial banks to meet short-term obligations. Liquidity is important as the amount of money in circulation influences commercial banks' decisions on how much to lend and with what conditions (interest rates). Domestically, the interbank market and the repurchase facility are the

channels commercial banks use to meet unanticipated short-term liquidity demands.

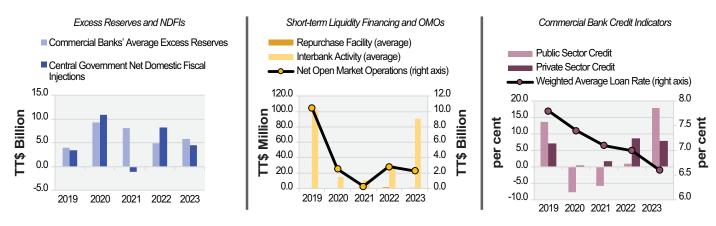
Open market operations (OMOs) are the Central Bank's main monetary tool to manage liquidity conditions in the banking sector. Excess liquidity is measured by commercial banks' holdings of reserves in excess of statutory requirements. In 2019, maturing open market bills were placed back into the system, net domestic fiscal injections¹⁹ (a key contributor of liquidity) resulted in an injection of liquidity and, while there was some interbank activity, the repurchase facility was unused (Figure 13). Under this environment, loan interest rates fell, leading to an uptick in credit growth. Over the next two years, though low, OMOs resulted in net injections of liquidity. Conversely, net domestic fiscal injections (NDFIs) rose in 2020 but turned negative in 2021.

In 2021, there was still a high amount of funds in circulation. Demand for credit however remained weak due to ongoing pandemic-related restrictions. Lending only rebounded in 2022. Notably, this coincided with a 39.9 per cent reduction in excess reserves despite an increase in NDFIs and short-term liquidity market activity. Going into 2023, commercial bank lending continued to pick up. Excess reserves grew by 20.8 per cent (to a monthly average

¹⁹ Net domestic fiscal infections (NDFIs) refer to the excess of Government domestic expenditure over domestic revenue.

of \$5.8 billion), although NDFIs and the repurchase facility fell by 46.4 per cent (to \$4.4 billion) and 75.4 per cent (to \$0.3 million), respectively. Notably, interbank activity rose by 198.3 per cent (to \$90.4 million).

FIGURE 13
LIQUIDITY, CREDIT AND INTEREST RATES, 2019 – 2023



Source: Central Bank of Trinidad and Tobago Note: For NDFIs/OMOs, positive (negative) values result in an injection (withdrawal) of liquidity.

Although excess reserves were higher in 2023, there has been a pick-up in government borrowing. Central Government domestic debt outstanding stood at \$71.3 billion in 2023 (37.3 per cent of GDP). Since 2019, domestic debt has grown at an annual average rate of 10.7 per cent against the backdrop of declines in energy sector receipts. The growing exposure to sovereign debt represents a latent vulnerability to financial stability by reducing funds available for lending to other economic agents.

The commercial banking stress test results (Chapter 3) signal potential risk from the tightening of liquidity. When reserves were included in liquid funds, a negative hypothetical surprise event, the number of days until the commercial banking sector became illiquid declined from 31 days in December 2022 to 27 days in December 2023. Meanwhile, when reserves were excluded in liquidity stress tests, the number of days until the commercial banking sector became illiquid fell from 19 days in December 2022 to 16 days in December 2023. While the deterioration was attributed mainly to a

fall in liquid assets over the year, it should be noted that large fiscal withdrawals could further drain liquidity. This could cause short-term liquidity markets to tighten, resulting in increased lending interest rates and higher Treasury yields.

Although the December 2023 FCI suggests loose financial conditions, any tightening of funding conditions can cause economic agents to lean more on savings, potentially stoking withdrawal demands. In light of the multifaceted risks to liquidity, efforts continue on improving liquidity stress tests to deepen monitoring and supervision. In the interim, through its OMO operations, the Central Bank assesses market liquidity requirements on a daily basis. For 2023, outstanding OMOs stood at \$2.7 billion and under the Treasury Bills Act (1960) the current borrowing limit for OMOs is \$23 billion leaving remaining headroom of \$20.3 billion. Notwithstanding, if outstanding OMOs fall too low, alternative instruments may have to be used to manage liquidity. In this regard, the overall liquidity risk emanating from broadly lower liquidity buffers is deemed as 'elevated'.

Higher Climate-Related Insurance Costs

Climate-related risks currently do not pose an immediate risk to domestic financial stability. Notwithstanding, due to the increase in economic losses from natural disasters, the cost of insurance (particularly reinsurance) has risen. High premiums may force firms and households to low-cost policies for climate-relevant assets, which could amplify the fallout of larger-than-expected climate loss events.

Rising global surface temperatures have exacerbated the intensity, duration and frequency of extreme weather events. The National Aeronautics and Space Administration's (NASA) Goddard Institute for Space Studies observed that the world's average temperature increased by at least 1.1° Celsius (°C) since 1880. Although the increase seems minimal, there is growing evidence that the extra heat is driving more severe and frequent natural disasters. For instance, the Emergency Events Database (EM-DAT)²⁰ noted that there were 399 reported natural disasters in 2023 — exceeding the 20-year average of 369.21 Further, the economic losses that resulted from these events (Figure 14) stood at US\$202.7 billion (the 20-year average was US\$196.3 billion).

²⁰ Created in 1988 as a joint initiative between the World Health Organization and the Centre for Research on the Epidemiology of Disasters (CRED).

NASA reported 2023 as the warmest year since global records began in 1850.

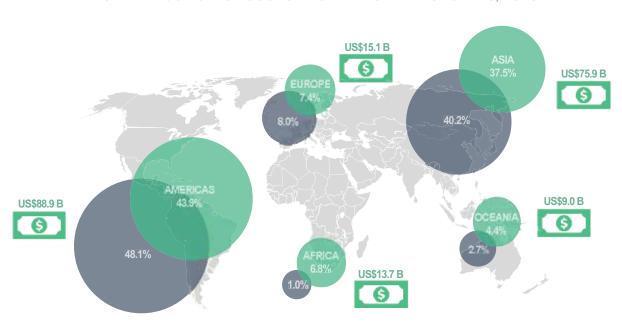


FIGURE 14
REPORTED ECONOMIC LOSSES FROM NATURAL DISASTERS, 2023

Source: EMDAT. "2023 Disasters in Numbers: A Significant Year of Disaster Impact." UCLouvain, CRED, USAID. 2024 Note: The size of the circles indicates the proportion of total economic losses. B stands for billion. Green represents 2023 data while blue represents 2003-2022 data (estimated as annual averages).

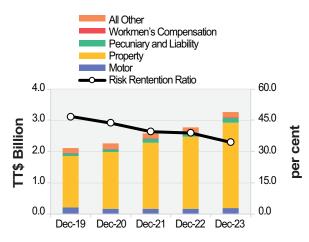
Climate change affects financial systems through two main channels.

The first involves physical risks, the economic losses that arise from natural The second catastrophes. involves transition risk, the challenges associated with low-carbon adjustments. Typically, transition risks materialise on the asset side of the balance sheet as part of the low-carbon adjustment requires financial institutions to shift exposures away from activities tied to fossil fuels. With respect to physical risks, due to varying business models, the pass-through is more nuanced. Even so, the transmission often starts with insurance companies.

Insurance markets are particularly vulnerable to the physical risk dimension of climate change. Insurance provides policies, at a predetermined rate, that allow economic agents to hedge financial losses resulting from injury, accidents and/ or property damage. However, the cost of claims has steadily increased following rising economic losses from adverse climatic events. Reinsurance, financial companies that insurers contract to assist with managing underwriting risks, has helped offset some of this expense reinsurers operate in multiple markets and regions, allowing for greater deployment of cost containment strategies. However, reinsurance is generally offered at a premium above the actuarial price of

ceded risks. As at December 2023, general insurance companies paid 65.7 per cent of gross premium income to reinsurance companies (**Figure 15**). The long-term segment had a higher risk retention ratio (a measure of how much business domestic insurers do not cede) of 82.9 per cent (**Figure 16**); however, it has fallen steadily over the last five years.

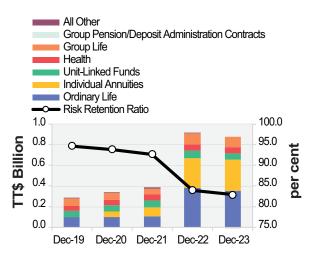
FIGURE 15
ANNUALISED REINSURANCE CEDED –
GENERAL INSURERS, 2019 – 2023



Source: Central Bank of Trinidad and Tobago

Hard insurance markets price out economic agents. To cover possible volatility in future claims, insurers could increase premiums—over the last five years, gross premium income for general insurance grew at an average rate of 6.8 per cent. By raising the cost of insurance coverage, the effects of climate change can make it more difficult and expensive for economic agents to obtain insurance. While there are cheaper alternatives, these policies tend to have reduced terms. If

FIGURE 16
ANNUALISED REINSURANCE CEDED-LONGTERM INSURERS, 2019–2023



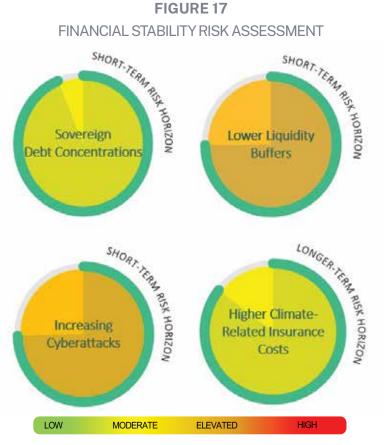
coverage is too low, firms and households with climate-relevant assets are at risk of not receiving the compensation needed to recover from larger-than-expected climate loss events. This will undermine the value of the asset. If it is still under a financing arrangement, loan-to-value ratios can become compromised. To offset this, credit lending institutions may renegotiate terms and/or charge higher interest rates. In extreme cases, these factors may cause forced asset sales.

However, prices could fall far below fair value—increased asset supply alongside strained demand. Ultimately this may cause credit lending institutions to face higher loan defaults.

To improve the response to potential threats from global warming, central banks and regulators are integrating climate risks into their supervision frameworks. In its strategic plan for 2021 to 2026, the Central Bank noted intentions to incorporate climate change considerations into monetary and financial stability policies. A key part of the project involves cooperating with local financial institutions to track environmental and climate-related developments. Notwithstanding information limitations and the existence of impact channels other than those identified, domestic insurance coverage has not been unduly compromised. In this regard, the overall risk to domestic financial stability from higher climate-related insurance costs is characterised as 'moderate'.

RISK ASSESSMENT

Figure 17 summarises key financial stability risks in the Trinidad and Tobago financial sector. The overall risk assessment considers the length of the risk horizon based on ongoing developments in the global and domestic macro-financial system. Overall, financial stability risks are assessed as 'moderate'.



Source: Central Bank of Trinidad and Tobago

BOX 1: RECENT TRENDS IN HOUSEHOLD AND BUSINESS DEBT

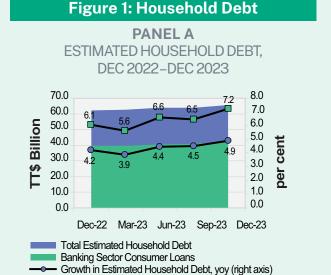
The post-pandemic recovery was marked by a pick-up in household and business debt. In particular, the debt appetite was boosted by reduced economic uncertainty¹, low interest rates, improvements in the labour market, and generally favourable financial conditions. Banking sector credit to households and businesses—the largest component of private sector debt—expanded in 2023, surpassing pre-pandemic growth rates. This Box explores the trends in household and business debt over the year.

Estimated household debt² grew over 2023, at 4.9 per cent (year-on-year), to \$65.5 billion (**Figure 1, Panel A**). This represented 35.5 per cent of Gross Domestic Product (GDP), well below the historic high of 42.0 per cent in the midst of the pandemic shock (December 2020).

Consumer loans, supplied by the consolidated banking sector, accounted for approximately 65 per cent of estimated household debt. This subset of loans grew more robustly over the year at 7.2 per cent.

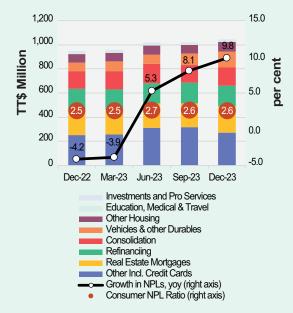
Real estate mortgages dominated the consumer loan portfolio (44.6 per cent) and contributed the greatest nominal increase in lending in 2023 (\$968.5 million). However, a few loan segments registered double-digit growth rates, including vehicles and other durables, other housing³, and other (miscellaneous) expenses.

In particular, loans for motor vehicles rebounded strongly in 2023, after several periods of decline, mainly due to the purchase of new vehicles. At the same time, asset quality in the motor vehicles portfolio deteriorated (**Figure 1, Panel B**)—the stock of new motor vehicle non-performing loans (NPLs) more than doubled over the year.



PANEL B
COMMERCIAL BANKING NPLs BY PURPOSE, DEC
2022–DEC 2023

Growth in Banking Sector Consumer Loans, yoy (right axis)



Source: Central Bank of Trinidad and Tobago

Economic uncertainty can be defined as a situation in which individuals and firms do not have perfect knowledge about the current state of the economy. The Trinidad and Tobago Economic Policy Uncertainty Index reduced to moderate levels in 2023, compared to elevated levels in 2022.

Household debt comprises credit extended to households including open accounts, personal loans, credit card facilities, mortgage advances, instalment sales transactions and lease agreements.

³ "Other housing" includes bridging finance, land and real estate, home improvement or renovations, and leasing.

BOX 1:

RECENT TRENDS IN HOUSEHOLD AND BUSINESS DEBT (Cont'd)

The total stock of NPLs exceeded \$1 billion in 2023—the first time since June 2021—as the growth in NPLs picked up. Nevertheless, the uptick in the overall loan portfolio contributed to a stable consumer NPL ratio. Stress tests indicate that the commercial banking sector will breach the regulatory minimum capital adequacy ratio (10 per cent) when 7.0 per cent of total consumer loans are written off.

Meanwhile, estimated debt held by private non-financial corporations (NFCs)⁴ climbed over 2023 to \$55.8 billion, growing at 7.0 per cent (year-on-year) (**Figure 2, Panel A**). As a share of GDP, estimated NFC debt trended upwards, from 25.7 per cent in 2022 to 30.2 per cent in 2023. Loans accounted for over 70 per cent of total estimated NFC debt in 2023, 97.1 per cent of which was attributed to the banking sector.

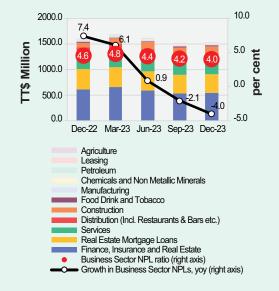
Banking sector loans to NFCs grew to \$38.9 billion over the year; an additional \$1.1 billion in credit was provided to financial corporations. Thus, total business sector lending increased by 8.8 per cent in 2023. Commercial real estate mortgages drove the expansion in business lending (\$854.8 million), followed by loans to the Petroleum industry (\$802.3 million). However, credit to businesses in the Finance, Insurance and Real Estate sub-sector remained the largest exposure (25.5 per cent of business loans).

Notwithstanding, asset quality in the business sector loan portfolio improved. The sector's NPL ratio fell to 4.0 per cent in 2023, from 4.6 per cent in 2022 (**Figure 2, Panel B**). This reflected the contraction in the stock of NPLs over the year (4.0 per cent), owing to declines in the major industries. Stress tests indicate that the commercial banking sector will breach the regulatory minimum capital adequacy ratio (10 per cent) when 8 per cent of business loans are written off.

Figure 2: NFC Debt



PANEL B
COMMERCIAL BANKING BUSINESS SECTOR
NPLs, DEC 2022–DEC 2023



Estimated NFC sector debt comprises the loans (investments) made out to (in) NFCs by commercial banks, non-bank financial institutions, insurance companies, and pension funds.



Financial System

PERFORMANCE AND RESILIENCE OF THE FINANCIAL SYSTEM

The domestic financial system remained healthy in 2023, as reflected in relatively stable financial soundness indicators. System assets continued to increase amid the ongoing domestic economic recovery. Asset concentrations within the major sectors were mixed at the end of 2023. Regarding asset mix, some institutions increased their sovereign exposure, which reduced their liquid assets during the year. The rise in sovereign exposure resulted from institutions' uptake of government debt. Central government financing activity via the primary debt market surged in 2023. The jump in borrowing activity led to higher long-term government bond rates during the year.

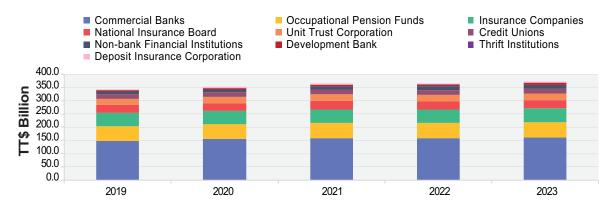
FINANCIAL SECTOR INTERLINKAGES

Interconnections among domestic financial sector participants were stable in 2023, notwithstanding an increase in common exposures, while concentrations fell in some industries. Despite no new entrants to the market over the period, smaller entities expanded operations to capture higher market share in their respective industries. As a result, larger entities' market power was reduced, implying greater substitutability among firms. Greater substitutability lowers the disruption to the financial sector due to an individual company's distress. As such, at appropriate levels, higher competition may reduce systemic risk within the financial sector.

Domestic financial sector assets expanded over the year, owing to growth in the three major sectors. Total financial sector assets increased by \$6.2 billion (1.7 per cent) to \$371.7 billion at the end of 2023 (Figure 18), equivalent to 201.3 per cent of GDP. The banking, pension, and insurance sectors accounted for 77.5 per cent of total assets (156.0 per cent of GDP). While insurance companies were the third largest segment of the financial sector, the industry contributed the majority of the growth over 2023.

FIGURE 18

DOMESTIC FINANCIAL SECTOR ASSETS, 2019 – 2023



Source: Central Bank of Trinidad and Tobago Note: The data for Credit Unions are estimated.

Concentrations within the major financial industries were mixed at the end of the year. The Herfindahl-Hirschman Index (HHI) (using gross premiums) pointed to persistently high concentration in the long-term insurance sector (Figure 19, Panel A). This concentration intensified over the year — the HHI increased by 8.1 per cent — as one of the few significant players generated lower premium income from individual annuities. This strengthened the market power of the largest company. In contrast, moderate concentration exists in the general insurance sector.

Waning HHI values in the banking sector (using deposits) suggest that competition is increasing and greater substitutability²² exists among institutions. Larger commercial banks recorded a reduction in their deposit base

over the year. Simultaneously, deposits at a few smaller commercial banks and non-banks saw double-digit growth. Market concentration in the pension sector, measured by the HHI (using assets), remained low and fell by a further 3.8 per cent over the year.

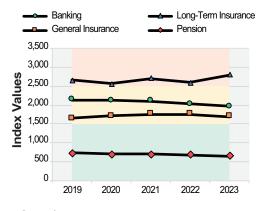
The financial sector's asset mix was relatively consistent in 2023. The banking, insurance, and pension sectors were heavily exposed to investments (46.6 per cent of aggregate exposures), followed by loans (33.2 per cent), and liquid funds (10.7 per cent) (Figure 19, Panel B). While the top asset exposures were unchanged over the year, a slight decline was observed in the share of liquid funds. An increase of 9.6 per cent in loan exposures more than offset a reduction of 15.1 per cent in liquid funds.

The substitutability factor of the Central Bank's Framework for Determining a Domestic Systemically Important Bank and Higher Loss Absorbency Requirement (see **Chapter 4**) is partly determined by the market share of banking system loans and deposits.

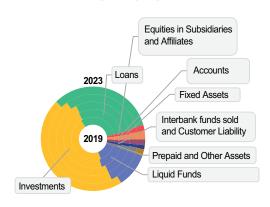
Within the largest class asset (investments), banks and insurance companies were heavily exposed to the domestic sovereign and increased their holdings by over 6 per cent in 2023. In contrast, investments in foreign countries contracted over the year. However, a larger share was attributed to the North American region (71.3 per cent in 2023, from 67.7 per cent in 2022) and the Caribbean Community area (13.3 per cent in 2023, from 12.6 per cent in 2022).

FIGURE 19
FINANCIAL SECTOR CONNECTIONS, 2019–2023

PANEL A:MARKET CONCENTRATION



PANEL B: FINANCIAL SECTOR ASSET PORTFOLIO MIX



Source: Central Bank of Trinidad and Tobago Note: HHI < 1,500 (low concentration), HHI between 1,500 and 2,500 (moderate concentration) and HHI > 2,500 (highly concentrated).

Ongoing concentrations and interlinkages across the individual financial industries could weaken the financial system's resilience to adverse shocks. These characteristics call for enhanced liquidity measures and stricter capital requirements, particularly for systemically important institutions, to limit contagion

effects. **Chapter 4** of the report discusses some of these measures.

The following sections summarise the recent performance of the individual financial segments.

FINANCIAL SOUNDNESS INDICATORS

Banking Sector (Commercial Banks and Non-banks)

The main FSIs of asset quality, capital adequacy and profitability for the banking sector remained stable despite challenges in 2023 (Table 1). The banking sector utilised liquid funds to expand its loan and investment portfolios, causing the sector's ratio of liquid assets-to-total assets to contract from 19.8 per cent in December 2022, to 16.3 per cent in December 2023. The sector's loan portfolio grew by 9.7 per cent (\$8.4 billion) in 2023, as loan demand surged from businesses, consumers, and the public sector. In comparison, the growth of investments was more contained, primarily increasing because of investments in local central government securities. The strong loan growth boosted the sector's profitability on account of the increased interest income. The ratio of non-performing loansto-gross loans improved from 3.1 per cent in 2022 to 2.8 per cent in 2023, reflecting improved asset quality despite the robust credit expansion. Additionally, the banking system remained well capitalised in 2023, with the regulatory capital-torisk weighted assets ratio at 18.0 per cent, compared to 18.7 per cent in 2022. Although the ratio declined marginally, it remained above the industry's minimum standard of 10 per cent. The year-on-year decline in foreign currency assets of \$1.8 billion (3.9 per cent) resulted in a decrease in net open positions in foreign exchange from 33.2 per cent of the banking system's capital in 2022, to 27.4 per cent.

TABLE 1

BANKING SECTOR: FINANCIAL SOUNDNESS INDICATORS, 2019–2023

/ Per Cent /

	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Capital Adequacy					
Regulatory capital-to-risk-weighted assets	n/a	18.8	19.3	18.7	18.0
Common Equity Tier 1 capital to risk-weighted assets	n/a	18.3	18.9	18.4	17.6
Regulatory Tier 1 capital to risk-weighted assets	n/a	18.3	18.9	18.4	17.6
Regulatory Tier 1 capital to total assets	n/a	12.7	13.4	13.4	13.6
Net Open position in foreign exchange-to-capital	11.8	16.3	23.7	33.2	27.4
Geographic Distribution of Total Loans					
Domestic Economy	93.6	93.9	93.8	92.6	93.0
Advanced Economies	0.3	0.6	0.6	1.0	1.4
Emerging Markets and Developing Economies	6.1	5.6	5.6	6.4	5.6
Latin America and the Caribbean	6.1	5.6	5.6	6.4	5.6
Foreign currency loans-to-total loans	18.0	16.2	15.5	16.1	16.4
Real Estate Market					
Residential real estate loans to total gross loans	19.7	20.6	21.0	20.7	19.8
Commercial real estate loans to total gross loans	9.8	10.5	10.9	10.3	10.3
Asset Quality					
Non-performing loans to gross loans	3.1	3.4	3.3	3.1	2.8
Non-performing loans (net of provisions) to capital	5.7	3.6	3.8	4.0	3.6
Provisions to non-performing loans	48.8	71.2	67.6	65.5	67.3
Earnings and Profitability					
Return on assets	3.6	1.8	2.2	2.6	2.8
Return on equity	17.1	8.9	10.9	12.4	13.8
Interest margin to gross income	57.0	64.2	59.2	57.5	61.0
Trading income to total income	8.6	8.6	10.2	10.0	7.7
Non-interest expenses to gross income	49.8	57.2	57.0	54.5	52.0
Personnel expenses to non-interest expenses	42.2	41.7	42.0	39.5	38.6
Liquidity					
Liquid assets to total assets	22.1	23.2	20.0	19.8	16.3
Liquid assets to total short-term liabilities	27.9	28.9	25.2	25.1	21.0
Customer deposits to total (non-interbank) loans	127.1	136.7	138.2	130.7	120.5
Foreign currency liabilities to total liabilities	25.5	24.0	25.1	25.9	25.1

Long-Term Insurance Industry

Over the last five years, industry profits fluctuated due to various factors, such as volatility in the markets and some significant one-off transactions (Table 2). Throughout 2023, capital and liquidity levels trended upward modestly. One insurer sold a subsidiary, the value of which enhanced capital reserves and

liquid assets. The decline in return on equity (ROE) over the year reflected the impact of two major issues: (i) one insurer significantly increased its policyholder reserves (brought on by changes in actuarial assumptions); and (ii) premium income levelled compared with the prior year, when the acquisition of a sizeable pension plan boosted premiums.

TABLE 2
LONG-TERM INSURANCE INDUSTRY:
FINANCIAL SOUNDNESS INDICATORS, 2019–2023
/ Per Cent /

	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Capital Adequacy					
Capital-to-total assets	15.5	14.6	17.7	18.7	21.4
Capital-to-technical reserves	23.0	21.2	25.4	27.4	32.0
Asset Quality					
(Real estate + unquoted equities + debtors)-to-total assets	7.6	8.4	8.1	8.0	7.6
Earnings and Profitability					
Expense ratio = expense (incl. commissions)-to-gross premium	30.5	28.9	30.1	28.0	32.4
Investment yield = investment income-to-investment assets	4.9	4.5	5.2	5.4	5.1
Return on equity = pre-tax profits-to-shareholders' funds	20.6	14.0	18.2	18.5	6.7
Liquidity					
Liquid assets-to-current liabilities	30.4	28.3	26.1	25.3	27.4

Source: Central Bank of Trinidad and Tobago

Note: Data from Colonial Life Insurance Company (Trinidad) Limited (CLICO) and British American Insurance Company (Trinidad Limited are now included in the long-term sector data. The Central Bank exited emergency control of both companies in December 2022.

General Insurance Industry

The general insurance industry remained relatively stable over the five-year period, notwithstanding the effects of the pandemic (Table 3). In 2023, the escalation of earnings shown through the

investment income and ROE was primarily due to dividend income received from investments in subsidiaries, which was used to fund growth strategies. Liquidity also contracted over the year but remains at an acceptable level.

TABLE 3
GENERAL INSURANCE INDUSTRY:
FINANCIAL SOUNDNESS INDICATORS, 2019–2023
/ Per Cent /

	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Asset Quality					
(Real estate + unquoted equities + accounts receivables)-to-total assets	17.4	16.7	16.4	18.2	19.8
Debtors-to-(gross premiums + reinsurance recoveries)	13.4	14.6	13.5	15.6	17.9
Reinsurance and Actuarial Issues					
Risk retention ratio = net premiums written-to-total gross premiums	46.9	43.7	39.7	39.1	34.5
Net technical reserves-to-average of net claims paid in the last three years	130.9	133.1	131.0	116.8	100.8
Earnings and Profitability					
Combined Ratio	100.1	97.3	107.3	113.8	116.7
Expense ratio = expense (incl. commissions)-to-net premiums	54.9	56.6	61.0	60.3	59.7
Loss ratio = net claims-to-net earned premiums	45.2	40.7	46.3	53.5	57.1
Investment income-to-net premium	6.7	6.6	7.6	6.5	21.0
Return on equity = pre-tax profits-to-shareholders' funds	11.2	12.0	11.4	5.3	16.4
Return on assets	5.1	5.8	5.5	2.5	8.2
Liquidity					
Liquid assets-to-current liabilities	54.3	58.8	56.5	54.8	46.2

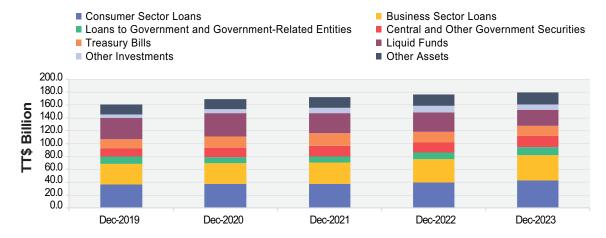
BANKING SECTOR (COMMERCIAL BANKS AND NON-BANKS) PERFORMANCE

Assets

Banking sector assets continued to grow in 2023, marked by a notable compositional change (Figure 20). Gross assets increased from \$176.0 billion in 2022 to \$179.1 billion in 2023, representing growth of 1.8 per cent (\$3.1 billion). The main source of funding for the asset growth was increased capital, as a result of growth in retained earnings. Notably, there was a slight shift in the asset composition whereby growth in

the loan portfolio was accompanied by a decline in liquid funds. Liquid funds declined by 20.3 per cent (\$6.3 billion) and the liquidity ratio moved from 19.8 per cent to 16.3 per cent, whereas the sector's loan portfolio expanded by 9.7 per cent (\$8.4 billion). Gross loans amounted to \$94.5 billion at the end of December 2023 on account of an increasing demand for loans from businesses, consumers, and the Government in the magnitude of 8.8 per cent, 7.2 per cent and 23.2 per cent, respectively. Comparatively, the investment portfolio expanded by a mere 0.8 per cent (\$0.3 billion) and accounted for 23.3 per cent of total assets in 2023, compared to 23.5 per cent in 2022.



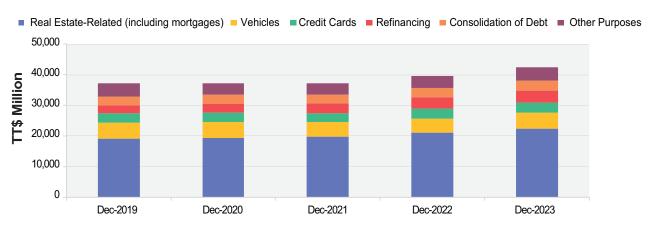


Consumer Sector Loans

Consumer lending recovered across most primary subcategories (Figure 21).

In 2023, consumer lending increased by 7.2 per cent (\$2.8 billion) to \$42.4 billion (44.8 per cent of gross loans). Residential mortgages, a key component of consumer lending for real estate-related loans²³, expanded by 5.4 per cent (\$1.0 billion) in 2023. Demand for new motor vehicles continued. The debottlenecking of supply issues, coupled with improved shipping operations, contributed to motor vehicle loans being boosted by 11.5 per cent (\$0.5 billion). Meanwhile, other purpose loans grew by 12.5 per cent (\$0.5 billion) in 2023 (**Table 4**).

FIGURE 21
CONSUMER LOANS BY PURPOSE, 2019–2023



²³ Real Estate-Related loans comprise of residential mortgages, bridging finance, land and real estate, home improvement and renovation.

TABLE 4
GROWTH IN CONSUMER LOANS BY PURPOSE²⁴, 2019 – 2023
/Year-on-Year Per Cent Change/

CATEGORIES	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Real Estate-Related (including mortgages)	9.8	1.7	2.3	6.6	6.6
Vehicles	2.5	-0.6	-9.7	-2.9	11.5
Credit Cards	3.8	-2.5	-7.6	12.3	1.5
Refinancing	9.1	6.7	17.8	13.5	4.9
Consolidation of Debt	13.6	2.9	-3.2	6.7	7.4
Other Purposes	9.9	-7.3	-2.4	2.5	12.5
TOTAL GROWTH IN CONSUMER LOANS	8.4	0.4	0.0	6.1	7.2

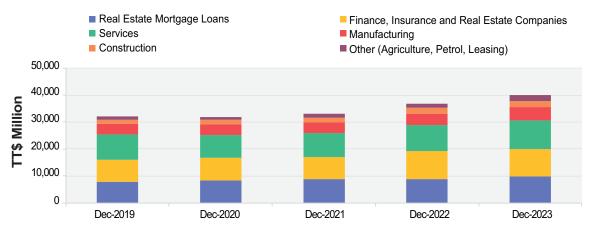
Business Sector Loans

Lending to the business sector continued its upward trend in 2023, propelled by loan demand from companies in the Petroleum and Services industries, as well as commercial real estate mortgage loans (Figure 22). During the year, overall business lending grew by 8.8 per cent (\$3.2 billion). Petroleum companies increased their borrowings from the local banking sector by 78.2 per cent, totalling \$0.8 billion. Firms in the Services sector also sought additional financing. For instance, loan growth in the Distribution sub-sector (including restaurants and bars) increased by 8.5 per cent (\$0.4 billion) and credit to Electricity and Water companies rose by 36.9 per cent (\$0.2 billion). Additionally, a 7.1 per cent (\$0.2 billion) upswing in lending was recorded for Hotel and Guest Houses, Commercial real estate mortgage loans continued on an upward trajectory, increasing by 9.5 per cent (\$0.9 billion) in 2023, compared to an increase of 1.7 per cent (\$0.2 billion) in the previous year.

Lending to the Manufacturing sector remained buoyant, primarily due to the strong demand from local and foreign consumers for products from the Food and Drink sub-sector, the Assembly-Type and Related Industries sub-sector and the Chemical and Non-Metallic Mineral sub-sector. Borrowing expanded by 14.1 per cent (\$0.2 billion), 53.4 per cent (\$0.2 billion), respectively.

²⁴ Absolute values are available in **Appendix B**.

FIGURE 22
BUSINESS LOANS BY ACTIVITY, 2019–2023



Asset Quality

Asset quality, as measured by the banking sector's non-performing loans-to-gross loans ratio (NPL ratio) improved by 29.3 basis points to 2.8 per cent as at December 2023. The improvement was driven by the growth of the loan portfolio, which rose by 9.7 per cent (\$8.4 billion). Additionally, there was a \$13.0 million (0.5 per cent) decrease in the level of NPLs, particularly in the business sector NPLs at commercial banks, where loan repayments led to a reduction in NPLs.

Despite the decline in the stock of NPLs, more provisions were set aside for loan losses, probably in anticipation of higher credit risk. The additional provisions reflect the banking sector's continuous close management of credit risk. As at December 2023, the ratio of provisions to non-performing loans for the banking

sector measured 67.3 per cent, compared to 65.5 per cent a year earlier.

Business entities' NPLs declined by \$97.4 million (6.1 per cent), largely due to a fall in commercial mortgage NPLs (\$84.2 million or 24.1 per cent). Conversely, consumer NPLs (\$65.3 million or 6.9 per cent) rose primarily due to real estate mortgages, new car loans and credit cards²⁵ (**Figure 23 and Table 5**).

²⁵ Only commercial banks' NPLs are disaggregated by sector. See Figure 24 for commercial bank sectoral NPLs to gross loans.

FIGURE 23
BANKING SECTOR NPLs, 2019–2023

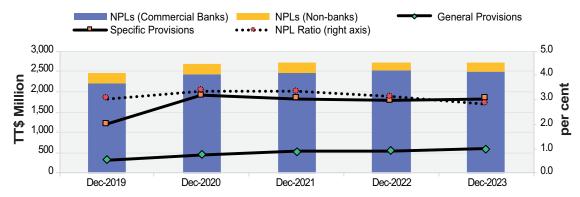


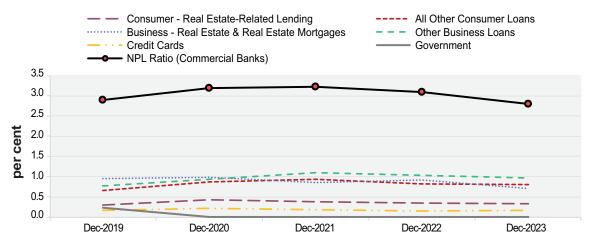
TABLE 5

NPLs BY SECTOR, 2022–2023

/TT\$ Thousand/

	Dec-22	Dec-23	Change	Change (Per Cent)		
					Dec-22	Dec-23
Consumer NPLs	951,148	1,016,474	65,326	6.9	2.5	2.6
Business NPLs	1,588,338	1,490,904	-97,434	-6.1	4.6	4.0
Government NPLs	612	262	-350	-57.2	0.0	0.0
NPLs – Commercial Banks	2,540,111	2,507,638	-32,473	-1.3	3.1	2.8
NPLs – Non-banks	182,360	201,820	19,460	10.7	4.0	3.6
Total NPLs – SYSTEM	2,722,471	2,709,458	-13,013	-0.5	3.1	2.8
Loan Loss Provisions (Specific and General)	2,322,096	2,415,901	93,805	4.0	-	-

FIGURE 24
COMMERCIAL BANKS' SECTORAL NPLs TO GROSS LOANS, 2019–2023



Sovereign Exposure

Total sovereign exposure relative to total banking sector assets increased from 23.6 per cent in 2022 to 25.1 per cent by the end of 2023. The 23.2 per cent (\$2.3 billion) increase in loans issued to Government and Government-related entities and the 10.4 per cent (\$1.6 billion) upswing in the banking sector's investment in central government securities were the main contributors to the banking sector's heightened sovereign exposure.

Sovereign loans increased from 5.6 per cent of total assets in 2022 to 6.8 per cent by the end of 2023 as State-owned Financial and Non-Financial Institutions sought funds to finance construction activity (\$1.5 billion) and activity in the Finance, insurance and real estate subsectors (\$0.9 billion).

Investments in Government of Republic of Trinidad and Tobago (GoRTT) securities, such as VAT bonds, US dollar senior unsecured notes, and bonds issued by state-owned non-financial institutions, also increased over the year. At the end of December 2023, 49.6 per cent of the sector's investment portfolio was comprised of GoRTT securities, compared to 47.4 per cent the previous year. The 53.1 per cent (\$4.2 billion) growth in the banking sector's investment in domestic central government securities outweighed the 28.2 per cent (\$2.6 billion) decline in the sector's investment in TT treasury bills.

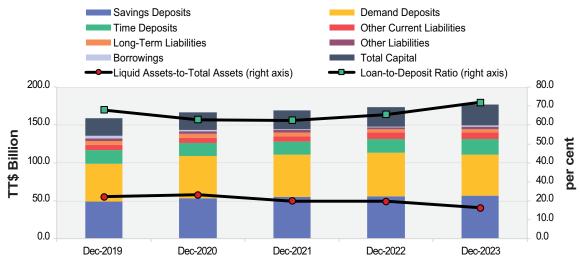
Liability Profile and Funding

Total deposit liabilities remained stable while the demand deposits declined in 2023. Total deposit liabilities increased by \$1.8 million—relatively unchanged from the previous year. Demand deposits

declined by \$2.8 billion (4.9 per cent); however, time and savings deposits increased by \$1.8 billion (10.1 per cent) and \$0.9 billion (1.7 per cent), respectively (**Figure 25**). The Government sector drove the decline in demand deposits, whereas time and savings deposits increased due to private non-financial businesses. Nonetheless, deposit liabilities remained the key funding source for assets, accounting for 88.0 per cent or \$131.4 billion of total liabilities in the banking system.

As the sector's loan portfolio expanded, liquidity tightened. Given the negligible increase in the deposit base, the banking sector's loan-to-deposit ratio increased from 65.6 per cent as of December 2022 to 71.9 per cent as of December 2023. The banking sector also converted liquid funds into interest earning loans and investments to grow the asset portfolios. Consequently, the liquid assets-to-total assets ratio reduced from 19.8 per cent in December 2022 to 16.3 per cent in December 2023. Further, the 201.7 per cent (\$0.9 billion) rise in the sector's borrowings and the 8.9 per cent (\$1.3 billion) growth in retained earnings supported the increase in assets.

FIGURE 25
DEPOSITS, OTHER LIABILITIES AND CAPITAL, 2019–2023



Earnings and Profitability

The banking sector's profitability improved due to significant gains in operating income, particularly interest income (Figures 26 and 27). Profits before taxes totalled \$4.9 billion in 2023, an increase of \$462.6 million (10.3 per cent) from the year prior. Although operating expenses rose by \$1.1 billion (17.0 per cent) this was offset by a \$1.5 billion (15.3 per cent) increase in operating income. Dividend income from the subsidiaries affiliates of four large commercial banks also contributed to net profits. Operating income was boosted by interest income expansion of \$1.4 billion (20.9 per cent) from the loan and investment portfolios and the \$0.1 billion (6.3 per cent) growth in fee income, primarily stemming from the increase in the number of credit cards issued and heightened card activity. The

\$187.1 million (55.6 per cent) increase in other income further supported overall profitability. However, the decline in foreign exchanges profits by 13.5 per cent (\$137.4 million) tempered the increase in operating income.

Operating expenses increased by \$1.1 billion (17.0 per cent) over the year, primarily due to higher provisions for bad debt and the upswing in other operating expenses, such as management fees and fees to Visa and MasterCard.

The sector's enhanced profitability was reflected in the improved profitability indicators from December 2022 to December 2023. Notably, the ROE ratio moved up by 147 basis points from 12.4 per cent to 13.8 per cent by the end of 2023.

0.0

Dec-2023

COMMERCIAL BANKS' CONTRIBUTION TO PROFIT BY SOURCE. 2019–2023 ■ Net Interest Margin Fee Income Trustee Service Other Income **Profit After Tax** Return on Equity (right axis) 9,000 18.0 16.0 8,000 12.0 tu 14.0 7,000 6,000 5,000 4,000 8.0 6.0 3,000 2,000 4.0 1,000 2.0

Dec-2021

Dec-2022

FIGURE 26

Source: Central Bank of Trinidad and Tobago

Dec-2019

Dec-2020

TT\$ Million

NON-BANKS' CONTRIBUTION TO PROFIT BY SOURCE, 2019–2023

Net Interest Margin
Other Income
Profit After Tax
Pr

FIGURE 27
NON-BANKS' CONTRIBUTION TO PROFIT BY SOURCE, 2019–2023

Dec-2021

Source: Central Bank of Trinidad and Tobago

Dec-2019

Dec-2020

Capital Adequacy

1,400 1,200

1,000

800

600 400 200

0

-200

TT\$ Million

The banking sector's average CAR remained robust, with an ample Tier 1 ratio, which largely comprises Common Equity Tier 1 capital. Despite a 67 basis point decline, the regulatory CAR stood at 18.0 per cent as at December 2023. All licensed financial institutions remained in excess of the minimum requirement as at December 2023 (Table 6). Although, the banking system registered an increase in total qualifying capital of 4.1 per cent (\$965.7 million), the decline in the CAR was mainly due to the 7.3 per cent (\$7.2 billion) rise in credit risk-weighted assets (RWA) amid the increase in the long-term exposure to corporate and securities firms and exposures to real estate mortgages (commercial and residential). The uptick in interest rate risk resulted in market RWA climbing by 10.1 per cent (\$1.3 billion) over the year ended December 2023. Additionally, operational RWA, which is calculated using the standardised

approach under Basel II, increased by 8.9 per cent (\$1.3 billion) over the same period, mainly due to the rise in gross income across several business lines.

Dec-2022

0.0

Dec-2023

TABLE 6

CAPITAL RATIOS AND RISK-WEIGHTED ASSETS (RWA) AS AT DECEMBER 2023

/Per Cent/

Capital Ratio	Minimum Requirement	Banking Sector Ratio
Regulatory capital-to-risk-weighted assets	10.0	18.0
Regulatory Tier 1 capital-to-risk-weighted assets	6.0	17.6
Common equity Tier 1 capital-to-risk-weighted assets	4.5	17.6
Risk-Weighted Assets (RWA)	as a per cent of RWA	TT\$ Billion
Total RWA	100.0	134.7
RWA Credit Risk	78.2	105.3
RWA Operational Risk	11.4	15.4
RWA Market Risk	10.4	14.0

Stress Testing the Commercial Banking Sector

At the end of December 2023, stress test results indicated that the commercial banking sector was generally resilient to various shocks, owing to robust capital buffers and adequate provisioning levels (Table 7). Based on provisioning guidelines for non-performing credits, the pre-shock CAR was adjusted downward to 15.8 per cent. This marginal downward adjustment of 0.5 per cent reflected a healthy stock of actual provisions held by the sector in proportion to regulatory required provisions (78.1 per cent in December 2023).

Satisfactory results continue to be reported for the foreign exchange and credit risk shocks. The net open long position of the aggregate foreign

exchange balance sheet remained the main contributor to the favourable result (post-shock CAR of 17.2 per cent) for the foreign exchange shock. Further, the sector maintained capital levels above the minimum regulatory capital threshold when the credit risk stress test was applied (post-shock CAR of 11.0 per cent). Given uncertainties relating to measures which can constrain disposable income (for example, implementation of residential property tax and electricity rate hikes), credit risk challenges can mount, should individuals encounter debt-servicing challenges.

The downward interest rate shock produced adequate results; however, the upward interest rate shock posed the largest risk to the sector in December 2023. The upward interest rate shock of

500 basis points had the largest impact on the adjusted CAR. The ratio declined by 10.9 percentage points, resulting in a post-shock CAR of 4.9 per cent. The decline was largely due to mismatches between the stock of assets and liabilities due to mature or be repriced particularly in the medium-to long-term time bands.²⁶

Liquidity levels have been on a downward trend towards the end of December 2023.

The number of days until the commercial banking sector became illiquid, declined from 31 days in December 2022 to 27 days in December 2023, when reserves were included in liquid funds. The exclusion of reserves resulted in the sector becoming illiquid in 16 days (December 2023) compared to 19 days (December 2022). This was mainly because of a fall in liquid assets in December 2023 compared to December 2022. Given this development, closer monitoring of liquidity risk is warranted (see **Chapter 2**).

²⁶ This test uses a duration methodology, which is the weighted average of assets held in a portfolio to maturity. As such, the further away the asset is from maturing, the higher interest rate risk it will incur.

TABLE 7

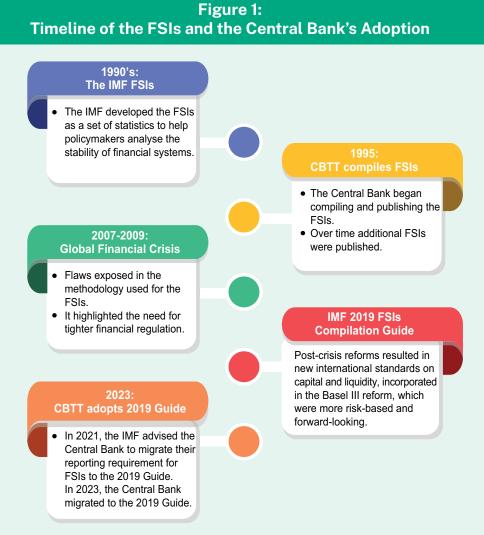
COMMERCIAL BANKING SECTOR STRESS TEST RESULTS, DECEMBER 2022 – DECEMBER 2023

		Dec-22	Jun-23		Dec-23
Pre-Shock CAR		16.7	16.7		16.3
Pre-Shock CAR Adjus	sted for Provisions	16.2	16.2		15.8
SINGLE	E FACTOR TESTS			-Shock CAR	Change from Pre-Shock Adjusted CAR
Interest Rate Risk	Upward shock of 500 bps	9.8	9.3	4.9	(10.9)
	Downward shock of 100 bps	17.4	17.4	17.8	2.0
F oreign Exchange Risk	TT Dollar depreciates 40 per cent	18.1	17.5	17.2	1.4
Credit Risk	General increase in non- performing loans	11.5	11.3	11.0	(4.8)
DAYS	UNTIL ILLIQUID				
Liquidity Risk (including reserves as liquid funds)	Bank Run	31 days	29 days		27 days
Liquidity Risk (excluding reserves as liquid funds)	Bank Run	19 days	18 days		16 days

Note: The Central Bank's current stress testing framework covers six single-factor stress tests. These are the interest rate, foreign exchange, credit, and liquidity risk stress tests. Two liquidity tests are conducted. One includes reserves and another that excludes reserves and applies different daily run-off rates based on the type of deposit (time deposits at 1 per cent and savings and demand deposits at 2 per cent). Two interest rate stress tests are also conducted. The first assumes an upward interest rate shock of 500 basis points, and another test considers the effect of a downward interest rate shock of 100 basis points. Moreover, a 6 per cent provisioning rate is applied to current loans and loans past due 1 to 3 months. This exercise is conducted semi-annually.

BOX 2: NEW METHODOLOGY FOR THE COMPILATION OF FSIs BY THE IMF1

The Central Bank's compilation of FSIs now largely complies with the 2019 Guide. Despite the methodology for some FSIs remaining unchanged from the 2006 Guide, some indicators compiled by the Central Bank have undergone revisions to better align with the IMF's recommendations. Adopting the new methodology has not resulted in any material change in key banking sector FSIs. According to data as at December 2023, the banking sector appears well capitalised, liquid, and profitable.



Source: Adapted from Central Bank of Trinidad and Tobago Adopts Enhanced Methodology for the Compilation of Financial Soundness Indicators" S. Smith, January 2024.

This is a summary of the Feature Article entitled, "Central Bank of Trinidad and Tobago Adopts Enhanced Methodology for the Compilation of Financial Soundness Indicators" published in the January 2024 Economic Bulletin See link here: https://www.central-bank.org.tt/node/1956.

BOX 2:

NEW METHODOLOGY FOR THE COMPILATION OF FSIs BY THE IMF¹ (Cont'd)

The Financial Soundness Indicators (FSIs) were developed by the International Monetary Fund (IMF) in response to the financial crises of the 1990s. These crises highlighted the need for a set of statistics that could help policymakers analyse the stability of financial systems. As the regulator of the banking and insurance sectors, the Central Bank of Trinidad and Tobago (the Bank) has been compiling various FSIs since 1995, and has continued to publish additional FSIs over time. Figure 1 shows the timeline of the Central Bank's implementation of the FSIs. These indicators are used for internal analysis, as well as for the Bank's publications and website, and are also uploaded to the IMF's reporting data portal.

The 2007-2009 Global Financial Crisis of exposed flaws in the methods used to identify and mitigate financial sector risks, highlighting the need for tighter financial regulation. In response, the IMF compiled a revised list of FSIs aligned with enhanced regulatory methods, supplemented with concentration and distribution measures. These changes are detailed in the IMF's 2019 Financial Soundness Indicators Compilation Guide (2019 Guide)². The 2019 Guide recommends compiling 50 FSIs in total, 13 of which are new. The inclusion of new metrics related to capital, liquidity, and asset quality, as well as concentration and distribution measures, aims to place greater emphasis on financial system stability.

The Bank's preceding methodology largely aligned with the IMF's 2006 Financial Soundness Indicators Compilation Guide (2006 Guide), but in some cases, national discretion was applied for regulatory reporting purposes. Additionally, capital adequacy FSIs were updated in August 2020 to comply with Basel II and certain aspects

of the Basel III Framework³. In 2021, the IMF advised the Central Bank to migrate their reporting requirement for FSIs to the 2019 Guide. The IMF intended to update the FSIs compilation to the most recent regulatory and accounting standards and to harmonise the methods used by different countries. The Central Bank migrated to the 2019 Guide in 2023.

The 2019 Guide is more forward-looking than the 2006 Guide, with significant changes in the regulatory framework and new International Financial Reporting Standards. The Central Bank largely complies with the 2019 Guide to meet IMF reporting requirements and allows for crosscountry comparison. Some indicators compiled by the Central Bank have undergone revisions despite the methodology for some FSIs remaining unchanged from the 2006 Guide. Highlighted below is a summary of some of the changes⁴.

Capital Adequacy

Regulators assess capital adequacy by ensuring that institutions comply with standards pertaining to risk-based net worth requirements and through capital trend analysis. The core capital adequacy ratios for deposit takers listed in the 2019 Guide are regulatory capital to risk-weighted assets, Tier 1 capital to risk-weighted assets, non-performing loans net of provisions to capital, common equity Tier 1 capital to risk-weighted assets, and Tier 1 capital to assets. Despite major changes in capital adequacy indicators as prescribed in the 2019 Guide, such indicators remain essentially unchanged since the Central Bank has already reported them based on the Basel II (and some elements of the Basel III) framework for data effective August 20205.

² IMF 2019 Financial Soundness Indicators Compilation Guide (2019 FSI Guide) can be accessed via the following link: https://www.imf.org/en/Data/ Statistics/FSI-guide

Effective August 2020, capital adequacy ratios are reported based on the Basel II (and some elements of the Basel III) framework. All capital adequacy ratios prior to August 2020 are based on the Basel I framework. Adjustments related to the new framework seek to raise the quality and quantity of the regulatory capital base and enhance the risk coverage of the capital framework. For further information on the Central Bank of Trinidad and Tobago's Basel II/III framework implementation, please view: https://www.central-bank.org.tt/core-functions/supervision/basel-iii-iii-implementation.

⁴ For further details, see the January 2024 Economic Bulletin Feature Article entitled "Central Bank of Trinidad and Tobago Adopts Enhanced Methodology for the Compilation of Financial Soundness Indicators". See link here: https://www.central-bank.org.tt/node/1956

⁵ See footnote Number 2.

BOX 2:

NEW METHODOLOGY FOR THE COMPILATION OF FSIs BY THE IMF¹ (Cont'd)

Asset Quality

According to the 2019 Guide, the core asset quality ratios for deposit takers are non-performing loans (NPLs)-to-total gross loans, loan concentration by economic activity, and provisions to NPLs. While the NPLs-to-total gross loans ratio remains unchanged under the 2019 guide, the Central Bank has adjusted the definition of gross loans (now includes interbank loans) to better align with IMF guidelines. This adjustment has resulted in a marginal improvement in the NPLs-to-total gross loans ratio.

Earnings and Profitability

Regulators assess banks' ability to consistently generate earnings by examining their financial performance. The 2019 Guide prescribes core earnings and profitability ratios for deposit takers, which include return on assets (ROA), return on equity (ROE), interest margin-to-gross income, and non-interest expenses-to-gross income. The ROA ratio remains unchanged under the 2019 Guide, as do the interest margin to gross income and noninterest expenses-to-gross income ratios. One notable change in the 2019 Guide is the calculation of ROE, where the preferred definition of net income (numerator of the indicator) was net income before taxes, while the 2019 Guide recommends using (net) income after taxes. As a result, there has been a decline in ROE with the implementation of the new methodology. Nevertheless, the ratio remains at a healthy level.

Liquidity

Regulators assess liquidity by looking at the availability of assets that can be easily converted to cash. Two core liquidity ratios for deposit takers are liquid assets-to-total assets and liquid assets-to-short-term liabilities. According to the IMF, these ratios indicate the liquidity available to banks to meet expected and unexpected cash outflows. These ratios remain unchanged from the 2006 Guide; however, due to a change in the Bank's definition of total assets (with items deemed to be off-balance sheet items removed), there was a marginal change in the liquid assets-to-total assets ratio.

Additional Indicators

The IMF has added additional indicators for deposit takers in addition to the core indicators outlined in the 2019 Guide. These new indicators include customer deposits-to-total (non-interbank) loans, foreign currency-denominated loans-tototal loans, and foreign currency-denominated liabilities-to-total liabilities. The Bank's compilation of these additional indicators has changed, even though the methodology for these FSIs has remained unchanged since the 2006 Guide. For example, the Central Bank previously used national discretion in the calculation of customer deposits. Customer deposits previously included all deposits held at commercial banks regardless of institutional units. In line with the 2019 Guide, customer deposits include all deposits placed by residents or non-residents, except those placed by (resident and non-resident) financial corporations, central governments and central banks. As a result of the exclusions, there is a significant change in the customer deposits -to-total (non-interbank) loans ratio reported. Table 1 highlights the differences in some of the FSIs based on December 2023 data.

BOX 2: NEW METHODOLOGY FOR THE COMPILATION OF FSIs BY THE IMF¹ (Cont'd)

TABLE 1
FSI COMPARISON (COMMERCIAL BANKS)
/Per Cent/

	Dec-23	
	2006 Guide*	2019 Guide
Regulatory capital to risk-weighted assets	16.3	16.3
Tier 1 capital to risk-weighted assets	15.7	15.7
Common equity Tier 1 capital to risk-weighted assets	15.7	15.7
Tier 1 capital assets	11.6	11.9
Non-performing loans net of provisions to capital	3.7	4.0
Non-performing loans to total gross loans	2.8	2.8
Provisions to non-performing loans	68.5	68.5
Return on assets	2.5	2.5
Return on equity	19.0	13.9
Interest margin to gross income	67.8	63.3
Non-interest expenses to gross income	32.2	54.0
Liquid assets to total assets	16.3	16.8
Liquid assets to short-term liabilities	20.5	20.5
Customer deposits to total (non-interbank) loans	143.0	124.9
Foreign currency-denominated loans to total loans	16.6	16.4
Foreign currency-denominated liabilities to total liabilities	24.6	24.2

Source: Central Bank of Trinidad and Tobago

The 2019 Guide was established to reflect advances in the regulatory framework and the need for more risk-based and forward-looking indicators. As risks change over time, it is expected that FSIs will also evolve. According to the IMF, future FSIs will encompass new and developing risks such as digital financial intermediation and other emerging risks. To provide pertinent statistics for the analysis of financial stability, new or updated FSIs will be developed as international consensus is reached on prudential requirements and regulatory approaches to these new risks.

^{*}Capital Adequacy ratios based on the Basel II (and some elements of the Basel III) framework and not the 2006 Guide.

INSURANCE SECTOR PERFORMANCE

Long-Term Insurance Industry

Assets

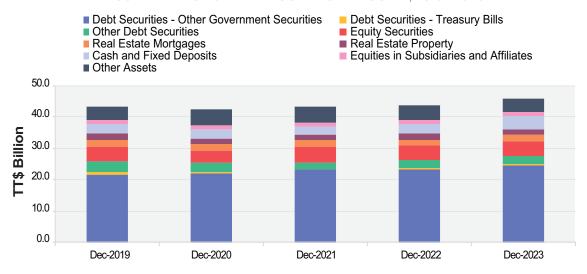
The long-term insurance sector recorded \$45.8 billion in total assets as at December 2023 (Figure 28). This represented a 5.0 per cent increase (\$2.2 billion) from the total assets of \$43.6 billion at the end of December 2022. The growth emanated partly from cash and fixed deposits which increased by 36.8 per cent (\$1.1 billion) over the year. One large insurer deposited proceeds from the sale of one of its subsidiaries during the last quarter of 2023. Additionally, government securities also increased by 4.8 per cent (\$1.1 billion) over the year, which occurred as short-term funds were directed towards reinvestment in government securities in the second half of 2023.

Three large insurers held 71.0 per cent of the sector's total assets at the end of December 2023. The sector experienced an average growth rate of total assets of 2.4 per cent over the last five years. It should be noted that growth rate of 5.0 per cent over the last year was significantly impacted by the movements mentioned previously. Prior to this, for the period 2019-2022, the sector's average growth rate stood at 1.7 per cent.

One of the two companies that was previously held under emergency control, accounted for 26 per cent of the sector's assets. These companies are operating closed portfolios and growth has been stagnated – which contributed to the relatively lower growth rate in the prior years.

Asset composition remained unchanged over the five-year period with debt securities being the major asset class, accounting for 60.0 per cent of the total asset base. Debt securities are the preferred asset class due to its longer-term duration, which facilitates appropriate asset-liability matching for the long-term sector. Notably, as at December 2023, approximately 89.8 per cent of the long-term sector's debt securities were government securities due to the low risk nature.

FIGURE 28
ASSET MIX-LONG-TERM INSURANCE INDUSTRY, 2019–2023



Lines of Business

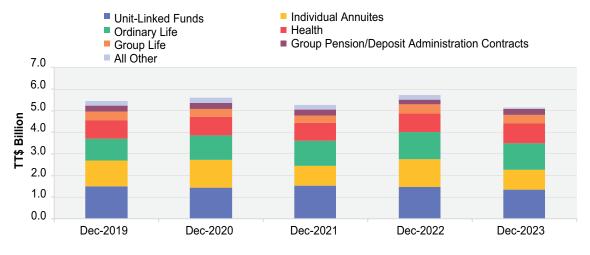
The long-term industry experienced an average annual growth rate in premium income of 1.4 per cent over the five-year period (2019-2023). The levels of annualised gross premium income in the long-term sector fluctuated as a result of different insurers acquiring pension plans in wind up in 2019, 2020 and 2022. These acquisitions contributed to the rise in annuities and, by extension, the increased levels of gross premium income over the respective reporting periods.

Gross premium income recorded for the year ended 2023 was \$5.1 billion, a decline of 10.4 per cent (\$0.6 billion) from \$5.7 billion in 2022. Income from individual annuities fell over the year as premiums levelled off subsequent to one large insurer acquiring a sizeable pension plan at the end of 2022. Additionally, income

from unit-linked funds contracted by 8.1 per cent (\$0.12 billion) over the year.

Unit-linked products, ordinary life, and individual annuities were the three major contributors to premium income, accounting for 25.9 per cent, 23.9 per cent and 18 per cent of total gross premium income in 2023, respectively (**Figure 29**).

FIGURE 29
ANNUALISED GROSS PREMIUM INCOME-LONG-TERM INSURERS, 2019-2023



Reported Profits

Annualised profits before taxes moved from \$1,298.5 million in December 2019 and settled at \$619.0 million in December 2023 (Figure 30). In 2019, the profits recorded were influenced by valuation changes made by one large insurer which reduced its policyholder reserves and operating expenses.

For the period 2020-2021, the onset of the COVID-19 pandemic and business inactivity saw continued volatility in the stock market, result in profits fluctuating in 2020. However, industry profits improved by the end of 2021, with the recovery in local and international markets.

Profits spiked again in 2022 mainly due to a reinsurance transaction of one of the larger insurers, which resulted in a release of reserves into the profits. Two main factors influenced the drastic decline in profits from \$1,409.8 million in 2022 to \$619.0 million in 2023. These include: (i) a significant increase in policyholder reserves due to one insurer adjusting assumptions; and (ii) the levelling off of premium income after the acquisition of a large pension plan at the end of 2022.

1,600 1,400 1,200 TT\$ Million 1,000 800 600 400 200 0 Dec-2019 Dec-2020 Dec-2022 Dec-2021 Dec-2023

FIGURE 30 ANNUALISED PROFITS BEFORE TAXES-LONG-TERM INSURERS, 2019-2023

Expenses

Total expenses rose in 2023 as the sector faced a series of costs related to the implementation of the International Financial Reporting **Standard** Insurance Contracts (IFRS 17). The rise in expenses alongside the fall in premium income reflected the increase in the sector's expense ratios compared to 2022 (Figure 31).

ANNUALISED EXPENSES AND EXPENSE RATIO-LONG-TERM INSURERS, 2019-2023 Management Expenses Commission and Other Acquisition Expenses Management Expense Ratio (right axis) Total Expense Ratio (right axis) 35.0 1,800 1,600 30.0 1,400 25.0 1,200 20.0 1,000 800 15.0 600 10.0 400 5.0 200 0.0 0 Dec-2019 Dec-2020 Dec-2021 Dec-2022 Dec-2023

FIGURE 31

General Insurance Industry

Assets

Total assets of the general insurance sector climbed steadily from \$6.0 billion as at December 2019 to \$7.4 billion as at December 2023—an annual average growth rate of 5.4 per cent (Figure 32). General insurance liabilities are short term in nature—as such, companies in this sector maintain a higher allocation in 'Cash and Short-term Investments' compared to the long-term sector. The sector also has a more diversified asset composition when compared to the long-term sector, with notable concentrations in Government Bonds (23 per cent) and Cash (15 per cent).

Over the year, 'Equity in Subs and Affiliates' increased from 2.7 per cent to 6.8 per cent due to one general insurer acquiring 100 per cent of the shares of another. This acquisition was finalised in the first quarter of 2023.

Accounts receivable accounted for 16.9 per cent of the general sector's assets. This consisted of significant receivables from agents, brokers and reinsurers, signalling that insurers need to practice more efficient management of receivables. Under the Insurance Act 2018 (IA 2018) the risk to capital is mitigated, as uncollected premiums over 20 days are deemed to be non-permissible for capital adequacy calculations.

ASSET MIX-GENERAL INSURANCE INDUSTRY, 2019-2023 Debt Securities Cash and Short-Term Investments Equity Securities Mutual Funds ■ Real Estate Mortgages Other Investments (excluding mutual Funds) Other Assets 8.0 6.0 T\$ Billion 4.0 2.0 0.0 Dec-2023 Dec-2019 Dec-2020 Dec-2021 Dec-2022

FIGURE 32
ASSET MIX-GENERAL INSURANCE INDUSTRY, 2019–2023

Lines of Business

Gross premium income for the general insurance sector increased from \$3.9 billion in December 2019 to \$4.9 billion in December 2023, representing an average annual growth rate of 6.8 per cent.

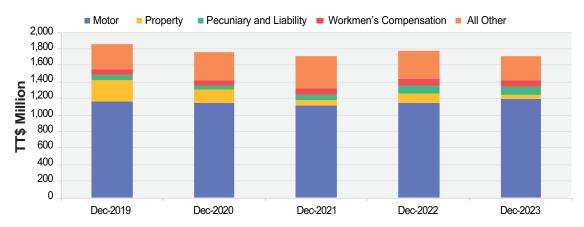
The property and motor lines of business continued to be the sector's top two contributors, accounting for 56.1 per cent and 27.6 per cent of total gross premium income, respectively.

Motor premiums experienced a decline over December 2019 to December 2021 due in part to the reduced demand for coverage during the various lockdown periods brought on by the COVID-19 pandemic. However, motor premiums

have since been on the rise, experiencing an average annual growth of 2.8 per cent over December 2022 to December 2023. Property insurance premiums continued to increase, with an average growth rate of 11.3 per cent over the last five years. Higher premium rates associated with rising reinsurance costs and increased demand for coverage and have influenced this upward trend.

On a net premium basis, the motor and property lines of business accounted for 69.2 per cent and 3.1 per cent of the total net premiums, respectively (**Figure 33**). The disparity is due to a higher proportion of property business being reinsured, whereas for motor business most of the premiums are retained.

FIGURE 33
NET RETAINED ANNUAL PREMIUM INCOME-GENERAL INSURERS, 2019--2023



Claims Adequacy

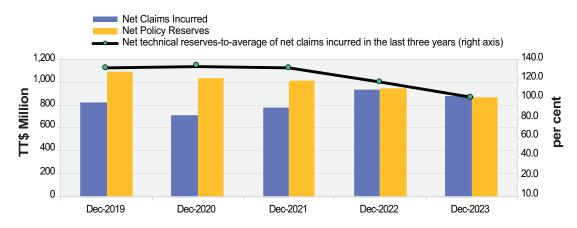
Net claims incurred decreased by 5.6 per cent over the last year after experiencing elevated claim levels in 2022. The increased levels of claims in 2022 were due to factors such as the removal of pandemic-related restrictions in the second half of 2021, the rising cost of claims (impacted by inflation), and significant flooding activity in the last quarter of 2022. The industry's claims

experience has largely reverted to prepandemic levels.

The ratio of net technical reserves as a percentage of the three-year average net claims incurred declined over the period from 116.8 per cent to 100.8 per cent (**Figure 34**). Technical reserves shrank with the contraction of business activity and the tightening of excess reserves by some insurers.

FIGURE 34

NET TECHNICAL RESERVES ²⁷/ THREE-YEAR AVERAGE NET CLAIMS INCURRED-GENERAL INSURERS, 2019–2023



 $^{^{27}}$ Technical Reserves = Claims Reserves + any Other Transfers from Funds.

Earnings and Profitability

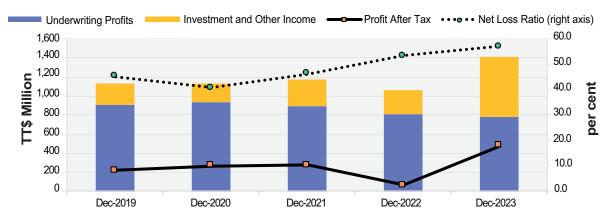
The overall net loss ratio (all lines of business) increased from 53.5 per cent to 57.1 per cent over the year ended December 2023 (Figure 35). For the motor line of business, the loss ratio increased from 51.2 per cent to 54.7 per cent over the year, as claims have now reverted to pre-pandemic levels. However, for the property line of business, the loss ratio declined from 54.5 per cent in December 2022 to 37.1 per cent in

December 2023. This improved property loss ratio was due to a decline in net claims as more reinsurance recoveries as well as increased gross premiums were observed over the last year.

Underwriting profits of \$783.7 million were recorded for the year ended 2023. The spike in profits over the year ending December 2023 reflected the receipt of dividend income from subsidiary investments.

FIGURE 35

CONTRIBUTION TO PROFIT AND EXPENSES (ANNUALISED)—GENERAL INSURERS, 2019–2023



OCCUPATIONAL PENSION PLANS

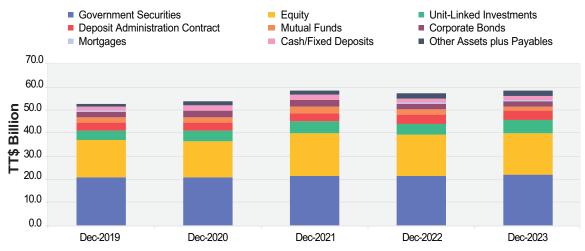
Assets

Occupational pension plans held \$58.1 billion in total assets at the end of 2023.

This amount represented an increase of 1.6 per cent, from the reported total assets of \$57.1 billion at the end of 2022 (**Figure 36**). The increase stemmed from the appreciation in the pension plans' overseas investments, mainly shares in companies traded on the US stock markets. Locally traded shares continued to decline (**Figure 37**).

Figure 36 also shows the mix of assets in the pension plan sector for the five years ended December 31, 2023. The majority of the sector's assets continue to be based in three asset classes: Government of Trinidad and Tobago bonds, locally traded shares, and foreign investments. Three corporate trustees managed approximately 78 per cent of the sector's assets as at December 31, 2023²⁸ (Figure 38).

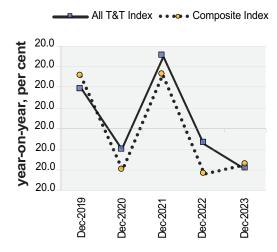
FIGURE 36
PENSION PLAN ASSET COMPOSITION, 2019–2023



²⁸ The remaining 22 per cent of the assets are managed by Boards of individual trustees.

FIGURE 37

MOVEMENT IN THE LOCAL AND FOREIGN STOCK MARKET INDICES, 2019–2023²⁹



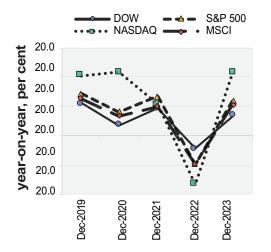
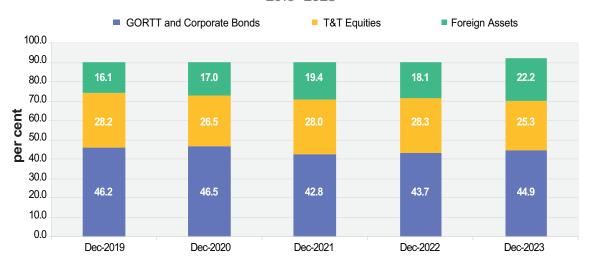


FIGURE 38

CORPORATE TRUSTEES: TOP THREE ASSET CLASSES AS A PROPORTION OF TOTAL ASSETS,

2019–2023



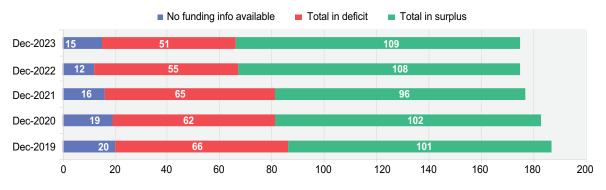
The local indices are the All Trinidad and Tobago (All T&T) Index and Composite Index. The foreign indices reviewed were the Dow Jones Industrial Average (DOW) Index, Standard and Poor's (S&P 500) Index, National Association of Securities Dealers Automated Quotations (Nasdaq) Index, and the Morgan Stanley Capital International (MSCI) World Index.

The majority of the sector (57 per cent) continued to be comprised of defined benefit pension plans³⁰, which held \$48.5 billion in assets as at December 2023 (\$47.9 billion in 2022). Defined contribution plans³¹, 32 per cent of the sector, held \$3.9 billion (\$3.7 billion in 2022) and hybrid plans³², held the remaining \$5.7 billion (\$5.5 billion in 2022).

Funding

The number of active pension plans remained unchanged in 2023 at 175. Out of these, 51 plans (29.1 per cent) reported funding deficits on ongoing and wind-up bases. Overall, there continued to be an improvement in funding positions which partly reflected actuarial forecasts that assume increased interest rates in the near to medium term, which would reduce costs in funding defined benefits. Additionally, changes to pension plan structures, such as conversions from defined benefit to defined contribution and hybrid plans, have contributed to the improved funding positions. Figure 39 shows the funding position of active pension plans over the last five years.

FUNDING POSITIONS OF ACTIVE PENSION PLANS, 2019-2023



A defined benefit plan specifies the monthly payment (benefit) to be received by a pensioner. The benefit is typically calculated, based on years of pensionable service and a percentage of pensionable salary, using a pre-determined formula. An employer is usually obligated, through their Plan's Trust Deed and Rules, to ensure that there is sufficient funds to meet all benefit obligations.

In a defined contribution plan, the retirement benefit is typically determined by the amount of money paid into the plan by the employer and member, the returns on the plan's investments and the annuity purchase rates at the time the member retires. There may be no obligation for employers to pay additional funds beyond their normal contributions.

³² A hybrid pension plan combines elements of defined benefit and defined contribution plans.

Income

The sector continued to generate positive cash flows as total income exceeded total expenses (Figure 40). Notably, the largest expense, pension payments, has been steadily increasing. If expenses continue to increase, less funds will be available for reinvestment, adversely impacting the plans' ability to ensure a steady income stream to pay benefits. The negative effect of COVID-19 on business activity was mainly responsible for the decrease in contribution income in 2021 (Figure 41). However, contribution income recovered in 2022 due in part to the payment of previously deferred contributions and employers increasing their contributions to cover deficits.

FIGURE 40

COMPOSITION OF PENSION PLANS TOTAL EXPENSES, 2019–2023

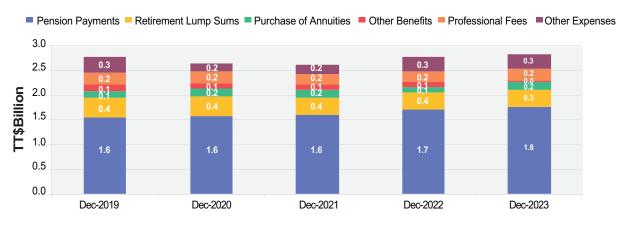
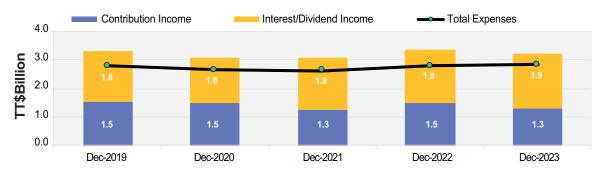


FIGURE 41

OCCUPATIONAL PENSION PLAN INCOME AND EXPENSES, 2019–2023



Challenges

Pension Plan Membership

Pension plan membership dynamics have changed over the years. Preliminary analysis of membership information from actuarial valuation reports showed that in 2013, occupational pension plans had three active members per pensioner. By 2023, the ratio declined to 1.6 active members per pensioner. Notably, while the ratio of active members to pensioners has declined, the primary driver was more pensioners and not less active members.

The trend of extended life expectancy and a generally aging population are not exclusive to Trinidad and Tobago. Globally, countries have been adapting to the changing demographics by utilising various reform measures such as raising retirement ages, increasing contribution requirements and reducing the benefits paid to persons retiring early.

Limited availability of long-term investment opportunities

Returns on investments make up a greater share of the pension plans' income than contributions. Pension plans are reliant on long-term income flows from their investments to pay pension benefits, which may be payable for a considerable number of years after a person retires. Hence, it is necessary that pension plans secure steady long term income streams. Since 2020, the number of investments submitted for the Central Bank's review as potentially suitable investments for pension funds has been declining (Table 8).

TABLE 8
SECURITIES REVIEWED FOR PENSION PLANS, 2019–2023

	2019	2020	2021	2022	2023	Total Number	Total Value of Securities, \$TTBillion
No. of Securities	17	25	8	5	3	58	48.4
GoRTT Securities	10	19	6	2	3	40	20.8
Private Securities	7	6	2	3	0	18	27.7
TTD Securities	11	18	5	3	3	40	19.7
USD Securities	6	7	3	2	0	18	28.8
Total Value, \$TT Billion	22.3	11.2	3.8	9.3	1.8		

CAPITAL MARKET DEVELOPMENTS

The primary debt market recorded a significant jump in activity in 2023.

Provisional information suggests that the market issued debt at a total face value of \$14.8 billion (12 issues) in 2023, compared to \$3.4 billion (5 issues) in 2022 (**Figure 42**). Central Government financing, which accounted for 96.3 per cent of the total face value of bonds issued during 2023, jumped by 469.4 per cent when compared to 2022. The Government accessed financing mainly for budgetary support and the repayment of maturing securities. Additionally, provisional data indicate that the private sector was absent from the market over the year.

Data from the Trinidad and Tobago Stock Exchange (TTSE) showed a substantial increase in the number of trades in secondary Government bond market during 2023. In 2023, the market recorded a notable 880 trades, compared to 91 trades in 2022 (Figure 43). The higher activity was due to investors trading their holdings of the Government series II bond following the CLICO Investment Fund (CIF) redemption and distribution of assets³³. Despite the large jump in trades, the total face value exchanged over 2023 was recorded at \$455.1 million, compared to \$792.2 million in 2022. Conversely, trading activity on the secondary corporate bond market trended down from 2021 to 2023. The market registered 98 trades at a face value of \$4.3 million, compared to 183

In January 2023, a \$702.9 million series II 2037 Government bond was listed on the TTSE secondary Government Bond Market. This bond was previously issued in 2012 and formed part of the CIF distribution of assets. During 2023, the secondary Government Bond Market recorded 857 trades at a face value of \$52.9 million of this Series II 2037 bond.

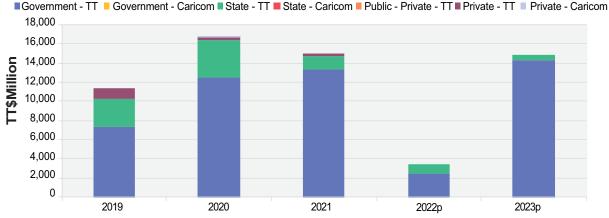
trades at a face value of \$24.8 million in 2022, and 258 trades at a face value of \$133.7 million during 2021.

The Central Government yield curve shifted upward, reflecting increased interest rates in 2023. Short-term rates observed notable increases, driven by volatile excess liquidity levels and a notable decline during the fourth quarter of 2023. The 3-month and 1-year rates jumped by 64 basis points to 1.14 per cent, and 73 basis points to 1.79 per cent, respectively. Similar movements were observed in medium-term rates as the 3-year and 5-year rates increased by 34 basis points to 3.15 per cent, and 16 basis points to 4.22 per cent, respectively. On the other hand, benchmark long-term rates observed minimal changes over the

year, likely due to a tempering of inflation expectations and lower risk-premiums on government debt. The 10-year rate increased by four basis points to 5.22 per cent, while the 15-year rate fell by three basis points to 5.99 per cent. Additionally, the longer-term 20-year rate declined by 23 basis points to 6.48 per cent.

However, sudden upward movements in these rates could negatively impact asset valuations in investors' (such as commercial banks and insurance companies) bond portfolios. Risk management and portfolio rebalancing can potentially result in further valuation declines given the concentration risks and relatively infrequent secondary market activity.

FIGURE 42
PRIMARY DEBT MARKET ACTIVITY, 2019–2023^p



Source: Ministry of Finance and market participants

Note: Includes bonds issued by local and CARICOM institutions and governments in domestic market but excludes bonds issued by the Local Government and firms on the international market. p (provisional)

Face Value Traded No. of Trades (right axis) 900.0 1,000 900 800.0 800 700.0 of trades 700 600.0 600 500.0 500 400.0 400 300.0 300 200.0 200 100.0 100 0.0 0 2019 2020 2021 2022 2023

FIGURE 43
SECONDARY GOVERNMENT DEBT MARKET ACTIVITY, 2019–2023

Source: Trinidad and Tobago Stock Exchange

In 2023, the local equity market recorded a second year of declines, driven by deteriorations in domestic and regional equities. The market fell by 8.9 per cent in 2023, compared to 2022 (**Figure 44**). This weakening mostly reflected investor pessimism on the earnings potential of domestic equities, linked to slowing global economic conditions, monetary policy tightening in most of the AEs and EMDEs, and declining domestic energy sector activity. Consequently, total stock market capitalisation fell by 8.8 per cent to \$115.7 billion. In comparison, over 2022 the market declined by 11.0 per cent in 2022, linked primarily to the inflationary challenges.

Persistent weak market conditions resulted in trading activity declining in 2023. The market observed 106.2

million shares being exchanged at a value of \$1,092.8 million, corresponding to a turnover ratio of 0.92. In comparison, during 2022, the market recorded 184.3 million shares traded at a value of \$1,706.9 million, corresponding to a turnover ratio of 1.28.

Overall, weakening equity prices and shallow market conditions may be cultivating activities that can generate financial stability implications. The increase in the Value-at-Risk (VaR)³⁴ measure over 2022 and 2023 suggests increased downside risks. Additionally, should policy reversals occur, the ability of banks (or other financial entities such as insurance companies and mutual funds) to access liquidity via the local capital market may be limited. A massive sell-off (or fire sale) by one financial entity

³⁴ VaR describes the minimum loss expected a certain percentage of the time over a certain period. It is computed via a parametric (normal distribution) methodology which uses the expected return and standard deviation of returns to estimate VaR. The VaR measures in this analysis takes the form of a percentage change in the index value over the period. Using a 95 per cent confidence interval, an estimated annual δ per cent VaR indicates that the market index will fall by at least δ per cent, 5 per cent of the time.

EQUITY PRICES AND MARKET CAPITALISATION, 2019-2023 Market Capitalisation (CPI) (right axis) Composite Price Index (CPI) 1,600 160.0 150.0 1,500 **CPI Index Value** 1,400 140.0 130.0 1,300 1,200 120.0 110.0 1,100 1,000 100.0 Dec-2019 Dec-2020 Dec-2021 Dec-2022 Dec-2023

FIGURE 44

can trigger significant price instability in the local market.

Source: Trinidad and Tobago Stock Exchange

The VaR results (Figure 45) show the average daily return on the CPI index, and its corresponding normal distribution (delta-normal) VaR. Importantly, periods of major increases in the VaR coincide with periods of major market declines. Specifically, the effects of the 2005 2006 regulatory market shock, the 2008 and 2009 GFC period, and the 2020 COVID-19 pandemic shock. resulted in substantial declines in the CPI market index, reflected in notably larger increases in the VaR. However, following a notable recovery in market conditions in 2021, the market again weakened in 2022 and 2023, driven by inflationary pressures and negative market sentiment, respectively. The recent increases in the VaR indicate increased downside risk and the potential for larger losses. This

can lead to heightened market stress and erode investor confidence in market resilience. Furthermore, when factoring concentration and liquidity risks, higher VaR levels can raise financial stability concerns, especially if accompanied by other indicators of market distress or systemic risk.

Average Daily Return, per cent 0.10 0.9 0.08 8.0 0.06 0.7 0.04 0.6 0.02 0.5 0.00 0.4 -0.02 -0.04 0.2 -0.06 0.1 -0.08 0.0 2023 2005 2018 2 201 ■ CPI Avg. Daily Return → Delta Normal VaR (right axis)

FIGURE 45
CPI RETURNS ANNUAL AND DELTA-NORMAL VAR, 2005–2023

Source: Trinidad and Tobago Stock Exchange and Central Bank of Trinidad and Tobago

Mutual Fund Industry

Mutual fund under management³⁵ increased negligibly in 2023, supported by fixed Net Asset Value (NAV) funds.

The overall industry increased by 0.4 per cent to \$52,462.7 million compared to a 1.8 per cent decline in 2022 (**Figure 46**). Money market funds expanded by 1.4 per cent to \$15,382.0 million, while Income funds gained only 0.4 per cent to \$28,483.0 million over 2023. However, this was mainly due to a 1.2 per cent growth in fixed NAV Income funds. Overall, the movement towards the protection of principal was reflected in a 1.3 per cent increase in aggregate fixed NAV funds to \$39,391.4. Conversely, floating NAV funds recorded a 2.4 per cent decline to \$13,071.3 million, partly owing to a 1.4 per

cent decline in Equity funds to \$8,153.4 million. Over the year, the movement towards the relative safety of fixed NAV funds was prompted by the negative valuation impact of higher interest rates from monetary policy tightening in AEs, an uptick in the domestic yield curve, and a weaker performance of the local equity market.

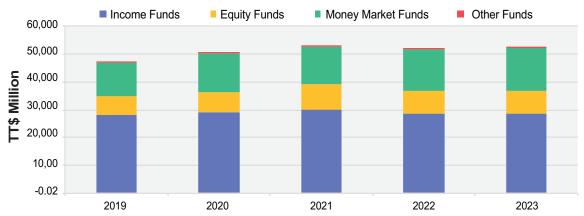
Collective Investment Scheme (CIS) data published by the Trinidad and Tobago Securities and Exchange Commission (TTSEC)³⁶ suggested that at the end of 2023, the total value of assets under management for all registered funds recorded an increase of 1.0 per cent to \$62,664.4 million.

³⁵ Aggregate funds under management refer to mutual fund information collected by the Central Bank of Trinidad and Tobago, including funds managed by the Trinidad and Tobago Unit Trust Corporation, Royal Bank of Trinidad and Tobago, Republic Bank Limited and First Citizens Bank Limited.

³⁶ CIS data from the TTSEC represents 79 registered funds from 16 issuers at the end of 2023.

Domestic and external factors will likely continue to impact the domestic mutual fund industry. In light of government debt concentrations, increases to domestic interest rates can affect asset valuations in various financial sector segments. Additionally, continued pessimism on local equity performance can prompt further repricing. These domestic factors could be compounded by any surprise tightening in AEs; however, this risk may be somewhat limited in the US.

FIGURE 46
VALUE OF FUNDS UNDER MANAGEMENT (FUND TYPE), 2019–2023



BOX 3: REDUCING SECURITIES SETTLEMENT TIME: IMPLICATIONS FOR FINANCIAL STABILITY

The settlement of securities transactions refers to the process that ensures the smooth and efficient execution of trades, while limiting potential transaction risks. The process involves several critical steps.

- 1. Trade execution agreement of the terms of trade between the involved parties.
- 2. Settlement Preparation settlement instructions and date are established.
- Trade Clearing a third party clearing house validates the details of the trade, ensures accuracy, and manages any potential default risk.
- 4. Trade Transfer the security and payment is transferred between the buyer and seller, typically through a central securities depository agency and the clearing house.
- Reconciliation-following the trade, all parties confirm the accuracy of the agreement, and that all transactions are correctly recorded in respective accounts.

The steps listed revolve around the T+n settlement date, where 'n' represents the maximum number of business days at which the trade must be completed. Historically, settlement cycles were as long as T+5 due to the manual process involved in trade confirmation, clearing, and settlement. Subsequently, advancements in technology and automation enabled settlement to occur within T+3. More recently, further advancements in technology and streamlined processes have enabled many economies to transition to a T+2 settlement cycle, while some Advanced Economies have switched to a T+1 cycle.

Reducing securities settlement time was driven by advancements in technology, regulatory mandates, and the need to improve market efficiency and risk management. According to the United States Securities and Exchange Commission (USSEC 2022), reductions in the settlement and clearing cycle are designed to reduce the credit, market, and liquidity risks in securities transactions. For example, shorter settlement cycles mitigate counterparty risks by reducing the exposure to counterparty default. Additionally, reducing the settlement time lessens the systemic risks associated with an accumulation of unsettled transactions.

Market liquidity conditions can also benefit from faster settlement times. Shortening the settlement cycle should reduce the margin requirements that counterparties are mandated to post with clearinghouses (USSEC 2022). This allows proceeds to be re-invested in a shorter timeframe, enabling more trading, and thus increasing market turnover and deepening market liquidity (Aguilar 2015). Considering that financial institutions are required to hold capital against unsettled trades, reducing settlement times can therefore free up capital for other investments.

Lastly, shorter settlement times supported by

advancements in technology and streamlined processes can improve operational efficiency. This has the potential to reduce the administrative and operational burden associated with managing trades over a longer period. According to the USSEC (2023), two episodes of market volatility in 2020 highlighted potential vulnerabilities in the US securities market. Shortening the settlement cycle and improving trade processing can mitigate those instances of volatility. Furthermore, in a previous release, the USSEC explained that as technology improves, new financial products emerge, and as trading volumes grow, outdated and longer settlement periods no longer serve the best interests of market participants (USSEC

Although advanced and developing economies have historically taken different approaches to their settlement periods, recent changes have brought these periods closer to parity. In April 2024, the Trinidad and Tobago Stock Exchange (TTSE) reduced the settlement period for domestic

2017).

BOX 3: REDUCING SECURITIES SETTLEMENT TIME: IMPLICATIONS FOR FINANCIAL STABILITY (Cont'd)

stocks and mutual funds from T+3 to T+2, in an effort to reduce credit and liquidity risks, and stimulate trading activity. Within the Advanced Economies, the USSEC adopted a rule amendment to shorten the standard settlement cycle for most broker-dealer transactions from T+2 to T+1, subject to exceptions in February 2023. Furthermore, a move towards a T+0 cycle in the future will depend on the outcome of an evaluation of operational and technical challenges (KPMG 2023).

In 2014, the standard settlement period for equities traded on the London Stock Exchange was shortened from T+3 to T+2. However, an exploratory report by the Accelerated Settlement Taskforce (AST 2024) recommended that UK trading venues transition towards a T+1 settlement period for all securities. According to Strachan and Streltses (2024), the UK Government accepted the recommendations of the AST report and endorsed a transition timeline no later than the end of 2027. Within the European Union (EU), the settlement cycle is set at T+2, but the growing digitalisation of finance has increased the momentum towards shorter cycles (European Commission 2024). However, Jones (2024) indicated that transition towards a shorter cycle would be a complex undertaking given the fragmented nature of the EU. Within the Caribbean region, the Jamaica Stock Exchange shortened its settlement cycle from T+2 to T+1 in May 2024, reflecting the more active domestic securities trading environment. On the other hand, in Barbados, the securities settlement cycle remains at T+3 days, where it has stood since 2006. However, an assessment is being undertaken to implement a shorter settlement cycle.

Despite the potential benefits, transitioning to shorter settlement cycles can introduce several risks that must be carefully managed to maintain financial stability. Operationally, shorter cycles place additional pressures on settlement systems and infrastructure. This can result in a heightened risk of operational errors or systemic failures

due to the need for faster processing. Especially if systems are not adequately upgraded and tested. Additionally, during periods of high trading volumes or market stress, shorter cycles can be particularly challenging. Market participants may also face significant costs related to upgrading technology and modifying processes to comply with shorter settlement times. This can be particularly challenging for smaller firms with limited resources.

Although market liquidity can benefit from shorter settlement periods, market risks can arise as market participants will need to maintain higher liquidity levels. With shorter settlement periods, market players must ensure higher liquidity availability, as funds need to be readily available to settle transactions. This can potentially place additional strain on liquidity reserves and exacerbate liquidity crunches. This is especially crucial for cross-border transactions, as a major concern for global firms is foreign exchange and liquidity (Wilson 2023).

Furthermore, a lack of harmonisation in settlement cycles can complicate crossborder transactions. Capital markets remain global, which necessitates some degree of harmonisation to reduce operational complexity of cross-border investment (Wilson 2023). Considering that different jurisdictions may adopt different settlement cycles, this can create additional complexities and inefficiencies cross-border transactions. Furthermore. smaller firms may struggle with the substantial operational costs and technological upgrades required to meet shorter settlement requirements. Within the Caribbean region, a lack of settlement harmonisation can potentially complicate crosslisted equity trades between stock exchanges.

Reduced securities settlement periods can also impact financial stability risks. Higher concentration risks may arise as liquidity needs

BOX 3: REDUCING SECURITIES SETTLEMENT TIME: IMPLICATIONS FOR FINANCIAL STABILITY (Cont'd)

become more synchronised during periods of increased trading activity. This could exacerbate the impact of any operational failures or disruptions within key financial institutions, increasing the potential for systemic liquidity crises. Relatedly, the requirement for quicker settlements could lead to a systemic liquidity crunch if multiple participants face difficulties in meeting their obligations. Faster settlement times could also amplify market volatility. Rapid movements in market prices could trigger higher frequency trading activity, which could lead to increased settlement failures, and potentially destabilise markets. Under market stress, increased pressure on settlement infrastructure heightens the risk of operational failures. Consequently, a significant disruption in settlement processes could lead to a cascade of defaults, posing a threat to broader financial stability.

Reducing securities settlement time offers numerous benefits. however. additional risks and challenges are introduced. Shorter settlement cycles offer substantial benefits such as enhanced efficiency, reduced counterparty risk, and improved liquidity. However, it also introduces significant operational, liquidity, and financial stability risks that must be carefully managed to ensure the resilience and robustness of financial markets. Essentially, the transition to shorter settlement cycles reduced pre-settlement risk, and introduces operational risk (Cameron and Mehta 2023). Despite these challenges, the overall trend towards accelerated settlement times reflects the financial industry's commitment to leveraging technology for safer and more efficient market operations. However, there needs to be a balance between the need for risk reduction and operational efficiency with the practicalities of trade processing and settlement infrastructure capabilities.

Within the domestic financial sector, the benefits of faster settlement must be weighed against

the additional risks. Securities trading in the local market is considered illiquid and shallow, reflected by low turnover ratios. Shorter settlement and clearing periods would therefore be beneficial by reducing credit risks associated with counterparty defaults, and lowering liquidity risks with lower margin requirements and faster turnover periods. However, despite these benefits, additional risks must be considered. Firstly, increased operational risks due to additional pressures on settlement systems and infrastructure should be evaluated. especially for smaller firms with less resources. Secondly, in small economies with few large players, liquidity risks can be exacerbated during periods of increased trading activity as liquidity needs become more synchronised. Lastly, a lack of harmonisation in settlement cycles and heightened liquidity pressures can increase risks with cross-border transactions between regional markets. These issues should be considered in the domestic and regional markets as changes to settlement cycles can bring about new and complicated financial stability risks.

BOX 3:

REDUCING SECURITIES SETTLEMENT TIME: IMPLICATIONS FOR FINANCIAL STABILITY (Cont'd)

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PAYMENTS SYSTEM (LOCAL CURRENCY PAYMENTS)

In 2023, the total volume and value of electronic payments (large-value and retail payments) continued to increase as the economy emerged from the effects of the COVID-19 pandemic. This growth was evident by a rise in the volume and value of the Real Time Goss Settlement System (RTGS), Automated Clearing House (ACH), and card transactions. Retail in-store shopping by consumers rose significantly, as reflected by a steady rise in the volume and value of debit and credit card transactions made at Point of Sale (POS) machines. Further, there was a reduction in the volume and value of cash withdrawals domestically in 2023. Additionally, new technologies and participants entered the payments ecosystem, thus widening the payment options available to consumers and businesses. As at March 2024, three non-bank E-Money Issuers (EMIs) were fully registered with the Central Bank and one non-bank was provisionally registered to issue electronic money (e-money)37.

Wholesale (Large Value) Payments Transaction Volume and Value

When compared to 2022, the volume and value of large-value payments processed over the RTGS increased by 13.2 per cent and 18.3 per cent, respectively, in 2023. Similar to 2022, RTGS payments also accounted for over 70 per cent of the volume and value of all large value payments.

Large value cheque payments accounted for less than 30 per cent of the volume and value of large value payments. However, there was an uptick in the volume and value of large value cheque payments similar to 2022. In 2023, the volume and value of large-value cheque transactions increased by 1.5 per cent and 3.5 per cent, respectively, on account of greater post-pandemic spending from the public and private sectors (**Figure 47**).

³⁷ E-money can be broadly defined as an electronic store of monetary value on a technological device (including mobile phones) that may be widely used for making payments to entities other than the EMI.

■ RTGS - Volume ■ Large-Value Cheques - Volume ■ RTGS - Value (right axis) ■ Large-Value Cheques - Value (right axis) 160 700.0 140 600.0 120 **Thousand** 500.0 100 400.0 80 300.0 60 200.0 40 0.00 20 0.0 0 2019 2020 2021 2022 2023

FIGURE 47
SHARE OF WHOLESALE PAYMENTS – VOLUMES AND VALUES, 2019 – 2023

Retail Payments - Transaction

Source: Central Bank of Trinidad and Tobago.

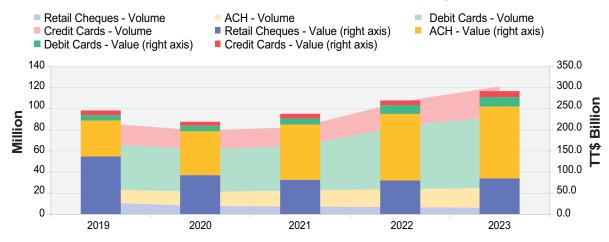
Volume and Value

There was an expansion in the volume and value of all retail payments³⁸ by 13.8 per cent and 7.6 per cent, respectively in 2023. The adoption of online and mobile banking payment channels for routine payments, such as bill payments and other interbank transfers, has led to an increase in ACH payments. Transactions processed through the ACH totalled 18.7 million and were valued at \$171.9 billion, representing an increase by 10 per cent and 8.7 per cent, respectively, when compared to 2022.

Comparatively, retail cheque processing continued trending downward in 2023. For 2023, the volume of retail cheques amounted to 6.4 million while the value of these cheques rose by less than 5 per cent to \$84.1 billion (**Figure 48**).

³⁸ Refers to retail electronic and cheque transactions

FIGURE 48
SHARE OF RETAIL PAYMENTS-VOLUMES AND VALUES, 2019–2023



With the declaration of the end of the COVID-19 pandemic by the World Health Organisation in May 2023, the return of consumers to in-store shopping resulted in an increase in the number of card payments made using POS machines. The roll out of new EMV³⁹ cards by commercial banks in 2022 into 2023 also increased card usage at POS machines. Payments made using debit and credit cards accounted for 56.6 per cent and 22.7 percent, respectively, of all retail payments in 2023. ACH transactions accounted for 15.5 per cent, while retail cheque accounted for 5.3 per cent of the total volume of retail payments.

In terms of value, ACH transactions accounted for the largest share of retail payments at 59.1 per cent followed by

retail cheques at 28.9 per cent. This marked an important market development. For the fourth year, the value of ACH payments superseded that of retail cheque values and accounted for the largest share of all retail payments, while the share of retail cheque value declined. Debit cards accounted for 7.2 per cent of retail payments, followed by credit card payments at 4.8 per cent.

Payments Infrastructure

At the end of 2023, 504 Automated Teller Machines (ATMs) existed throughout Trinidad and Tobago - an increase of six from the previous year. The number of POS machines also increased to 25,322 machines in 2023 from 24,390 machines in 2022. Commercial banks have been encouraging online banking rather than

³⁹ EMV stands for Europay, MasterCard® and Visa®. EMV cards offers increased security of payment card transactions through the use of a chip embedded in the cards.

in-person banking, where possible, in an attempt to reduce the number of over-the-counter (OTC) transactions. Consumers are also encouraged to make use of ATMs to improve access to electronic banking services, routine transactions and cash withdrawals.

Moreover, commercial banks continued of EMV^{40} roll-out their (Europay, Mastercard and Visa) chip debit cards in 2023 and upgraded their infrastructure (POS and ATMs) to process EMV chip cards. These co-branded, VISA/LINX EMV debit chip cards can process both domestic and online/international transactions⁴¹ and reflect a major market development. EMV is known to be one of the oldest and safest technologies for cards and was designed to mitigate instances of fraud. Banks internationally are phasing out magnetic stripe cards in favour of these more secure, authenticated cards. As at December 2023, most banks had migrated to EMV debit chip cards and credit cards which offer a "Tap and Go" feature. "Tap and Go" allows card holders the convenience of making contactless payments (TT\$700 and under) by tapping the card on the POS machine. In December 2023, just over 76 per cent of POS machines were "Tap and Go" ready.

Cash Withdrawals

In 2023, number and value of cash withdrawals executed by businesses and consumers decreased by 2.0 per cent and 3.4 per cent, respectively, compared to 2022. The number of cash withdrawals OTC at commercial banks increased slightly (less than 1 per cent) but declined at ATMs by 2.1 per cent. The value of cash paid OTC decreased from \$27.4 billion in 2022 to \$26.7 billion in 2023 (-2.4 per cent) and ATM withdrawals decreased from \$37.7 billion in 2022 to \$36.1 billion in 2023 (-4.1 per cent). A review of the last 5 years revealed that the highest average value of cash withdrawals was seen in 2022 and 2023, demonstrating that cash is still an important means of payment (Figure 49).

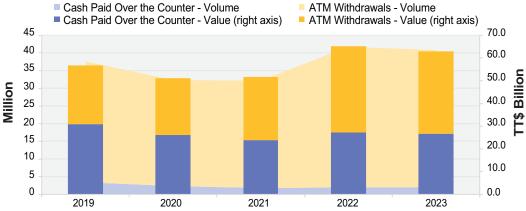
Cash in Active Circulation⁴² increased from \$7.6 billion in 2022 to \$7.7 billion in 2023 (2.1 per cent). When taken as a percentage of Gross Domestic Product, the percentage of cash in circulation remained relatively steady between 2022 (3.7 per cent) and 2023 (4.2 per cent).

⁴⁰ EMV is the acronym for Europay, Mastercard and Visa

The ability of the VISA/LINX card to process foreign currency transactions is dependent on if issuing bank offers the facility to its customers.

⁴² Source: Central Bank of Trinidad and Tobago

FIGURE 49
CASH WITHDRAWALS-VOLUMES AND VALUES, 2019–2023



Payment Service Providers

Payment Service **Providers** (PSPs) generally facilitate bill payments, other e-commerce. and payment services. Entities can register as PSPs conduct payment services more specifically, Bill Payment Service Providers (BPSPs) or EMIs. At the end of 2023, eight PSPs were licensed to conduct payment services. During 2023, PSPs processed 2.47 million payments valued at \$1.08 billion, decreases of 16.6 per cent and 8.3 per cent, respectively, from the previous year.

Regarding the three PSPs that process utility bill payments, a total of 2.26 million transactions valued at \$0.86 billion were processed in 2023, compared with 2.29 million transactions valued at \$0.83 billion in 2022. Cash remained the most popular means of making payments at BPSPs, accounting for over 80 per cent

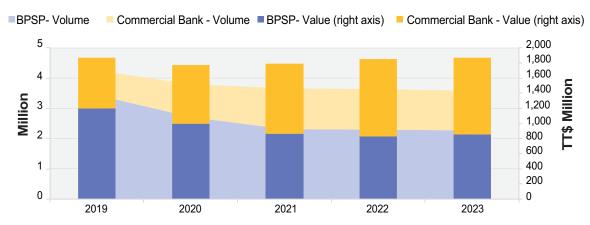
of the volume and value of total payments (**Figure 50**). Meanwhile, the volume and value of payments made at BPSPs using debit cards and credit cards declined in 2023 when compared to the previous year. The fall in the value of BPSP payments may be ascribed to the migration of consumers to online bill payment options.

FIGURE 50
TRENDS IN DOMESTIC RETAIL PAYMENTS - BILL PAYMENTS, 2019 - 2023



Comparatively, the volume and value of utility payments processed by commercial banks decreased by 2.8 per cent and 0.3 per cent, respectively. Traditionally, commercial banks accounted for the larger value of bill payments (**Figure 51**).

FIGURE 51
TRENDS IN DOMESTIC RETAIL PAYMENTS –BILL PAYMENTS AND COMMERCIAL BANKS, 2019–2023





CHAPTER 4

Safeguarding the Financial System



SAFEGUARDING THE FINANCIAL SYSTEM

In 2023 and early 2024, the Central Bank promoted domestic financial stability through various regulatory and legislative measures. The Central Bank issued additional capital buffers and liquidity requirements to improve the financial system's resilience to systemic threats. It also issued a cybersecurity management guideline to regulated entities following consultations with the IMF. A guideline to improve financial crisis management was also issued as part of the process of building the system's capacity to deal with severe crisis situations. Further, the Central Bank and other agencies collaborated to develop a Bill to introduce monetary fines for AML/CFT breaches.

STATUS OF IMPLEMENTATION OF NEW SUPERVISORY STANDARDS

Basel II/III

The Central Bank activated the additional Basel III capital buffers contained in the Financial Institutions (Capital Adequacy) Regulations, 2020 via the publication of a Notice in the Gazette by the Minister of Finance on October 12, 2023. This Notice brought into effect the Leverage Ratio, Capital Conservation Buffer and the Domestic Systemically Important Bank (D-SIB) capital add-on from January 1, 2024. The Leverage Ratio Guideline and Report, and the Framework for Identification of a D-SIB were issued to the industry in October 2023.

The Central Bank continued to implement the Liquidity Coverage Ratio (LCR). Following the issuance of the first LCR Consultation Paper and draft LCR reporting template to the industry in November 2022, the Central Bank conducted two Quantitative Impact Studies (QISs) to assess industry compliance and considered the results for amending the LCR policy framework and drafting the LCR Regulations.

STRENGTHENING FINANCIAL STABILITY

Cybersecurity Best Practices Guideline

On September 15, 2023, the Central Bank issued a Cybersecurity Best Practices Guideline for Financial Institutions. This Guideline, which is primarily principlesbased, incorporates twenty requirements under six categories: (i) Governance; (ii) Risk Management; (iii) Awareness and Training; (iv) Business Continuity and Disaster Recovery; (v) Testing; and (vi) Incident Management and Reporting. Included is an Incident Reporting template to facilitate prompt notification and reporting to the Central Bank upon occurrence of a material cyber incident. Financial entities are expected to use the guiding principles to establish robust cybersecurity frameworks proportional to their business models, complexity, and risks. Regulated institutions are required to conduct an annual self-assessment with the first submission due on March 31, 2024, along with a detailed action plan to remedy any material deficiencies identified. The Central Bank is reviewing the self-assessments and action plans to identify key risks in institutions' cybersecurity frameworks.

Guideline for Recovery Planning for Financial Institutions

On October 27, 2023, the Central Bank issued its finalised Guideline for Recovery

Planning for Financial Institutions. It outlines a framework for financial institutions to develop and maintain recovery plans, including the measures the institution can take to restore its financial viability following a severe stress event. Pursuant to this Guideline, financial institutions are required to submit Boardapproved Recovery and Action Plans that address the implementation and testing of the Recovery Plan within a six-month period, to the Inspector of Financial Institutions, by July 31, 2024.

Leverage Ratio Guideline

On October 26, 2023, the Central Bank issued the Leverage Ratio Guideline to the banking industry. This Guideline was made pursuant to regulation 19 of the Financial Institutions (Capital Adequacy) Regulations, 2020 (Regulations). The purpose of this Guideline is to provide directions to licensees and financial holding companies, under the Financial Institutions Act (2008), on the calculation of the leverage ratio and the rules that guide the determination of the respective components of the ratio. The Guideline applies to licensees on an individual and consolidated basis and to financial holding companies on a consolidated basis only in accordance with regulation 4 of the Regulations. Effective January 1, 2024, financial institutions are required to report to the Central Bank on the leverage ratio, monthly on an individual basis and quarterly on a consolidated basis.

Framework for the Identification of a Domestic Systemically Important Bank

On October 26, 2023, the Central Bank also issued the Framework for Determining a Domestic Systemically Important Bank and Higher Loss Absorbency Requirement (D-SIB Framework) to the banking industry. This Framework was made pursuant to regulation 20 of the Regulations. Based on the Central Bank's D-SIB Framework, three criteria are considered for assessing domestic systemic importance: interconnectedness, and substitutability. The Framework requires that banks deemed to be systemically important maintain a capital buffer ranging from 1 per cent to 2.5 per cent of risk-weighted assets, consisting entirely of common equity Tier 1 capital. The effective date of the implementation was January 1, 2024 and the two banks which have been classified as D-SIBs are required to hold their respective buffers until otherwise advised by the Central Bank.

Thematic Liquidity and Market Risk Onsite Examinations

The Central Bank is currently conducting thematic Liquidity and Market Risk onsite examinations of selected banking entities. The objectives of the thematic review are to assess the governance and risk management processes for compliance with the Guidelines for the Management of Liquidity Risk and Market Risk. Results will be shared with each individual institution. The Central Bank will also issue a thematic

report outlining the key findings and recommendations.

Guideline for the Approval of New or Significantly Amended Insurance Products under the Insurance Act, 2018

In March 2024, the Central Bank issued a revised Guideline for the Approval of New or Significantly Amended Insurance Products under the Insurance Act, 2018 after consideration of all feedback received during the consultation process. The revisions seek to:

- Further enhance the transparency and efficiency of the product approval process under the Insurance Act 2018;
- Address issues and concerns that have arisen over time as part of the approval process;
- Enhance the insurers' product development processes, with new requirements governing general insurance policies; and
- Ensure continued relevance in the current environment.

IFRS 17 Compliance

In order to achieve compliance with the IFRS 17 standard, the Central Bank has to, inter alia, review and revise its legislation and statutory reporting forms. In this regard, the Central Bank issued for consultation amended Regulations, and required a parallel run of IFRS 17 Capital Adequacy reports. IFRS 17-compliant Annual Returns were also issued alongside an Instructions Manual, for providing the information regarding the requirements of IFRS 17. These Returns and the accompanying instructions apply from reporting periods ending on, or after, December 31, 2023.

In the interim, work continues on the implementation of IFRS 17:

- IFRS 17-compliant Quarterly Returns are being drafted by the Central Bank for industry consultation;
- Proposed revisions to the Regulations for compliance with IFRS 17 will be finalised after consideration of all comments from public consultation and analysis of the results of the second Capital Adequacy Quantitative Impact Study.

Own Risk Solvency Assessment (ORSA)

An Own Risk and Solvency Assessment (ORSA) Guideline for insurers is currently under development. The ORSA is a dynamic, forward-looking process and serves as a management tool to enhance insurer's understanding of the interrelationships between its risk profile and capital needs. This ensures that the insurer maintains adequate capital to support all material risks in its business. Liquidity risk management for insurers is another area under development, and the drafting of the Guideline, which is intended to provide guidance on the liquidity risk management framework for insurers, is also in progress. Both of these areas form integral aspects of the ongoing development and implementation of a risk-based framework for insurance companies.

STRENGTHENING THE AML/CFT REGULATORY FRAMEWORK

External Assessments

Preparation for the 2026 Caribbean Financial Action Task Force (CFATF) Fifth Round Mutual Evaluation ramped up in 2023. Changes to the Financial Action Task Force (FATF) Standards and Methodology are being considered by the Central Bank and other national stakeholders to identify and address gaps in Trinidad and Tobago's anti-money laundering and combatting the financing of terrorism (AML/CFT) regime. Advancing legislative reform and completion of the national risk assessments are being prioritised. Additionally, the Central Bank continued to execute its risk-based AML on-site work plan.

Introduction of a Regulatory Framework for Administrative Monetary Penalties for AML/CFT Breaches

The Central Bank, the Trinidad and Tobago Securities Exchange Commission, and the Financial Intelligence Unit of Trinidad and Tobago worked with the Office of the Attorney General and Legal Affairs on a Bill to introduce monetary fines for AML/CFT breaches. The legislation seeks to address an outstanding finding from the country's 2016 CFATF Fourth Round Mutual Evaluation report and to further strengthen the enforcement powers of the regulators. The Bill is currently before the Cabinet for approval to be laid in Parliament.

National Risk Assessments

Money Laundering (ML) and Terrorist Financing (TF) Risk Assessment

The Central Bank, together with other national stakeholders, worked on finalising the country's second ML/TF risk assessment. The findings of the assessment will inform national policy and strategies to strengthen Trinidad and Tobago's AML/CFT financing regime, including the AML/CFT framework for the financial sectors supervised by the Central Bank. The findings and recommendations will be shared with public and private sector stakeholders in 2024.

Proliferation Financing (PF) Risk Assessment

The PF assessment was conducted with technical assistance (TA) from King's College London and coordinated by the Customs and Excise Division. The assessment sought to examine the risks of potential breaches, non-implementation and/or evasion of targeted financial

sanctions related to the financing of weapons of mass destruction. As a member of the Working Group, the Central Bank was responsible for assessing the financial sector's PF vulnerability. A workshop was held in December 2023 with national stakeholders and King's College London to discuss the findings. The report will be finalised in 2024.

Assessment of Virtual Assets and Virtual Assets Service Providers

The Government of Trinidad and Tobago has engaged the European Union (EU) Global AML Training Facility to provide TA to conduct the ML/TF/PF risk assessment of Virtual Assets and Virtual Assets Service Providers. The assessment will commence in 2024.

International Lists

The Government of Trinidad and Tobago advanced legislative reforms to address international tax transparency standards, with TA from the Global Forum. National stakeholders commenced preparations for a mock on-site review to be conducted in early 2024, by the Global Forum's TA team, in anticipation of the actual Peer Review assessment (which is scheduled to commence in June 2024). The outcome of the assessment will inform whether Trinidad and Tobago is removed from the

EU and Global Forum tax transparency blacklists.

Thematic Examinations

In line with its risk-based supervisory approach and the thrust to adopt technological supervisory solutions for greater efficiency, the Central Bank conducted a cross-sectoral thematic review of 30 institutions for compliance with targeted financial sanctions obligations. The review sought to assess the effectiveness and efficiency of the screening systems utilised by institutions to ensure that they are not doing business with, or sending funds to persons, entities or countries designated for terrorism or the proliferation of weapons of mass destruction. A thematic report will be published in 2024.

REVIEW OF DEVELOPMENTS IN NATIONAL PAYMENTS SYSTEMS

The global payments ecosystem is rapidly evolving with new players and new digital payment options, due to advancements in technology, attracting heightened risks to the payments market. To adequately adapt to the changing payments landscape in Trinidad and Tobago, the Central Bank continued to improve on the legislative framework that governs the national payments system. This has been done through recommended amendments to the e-money legislation and continued drafting of the payments legislation. In addition, the Central Bank plans to develop a supervisory and regulatory framework for the payments system and is shoring up its capacity to meet the demands.

The regulatory and supervision framework was expanded to address the changing market dynamics for PSPs that have now expanded their services beyond bill payments, to facilitate e-commerce and other payment services such as payment aggregators, merchant acquirers and payment gateways. Additionally, new offerings are also emerging on the payments landscape including virtual assets, stablecoins, fast payments system options, and cross border solutions. New technologies, such as cloud computing, application programming interface (API), and distributed ledger technology are also

driving these new offerings to facilitate digital payments and remittances.

The Central Bank, through the Joint Regulatory Innovation Hub (the Hub) established in October 2020, engaged with 81 entities on fintech matters since its launch. As at March 2024, 11 EMI applications and three PSP applications were under review. Moreover, the Joint Fintech Steering Committee. comprises three regulatory authorities (the Central Bank, the TTSEC and the Financial Intelligence Unit of Trinidad and Tobago) meet regularly to discuss matters pertaining to developments in the Fintech and digital payments landscape.

The Central Bank also provides oversight of the Payments System Operators as part of its mandate to ensure compliance with the Principles for Financial Market Infrastructures, and other regulatory requirements. The payments systems overseen include the RTGS, the LINX Debit Card Switch, Automated Clearing House/Electronic Funds Transfer (ACH/EFT), and the Electronic Cheque Clearing System (ECCS), which was launched in February 2023. It should be noted that the Government Securities Settlement is also owned and administered by the Central Bank.

Registration of E-Money Issuers

Pursuant to the E-Money Issuer Order (2020) (EMI Order), the Central Bank granted full registration to three entities and provisional registration to one entity to operate as EMIs, effective September 1, 2023. These were PayWise Limited (PayWise), Telecommunications Services of Trinidad and Tobago Limited (TSTT) and PESH Money Limited. PayWise was the first company, apart from commercial banks and non-bank financial institutions. authorised to issue e-money in Trinidad and Tobago. They were followed by PESH, a privately-owned local company that provides customers with e-wallets to facilitate the storage of e-money and allow peer-to-peer domestic mobile wallet transfers.

TSTT was the country's first Mobile Network Operator authorised by the Central Bank to offer e-money service. This was followed by MyCash Trinidad and Tobago Limited, a subsidiary of Digicel, which was granted a provisional registration to operate as an EMI on October 1, 2023.

Legislative Developments

Amendments to the E-Money Issuer Order, 2020

The Central Bank made recommendations to the Minister of Finance to amend the wallet sizes and transactional limits for EMIs under Schedule 2 of the EMI Order. On December 29, 2023, the EMI Order was amended and Schedule 2 of the EMI Order was repealed and substituted with a new Schedule 2, which reflected increased wallet sizes and transaction limits for EMIs. This legislative development was critical to foster greater use of e-money.

Development of Comprehensive Payments System and Services Legislation

The Central Bank continued work on developing a modern, flexible and comprehensive Draft Payments Systems and Services Bill and three accompanying Regulations⁴³. This proposed legislative framework would, inter alia, allow the Central Bank to regulate, supervise, and oversee a wider range of fintech activities, non-bank payment services providers and non-bank payments system operators and their attendant risks. The Central Bank received TA from the IMF and the United Nations Capital and Development Fund (UNCDF) to advance the work on the Draft Bill and Regulations and to explore fintech regulation and legislation. From April 26-28, 2023, the Central Bank

received TA from the IMF on fintech regulation and legislation. In July 2023, the IMF produced its TA Report on Fintech Regulation and Legislation, making recommendations to improve the Central Bank's licensing and supervisory regime for EMIs and institutional arrangements for fintech regulation. Subsequently, the Legal Department of the IMF continued its TA on the Draft Bill and Regulations at the Central Bank from May 02-11, 2023. In mid-2023, the UNCDF extended TA to the Central Bank, to assist with the operationalisation of the Draft Bill and Regulations.

Payments Systems and Services (Licensing, Supervision and Oversight) Regulations; Payments Systems and Services (Safeguarding of User) Funds Regulations; and Payments Systems and Services (E-Money) Regulations.

APPENDIX A

DOMESTIC FINANCIAL STABILITY MONITOR HEAT MAP, 2019 - 2023

SUMMARY HEAT MAP	December 2019	December 2020	December 2021	December 2022	December 2023		
Aggregate Indicators ¹							
Financial Markets							
Banks						Legend	
Other Financial Institutions ²						Low	
Non-financial Sectors							
Household						Moderate	
Corporate	***************************************					⊟evated	
Sovereign						High	
OVERALL RISK SUMMARY						Very High	

Source: Central Bank of Trinidad and Tobago

Note: A 'heat map' is a data visualisation tool, which takes the form of a matrix. They condense a large amount of data into a more user-friendly form. The Central Bank's Domestic Financial Stability Monitor summarises 51 macroeconomic and financial data series, as well as 4 composite risk indices, over a five-year period. Each indicator is assigned a risk rating of 1 (low) to 5 (very high) based on a specific benchmark. The overall and sub-sector risk ratings are estimated by using the equal-weighted average of the associated indicators. The result is rounded to the nearest whole number and the respective colour rating is subsequently applied. With this approach, it is possible for the overall risk rating to change as a result of aggregate changes in the underlying indicators, without sufficient magnitude to trigger sectoral rating adjustments.

- 1. Aggregate Indicators consist of indicators which evaluate macroeconomic, macro-financial, or composite risk.
- 2. 'Other Financial Institutions' consist of Insurance (Long-Term and General) and Occupational Pension Plans sectors.

APPENDIX BBANKING SECTOR LOANS BY SECTOR, 2018 – 2023

	TT\$ Millions (Absolute Values)						TT\$ Millions (Change)					Percentage Change (per cent)				
PUBLIC SECTOR LOANS	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
							Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Petroleum	2,995.4	3,155.4	2,534.3	2427.1	2,375.9	2,520.1	160.0	(621.0)	(107.3)	(51.2)	144.2	5.3	(19.7)	(4.2)	(2.1)	6.1
Construction	1,714.2	645.4	1,226.4	1,135.5	1,548.5	3,000.3	(1,068.8)	581.0	(91.0)	413.1	1,451.7	(62.4)	90.0	(7.4)	36.4	93.7
Transport, Storage and Communication	1,244.0	640.2	525.6	412.4	718.0	498.6	(603.8)	(114.6)	(113.3)	305.6	(219.4)	(48.5)	(17.9)	(21.5)	74.1	(30.6)
Finance, Insurance and Real Estate	2,371.9	4,369.8	4,007.5	4,330.8	3,823.8	4,717.3	1,997.9	(362.2)	323.2	(507.0)	893.6	84.2	(8.3)	8.1	(11.7)	(23.4)
Electricity and Water	1,045.0	1,067.8	1,030.5	651.3	682.8	754.3	22.8	(37.3)	(379.2)	31.5	71.5	2.2	(3.5)	(36.8)	4.8	10.5
Other	139.2	757.4	719.8	844.2	714.1	660.1	618.2	(37.7)	124.4	(130.1)	(54.0)	443.9	(5.0)	17.3	(15.4)	(15.4)
TOTAL	9,509.8	10,636.0	10,044.2	9,801.2	9,863.0	12,150.7	1,126.2	(591.8)	(243.1)	61.9	2,287.7	11.8	(5.6)	(2.4)	0.6	23.2
BUSINESS LOANS	Dec-18 Dec-19 Dec-2	Dec-20	Dec-21	Dec-22	Dec-23	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	
BOSINEOS ESANO	DCC-10	Dec-13	DCC-20	D00-21	DCC-22	DCC-23	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Real Estate Mortgage Loans	6,841.3	7,856.5	8,347.8	8,810.2	8,960.3	9,815.1	1,015.2	491.3	462.4	150.1	854.8	14.8	6.3	5.5	1.7	9.5
Finance, Insurance and Real Estate Companies	9,206.3	8,240.5	8,358.2	8,228.9	10,224.0	10,216.1	(965.7)	117.6	(129.2)	1,995.0	(7.9)	(10.5)	1.4	(1.5)	24.2	(0.1)
Services	8,148.3	9,270.8	8,464.5	8,919.9	9,747.1	10,623.2	1,122.5	(806.3)	455.4	827.1	876.1	13.8	(8.7)	5.4	9.3	9.0
Manufacturing	3,601.9	3,933.8	3,949.0	3,829.6	4,251.5	4,893.5	332.0	15.1	(119.4)	421.9	642.0	9.2	0.4	(3.0)	11.0	15.1
Construction	1,449.9	1,566.2	1,684.5	1,840.4	2,170.8	2,196.6	116.3	118.3	156.0	330.4	25.7	8.0	7.5	9.3	18.0	1.2
Other (Agriculture, Petroleum, Leasing)	1,155.6	1,137.7	1,168.8	1,391.9	1,427.6	2,264.1	(17.9)	31.0	223.1	35.7	836.5	(1.5)	2.7	19.1	2.6	58.6
TOTAL	30,403.2	32,005.6	31,972.6	33,021.0	36,781.2	40,008.5	1,602.4	(33.0)	1,048.4	3,760.2	3,227.3	5.3	(01)	3.3	11.4	8.8
CONSUMER LOANS BY PURPOSE	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
CONSCINENCES NAME OF THE COL	500 10	500 10	500 20	500 21	500 22		Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Real Estate including Mortgages	17,321.5	19,016.7	19,336.4	19,779.6	21,084.5	22,471.7	1,695.2	319.7	443.2	1,305.0	1,387.1	9.8	1.7	2.3	6.6	6.6
Vehicles	5,092.4	5,219.4	5,187.9	4,683.7	4,548.8	5,072.1	126.9	(31.5)	(504.2)	(134.9)	523.3	2.5	(0.6)	(9.7)	(2.9)	11.5
Credit Cards	3,105.3	3,224.8	3,143.2	2,903.6	3,260.4	3,309.1	119.5	(81.6)	(239.6)	356.8	48.7	3.8	(2.5)	(7.6)	12.3	1.5
Refinancing	2,384.0	2,601.6	2,776.2	3,270.5	3,712.8	3,896.0	217.6	174.6	494.3	442.2	183.3	9.1	6.7	17.8	13.5	4.9
Consolidation of Debt	2,532.4	2,877.7	2,961.6	2,865.9	3,057.5	3,283.9	345.3	83.9	(95.7)	191.6	226.4	13.6	2.9	(3.2)	6.7	7.4
Other Purposes	3,777.8	4,152.3	3,850.2	3,758.0	3,852.3	4,333.0	374.5	(302.1)	(92.2)	94.3	480.7	9.9	(7.3)	(2.4)	2.5	12.5
TOTAL	34,213.5	37,092.5	37,255.5	37,261.2	39,516.3	42,365.8	2,879.1	163.0	5.7	2,255.1	2,849.5	8.4	0.4	0.0	6.1	7.2

Note: Banking sector loans data are obtained from regulatory reports submitted to the Central Bank.

