BANK OF GUYANA

BANK OF JAMAICA

CENTRAL BANK of BELIZE

CENTRAL BANK OF BARBADOS

CARICOM

CARIBBEAN REGIONAL FINANCIAL STABILITY REPORT

2020

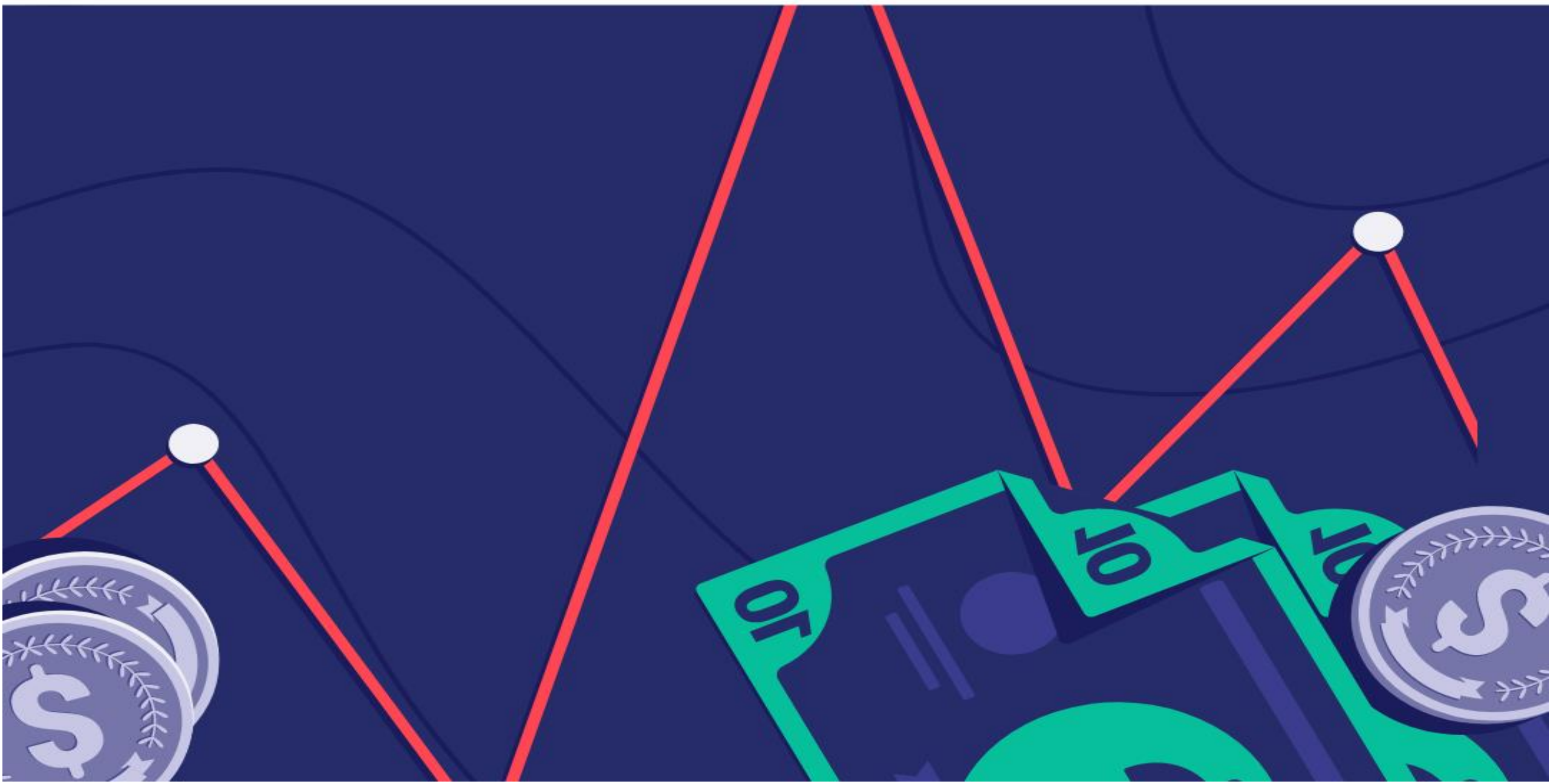
THE CENTRAL BANK OF THE BAHAMAS

CENTRAL BANK OF TRINIDAD & TOBAGO

EASTERN CARIBBEAN CENTRAL BANK

BRH

CENTRALE BANK VAN SURINAME



LIST OF CONTRIBUTORS

Regional Financial Stability Coordination Council (RFSCC) Members

John Rolle (Chairman)	Central Bank of The Bahamas
Ramnarine Lal	Bank of Guyana
Sherene Bailey	Bank of Jamaica
Sharon Branch	Central Bank of The Bahamas
Anton Belgrave	Central Bank of Barbados
Barrington Sutherland	Central Bank of Belize
Kevin Finch	Central Bank of Trinidad and Tobago
Kelvin Kleist	Central Bank van Curacao en St. Maarten
Allister Hodge	Eastern Caribbean Central Bank
Rosminie Warsosemito	Central Bank of Suriname

Regional Individual Contributors

Steve McLean	Bank of Guyana
Paula-Kay Cousins	Bank of Jamaica
Ricardo Reid	Bank of Jamaica
Justine Cork	Bank of Jamaica
Julia Jhinkoo-Ramdass	Caribbean Economic Research Team
Jewel Pratt	Central Bank of The Bahamas
LaShawn Edwards	Central Bank of The Bahamas
Carlon Walkes	Central Bank of Barbados
Anwar Juan	Central Bank of Belize
Ryan-Anthony Prince	Central Bank van Curacao en St. Maarten
Sumaya El Hage	Central Bank van Curacao en St. Maarten
Euredice Werson	Central Bank of Suriname
Dave Seerattan	University of the West Indies, St. Augustine

Table of Contents

ABBREVIATIONS

ACH	Automated Clearing House
AFSI	Aggregate Financial Stability Index
AML/CFT	Anti-Money Laundering/ Countering Financing of Terrorism
B-FXITT	Bank of Jamaica Foreign Exchange Intervention & Trading Tool
BoJ	Bank of Jamaica
BSA	Banking Services Act
BSI	Bank Stability Index
CAR	Capital Adequacy Ratio
CARICOM	Caribbean Community
CARTAC	Caribbean Regional Technical Assistance Centre
CBDC	Central Bank Digital Currency
CBR	Correspondent Banking Relationship
CBvS	Central Bank of Suriname
CDD	Customer Due Diligence
CFATF	Caribbean Financial Action Task Force
CGBS	Caribbean Group of Banking Supervisors
CLICO	Colonial Insurance Company
CRFSR	Caribbean Regional Financial Stability Report
CSD	Central Securities Depository
D-SIBS	Domestic Systemically Important Banks
ECCU	Eastern Caribbean Currency Union
ELA	Emergency Liquidity Assistance
ERPS	Electronic Retail Payment Services
EU	European Union
FATF	Financial Action Task Force
FDI	Financial Development Index
FIA	Financial Institutions Act
FINTECH	Financial Technology
FOMC	Financial Oversight Monitoring Committee
FSAC	Financial Stability Advisory Committee
FSI	Financial Soundness Index
FSD	Financial Stability Department
FSC	Financial Services Commission
FSR	Financial Stability Report
FSSA	Financial Sector Stability Assessments
FSSC	Financial System Stability Committee
FVI	Financial Vulnerability Index
FX	Foreign Exchange
GDP	Gross Domestic Product
IA	Insurance Act
ICT	Information and Communication Technologies
IFSA	International Financial Services Act

IMF	International Monetary Fund
JMMB	Jamaica Money Market Brokers
KYC	Know Your Customer
LAC	Latin American & Caribbean
LCR	Liquidity Coverage Requirement
ML/TF	Money Laundering/Terrorist Financing
MPIs	Macro Prudential Indicators
NOP	Net Open Position
NPL	Non – Performing Loan
NPSA	National Payments System Act
OECD	Organization for Economic Co-operation and Development
PSPs	Payment Service Providers
ROA	Return on Asset
ROE	Return on Equity
RoW	Rest of World
RTGS	Real Time Gross Settlement
SIBs	Systemically Important Banks
SIFIs	Systemically Important Financial Institutions
TA	Technical Assistance
TTSEC	Trinidad and Tobago Securities and Exchange Commission
USA	United States of America
WECI	World Economic Climate Index

PREFACE

This edition of the Regional Financial Stability Report (RFSR) is produced in the midst of the COVID-19 pandemic. The economic, financial and social fallout from the pandemic and the policy responses to address the ongoing crisis has defined the efforts of the monetary and regulatory authorities to maintain financial stability in the Caribbean. The pandemic is still unfolding and continue to cause severe economic and financial disruptions in the Region and around the World.

Vaccination programmes in the Region have gotten off the ground belatedly as supplies became available. This has helped economies to ease lockdowns and other pandemic related restrictions which has helped employment and business activity to pick up. The resurgence of the virus as restrictions ease, as well as vaccine hesitancy, have, however, created problems for policymakers. The unprecedented policy actions both in the public health and economic/financial policy fronts have helped to prevent a financial crisis, but the reality is that the legacy of the pandemic would mean higher debt and weaker balance sheets in the financial and non-financial sectors that, if left unattended, could generate sharp corrections in the financial sector which would threaten financial stability and prolong the recovery process.

In this environment, risks to financial stability remain elevated and unevenly distributed, as some sectors and countries are disproportionately impacted by the pandemic. In particular, the service-based economies in the Region that depend on tourism have been more severely impacted by the pandemic. The unprecedented policy support to deal with the pandemic also means there is growing interconnectedness between sovereigns, households, non-financial corporations and financial institutions, which is an exposure that must be managed carefully. The RFSR, therefore, focuses on the impact of the pandemic on economic and financial stability and the monetary authorities' policy response to sustain financial stability in the Caribbean during the pandemic.

The 2020 Report covers several areas that are required to comprehensively assess the stability of the financial system in the Caribbean. Chapter 1 provides an overview of the Caribbean financial system, including a summary of macroeconomic and macro-financial developments generated by the COVID-19 pandemic, financial system architecture and financial market developments. The performance of financial institutions within the Region is discussed in Chapter 2, with a focus on key financial soundness indicators for commercial banks and insurance companies and how these have been impacted by the pandemic and policy responses to the crisis. Chapter 3 provides an update on the stress testing frameworks employed within the Region and assesses the Caribbean banking sector's potential credit, interest rate, foreign exchange and liquidity risks in the context of the COVID-19 pandemic. Chapter 4 considers several important issues about regional systemic risks such as regional credit to GDP gaps, regional financial stability indices, regional systemic risks, systemically important financial institutions (SIFIs) and cross border banking system exposures. Finally, Chapter 5 discusses policy initiatives for the support and maintenance of financial stability amid the pandemic.

The RFSR is designed to increase stakeholders' awareness of issues relevant to the stability of the financial system in CARICOM, by reviewing recent economic and financial developments that present the main sources of risk to regional financial stability. It also assesses the effectiveness of the policy framework in place to identify, manage and mitigate emerging risks and, very importantly, it seeks to identify reforms to the regional financial architecture which would enhance financial risk assessment in CARICOM and the related capacity to respond to emerging risks which can threaten the stability of the financial system in the Region. This Report complements the annual national financial stability reports produced by regional central banks, to provide a panoramic and comprehensive view of financial stability across the Region. The RFSR is prepared under the guidance of the Regional Financial Stability Coordination Council (RFSCC) set up by the CARICOM Committee of Central Bank Governors.

EXECUTIVE SUMMARY

The *Region's financial system has weathered the COVID-19 pandemic relatively well so far* due mainly to *unprecedented policy interventions* to address the fallout from the pandemic. *Resilience built up over time* in areas such as asset quality, capital adequacy and liquidity has also been a critical aspect of the strength of the financial system during this period, as well as the *reforms introduced to strengthen the regional financial stability architecture*.

The main risks to financial stability facing the Region during this period include the following:

1. The potential for the emergence of new COVID-19 variants, which intensifies the stresses on public health systems and extends the duration of the pandemic restrictions and the related potential to disrupt the financial system in the Region;

2. The long duration of lockdowns, increased uncertainty and the related losses in income for the household and business sectors have increased credit risks – the scale of this problem has been deferred, masked and attenuated by loan payment moratoria, relaxation of the standards for problem loan classification and other government support measures, but the potential for significant problems in the areas of asset quality and profitability in the financial sector represents one of the main risks to financial stability in the Region;

3. The growing dominance of financial conglomerates in the Caribbean along with recent major acquisitions have led to the amplification of concentration risks and this coupled with high interconnectedness and the COVID-19 shock implies that the risk of contagion is elevated. This risk is being mitigated by the strengthening of the regulatory architecture in place for these entities, but this must be continuously upgraded to effectively manage their increasing centrality to regional financial stability;

4. High sovereign debt overhangs and the financial system's relatively high exposure to sovereigns have been accentuated by the pandemic and increased the sovereign risks faced by the financial system in the Region;

5. The escalation of the use of digital technologies in the financial sector driven by the need to conduct financial business remotely during the pandemic has increased the Region's exposure to cyber risks and cyber-attacks;

6. The impact of the COVID-19 shock has been very unevenly distributed across the Region with service-based economies suffering more intensely than commodity-based economies. Close financial and trade links suggest that the potential for contagion is elevated and regional risk exposures must be monitored closely in this environment;

7. The current financial environment characterized by the complex interaction of pre-existing vulnerabilities, the escalation of the penetration of digital ecosystems in the financial sector, high levels of financial interconnectedness and the COVID-19 shock can increase financial risks to dangerous levels in unexpected ways. This is especially so if there are gaps in the framework for the monitoring, assessment and mitigation of financial risks in the Region. In this regard, more granular and frequent monitoring of these risks in an integrated framework, as well as,

very clear protocols and triggers for intervention by regulators are essential for the maintenance of regional financial stability in the current environment.

A review of the regional performance in terms of financial soundness indicators indicates a slight decline in capital adequacy and asset quality and more significant declines in profitability. Average capital adequacy in the regional banking system fell off slightly in 2020 but is still much higher than the regulatory minimum. Asset quality fell as NPLs increased from 6.2 per cent in 2019 to 6.8 per cent in 2020, but this is still much lower than the levels recorded in the aftermath of the international financial crisis in 2007/2008. Problems on the loan portfolio from the tourism sector amongst the service-based economies is driving much of the fall in asset quality in the Region. Moratoriums on loan payments have helped to restrain the growth in NPLs, but the full extent of the NPL deterioration caused by the pandemic will only become evident when these end. In this context, capital buffers may need to increase in a few countries where capital adequacy is higher than the regulatory minimum, but still low enough to be at risk given the size and duration of the pandemic shock.

The area of performance hardest hit by the pandemic has been profitability. Profitability had improved slowly in the last 5 years leading up to the pandemic but was still below the pre-2008 level. The pandemic has therefore reversed some of the improvements recorded up to 2019 and accentuated vulnerabilities in this area. Both ROA and ROE have declined significantly in 2020 relative to 2019, driven by the fallout from the pandemic such as low interest rates, low credit demand and moratoriums on loan payments. The scaling back of the moratoriums on loan payments could lead to an improvement in profitability, but there is the potential for NPLs to increase significantly worsening the problems concerning profitability. This process has to be managed very carefully by central banks and the banking industry. In this context, stress tests calibrated to the expected size and duration of the pandemic should continue to be given priority to provide real-time information to policymakers to inform action as a very fluid situation evolves. Liquidity levels have increased in 2020 relative to 2019 driven by lower credit demand due to pandemic related reductions in aggregate demand and fiscal injections related to COVID-19 support measures.

Stress tests suggest that the banking sector in the Region is resilient to interest rate, foreign exchange and liquidity shocks caused by the pandemic. There is, however, some vulnerability to credit risk emanating from large borrowers and the corporate loan portfolio. The dominance of SIFIs in the regional financial sector and cross border transactions, their often complex organisational structure and a regional regulatory and supervisory architecture which still has some gaps, means that this confluence of factors is a significant source of vulnerability in the regional financial system.

The Region is also highly interconnected both with regional counterparts and the rest of the world. This is a source of strength but can also be a source of contagion if risks are not managed well. Network analysis also suggests that there is a relatively high level of fragility in the regional financial system. The existing gaps in the regional architecture for financial stability is therefore an issue that must be addressed urgently.

The outlook for financial stability in the Region is complicated by the unpredictable evolution of the pandemic. In this environment, the challenges concerning asset quality and profitability are likely to continue and the regulatory authorities will therefore have to carefully manage the transition away from the support measures to ensure that disruptions are kept to a minimum. Capital may also need to be increased in a few jurisdictions where capital adequacy ratios are still above international regulatory norms, but there is the potential for the scale and duration of the pandemic shock to push capital below the regulatory threshold in a few cases.

The digitalisation of the financial services industry which accelerated during the pandemic has created a situation where electronic platforms are being rolled out and entrenched on an unprecedented scale. In this environment, cyber risks and cyber-attacks are likely to escalate and it is critical in this setting that regulated institutions and regulators ensure that appropriate cybersecurity protocols and systems are in place. The regulatory process, therefore, has to ensure that cybersecurity is an important dimension evaluated during the regulatory examination process. This process must ensure that cybersecurity governance systems at regulated institutions are fit for purpose and meet international best practices.

The increasing market concentration due to the dominance of large conglomerates combined with high levels of financial interconnectedness in the Region, which has been accentuated by the increased footprint of sovereigns due to pandemic related support measures, will require close monitoring of the regional dimension of these stakeholders' exposures to preempt any emerging problems and potential for contagion.

The financial regulatory authorities in the Region have responded and are responding to these challenges in an increasingly effective way. Regionally, the regulatory and supervisory authorities in the financial sector have made enhancements to their Anti-Money Laundering/Countering Financing of Terrorism (AML/CFT) guidelines, as well as, the development of frameworks to address the emergence of private digital currencies and other Fintech developments. Some of them have introduced or are planning to introduce national digital currencies. They have also improved the more traditional elements of their payments systems. The growing importance of large integrated financial firms in the regional financial space has spurred the development of the regulatory architecture for systemically important financial institutions (SIFIs), such as regional regulatory colleges for institutions with a large Caribbean footprint.

Nevertheless, there is room for improvement in terms of the macro-prudential surveillance of the cross-border dimension of systemic risk. In this regard, there are very good possibilities for enhanced regional coordination and cooperation in the financial stability arena. Important financial architectural elements such as a regional financial institution resolution framework, as well as, more formal memoranda of understanding to backstop cooperation in areas such as information sharing amongst regulatory agencies, the harmonization of minimum prudential standards and common licensing requirements will go a long way to ensuring the regional architecture in place for sustaining financial stability is sufficiently comprehensive to meet emerging challenges. In this context, therefore, d*espite the unprecedented recent challenges, the regional financial system is likely to weather these current problems without major disruptions*.

In the future, the RFSR intends to focus more on regional systemic risk exposures and the resilience of the Caribbean-wide financial network in the context of the continuing development of the architecture to monitor, report and implement policy measures to maintain and strengthen financial stability in CARICOM.

Chapter 1: Overview of the Regional Macro-Financial Environment

The tumultuous nature of the global economy in the recent past have driven economic outcomes in Caribbean countries over the last four years because of their vulnerability to negative external shocks. Over the review period, global economic growth has weakened significantly through a combination of structural weaknesses, trade tensions, geopolitical risks and natural disasters, culminating in a synchronized global recession in 2020 caused by lockdowns and other COVID-19 pandemic related challenges. These severe challenges were reinforced in some countries and Regions by idiosyncratic factors, as well as lingering structural weaknesses from the legacy of the 2007/2008 international financial crisis.

1.1 International Economic Developments

The last four years have been a very difficult period for the global economy. In 2018, global growth weakened to 3.6 per cent from 3.8 per cent in 2017 as trade tensions between the US and China increased. Additionally, concerns about the high levels of public and private debt in important economies, the fallout in the UK and the Euro area from tensions related to the Brexit negotiations, natural disaster in Japan and the tightening in financial markets also hampered global growth. Global growth weakened further in 2019 to 2.8 per cent driven by increased trade tension and the related increases in tariffs leading to declines in business confidence, investment, manufacturing and trade in major economies. In this fragile environment, the pandemic struck in the first quarter of 2020 and the lockdowns that were used to control the spread of the virus led to a severe contraction of -3.1 per cent in global growth in that year. This was a synchronized recession, with only China amongst the major economies recording positive growth.

Global growth is expected to recover to 5.9 per cent in 2021 driven by vaccine rollouts, the easing of lockdowns and unprecedented policy measures to support economies at the national level and the international level through the provision of much higher levels of development financing. The recovery is also driven by a strong rebound in developed market economies and China, a boom in demand for consumer durables underpinned by COVID-19 income support, excess household savings from suppressed spending during lockdown periods and higher growth by commodity-based economies. These unprecedented support measures across the world have supported demand, sustained private sector risk appetite and effectively mitigated risks to the international financial system. Global growth is expected to slow to 4.9 per cent in 2022, as extraordinary policy support is scaled back. Global growth is expected to moderate further over the period 2023-2026 as policy normalizes and due to more persistent problems in some developing countries, driven by slower vaccination programmes, a lower capacity for policy support and pre-existing vulnerabilities (Table 1).

The growth projections are heavily dependent on assumptions about vaccine rollout with most countries expected to achieve broad access by the end of 2022. These programmes are constrained in many developing countries by shortages of supply and vaccine hesitancy. Nevertheless, vaccine rollouts have been improving with the worldwide vaccination rate jumping from 4.6 per cent on April 1, 2021, to 49.0 per cent by October 30, 2021, driven in large part by the vaccination programmes in developed economies (See Figures 1.1 – 1.3).

Table 1: Global Economic Growth (%)

Country/Region	2019	2020	2021	2022	2023	2024	2025	2026
World	2.8	-3.1	5.9	4.9	3.6	3.4	3.3	3.3
Advanced economies	1.7	-4.5	5.2	4.5	2.2	1.7	1.6	1.6
Canada	1.9	-5.3	5.7	4.9	2.6	1.5	1.4	1.6
Germany	1.1	-4.6	3.1	4.6	1.6	1.4	1.2	1.1
Japan	0.0	-4.6	2.4	3.2	1.4	0.8	0.6	0.5
Korea	2.2	-0.9	4.3	3.3	2.8	2.6	2.5	2.4
Singapore	1.3	-5.4	6.0	3.2	2.7	2.6	2.5	2.5
United Kingdom	1.4	-9.8	6.8	5.0	1.9	1.6	1.5	1.5
United States	2.3	-3.4	6.0	5.2	2.2	1.7	1.7	1.7
Euro area	1.5	-6.3	5.0	4.3	2.0	1.6	1.4	1.4
Emerging market and developing economies	3.7	-2.1	6.4	5.1	4.6	4.5	4.4	4.4
Russia	2.0	-3.0	4.7	2.9	2.0	1.8	1.7	1.6
Emerging and developing Asia	5.4	-0.9	7.2	6.3	5.7	5.6	5.4	5.3
China	6.0	2.3	8.0	5.6	5.3	5.2	5.1	4.9
India	4.0	-7.3	9.5	8.5	6.6	6.3	6.2	6.1
Emerging and developing Europe	2.5	-2.0	6.0	3.6	2.9	2.7	2.7	2.6
Latin America and the Caribbean	0.1	-7.0	6.3	3.0	2.5	2.3	2.4	2.4
Brazil	1.4	-4.1	5.2	1.5	2.0	2.1	2.1	2.1
Middle East and Central Asia	1.5	-2.8	4.1	4.1	3.8	3.6	3.6	3.7
Sub-Saharan Africa	3.1	-1.7	3.7	3.8	4.1	4.0	4.1	4.2

Source: World Economic Outlook Database, October 2021

Figure 1.1: Global COVID-19 Vaccination Rates

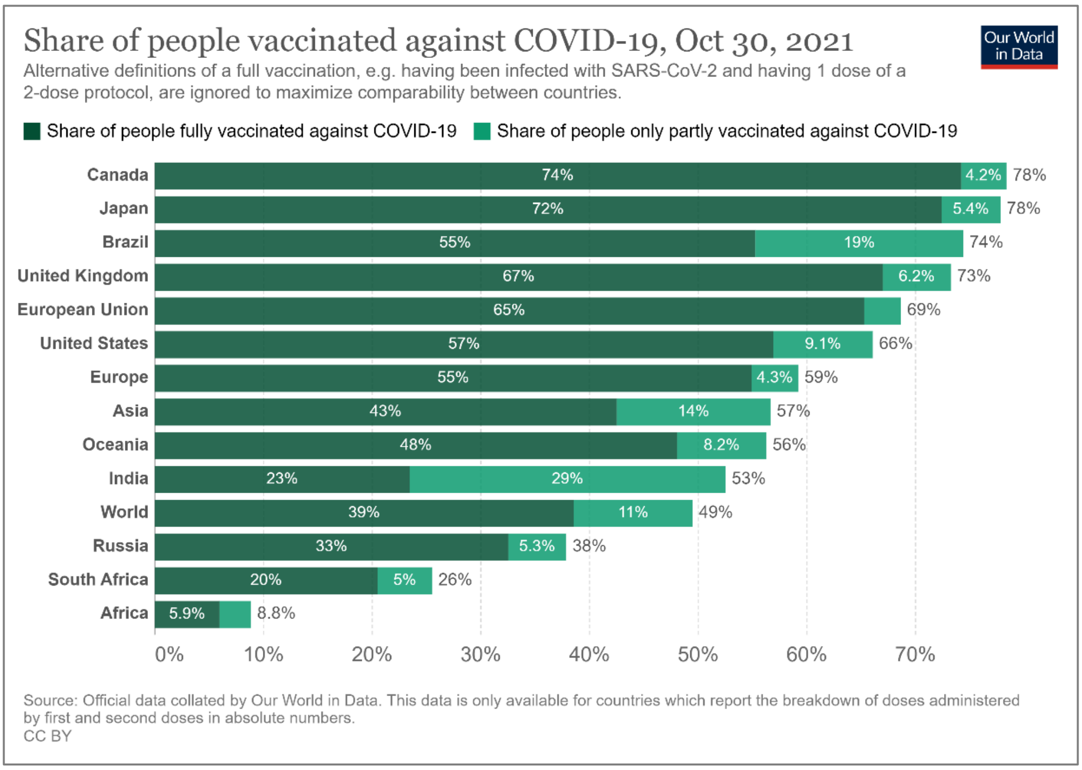


Figure 1.2: Global Daily Confirmed COVID-19 Positive Cases

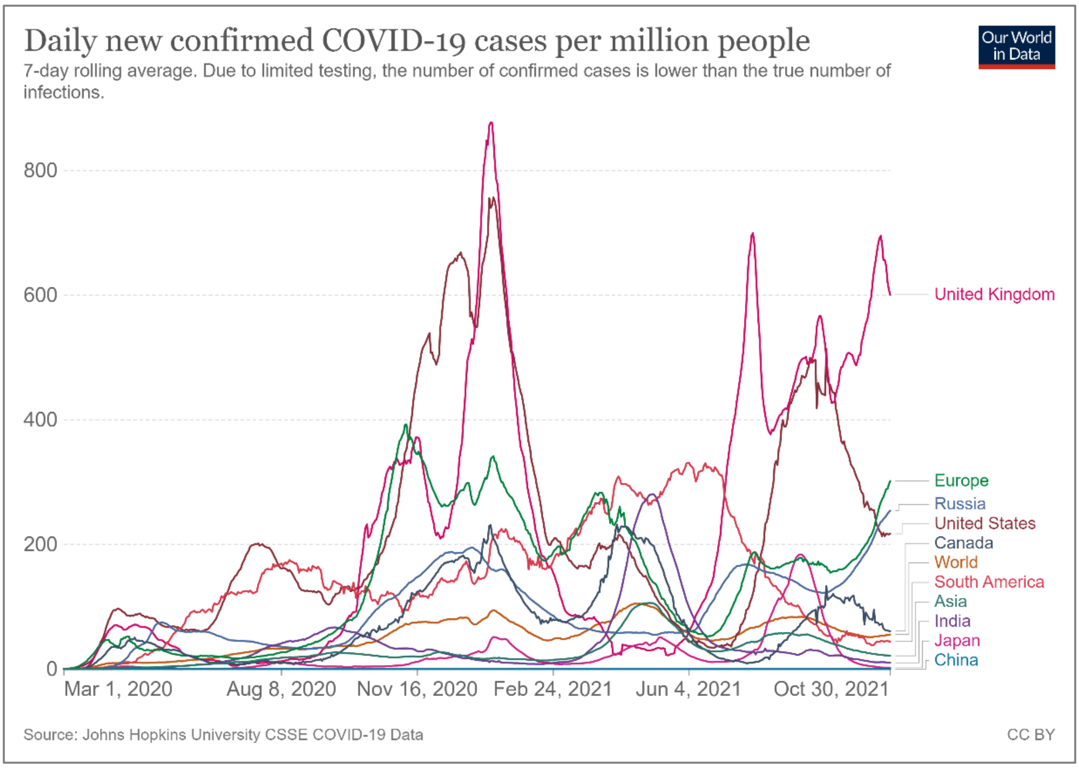
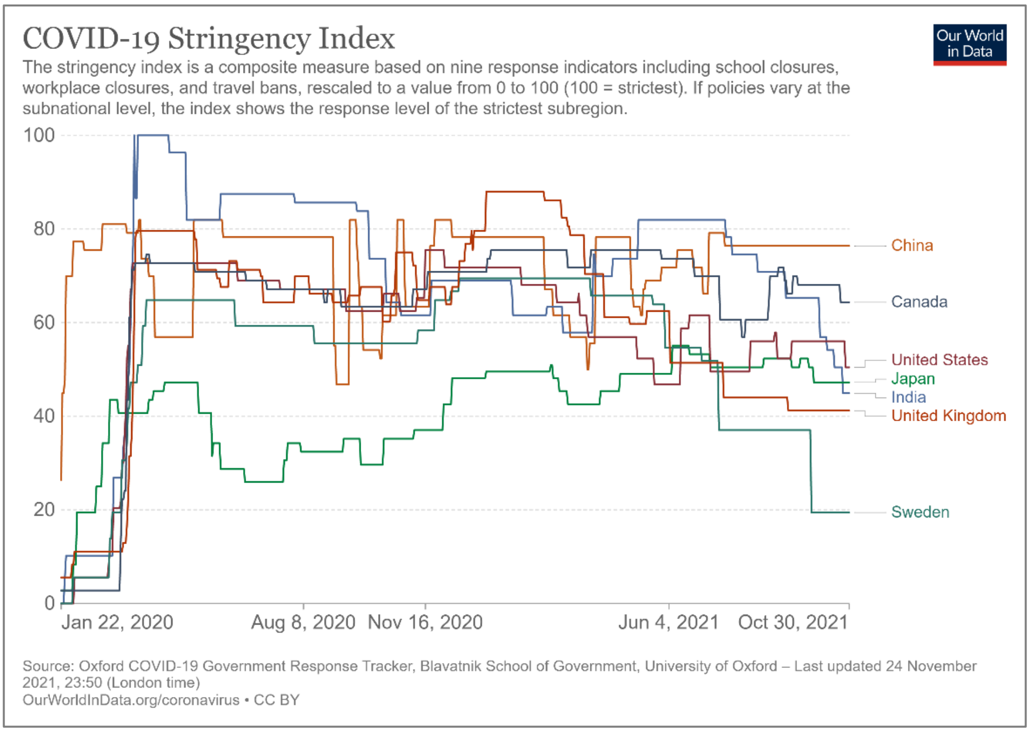


Figure 1.3: Global Stringency Index



The recovery is expected to be characterised by weak increases in employment and unevenness across countries and sectors. Unequal access to vaccines, vaccine hesitancy, the differential impact of the pandemic on various sectors, unequal capacity of countries to provide support and pre-COVID-19 vulnerabilities, have driven the uneven nature of the recovery. In particular, sectors dependent on personal contact such as the hospitality and tourism industries have been the most severely affected and countries dependent on these sectors are expected to continue to experience the greatest difficulties recovering from the pandemic. The longer the duration of the pandemic the greater the risk of longer-term scarring to economies so it's critically important that governments and international institutions put in place the required policy framework as quickly as possible to facilitate the re-opening of economies and the recovery process.

There are significant risks to the global recovery. In particular, some countries have already begun tapering as inflation risk and fiscal sustainability issues arise. This has the potential to create more difficult financing conditions for developing countries. The possibility of faster monetary policy normalisation in developed economies in the context of overextended international financial asset prices could lead to a rapid shift in investor sentiments. This would undo the supportive international financial conditions on which the current global growth projections depend. The latest granular data also suggest that momentum is weakening in the US and China. In the US, the erosion of consumer and business confidence could restrain consumer demand, while the Chinese government's deleveraging campaign and the Evergrande Group crisis could continue to squeeze the real estate market which is a major engine of growth in China.

Moreover, expectations are that supply bottlenecks could persist into 2022, this together with increased commodity prices are leading to increased inflationary pressures which could restrain global growth. The emergence of COVID-19 variants resistant to current vaccines is a major risk to the recovery. There is also the risk of permanent scarring amongst developing countries from the scale and duration of the crisis. The possibility of the escalation in trade tensions between the US and China, increased cyberattacks, as automation and virtual work arrangements become more entrenched, and the possibility of social unrest caused by pandemic responses are also significant risks to the recovery.

On the financial stability policy front, the monetary and financial authorities should look to selective tighten macro-prudential policy tools without precipitating a general tightening in financial conditions. In particular, they should streamline credit guarantees, debt moratoria and capital and liquidity buffers to facilitate a narrower focus on more vulnerable financial institutions, while more broadly limiting the buildup of balance sheet mismatches. Concerns about asset quality and profitability in financial institutions should drive efforts at balance sheet repair, but it should be done in a way that avoids banks adopting a highly risk-averse posture to facilitate a sustainable recovery.

1.2 Regional Macroeconomic Developments

1.2.1 Economic Growth

In spite of the ongoing global recovery, economic growth in the Region was still stymied by a shortage of vaccines, vaccine hesitancy and lockdowns. There have been improvements in terms of vaccination rates, but most countries are still below the global average. As a result, there have been improvements in infection rates but they are still high leading to a situation where pandemic restrictions (stringency index) are still high and subject to re-imposition after easing as infection surges emerge in the Region (Figures 1.4, 1.5 and 1.6).

Figure 1.4: COVID-19 Vaccination Rates in the Caribbean

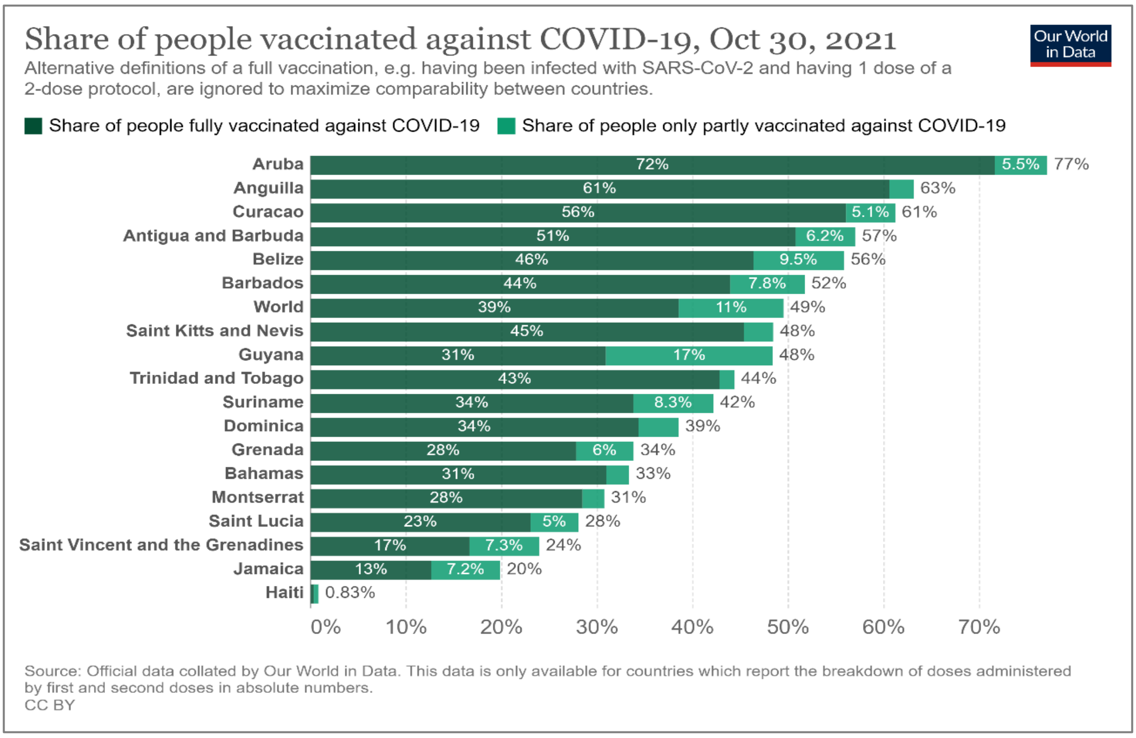


Figure 1.5: COVID-19 Infection Rates in the Caribbean

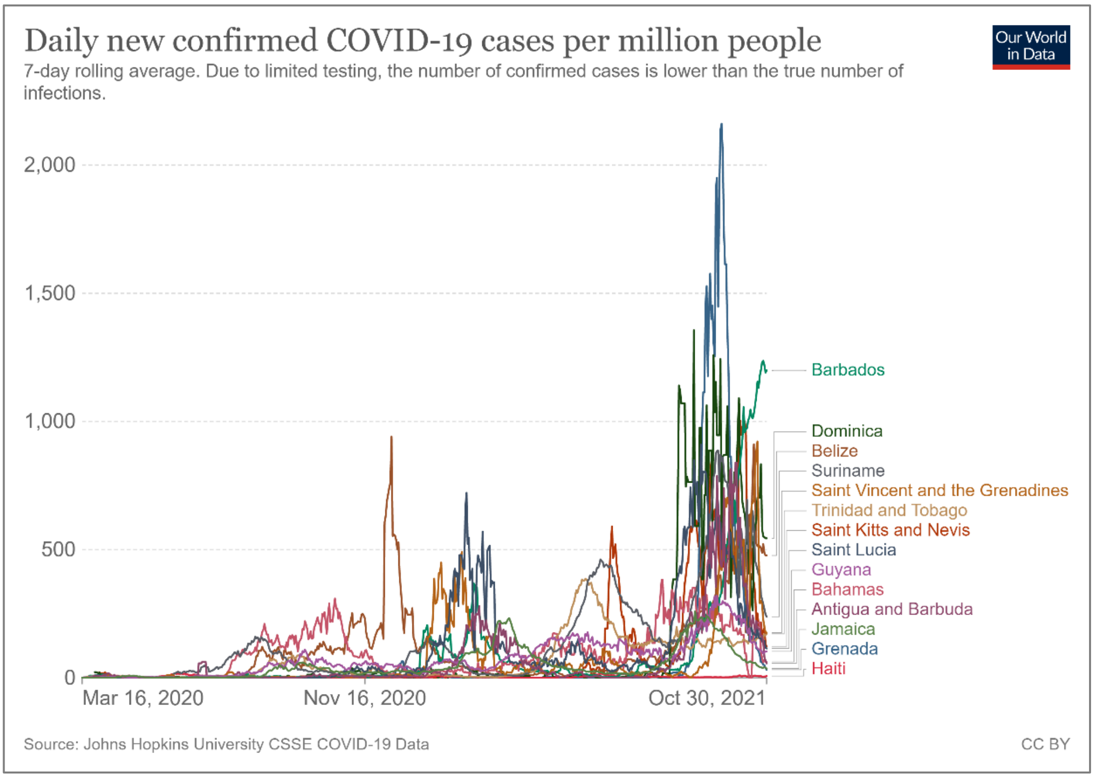
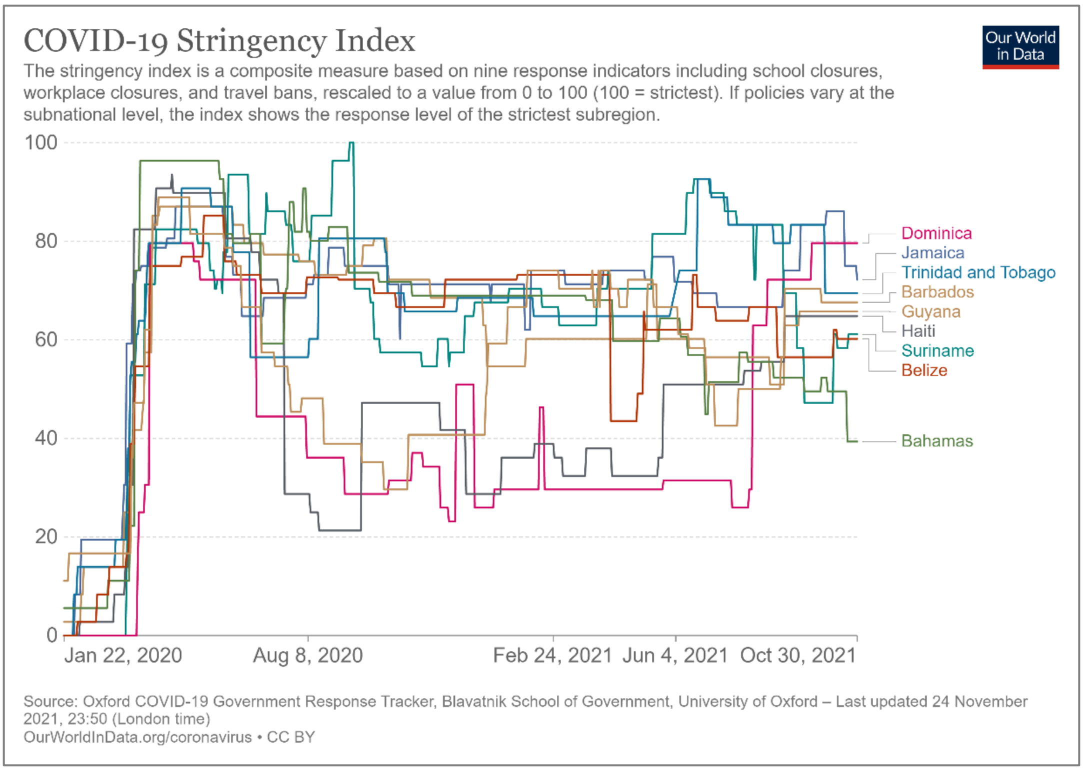
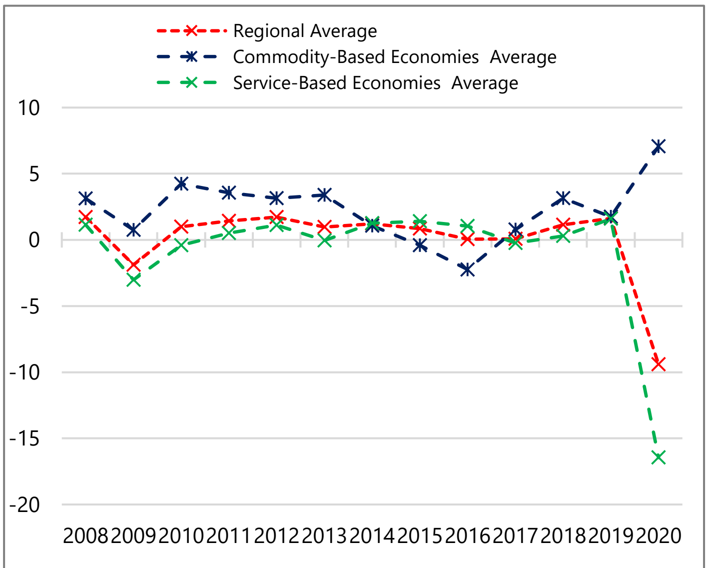


Figure 1.6: The Stringency of Lockdown Measures in the Caribbean



Average regional growth has been weak for the last 3 years falling from 2.5 per cent in 2018 to 1.4 per cent in 2019 and collapsing to -9.4 per cent in 2020, as the pandemic swept through the Region (Figure 1.7). This trend has been driven mainly by a very difficult international economic environment, involving a series of external shocks culminating in the COVID-19 pandemic, as well as pre-existing macroeconomic vulnerabilities. In 2018, the Region was rebuilding after a very active hurricane season in 2017. In 2019, sluggish global growth due in part to trade tensions and the uncertainties related to Brexit, hurricane Dorian in the Bahamas, social unrest in Haiti and adverse weather conditions in Belize, Barbados and Jamaica slowed regional growth to 1.4 per cent. The COVID-19 pandemic, by far the most severe shock the Region has faced, struck in the 1st quarter of 2020 and together with the pre-existing fiscal, external sector and structural economic vulnerabilities drove regional economies to contract on average by 6.5 per cent, a historic low.

Figure 1.7: Caribbean Average Economic Growth (% Change)



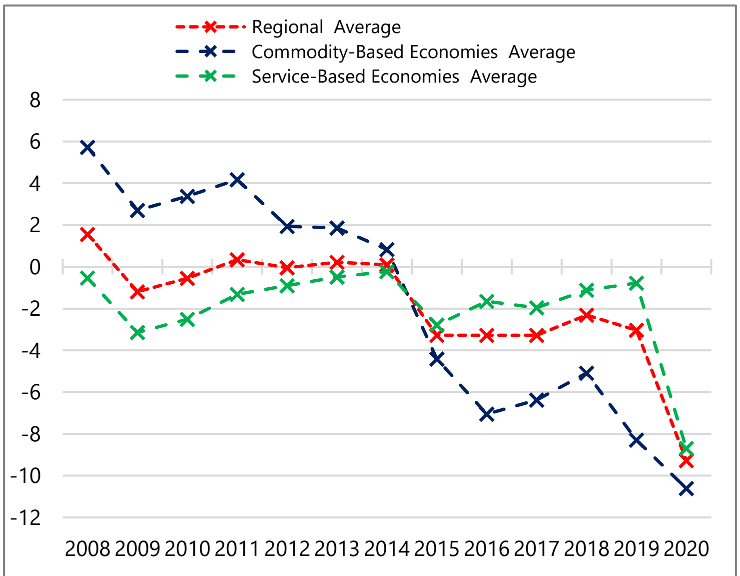
Source: National Central Banks, September 2021

The magnitude of the recession in 2020 was also influenced by the Region's dependence on the tourism and commodities markets which were severely negatively impacted by the pandemic. The fact that the Region was also highly dependent on remittances which was significantly negatively affected by the pandemic also deepened the recession. Additionally, the labour market fallout from the lockdowns amplified the recession in 2020. The greater importance of the informal sector in the Caribbean has also served to deepen the recession since this sector is largely based on face to face transactions and was therefore disproportionately negatively affected by the pandemic. The undocumented nature of the informal sector also complicated government assistance efforts and weakened the overall attempt to support domestic demand. Significantly weaker credit demand also contributed to a contraction in 2020.

The service-based economies were more severely affected by the pandemic evidenced by a 14.5 per cent contraction, relative to their commodity-based counterparts, who registered a 7.2 per cent growth in real output, because the dominant tourist industry was essentially closed by lockdown measures. The reopening of borders have helped, but problems with the airline and cruise industries still restrain recoveries. Travel restrictions, COVID-19 protocols and high risk-aversion on the part of potential tourists have restrained the recovery in these countries. The average growth performance for the commodity-based economies in 2020 was skewed by the extraordinary performance of Guyana, without Guyana the average for these economies was -11.2 per cent.

1.2.2 Fiscal Balance

Figure 1.8: Current Fiscal Balances in the Caribbean (% of GDP)



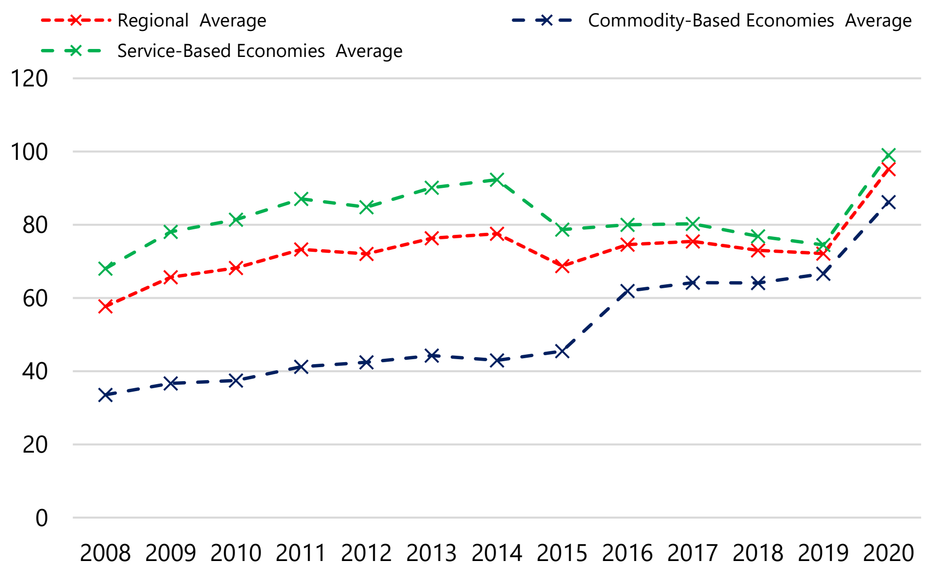
Source: National Central Banks, September 2021

The current fiscal situation of the Region has deteriorated over the last 3 years, moving from -2.2 per cent in 2018, -3.5 per cent in 2019 and deteriorating significantly to -8.5 per cent in 2020 as a per cent of GDP. Commodity-based economies (-10.6 per cent) had greater problems in this area, relative to their service-based counterparts (-7.2 per cent) in 2020. This situation has developed since the end of the commodity super-cycle in 2014, but it is also because the fiscal consolidation cycle is generally more advanced in service-based economies. The 2020 outturn was driven by exceptional expenditures for COVID-19 support measures, reduced indirect tax revenues from the collapse of private demand and a lower intake from income taxes on individuals and firms. The deterioration of the fiscal balance between 2019 and 2020 has been more extreme amongst service-based economies because of their dependence on tourism which has been severely affected by the pandemic and the associated lockdown measures. Weaknesses in this account have important implications for financial stability through the government finance/financial institution nexus.

1.2.3 *Sovereign Debt*

The regional average Debt/GDP ratio increased significantly from approximately 79.5 per cent in 2018 and 2019 to 101.9 per cent in 2020. Serviced based economies generally had larger debt overhangs (111.3 per cent) relative to their commodity-based counterparts (86.2 per cent) in 2020. The usual metrics on debt sustainability suggest problems with sustainability. In particular, the service on external debt has jumped from 10.9 per cent of exports of goods and non-factor services in 2018 to 18.1 per cent in 2020, which is above the rough 15 per cent benchmark thought to be the threshold beyond which problems with sustainability arise. This is a problem concentrated amongst the service-based economies and has implications for international credit ratings and increased macro-prudential risks. These developments are driven by weaknesses on the fiscal and external accounts, made worse by vulnerability to a variety of external shocks. The performance in 2020 was due mainly to disbursements for countries already on IMF programmes and additional borrowings to backstop COVID-19 support measures.

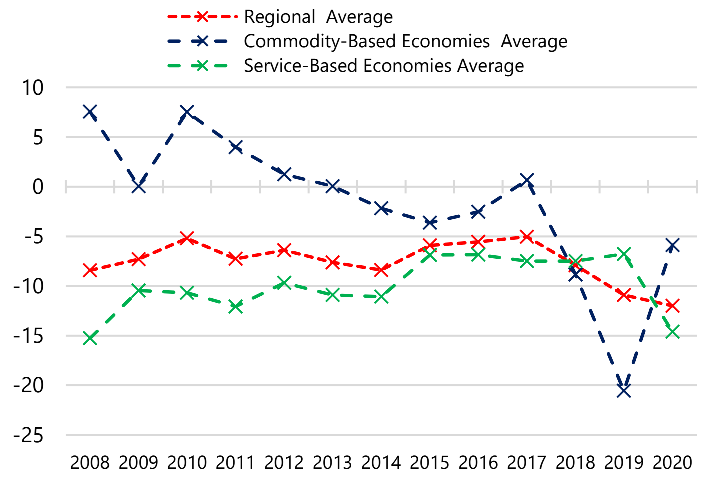
Figure 1.9: Total Debt in Caribbean Economies (% of GDP)



Source: National Central Banks, September 2021

1.2.4 External Current Account

Table 1.10: External Current Account Position in the Caribbean (% of GDP)

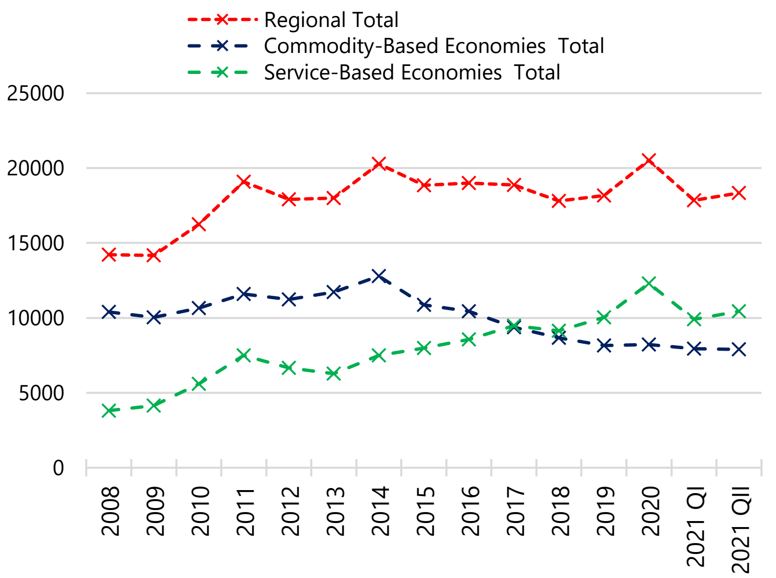


Source: National Central Banks, September 2021

The external current account as a per cent of GDP has generally deteriorated over this period from -7.4 per cent in 2018 to -8.1 per cent in 2020, as the sharp reduction in export revenues in the Region, generally because of the closure of the tourism sector, was counterbalanced by a significant reduction in imports as intermediate and final imports fell as demand contracted with the lockdowns. The improvement in the average performance of the commodity-based economies in 2020 relative to 2019 was driven largely by the reduction in the current account deficit for Guyana in 2020. This occurred as a huge transitory increase in imports of intermediate and capital goods for the oil and gas industry was recorded in 2019 generating a much higher current account deficit in that year. The ensuing normalization in 2020 led to a sharp improvement in that year. Commodity-based economies have traditionally performed better in this area relative to their service-based counterparts, however, this changed in 2018 and 2019 as the latter group of countries were further along their adjustment cycle. In 2020, it switched again in the wake of the pandemic as service-based economies were more severely affected by the pandemic due to their dependence on tourism. Weaknesses on this account have important implications for financial stability through the foreign exchange market channel.

1.2.4 External Reserves

Regionally, the total gross international reserves of the monetary authorities were on an increasing trend before the pandemic hit. Total international reserves increased from US$21.0 billion in 2018 to US$23.9 billion in 2020. International reserves increased by US$ 2.4 billion between 2019 and 2020 due to increased debt flows related to the pandemic. This increase in international liquidity provided much-needed support during the lockdowns in 2020. Relatedly, the average monthly import cover jumped from 4.9 months in 2018 to 8.6 months in 2020. The increased total reserves of the Region over the period 2018 to 2020 was driven by increasing reserves in



Source: National Central Banks, September 2021 service-based economies. This performance was, however, built mostly on debt flows and the benefits that flow from increased foreign exchange reserve buffers must be viewed in the context of increasing vulnerability on the debt sustainability front.

1.3 Financial System Structure

Financial sectors within the Region are predominantly commercial bank-centric (Table 1.2). Other important financial sub-sectors include insurance companies, credit unions and pension funds. Financial markets such as foreign exchange, bond and stock markets are also still relatively under-developed and relatively small, but they are still important to the maintenance of financial stability since they can be an important channel for contagion. The regulatory and supervisory systems in the Region are also relatively diverse, especially in the context of the systems in place for the supervision of banks and non-bank financial institutions. The regulatory and supervisory structures for banks are much more comprehensive relative to the system in place for non-bank financial institutions, but over time these gaps have been closing, especially as regulators respond to the need to follow international best practices in these areas. There has also been a concerted effort to harmonise regulatory practices, especially in the realm of common prudential standards and jurisdictions have sought to develop their financial architecture, particularly in the area of payments and settlement systems.

The banking sectors within the Region include a balance of local and foreign-owned entities. Foreign-owned banks are usually subsidiaries or extensions of Canadian parents. Regional financial conglomerates with extensive cross-border operations are headquartered in Barbados, Jamaica and Trinidad and Tobago. This implies that these countries and the conglomerates domiciled there are important nodes in the regional financial network and you cannot maintain financial stability in separate national jurisdictions without reference to these regional dynamics.

The insurance market is a vital component of the financial structures within the Region. The holding company structure of some of the large insurers in the Caribbean also implies that these entities create regional exposures which have to be monitored. The regulatory frameworks for this sector, however, vary amongst Caribbean countries and the regulatory authorities have worked to upgrade the regulatory and supervisory system for these institutions. There also exists significant common exposure to Caribbean sovereigns amongst these institutions which can amplify regional contagion risks.

Table 1.2: Structure of CARICOM Economies Financial Systems 2020
(Total Assets as % of GDP)

	Bahamas	Barbados	Belize	ECCU	Guyana	Jamaica	Suriname	Trinidad and Tobago	Caribbean
Banks	135.15	149.36	111.80	161.92	55.23	92.92	93.84	106.11	**104.10**
Credit Unions	4.29	31.87	33.44	25.29	0.81	6.90	0.16	13.36	**14.52**
Insurance Companies	19.68	42.50	10.54	7.98	9.26	22.90	14.81	32.08	**19.98**
Other	18.50	70.07	11.01	19.90	41.15	136.38	16.72	125.56	**60.99**
Total	**177.62**	**293.81**	**166.79**	**215.09**	**106.45**	**259.10**	**127.09**	**277.11**	**199.58**

Source: Caribbean National Central Banks, May 2021; Eastern Caribbean Currency Union Country Reports, International Monetary Fund, March 2021; Bank of Guyana Annual Report 2020; Financial Stability Report 2020, Bank of Jamaica.
Notes: Credit Union Data for Guyana and Trinidad and Tobago represent 2019 values. Suriname Insurance Data represent 2019 values.

1.4 Financial Infrastructure

Financial market infrastructures are at varying levels of development across the Region (Table 1.3). Credit Bureau establishment within the Region has been slow, with only four countries having legislated credit bureaus. Although a credit bureau has not been established in The Bahamas, the process is at an advanced stage, with the Credit Reporting Act having been passed in Parliament in 2018 and CRIF S.p.A. being selected as the credit bureau operator. Furthermore, Suriname has forwarded a draft Credit Bureau Act to Parliament for approval.

With regard to payments system infrastructure, all jurisdictions have upgraded to a Real-Time Gross Settlement System (RTGS). In terms of the securities market infrastructure, only Haiti and Suriname do not as yet have Central Securities Depositories (CSDs), while only Belize and Haiti do not have stock exchanges. Only four countries had explicit deposit insurance schemes in 2020, but other jurisdictions have been exploring the possibility of setting up such schemes, with Belize signing the Deposit Insurance Act 2020 into law in January 2020, to set the stage for the establishment of an explicit deposit insurance scheme in Belize. These concerted efforts to improve the financial infrastructure underpinning the operation of the financial system in the Caribbean has increased the Region's capacity to mitigate financial risks.

Table 1.3: Financial Market Infrastructure 2020

	Deposit Insurance	Credit Bureau	RTGS	Central Securities Depository	Stock Exchange
Bahamas	Yes	No	Yes	Yes	Yes
Barbados	Yes	No	Yes	Yes	Yes
Belize	No	No	Yes	Yes	No
ECCU	No	No	Yes	Yes	Yes
Guyana	Yes	Yes	Yes	Yes	Yes
Haiti	No	Yes	Yes	No	No
Jamaica	Yes	Yes	Yes	Yes	Yes
Suriname	No	No	Yes	No	Yes
Trinidad and Tobago	Yes	Yes	Yes	Yes	Yes

Sources: Caribbean Central Banks; Financial Stability Reports of Caribbean countries.
Notes: Guyana is currently updating their National Payment Systems. Guyana recently implemented the following components of financial infrastructure: Deposit Insurance (April 2019); RTGS and Central Securities Depository (March 2021).

1.5 Financial Market Developments

The equity, bond and foreign exchange markets in the Region are still relatively small, with a limited number of agents involved in trading, underdeveloped mechanisms for price discovery and gaps in the market infrastructure. The Region has, however, made significant progress in developing its financial market infrastructure.

In Jamaica, the process of modernizing the foreign exchange (FX) market infrastructure is ongoing. On June 1, 2020, Jamaica launched the JamClear®-Foreign Exchange Trading Platform. This platform provided real-time electronic FX trading for the US dollar/Jamaica dollar currency pair and observation of trades between authorised foreign exchange dealers. In 2020, steps were taken to develop a market for the trading of private placements of equity and debt on the Jamaica Stock Exchange NASDAQ platform which culminated in the launch of this market in January 2021. During 2020, amendments were also made to the securities regulations to facilitate a more competitive fee structure for the trading of debt. In 2020, a project to facilitate the listing and trading of Jamaican government securities on the Jamaica Stock Exchange NASDAQ platform was initiated. In February 2020, a stakeholder group was established to drive this project and in December 2020 a first draft of the business requirement document was completed.

The ECCU and The Bahamas are in the early stages of implementing digital fiat currencies, both underscoring the benefits, such as financial inclusion and efficiency gains in an archipelagic setting. The Eastern Caribbean Central Bank (ECCB) digital currency pilot was rolled out on March 12, 2019, to assess the potential efficiency and welfare gains that could be achieved through the introduction of a digital currency. The ECCB will issue the digital currency and it would be distributed by the licensed bank and non-bank financial institutions in the Eastern Caribbean Currency Union. The digital currency was eventually launched in March 2021. The Central bank of The Bahamas initiated a gradual nationwide launch on October 20, 2020, of its digital currency, the Sand Dollar, with six authorized financial institutions, four money transmission businesses and two payment service institutions. The Central Bank also worked to develop the regulatory framework for the digital currency by addressing key policy concerns such as financial inclusion, interoperability, cyber security resilience and financial stability. The authorities in both jurisdictions have indicated that they expect significant potential gains in the effectiveness of their AML/CFT frameworks from a reduction in the share of cash transactions when these digital currencies are fully operational and in widespread use.

In July 2020, the Bahamas Registered Stock Act was amended to allow for the dematerialisation of bond certificates. The listing of all Bahamas Registered Stock commenced on the Bahamas Internal Securities Exchange (BISX) in July 2020. The BISX trading platform and dematerialised holdings also integrates with the Bahamas Government Securities Depository (BGSD) for more efficient record keeping around securities ownership and transfer of ownership.

Chapter 2: Performance of the Financial Institutions in the Region

2.1 Broad State of Financial Sector Performance in the Region

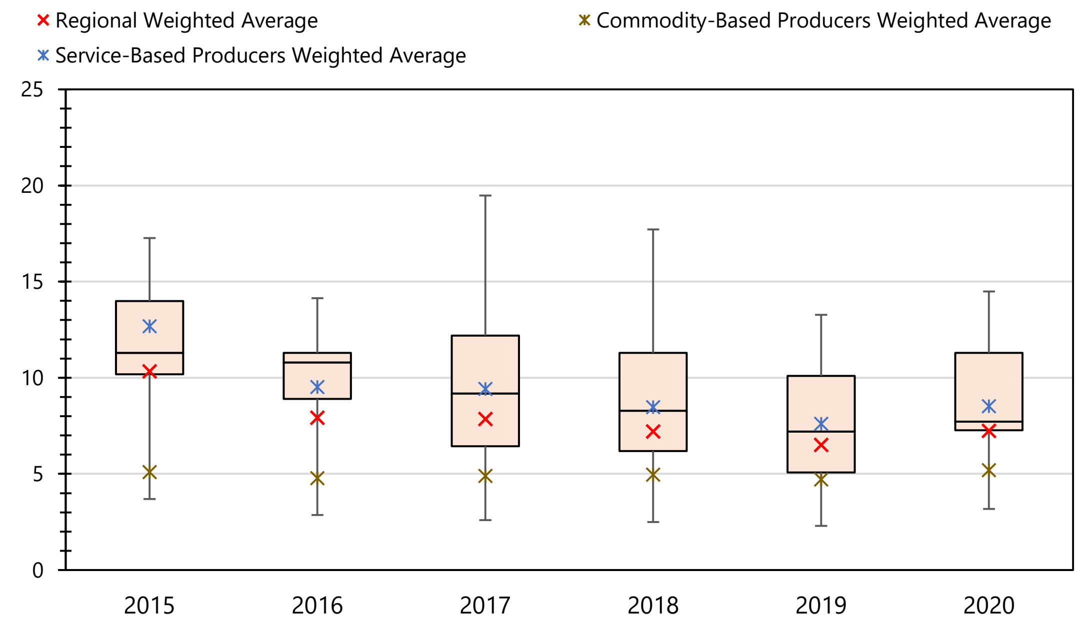
The performance of the regional financial sector has recorded some significant changes in important areas over the last two years. In particular, while capital adequacy levels remained robust, indicators of asset quality and profitability weakened within both the services and commodity-based economy groupings. Developments were dominated by the impact of the COVID-19 pandemic, as globally imposed travel restrictions adversely impacted the operations of all financial institutions in the Region. In contrast, bank liquidity remained at relatively high levels over this period.

2.2 Banking Sector Soundness Indicators

2.2.1 Asset Quality

The aggregate level of non-performing loans have trended downwards over the last five years up to 2019, but this general trend ended as the pandemic swept through the Region in 2020. Specifically, the regional weighted average of non-performing loans to total loans fell from 10.3 per cent in 2015 to 6.5 per cent in 2019 but increased to 7.2 per cent in 2020 (see Figure 2.1).

Figure 2.1: Non-Performing Loans to Total Gross Loans for Commercial Banks (%)

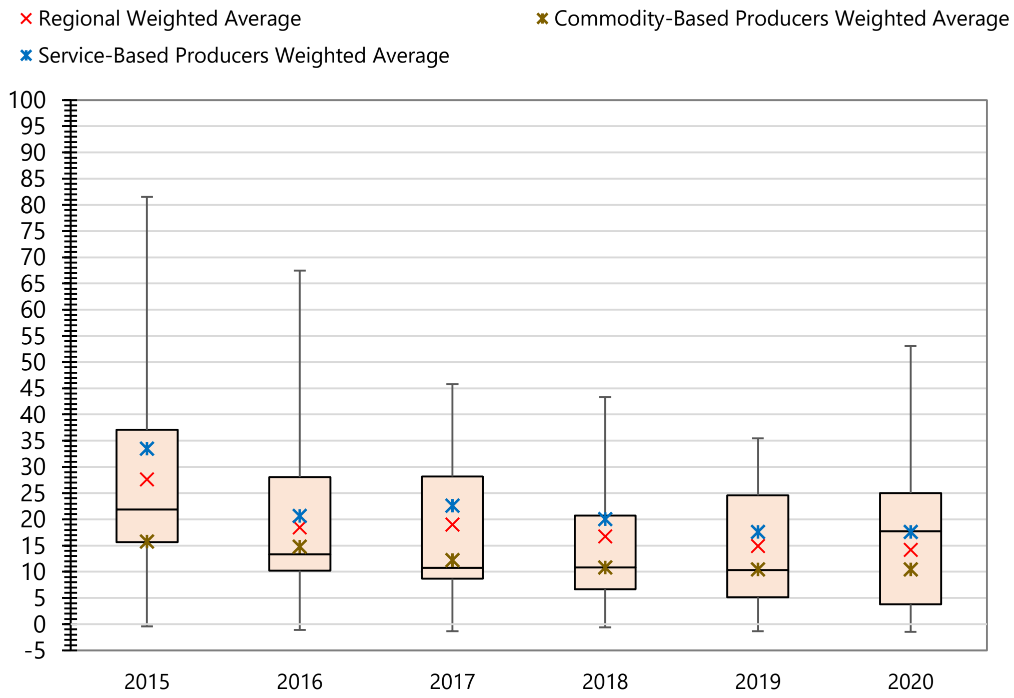


Source: : National Central Banks for Caribbean countries, September 2021
Notes : Haiti data not available ; Weighted Averages weighted by Banking systems assets.

This trend was largely attributed to developments in service-based economies where the ratio of non-performing loans to total loans in the banking system declined significantly from 12.7 per cent in 2015 to 7.6 per cent in 2019 and rose to 8.5 per cent as the pandemic struck the Region in 2020. Over the same period in commodity-based economies, the ratio moved more moderately from 5.1 per cent in 2015 to 4.7 per cent in 2019 and then deteriorated to 5.2 per cent in 2020.

The non-performing loan net of provisions to capital for banks also exhibited a similar trend (see Figure 2.2).

Figure 2.2: Non-Performing Loans Net of Provisions to Capital for Commercial Banks (%)



Source: : National Central Banks for Caribbean countries, September 2021.
Notes : Haiti data not available; Data for Curacao & Sint Maarten only available from 2017; Weighted Averages weighted by Banking systems assets.

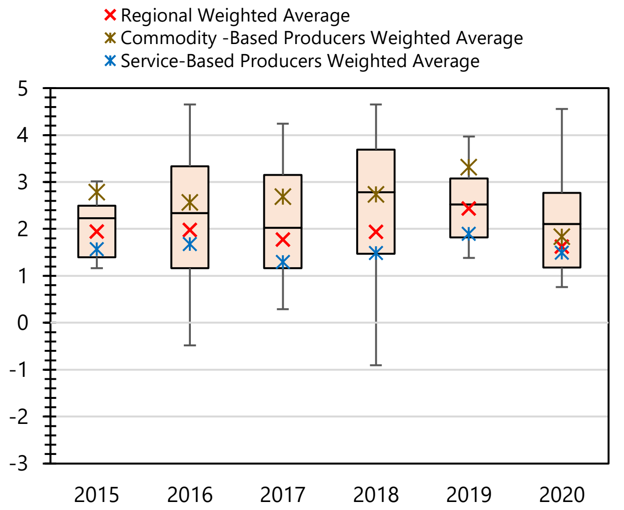
2.2.2 Earnings and Profitability

The profitability of banks within the Region has generally benefitted from relatively high interest rate spreads, but the recent decline in spreads, lower credit demand, loan payment moratoria and increased provisioning for bad debts, all driven by the fallout from the pandemic, have led to a sharp fall in both ROA and ROE in 2020, relative to 2019 (see Figures 2.3 and 2.4).

The average profitability of regional commercial banks, as measured by the regional weighted average ROA, had remained just below 2.0 per cent for the period 2015 to 2018, but increased to 2.4 per cent in 2019, driven by a general improvement in both service and commodity-based economies, as NPLs and provisioning declined. The impact of the pandemic reversed this improvement, as the average ROA from the Region fell to 1.5 per cent in 2020.

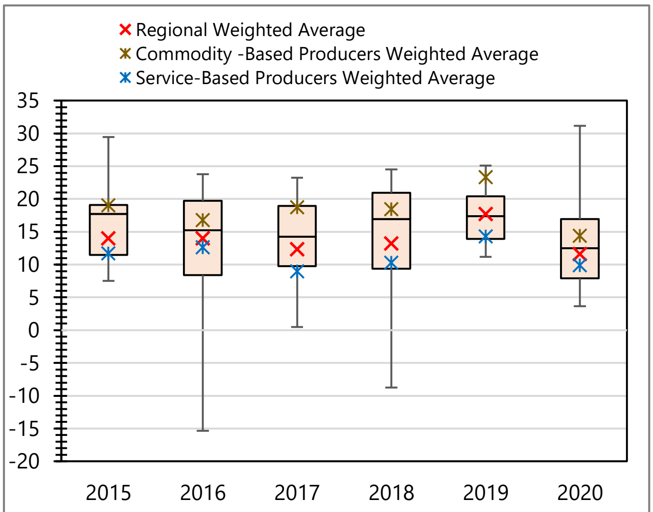
The performance of the commodity-based economies has been consistently better than their service-based counterparts in this area. In particular, the average ROA for commodity-based economies moved from 2.8 per cent in 2015 to 1.8 per cent in 2020, while the average ROA for service-based economies moved from 1.6 per cent in 2015 to 1.5 per cent in 2020. The gap between these two groups of countries, however, narrowed considerably in 2020, due to the negative symmetric shock from the pandemic. The regional bank profitability dynamic, using ROE, exhibited similar trends to ROA over the review period.

Figure 2.3: Return on Assets for Commercial Banks (%)



Source: National Central Banks for Caribbean countries, September 2021.
Notes : Haiti data not available ; Weighted Averages weighted by Banking systems assets.

Figure 2.4: Return on Equity for Commercial Banks (%)

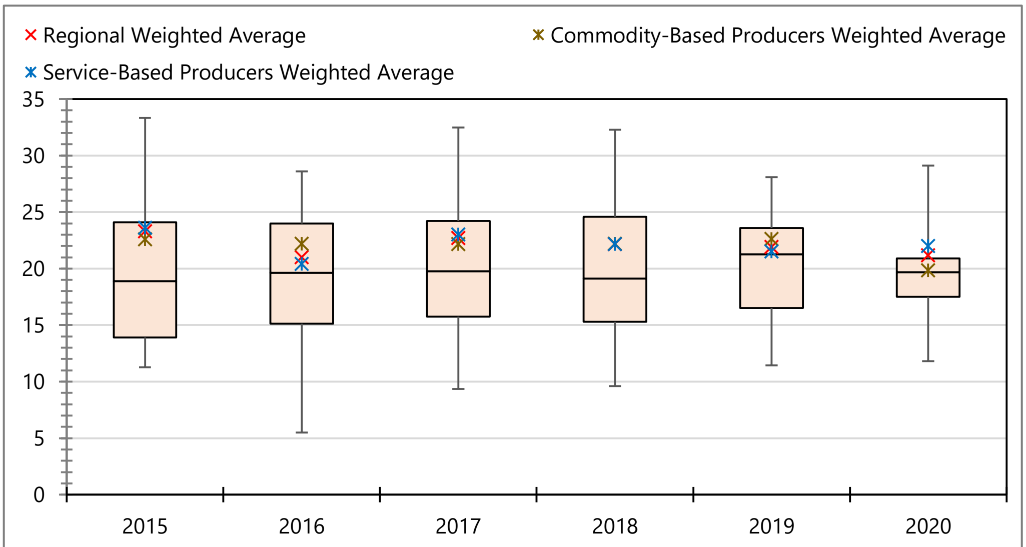


Source: National Central Banks for Caribbean countries, September 2021.
Notes : Haiti data not available ; Weighted Averages weighted by Banking systems assets.

2.2.3 Bank Capital Adequacy

Capital adequacy ratios (CAR) across the Region remained above the regulatory minimum, averaging over 20.0 per cent consistently for the period 2015-2020 (see Figure 2.5). The average regional CAR fell slightly from 22.5 to 21.6 per cent between 2019 and 2020. This slight deterioration was driven by a decline in the average for commodity-based economies, from an average of 22.6 to 19.9 per cent between 2019 and 2020, due largely to developments in Trinidad and Tobago, where higher weights applied to riskier credit exposures and the inclusion of a capital charge for operational risk under the Basel II standard caused an increase in risk-weighted assets.

Figure 2.5: Regulatory Capital to Risk-Weighted Assets for Commercial Banks (%)

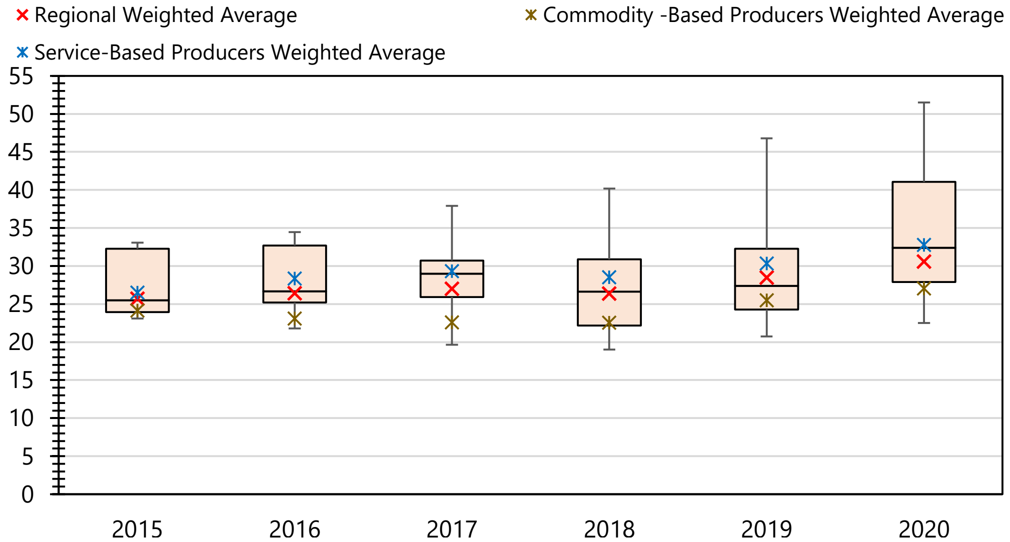


Source: : National Central Banks for Caribbean countries, September 2021.
Notes : Haiti data not available ; Weighted Averages weighted by Banking systems assets.

2.2.4 Bank Liquidity

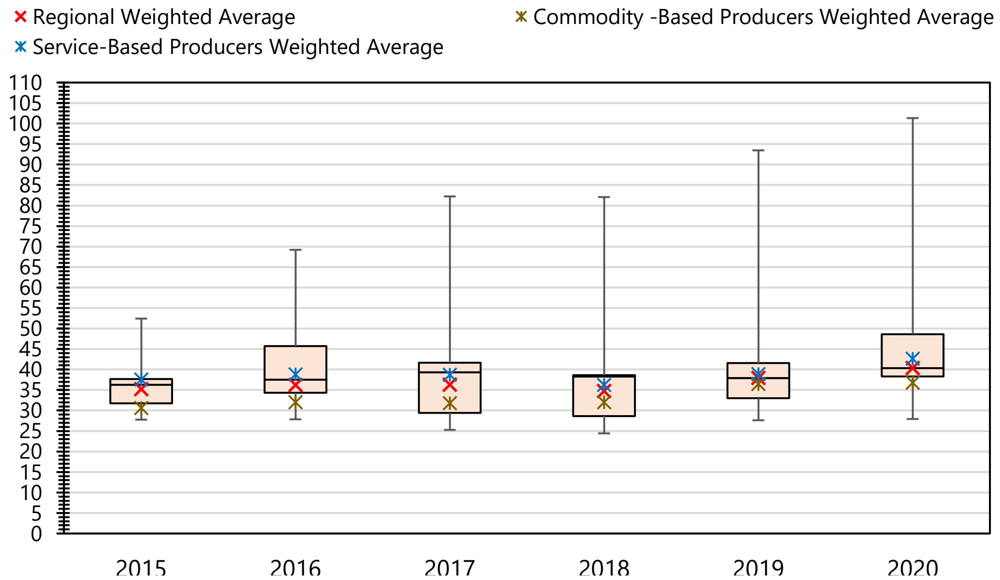
The average liquid assets to total assets ratio for the Region has remained above 25 per cent for the period 2015-2020 (see Figure 2.6). Liquidity levels in the banking sector rose from 28.6 per cent in 2019 to 30.9 per cent in 2020, as the pandemic struck.

Figure 2.6: Liquid Assets to Total Assets for Commercial Banks (%)



Source: : National Central Banks for Caribbean countries, September 2021.
Notes : Haiti data not available ; Data for Curacao & Sint Maarten only available from 2017; Weighted Averages weighted by Banking systems assets.

Figure 2.7: Liquid Assets to Short-term Assets for Commercial Banks (%)



Source: : National Central Banks for Caribbean countries, September 2021.
Notes : Haiti data not available ; Data for Curacao & Sint Maarten only available from 2017; Weighted Averages weighted by Banking systems assets.

This dynamic was driven by central bank policy measures to sustain market liquidity, government COVID-19 support measures and lower credit demand in the wake of the pandemic. Service-based economies have generally had higher levels of liquidity, relative to their commodity-based counterparts over the period 2015 to 2020 and this gap seems to have become entrenched, as the pandemic more severely impacted the former group of countries. The average ratio of liquid assets to short-term liabilities exhibited similar trends, with the regional average growing from 38.0 per cent in 2019 to 40.6 per cent in 2020 (see Figure 2.7).

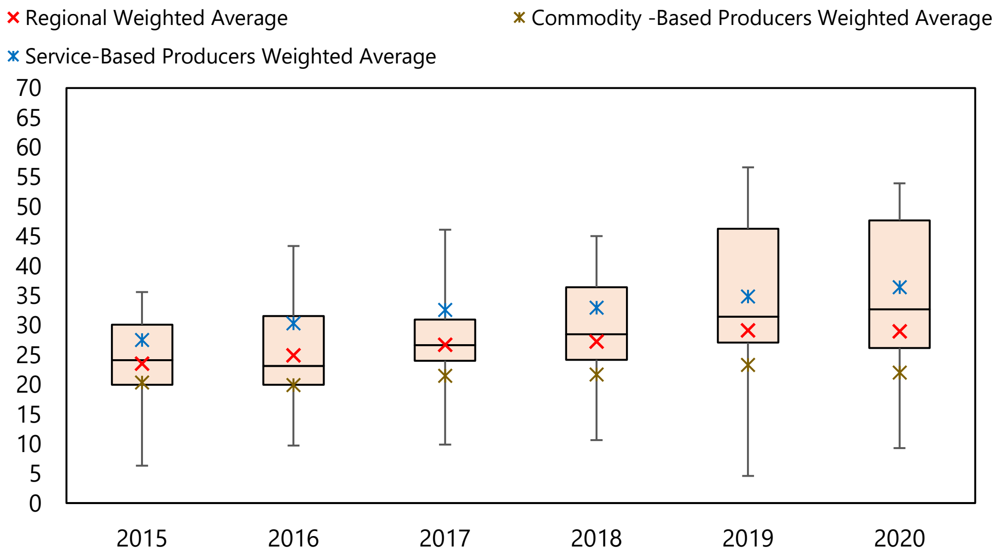
2.3 Life Insurance

2.3.1 Capital Adequacy

The life insurance component continued to dominate the insurance industry's asset base across the Caribbean, accounting for more than 70 per cent of the Region's average total assets.

Insurance companies across the Region remained highly capitalized relative to total assets, averaging over 23.0 per cent and above over the period 2015 to 2020. The average regional capital to asset ratio for life insurance companies increased from 27.2 per cent in 2018 to approximately 29.0 per cent in 2019 and 2020 despite the onset of the pandemic. The firming in this ratio was largely attributed to the service-based economies, which increased from 33.0 to 36.4 per cent in 2020 (See Figure 2.8).

Figure 2.8: Life - Capital/Total Assets (%)

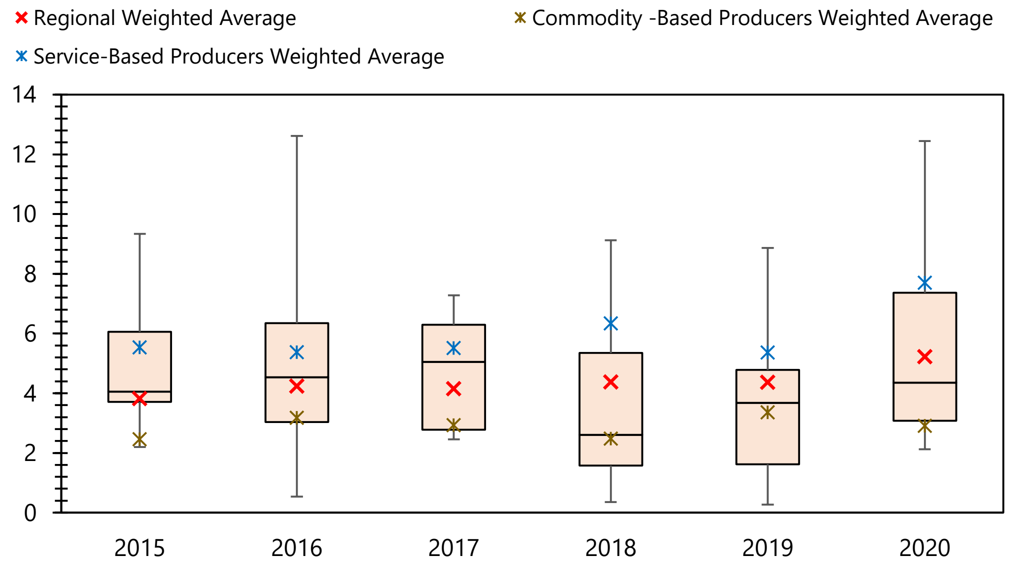


Source: : National Central Banks for Caribbean countries, September 2021.
Notes : ECCU and Haiti data not available ; Weighted Averages are weighted by Insurance systems assets ; Suriname Insurance system assets not available - 2020 data used as a proxy.

2.3.2 Profitability

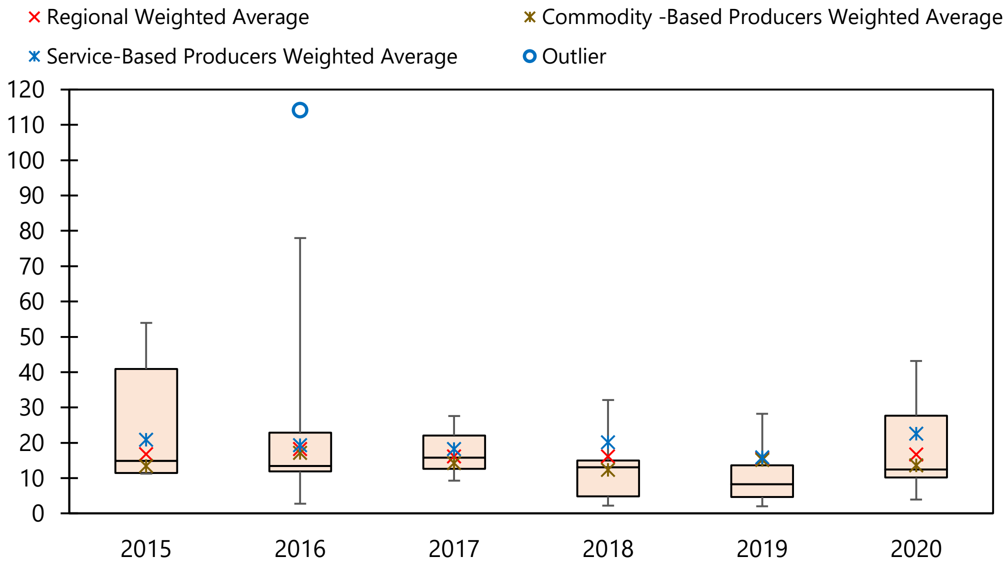
The average profitability for life insurance companies defined by the return on assets (ROA) has generally increased in the Region over the period 2015 to 2020 (see Figures 2.9). The average regional ROA for life insurance companies increased from 4.4 per cent in 2019 to 5.2 per cent in 2020. This was driven mainly by improvement in the average ROA for service-based economies from 5.4 per cent to 7.7 per cent between 2019 and 2020. In contrast, the average ROA fell slightly amongst commodity-based economies from 3.4 to 2.9 per cent between 2019 and 2020, partly because of lower returns on its investment portfolio due to fallout from the pandemic.

Figure 2.9: Life – Return on Assets (Life)



Source: : National Central Banks for Caribbean countries, September 2021.
Notes : ECCU and Haiti data not available ; Weighted Averages are weighted by Insurance systems assets; Suriname Insurance system assets not available - 2020 data used as a proxy.

Figure 2.10: Life – Return on Equity (%)



Source: : National Central Banks for Caribbean countries, September 2021
Notes : ECCU and Haiti data not available ; Weighted Averages are weighted by Insurance systems assets ; Suriname Insurance system assets not available - 2020 data used as a proxy.

Similar dynamics were observed for profitability as defined by the average return on equity (ROE) for the Region. The average ROE for the Region increased from 15.6 per cent in 2019 to 18.0 per cent in 2020 (see table 2.10). The performance was again driven by the service-based economies, as their average ROE rose from 15.9 per cent in 2019 to 22.6 per cent in 2020. However, for the commodity-based economies, the average ROE for that group of countries decreased from 15.2 per cent to 13.6 per cent over the same period.

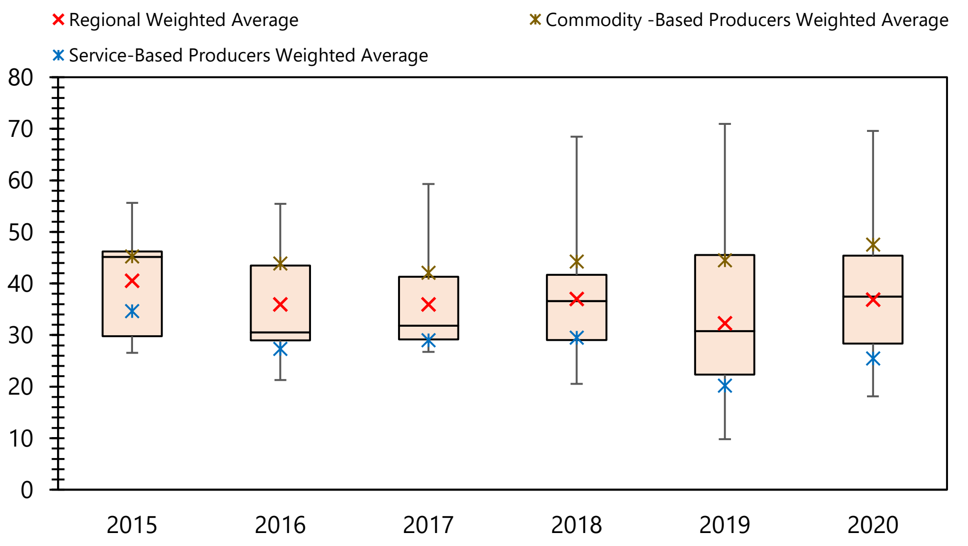
These average performances concealed significant variance in the performance of the life insurance sector in individual countries. In particular, the ROE for Jamaica, Suriname and The Bahamas improved significantly over the review period, while the ROE for Guyana, Trinidad & Tobago, Barbados and Belize declined significantly in 2020. This asymmetric response to the pandemic, combined with high levels of financial interconnectedness suggests that regional exposures in the regional life insurance industry need to be monitored carefully.

2.4 Non-Life Insurance

2.4.1 Capital Adequacy

Non-life insurers across the Region maintained adequate stocks of capital relative to their assets, with the regional capital to total asset ratio averaging above 30 per cent for the period 2015 to 2020 (see Figure 2.11). The regional average of the capital to total assets ratio for non-life insurance in the Region increased from 32.2 per cent in 2019 to 36.9 per cent in 2020. The commodity-based producers in the Region had relatively higher ratios, with this group recording an average capital to total asset ratio of 47.5 per cent in 2020, exceeding the 44.5 per cent in 2019. The average ratio of the service-based producers also rose from 20.1 per cent in 2019 to 25.5 per cent in 2020.

Figure 2.11: Non-Life - Capital/Total Assets (%)

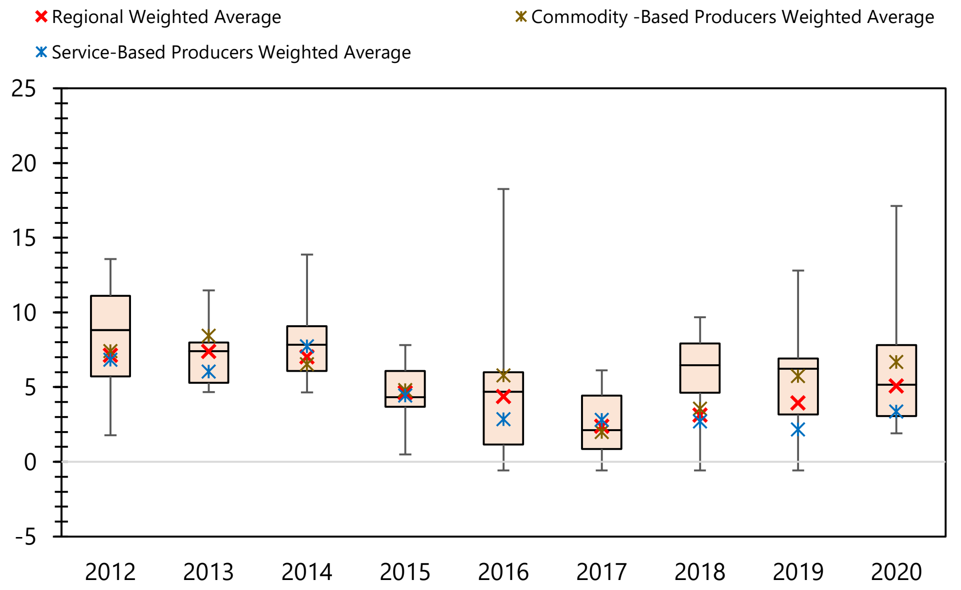


Source: National Central Banks for Caribbean countries, September 2021.
Notes : ECCU and Haiti data not available ; Weighted Averages are weighted by Insurance systems assets ; Suriname Insurance system assets not available - 2020 data used as a proxy.

2.4.2 Profitability

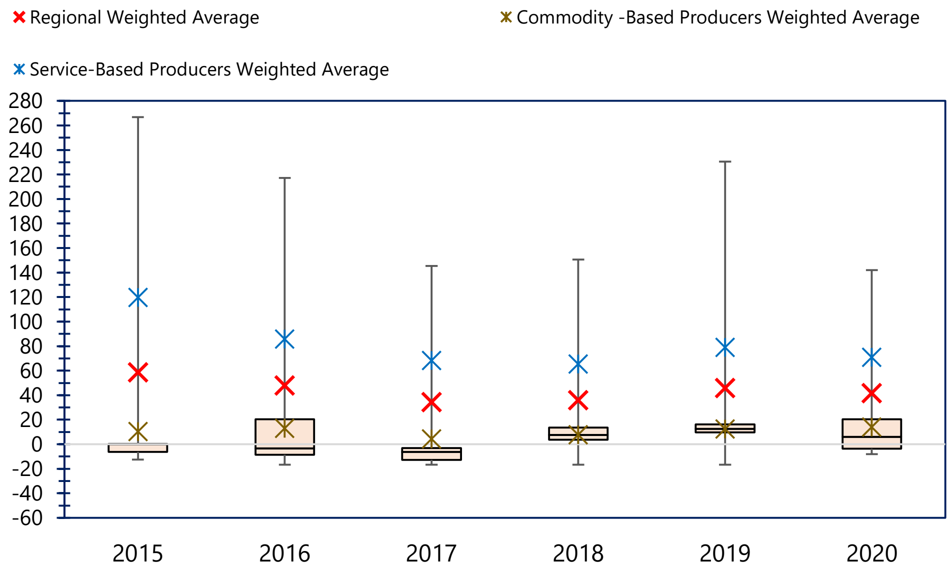
The regional average for the ROA for non-life insurance companies trended downwards from 2015 to 2017 but thereafter improved even in 2020 with the onset of the pandemic. The regional ROA moved up from 3.9 per cent in 2019 to 5.1 per cent in 2020, led by a jump in the ROA of both commodity and service-based economies. The same trends were observed when profitability is defined by ROE, with commodity-based economies having significantly higher profitability metrics relative to their service-based counterparts. This increase in profitability during a pandemic is largely attributable to lower net loss ratios, especially in the motor insurance segment of the market due to pandemic restrictions (see Figures 2.12 and 2.13).

Figure 2.12: Non-Life –Return on Asset (%)



Source: : National Central Banks for Caribbean countries, September 2021.
Notes : ECCU and Haiti data not available ; Weighted Averages are weighted by Insurance systems assets ;
Suriname 2020 Insurance system assets not available - 2019 data used as a proxy.

Figure 2.13: Non-Life –Return on Equity (%)



Source: : National Central Banks for Caribbean countries, September 2021.
Notes : ECCU and Haiti data not available ; Weighted Averages are weighted by Insurance systems assets ;
Suriname 2020 Insurance system assets not available - 2019 data used as a proxy.

Chapter 3: Assessment of Banking Sector Financial Risks in the Caribbean

3.1 Overview

The COVID-19 shock dominated stress test scenarios in 2020, as regional regulators sought to assess the resilience of their respective financial sectors to this extraordinary event. Stress test coverage remained predominantly confined to the banking system - the sector which accounts for the largest proportion of financial sector assets. Balance sheets were subjected to the conventional range of shocks to interest rates, credit and liquidity. Shock transmission via the macroeconomic and funding channels was emphasized in 2020. While most jurisdictions reported that the banking sector remained resilient in the face of the COVID-19 shock, there appeared to be increased susceptibility to credit risk. Regulators have extended forbearance to assist financial institutions in managing the fallout from COVID19, but with the impending sunset of regulatory forbearance in many jurisdictions, rising non-performing loans is likely to test capital provisions.

3.2 Updates to Regional Stress Testing Frameworks

With a number of countries upgrading their stress testing frameworks over the past few years, there have not been significant amendments to underlying frameworks since the last report. However, in early 2021 Suriname received technical assistance on stress testing from CARTAC. The Central Bank van Suriname advised that adjustments to the current stress testing model and assumptions are likely. In the case of Jamaica, while the framework has not changed since 2018, shocks were calibrated to account for the COVID-19 pandemic. The COVID-19 stress tests captured two scenarios, specifically an adverse scenario, as well as a severely adverse scenario. Liquidity, credit and market risks were assessed based on historically adverse events, with a COVID-19 factor applied to the shocks examined in each scenario based on the anticipated severity and duration of the impending crisis. The Bank of Guyana (BOG) also executed COVID-19 tailored stress tests. For the December 2020 COVID-19 stress test, the following scenarios were formulated and revised shocks (from June 2020) were calibrated:

- **Adverse Scenario 1**: Banks are required to book and maintain 20 per cent provision against the highest observed value of COVID-19 relief since the pandemic started in March 2020.
- **Adverse Scenario 2:** By end of three months, total relief granted increases 10 per cent[1] above the level at scenario 1.
- **Adverse Scenario 3:** By the end of six months, relief granted further increases by another 25 per cent.

The scenarios were based on three assumptions:

1. The assumed lockdown may result in a worse effect as observed during the March to September 2020 lockdown.
2. The BOG issues a prudential directive for all commercial banks to immediately book and maintain 20 per cent provisions against the total value of relief granted.

[1] The 10 per cent was determined by observing the change in relief granted over the March and June 2020 quarters. These quarters were in the peak of the lockdown and in consonance with assumption 1, the observed increase of 8 per cent formed the basis for determining the 10 per cent. A factor of 2 percentage points was added to the observed increase, thus resulting in the 10 per cent.

3. The value of relief granted increases by 10 per cent over the first three months following the assumed lockdown and another 25 per cent by the end of the sixth month.

The results of the COVID-19 test revealed a resilient banking sector. Across the three adverse scenarios, the banking sector recorded an average deterioration of CAR by 6.4 percentage points. When the adverse scenario 3 was applied, the sector reflected a post-shock CAR of 21.9 per cent, down 7.5 percentage points from an initial CAR of 29.5 per cent. No bank failed the COVID-19 stress test. Individual banks reflected deterioration ranging from 3.4 to 11.1 percentage points.

The Central Bank of Trinidad and Tobago updated the parameters of its single factor stress tests[2]. For example, the upward interest rate shock was tempered from 700 basis points to 500 basis points after consultation with commercial banks on the long-run trajectory of interest rates. For the credit shock, provisioning on performing loans was increased to 6 per cent from 1 per cent previously. The liquidity test applied additional granularity by simulating deposit runs for demand, savings and time deposits using daily runoff rates of 2 per cent, 1 per cent and 1 per cent, respectively. Liquidity balances were also adjusted for the exclusion of reserves for use in case of a run on deposits. The parameters would be reviewed annually and assumptions would be informed by quantitative and qualitative surveillance of the banking sector. Tangentially, work progressed on developing a macroprudential stress testing framework. The stress testing framework for insurance companies was issued for industry consultation in October 2020 and discussions continued with an international solutions provider for stress testing of the payments system. Preliminary discussions have also been held with the Trinidad and Tobago Securities and Exchange Commission, the securities market regulator, to conduct joint stress tests on an annual basis.

3.3 Regional Stress Test Results

3.3.1 Credit Risk Shocks

For Jamaica, at end-2020 deposit-taking institutions (DTIs) were adequately capitalized to absorb a hypothetical increase of 30.0 per cent in non-performing loans (NPLs), which was a similar performance relative to end-2019. Reverse stress testing exercises were also used to assess the magnitude of increases in NPLs that would cause the most vulnerable institution to fall below the 10.0 per cent benchmark. Results showed that a shock of 259.0 per cent would be required for an institution to breach the prudential minimum, a deterioration relative to the close of the previous year when a shock of 421.0 per cent was required. The sector also continued to be resilient to hypothetical shocks involving a 100.0 per cent decline in past-due loans less than three months. The results for the COVID-19 scenarios indicated that DTIs were most susceptible to credit-related shocks. Under the severely adverse scenario, if 40 per cent of performing 'retail' loans become non-performing, more than half of the DTIs would breach the capital adequacy minimum. The declines in CARs were primarily due to the magnitude of these institutions' exposure to corporates.

In the case of The Bahamas, credit stress tests scenarios considered NPL shocks of 100 per cent, 150 per cent and 200 per cent for forecasted years 2020 and 2021. Simulated impacts on profits were modelled through foregone interest income and increased provisions for impaired loans. The

[2] As of August 2020, the Basel II minimum regulatory capital requirement (MCR) of 10 per cent came into effect.

consolidated results consistently showed that at all magnitudes of shocks no capital injection requirement was assessed against the regulatory trigger ratio of 14.0 per cent. However, there was some capital injection requirement triggered at the 200 per cent NPL shock, when assessed against the regulatory target ratio of 17.0 per cent.

In Trinidad and Tobago, the large exposure credit shocks applied to the banking sector had a material impact on the post-shock CAR, which suggested some level of vulnerability. The credit shock to the Government of the Republic of Trinidad and Tobago (GORTT) Group, which accounts for 65 per cent of total large exposures, had the largest impact on the adjusted CAR. The ratio declined by double-digits, resulting in a post-shock CAR falling significantly below the regulatory minimum of 10 per cent. On a sectoral basis, a 50 per cent shock to the lending portfolio saw exposures to "Other Services" sector cause CAR to dip below the minimum of 10 per cent. In Guyana, the large exposure stress tests assessed potential defaults of the largest borrowers under three default levels: (1) the top borrower of each institution; (2) the top 3 borrowers of each institution; and, (3) the top 5 borrowers of each institution. The industry passed the large exposure stress test under all three levels, with the post-stress CAR well above 8.0 per cent. However, four institutions failed at the level 3 shock.

3.3.2 Interest Rate Risk Shocks

In 2020, the commercial banking sector in Trinidad and Tobago appeared somewhat vulnerable to significant upward interest rate movements (500 basis points), as this magnitude of shock caused the CAR to fall close to the regulatory minimum of 10 per cent on a Basel II basis. Despite the already lower interest rate environment, banks appeared more resilient to a 100 basis point decline in interest rates, with the CAR hovering around 18 per cent. For The Bahamas, the 2020 stress test results showed that interest rate risks remained low, given the infrequent movement in the Bahamian dollar prime lending rate. In the case of Jamaica, the results of interest rate risk stress tests showed that the sector's resilience to hypothetical shocks was unchanged for the year ended 2020 relative to end-2019, due to their strong capital positions.[3] Following large but plausible hypothetical increases in interest rates, the CAR for the sector remained above the prudential minimum. For the COVID-19 test, the DTIs were resilient under both adverse and severely adverse shocks. Of note, it would require an increase in market yields of 60.0 per cent and 90.0 per cent on GOJ domestic and global bonds, respectively, for the first DTI to breach the prudential benchmark.

3.3.3 Foreign Exchange Risk Shocks

In relation to the foreign exchange COVID-19 risk scenarios for Jamaica, all banks remained robust to the contemplated depreciation in the exchange rate. However, it would require a depreciation of 102.0 per cent for the first DTI to fall below the 10.0 per cent prudential minimum. The standard stress test showed that the DTIs remained generally resilient to the hypothetical depreciation of the Jamaica Dollar vis-à-vis the U.S. dollar at the end of 2020.[4] This result was obtained despite most DTIs holding short positions at the close of the year. DTIs generally held short positions during the review period in anticipation of potential liquidity needs. In addition, the foreign exchange stress test included an

[3] This interest rate stress test is characterized as interest rate increases of 1100 bps/ 100 bps & 275 bps/ 15 bps on domestic and foreign rate sensitive assets

[4] Shocks are applied first to the exchange rate between the Jamaica Dollar and the US dollar. The corresponding exchange rates of the Jamaica Dollar vis-à-vis the Euro, the Canadian dollar, and the Pound Sterling are then incorporated based on historical correlations with the selling rate for the US dollar between the January and May 2003 foreign exchange crisis period.

increase in NPLs and the associated 100.0 per cent provisioning for foreign currency loans to non-FX earners. The analysis showed that at end-2020 most institutions were able to withstand a 30.0 per cent depreciation shock, similar to the performance at end-2019. DTIs were also largely resilient to a 30.0 per cent appreciation shock, with the post-shock CAR of most impacted entities remaining above the 10.0 per cent CAR benchmark.

The banking sector in Trinidad and Tobago appeared to be resilient to significant exchange rate shocks, as 2020 stress test results revealed that CAR measured 17.7 per cent when a 40 per cent depreciation shock was applied to the exchange rate. Foreign currency stress tests conducted by the Bank of Guyana estimated the impact on the banks' capital of depreciation or appreciation of the Guyana dollar (G$) against the four major trading currencies (US$, EURO, GBP & CAN), as well as all other foreign currencies in which the banks have assets and liabilities. The system remained resilient to exchange rate changes, requiring an 87.5 per cent appreciation (0.4pp below December 2019) of the Guyana dollar to reduce CAR to the prudential minimum. However, only two banks showed vulnerability to this extreme shock.

3.3.4 Liquidity Risk Shocks

On the liquidity front, all institutions in Jamaica were robust to the assumed shock under the adverse scenario. However, for the severely adverse scenario involving a 40.0 per cent reduction in deposits, two DTIs would become susceptible due to insufficient liquid assets to cover these losses. As it relates to funding sources, deposits continued to dominate the DTIs' funding base. Against this backdrop, liquidity risk stress tests were used to examine hypothetical declines in deposits. Following a hypothetical decline of 10.0 per cent in average deposits, the sector maintained the regulatory minimum. Similar to the previous year, a decline of 40.0 per cent would be enough to push the first institution below the prudential benchmark at the end of 2020.

The banking sector in Trinidad and Tobago appeared comfortable with all banks performing above the 30-day deposit run benchmark. However, the commercial banking sector became illiquid in 21 days when reserves were excluded from the pool of liquid funds that may be drawn down to meet a run on deposits, 16 days sooner than if reserves were available. For the Bank of Guyana's 2020 liquidity stress test, the respective run-off rates and percentage of liquidity drawn from 'other assets' were standardized to reflect three scenarios: 5/5, 3/7 and 0/10. Across all three scenarios, the industry on average could withstand a run on total deposits for nine days. However, when only demand deposits were assessed, the system, on average across the three scenarios, endured more than 30 days. When savings and time deposits were assessed, the industry endured on average 13 days. Meanwhile, in The Bahamas risks to near-term depletion of liquidity were negligible given the high excess liquidity, a sustained cautious lending posture, and limited investment opportunities for surpluses.

Chapter 4: Regional Systemic Risk

4.1 Overview

The capacity of Caribbean financial regulators to identify and assess systemic risk has continued to be strengthened through improved technical capabilities and regulatory mandates. Defenses against potential systemic threats to financial stability were tested in the regional financial sectors as a result of the COVID-19 pandemic, which saw many countries regionally and globally close their borders, affecting some of the Caribbean's main economic drivers, such as tourism and remittances. This has led to increases in the vulnerability to systemic risks due to a decline in unemployment and funding mechanisms. Further, the macroprudential and credit cycle indicators reflect the mainly negative effects the pandemic has had on the Region's financial stability.

Against this background, jurisdictions have continued to move forward in their efforts to formalize their overall financial stability and macroprudential structures. The progress has in some cases slowed down due to the pandemic's strain on regional resources and the shift in regional priorities. Jamaica has amended legislation (the BOJ Act) to establish a Financial Policy Committee that will make macroprudential policy decisions to curtail systemic risks, based on recommendations from their Financial System Stability Committee (FSSC), which currently has responsibility for macroprudential oversight. The Monetary Union of Curaçao and Sint Maarten will be conducting a project aimed at assessing the systemic importance of domestic institutions and strengthening their crisis framework in 2021. Trinidad and Tobago have also indicated ongoing reforms to their domestic systemically important financial institutions (D-SIFI) framework. Similarly, although a formalised D-SIFI policy may not be in place, other jurisdictions can carry out D-SIFI identification using the CARTAC approach previously introduced in the December 2018 workshop.

In this regard, this chapter highlights the cross-border funding relationships in the Region and the systemic importance of specific countries in the Caribbean. Macroprudential surveillance of the cross-sectional dimension of systemic risk continues to be weak in the Region. The pandemic has highlighted the continued importance and clustering of financial services between Barbados, Jamaica and Trinidad and Tobago compared to the rest of the Region, as well as, the strong dependence on external economies. Financial conglomerates continue to dominate in the Caribbean, many of which have been flagged as D-SIFIs in various jurisdictions, leading to sustained concentration risks in comparison to the previous review period.

4.2 Systemic Risk Assessment in the Caribbean

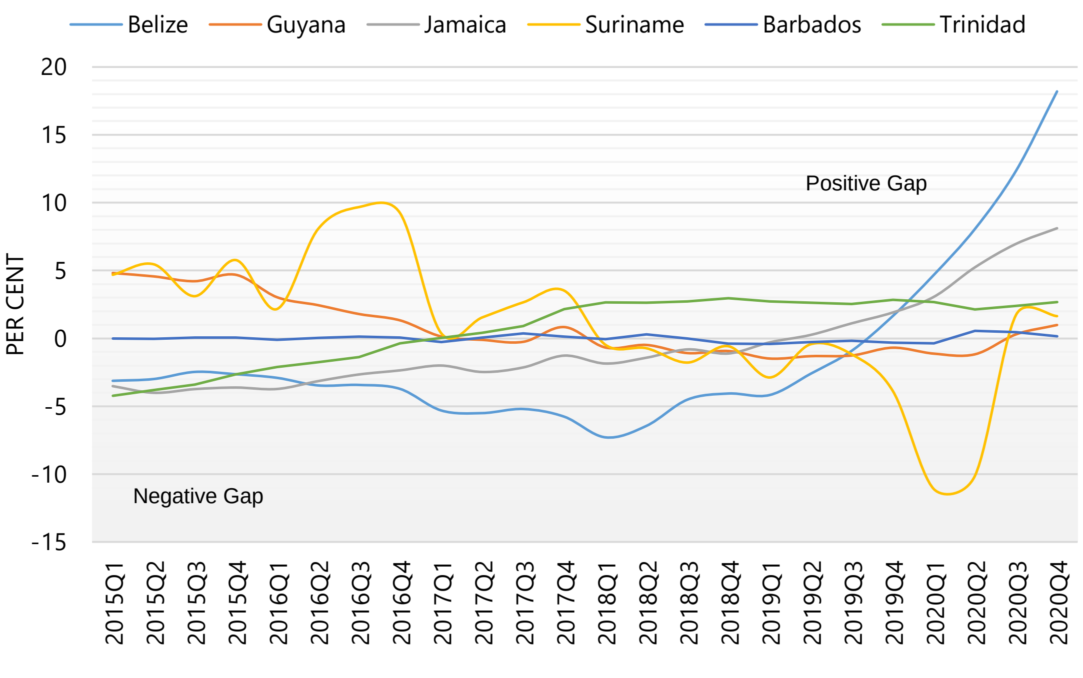
4.2.1 Regional Credit-to-GDP Gaps

The Credit-to-GDP gap metric captures the build-up of a country's total credit-to-GDP ratio relative to its long-term trend. This indicator is used to signal whether credit risks to the financial system are elevated. At end-2020, the credit-to-GDP gap in all reporting Caribbean countries indicated heightened credit risks when compared to the previous report at end-2018 (Figure 4.1). More specifically, the regional credit-to-GDP gaps reflected a positive outturn for the review period highlighting the increased risk environment caused by the COVID-19 pandemic. The lowest credit-to-GDP gap in the Region was recorded by Guyana at -1.2 per cent, while the highest was recorded in

Belize at 18.2 per cent. Notably, Jamaica and Belize experienced a turning point from a negative to a positive gap by the end-2019, while Barbados and Suriname experienced a turning point in late 2020 when the effects of the pandemic began to materialise. Trinidad and Tobago's credit gap has been consistently positive since 2015.

Further, the Region's data showed a persistent deterioration of credit conditions since the last reporting period in 2018. Service-based producers and commodity exporters, except Guyana, have been increasingly characterized by positive credit-to-GDP gaps. This was due in large part to the slowdown in economic activity caused by the COVID-19 containment measures implemented in the various jurisdictions. The performance for Jamaica was a result of increased private sector credit and a strong contraction in GDP. The growth in private sector credit occurred against the background of BOJ's continued easing of monetary policy to maintain low and stable inflation. In the case of Barbados, Suriname and Belize, macro-economic challenges reversed the negative credit-to-GDP gap trend experienced in 2018. More specifically, travel restrictions negatively impacted the tourism sector and economic growth as a whole. In contrast, Guyana was able to sustain a negative credit-to-GDP gap, as its economy remained largely resilient to the adverse economic impact of the COVID-19 pandemic due to its growing petroleum sector. Nevertheless, the outturn for all reporting countries except Belize, continued to be below the Bank of International Settlements' (BIS) upper threshold of 10.0 per cent.

Figure 4.1: Caribbean Credit-to-GDP Gaps



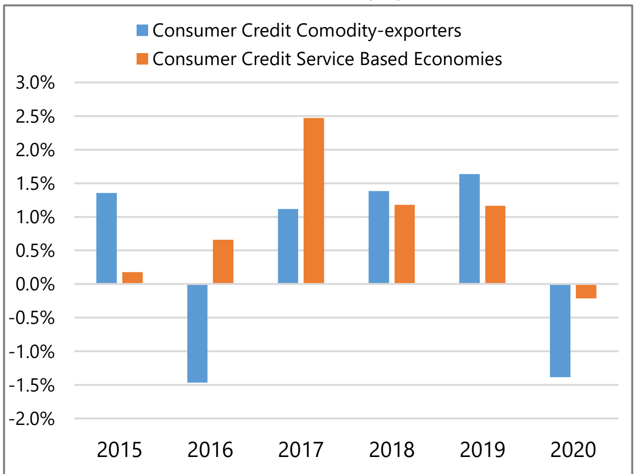
Source: Regional Central Banks, CERT (September 2021).

4.2.2 Other Credit Cycle Indicators

Growth rates for private sector credit, as well as consumer, business and real estate loans, are also critical aspects of credit cycle assessments. Based on quarterly data from 2015 to 2020, there was weak growth in consumer credit across both commodity-exporting and service-based economies in the Caribbean up to the end of 2019. In 2020, however, there was a decrease in consumer credit in both commodity and service-based economies (Figure 4.2). Notably, consumer credit has fallen consistently since 2015 in the ECCU and The Bahamas, as well as, in Suriname from 2016. Jamaica has been the exception, outperforming other regional jurisdictions in terms of both business and consumer credit growth – a testament to the effectiveness of the reforms which they have been implemented.[5]

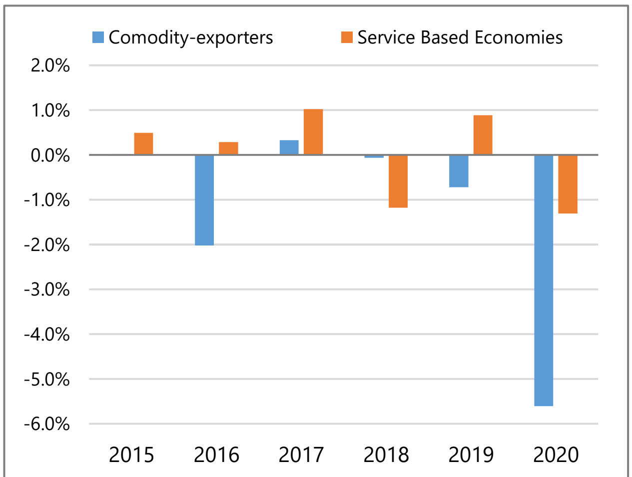
In contrast, business credit growth has consistently decelerated, on average, across commodity exporters in the Region since 2018 while, on average, service-based economies experienced an uptick in their business credit growth in 2019. In 2020, there was a deceleration in the pace of growth of business credit in most jurisdictions, except Jamaica, Belize and the ECCU, which displayed sustained growth between 2018 and 2020 (Figure 4.3).

Figure 4.2: Consumer Credit Growth in the Caribbean (%)



Source: Regional Central Banks, CERT (September 2021).

Figure 4.3: Business credit Growth in the Caribbean (%)



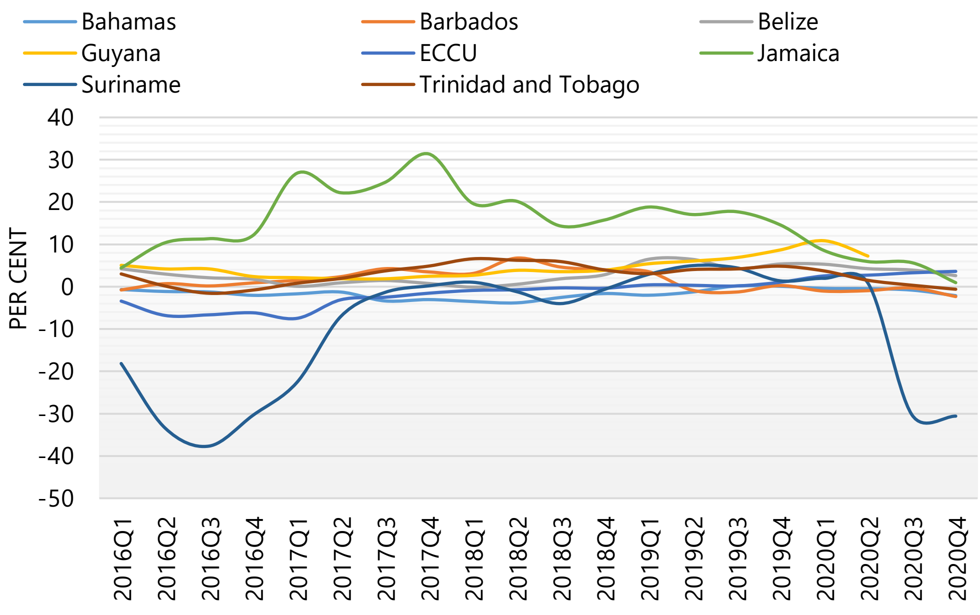
Source: Regional Central Banks, CERT (September 2021).

The annual growth in private sector credit remained relatively stable for all reporting jurisdictions, except Suriname (Figure 4.4). Notably, due to the negative effects of the COVID-19 pandemic, private sector credit growth decreased in the Region in the third and fourth quarters of 2020. In terms of loan concentrations, consumer credit accounted for roughly 39.0 per cent of the loan portfolio in service-based economies throughout 2018-2020 while real estate/construction credit accounted for approximately 36.0 per cent of their loan portfolio (see Figure 4.5). Notably, consumer credit concentrations were highest in Trinidad and Tobago, Barbados and Jamaica. Additionally, commodity-based economies generally had a larger share of their loan portfolios concentrated in real estate (36.0 per cent) and business credit (35.0 per cent) over the review period. Real estate credit concentration was highest in The Bahamas, Barbados and Trinidad and Tobago. Business credit concentration was

[5] Reforms made in Jamaica included (but are not limited to) fiscal consolidation and imposing an inflation targeting monetary policy regime.

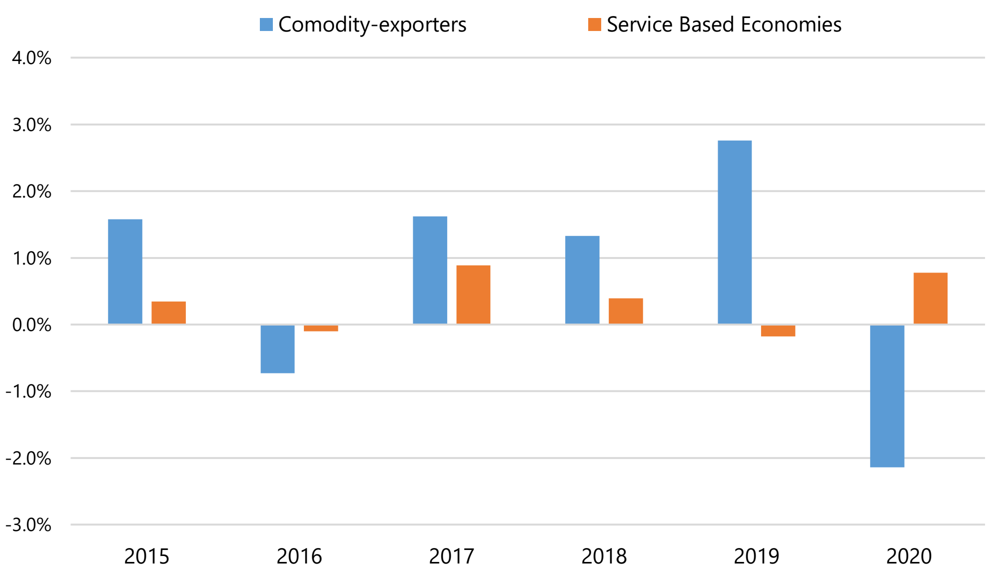
also high in Barbados, Jamaica and Trinidad and Tobago—the three largest economies in the Caribbean.

Figure 4.4: Private sector Credit Growth



Source: Regional Central Banks, CERT (September 2021).

Figure 4.5: Real Estate Credit Growth in the Caribbean (%)



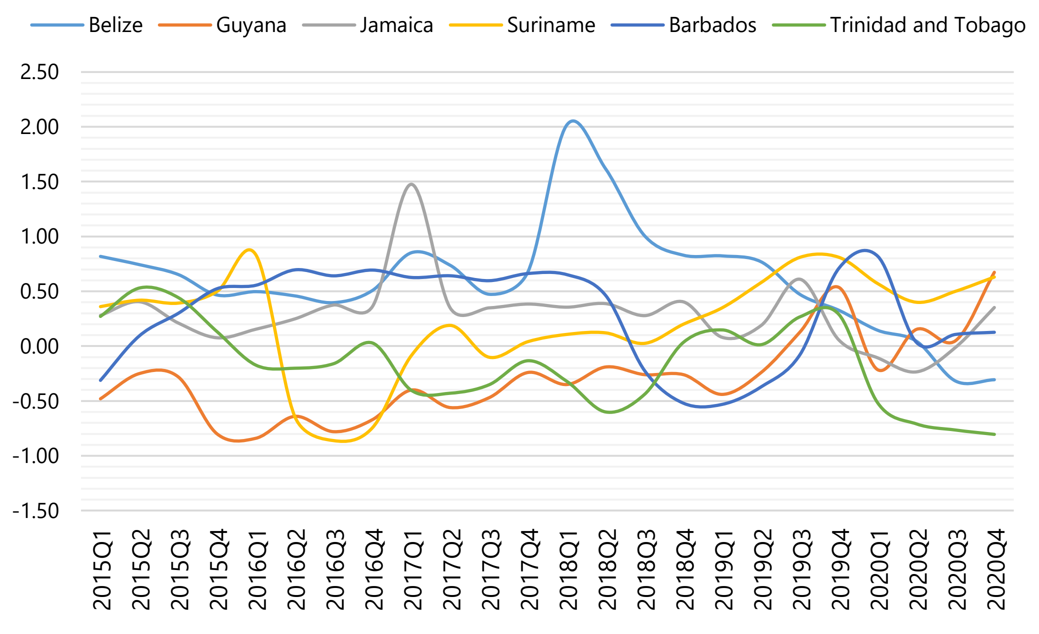
Source: Regional Central Banks, CERT (September 2021).

4.3 Key Macro-prudential Indicators

4.3.1 Banking Stability Index (BSI)

Over the period of 2018 to 2020, the BSI showed that banking conditions have been broadly stable in Suriname, Barbados and Trinidad and Tobago (Figure 4.6).[6] Though conditions in the Jamaican banking sector had been generally stable, there was a notable fall in the country's BSI for 2020. This result was due to marginal declines in profitability and liquidity, which were partially offset by improved asset quality and tempered interest rate risks. In the case of Guyana, there was a marginal decline in the BSI between 2018 and 2019. However, there were signs of improvement in Guyana's BSI by end-2020 as a result of increased capital adequacy and a boost in asset quality. Notably, the BSI for Barbados has increased between December 2019 to December 2020 due primarily to enhanced asset quality and capital adequacy. Furthermore, Trinidad and Tobago recorded significant improvements in its BSI between 2018 and 2019 due to asset quality but recorded a deterioration in 2020 owing to decreases in profitability.

Figure 4.6: Banking Stability Index



Source: Regional Central Banks, CERT (September 2021).

4.3.2 Aggregate Financial Stability Index (AFSI)

The AFSI for the reporting jurisdictions in the Region displayed consistent levels of resilience to a range of financial stability risks over the period 2018 to 2020 (Figure 4.7).[7] Belize's AFSI fell by its largest margin in 2020 as the AFSI contracted from 0.6 in 2018 (and 2019) to 0.5 in 2020. The contraction in Belize's AFSI mainly reflected the adverse effects caused by the pandemic on local and global

[6] The BSI is an aggregate financial stability indicator, which combines partial indicators: Soundness, Asset Quality, Profitability, Liquidity, Interest Rate Risk and Foreign Exchange Risk. The index assesses each in terms of standard deviations from its historical average (effectively standardizing or normalizing each partial indicator such that it has a mean of zero and standard deviation of 1. Averages are computed for a 10-year period. In the absence of a 10-year series, the available data was used.

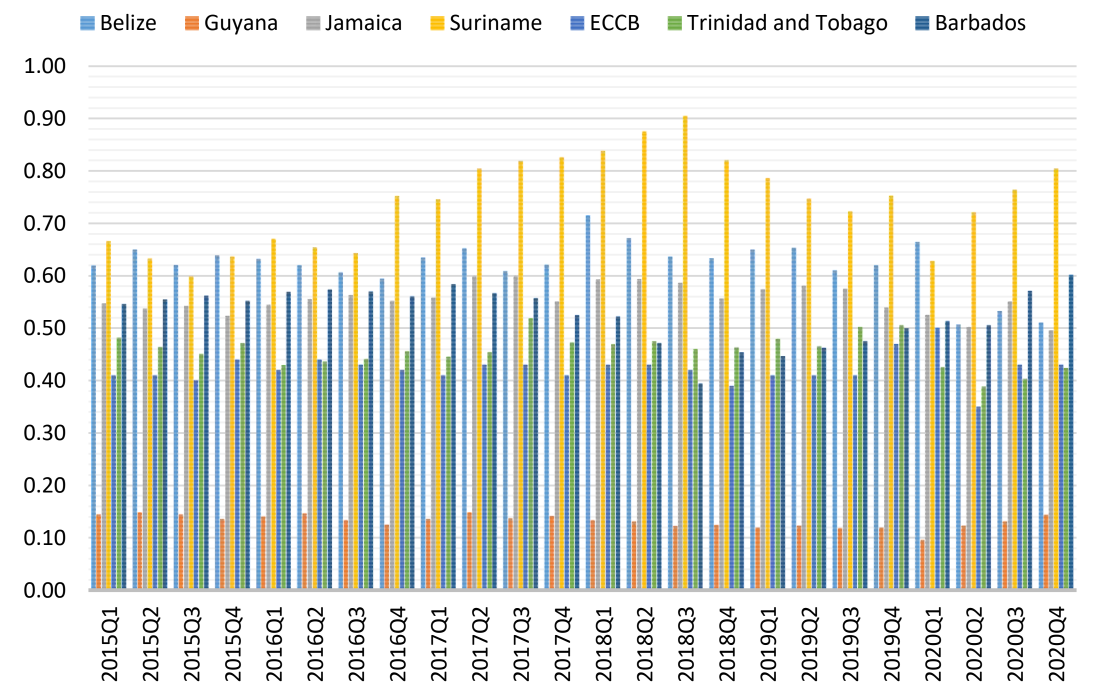
[7] The Aggregate Financial Stability Index is computed as a weighted average of normalized balance sheet and macroeconomic partial indicators, capturing financial development (FDI), financial vulnerability (FVI), and financial soundness (FSI).

economies. However, the country's domestic banking sector remained resilient against the external shock, as the system showed signs of continued financial deepening amid the pandemic.

In Jamaica, the financial soundness, financial development and world economic climate sub-components of the AFSI declined slightly for the review period, while the financial vulnerability sub-component was relatively unchanged. Although there were positive developments in the credit environment and a narrowing of the interest rate spreads, Jamaica's decline in GDP and reduced stock market capitalization resulted in an unfavourable outturn in the financial development sub-component. The deterioration in the financial soundness and world economic climate sub-components of the AFSI was due to an increase in the non-performing loans (NPL) to total loans ratio of DTIs, as well as the economic downturn.

At the end of 2020, a decline in the financial vulnerability and financial soundness sub-indices contributed to an overall decline in Trinidad and Tobago's AFSI when compared to 2018. This weakening was primarily attributable to the severe and unanticipated macro-financial shocks from the COVID-19 pandemic. During 2019, the AFSI improved relative to 2018, as expansion in the financial development and financial soundness sub-indices offset negative external financial stability conditions. However, these gains were reversed during 2020 mainly as a result of contractions in profitability and capital buffers, accompanied by the deterioration in economic activity during the pandemic. In contrast to other reporting jurisdictions, Barbados did not experience any decline in the AFSI at the beginning of the pandemic. Instead, financial sector stability continued to improve between the end of 2019 and the end of 2020, an indication of the resilience of the financial system to the macroeconomic shocks caused by the COVID-19 pandemic.

Figure 4.7: Aggregate Financial Stability Index



Source: Regional Central Banks, CERT (September 2021).

4.4 Systemically Important Financial Institutions in the Caribbean

Systemically important financial institutions (SIFIs) are financial institutions whose failure can trigger material disruptions to the entire financial system and ultimately to the real economy due to their size, lack of substitutability, complexity and interconnectedness. These institutions are not only "too big to fail" but "too systemic to fail" which highlights the risks posed to financial stability and the importance of establishing proper resolution regimes in the various jurisdictions, as well as regionally. Notably, although Jamaica aims to incorporate financial conglomerates into its D-SIFI policy, most D-SIFI designation and contemplated policy responses in the Region have continued to be focused mainly on deposit-taking institutions as a result of regulatory portfolios and ease of implementation.

The footprint of regional D-SIFIs continues to expand and the number of designated SIFIs in the various jurisdictions being reviewed changed marginally in comparison to the previous 2018 report. Some jurisdictions have gone on to designate more SIFIs, and the systemic role of insurance companies—mainly those within regional financial holding companies, has been highlighted. The existence of complex group structures and their business models continues to be a vulnerability for regional financial stability and jurisdictions' ability to mitigate systemic risks. It is therefore imperative in a post-COVID-19 environment to strengthen regulation and consolidated supervision to address these risks.

In December 2018, the Bank of Jamaica in collaboration with CARTAC conducted a regional workshop entitled, "Macroprudential Regulation of Systemically Important Financial Institutions in the Caribbean", to support national authorities in the identification of domestic SIFIs. A Basel recommended approach that encompasses assessment criteria such as size, substitutability, interconnectedness and complexity was used. Based on available information, the number of D-SIFs in the Region is outlined in Table 4.1.

Table 4.1: SIFIs in the Caribbean as at end-2020

Country	Deposit-taking Institution[8]
Bahamas	7
Belize	3
Barbados	n/a
Curaçao and Sint Maarten	1
ECCU	n/a
Guyana	3
Jamaica	3
Suriname	4
Trinidad and Tobago	6

Source: Regional Central Banks, CERT (September 2021)

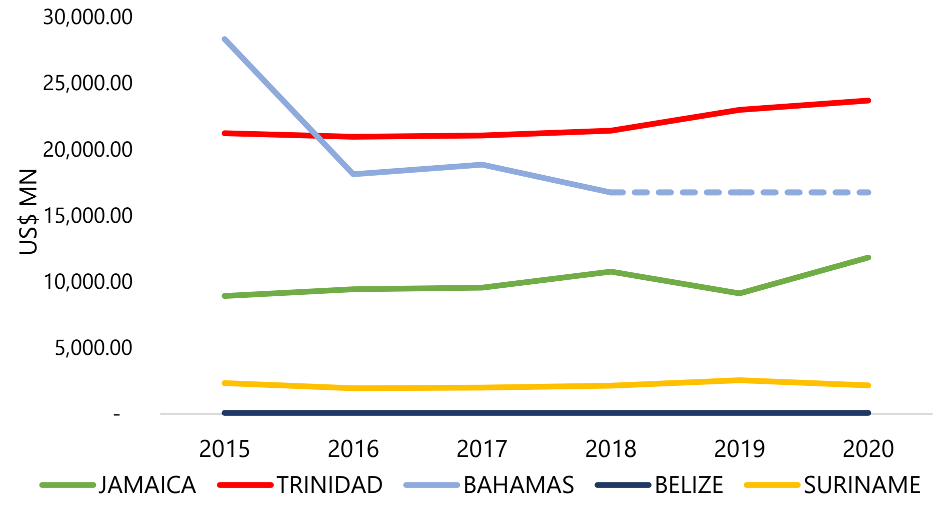
In total, twenty-seven entities were identified as SIFIs within the Region at the end of 2020. The Bahamas, which continued to have the highest total number of D-SIFIs for any country within the Region, had seven banks designated as SIFIs, while Trinidad and Tobago's D-SIFIs increased to six for the review period (see Table 4.1). All other countries in CARICOM reported having three D-SIFIs, except Suriname, which had four. In particular, insurance companies have demonstrated increased systemic

[8] Deposit-taking institutions include commercial banks, building societies, merchant banks and credit unions.

importance in some jurisdictions. Notably, also, Curaçao and Saint Maarten were the only jurisdiction to indicate pension funds playing a systemic role in their financial system.

Total SIFI assets for the Region were US$38.0 billion at the end of 2020, which reflected an increase of 9.3 per cent relative to the previous year. However, when compared to end-2018, total SIFI assets declined by 25.6 per cent. Furthermore, approximately 86.0 per cent of all SIFIs assets belong to SIBs. Specifically, Jamaica, Trinidad & Tobago and Suriname had banking SIFIs assets to total SIFI assets ratios ranging from 79.0 per cent to 100.0 per cent (see Figure 4.8).

Figure 4.8: Total Assets of Systemically Important Financial Institutions



Source: Regional Central Banks, CERT (September,2021).

Total SIFI assets have remained largely constant over the years except in Jamaica and Trinidad and Tobago which saw a general increase in their trend. Notably, Trinidad & Tobago continued to account for the lion's share of total SIFI assets in the Region at US$23.7 billion at the end of 2020, with six SIFIs identified, an increase relative to the previous reporting period.

Further, the Basel framework was utilised to identify which countries in the Caribbean were the "most systemically important" for the smooth functioning of the regional financial system. As a result of data limitations, the score was calculated using the dimensions of size, structure & substitutability, and complexity. Trinidad and Tobago, Jamaica and Barbados, ranked accordingly, were found to be the systemically important jurisdictions in the Caribbean. Notably, Trinidad and Tobago's systemic importance score was almost three times higher than the jurisdictions that ranked second and third, dominating all categories for the score computation. Jamaica scored highly in the size and structure criteria, while Barbados' significance was mainly evident in the complexity criterion.

Potential sources of contagion in the Caribbean via SIFIs have been mostly unchanged relative to the 2018 report and include:

- Potential of liquidity squeeze and credit crunch, due to the impact of the COVID-19 pandemic on jurisdictions and the potential for these stressed conditions to spill over into the Region via regional financial groups;
- Inadequate financial group supervision across borders;

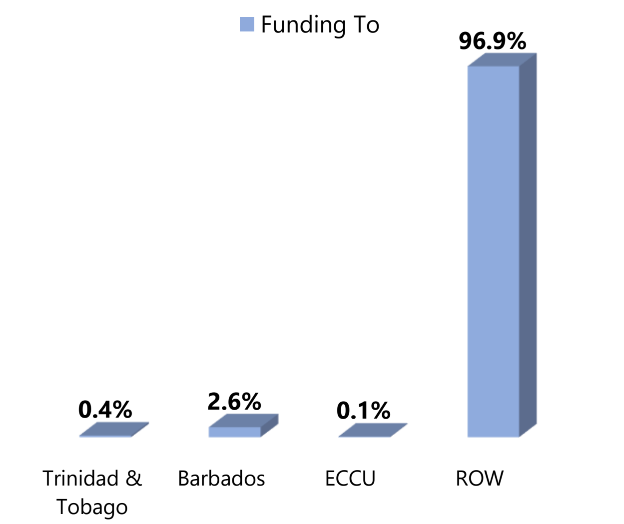
- The activities of non-deposit taking institutions that are members of financial groups;
- Common asset market exposures across regional FIs, including sovereign instruments, corporate bonds, equities and foreign currencies;
- Inadequate cross-border regulatory cooperation and capacity to effectively control network risk between groups.

4.5 Cross-Border Banking System Exposures

An analysis of the cross-border exposures of three Caribbean countries was conducted based on data availability, where a cross-border banking exposure is a claim on, or, liability to a counterparty bank located in another country. As expected, most of the countries assessed had significant banking exposures with economies, such as the United States of America (USA) and Canada. There was also notable exposure to the United Kingdom, Europe and other countries outside the western hemisphere. Countries outside of the Caribbean are referred to here as the Rest of the World (RoW). The analysis found that these countries all had exposures to Trinidad and Tobago, while two were exposed to Barbados.

Belize's most significant exposures were to the USA and the UK. Regionally, its exposure to Barbados was the most dominant (Figure 4.9). Jamaica recorded significant exposure to other Caribbean countries, with The Bahamas, Barbados, the ECCU, and Trinidad & Tobago making up part of its top five funding system exposures (Figure 4.10).

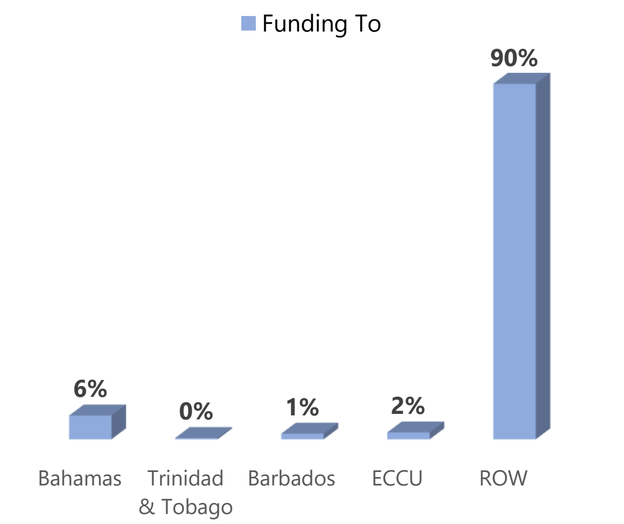
Figure 4.9: Belize Banking System's "Funding To" Exposure Composition



ROW category represents countries: United States of America, United Kingdom , Canada, Cayman Islands, Puerto Rico and Germany.*

Source: Regional Central Banks, CERT (September,2021).

Figure 4.10: Jamaica Financial System's "Funding To" Exposure Composition

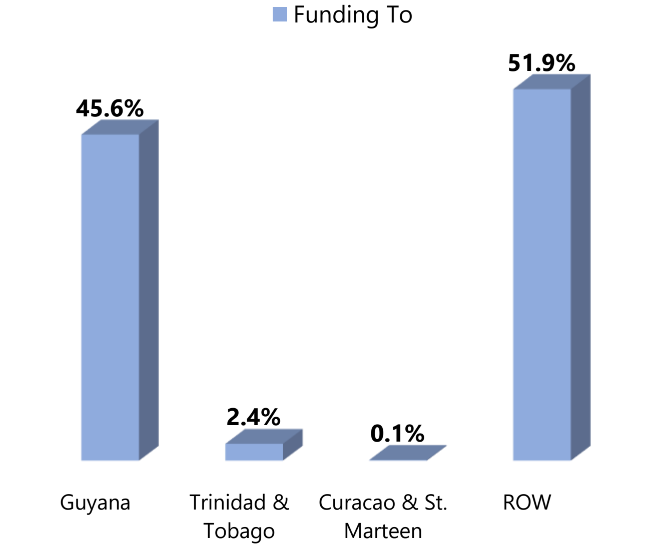


ROW category represents countries: United States of America, United Kingdom , Canada, Cayman Islands, Cuba, Panama, Mexico, Japan, Dominican Republic, South Africa, US Virgin Islands and Germany.*

Source: Regional Central Banks, CERT (September,2021).

The countries to which Jamaica was exposed was the most varied, with the USA being the most significant, along with countries such as Canada, the UK and Cayman Islands. Suriname recorded

Figure 4.11: Suriname Financial System's "Funding To" Exposure Composition



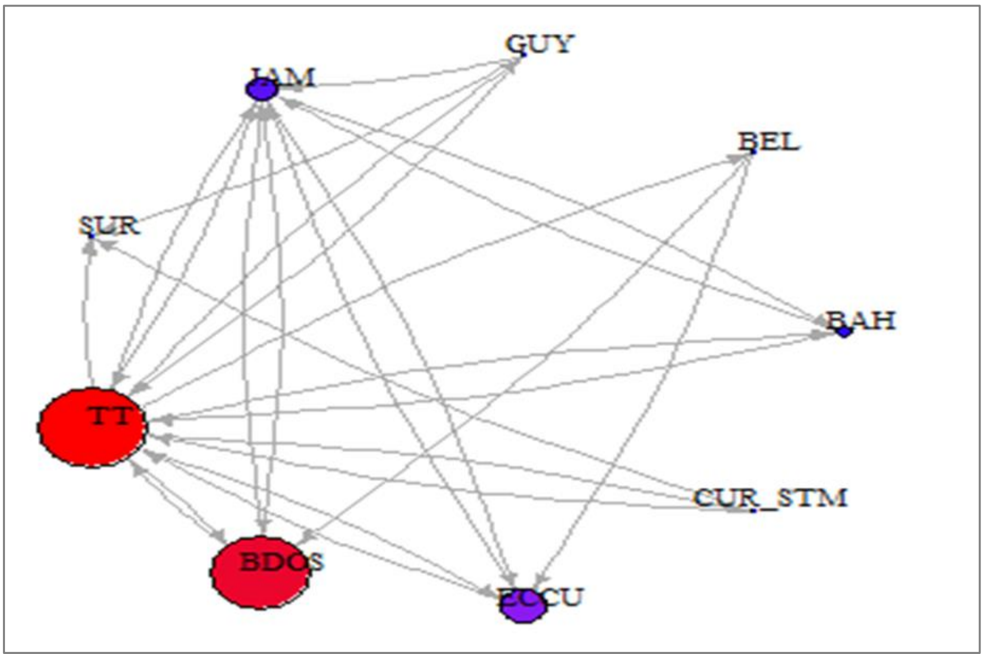
ROW category represents countries: United States of America and Netherlands*
Source: Regional Central Banks, CERT (September,2021).

significant exposures to the Netherlands, as well as its neighbour Guyana. Notably, Suriname also had funding relationships with Trinidad and Tobago and The Monetary Union of Curaçao and Saint Maarten (Figure 4.11). When exposures for the three Caribbean[9] countries assessed for 2020 were aggregated, their total banking system exposure relative to their commercial banking total assets was 3.8 per cent. The largest exposure or vulnerability continued to be the North American Region, which emphasizes its importance to the Region's banking system.

4.6 The Caribbean Cross-border Banking System Network

The interconnectedness of the Region was further assessed using network analysis. This analysis was performed on gross cross-border banking exposures. The results support the central role Trinidad & Tobago and Barbados play in the regional banking system (Figure 4.12).

Figure 4.12: Gross Cross-border Exposure network for the Caribbean Countries Assessed

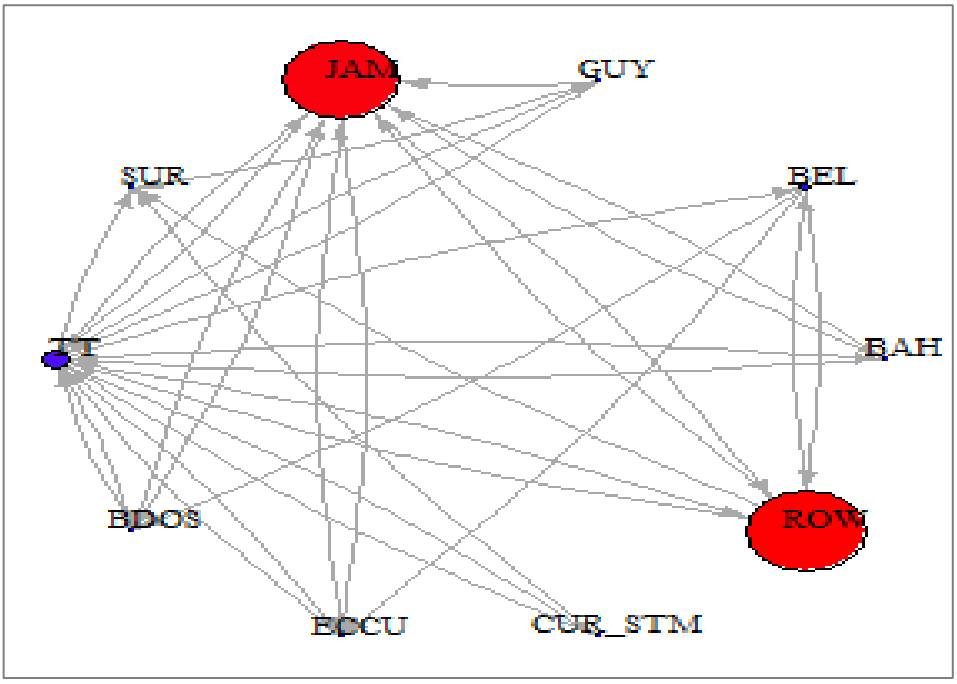


[9] Caribbean Region here refers to the select Caribbean countries: Aruba, Bahamas, Barbados, Belize, Curacao and Saint Maarten, ECCU, Guyana, Haiti, Jamaica, Suriname and Trinidad & Tobago

The network also indicated that Jamaica and the ECCU played notable roles in regional funding. Analysis showed that there was a high level of reciprocity at 72.0 per cent and that the network had a relatively high fragility score of 7.7.

When external exposures were incorporated into the network, Jamaica became the most central Caribbean participant. Highlighting the fact that Jamaica has more funding relations with the RoW than with countries within the Region. RoW's critical role in funding relations with the Caribbean as a whole was also highlighted. The reciprocity and fragility scores increased to 75.0 per cent and 8.7, respectively, following an increase in the counterparties (Figure 4.13). The networks illustrate that countries are willing and able to carry out transactions with each other despite the pandemic, however, the potential threat to the Region of spillover risks is elevated due to a high level of interconnectedness, as well as, its reliance on external markets.

Figure 4.13: Global Gross Cross-border Exposure Network



Chapter 5: Policy Initiatives for Maintaining Financial Stability

5.1 Overview of Policy Initiatives

The Caribbean has faced several challenges since the publication of the 2015 RFSR, which have driven the reform of the architecture for financial stability in the Region. The Region is dealing with the unprecedented shock of the COVID-19 pandemic. At the same time, the Caribbean remains disproportionately impacted by global "de-risking" trends, the increasing frequency and intensity of hurricanes and exposure to a host of structural vulnerabilities. Additionally, the need to adjust their AML/CFT and capital standards based on more comprehensive and intrusive international standards have placed additional burdens on the limited resources in the Caribbean. The Region also has to respond to the increasing importance of Fintech, the associated increased prevalence of cyber-risks and the regulatory challenges this entails. Increasing interconnectedness in the financial system has also created elevated contagion risks along with the benefits of a larger and more efficient financial sector.

In response to these vulnerabilities and risks, countries have been implementing unprecedented policy initiatives to deal with the COVID-19 pandemic, AML/CFT enhancements, the required infrastructure and legislative framework for Fintech, improvements in their regulatory and supervisory architecture, especially as it relates to SIFIs, updated prudential standards, enhancements to national payments systems infrastructure and legislation and conducting national risk assessments (NRAs).

5.2 COVID-19 Financial Stability Policy Responses

The monetary authorities in the Region responded to the COVID-19 pandemic with a set of policy measures to limit the impact of the pandemic on the financial system and to preserve financial stability. Policy measures such as the lowering of policy rates, reduction in the primary reserve requirements for banks, government bond purchases and redemption of central bank securities, the removal of penalties on overnight borrowing by commercial banks, the temporary relaxing of standards for non-performing loan classification and the fine-tuning of policies to support operational resilience, such as business continuity plans, crisis management plans and resolution framework (See Appendix 1 for a more detailed list of COVID-19 policy responses in the Caribbean). The fact that the trajectory of the COVID-19 pandemic is uncertain means that the monetary authorities must be careful not to remove supportive measures too soon. The fact that these unprecedented policy measures are not without risks also means that policymakers must have a clear view of the timing of the exit strategy for these initiatives. Moreover, policies such as supporting liquidity in the foreign exchange market and guidelines to ensure continued compliance with AML/CFT rules may need to be sustained, even after the worst of the pandemic has passed.

The coverage of the policy response to the COVID-19 pandemic was also relatively complete and required close collaboration between the monetary and fiscal authorities. In particular, there needed to be close coordination of monetary and fiscal policy. The lending support in terms of government guarantees and relief for households and corporates required the backstop of governments. Funding support both in terms of domestic and foreign currency also required a government backstop. This process must be carefully managed to maintain the operational and policy autonomy of central banks.

The critical importance of financial technology in the financial sector and the acceleration of digitalization in the wake of the pandemic have required that countries in the Region prioritize the development of the regulatory architecture for Fintech. Most jurisdictions have been developing their systems to address the emergence of private digital currencies, other Fintech based experiments and the studies and pilot projects on central bank digital currencies. In this context, two jurisdictions in the Region (The Bahamas and the ECCU) have already begun rolling out their national digital currencies.

The Central Bank of Trinidad and Tobago has completed a draft E-money Policy which was issued for public consultation in November 2018. It has also completed its Fintech Policy that entails the formalization of its Innovation Hub, as well as the establishment of a regulatory sandbox. In Suriname, Fintech developments in the private sector are predominantly focused on payments apps and wallets. These innovations are targeted both at the unbanked and citizens who are already technologically and financially sophisticated but are desirous of easier and more efficient financial services. Other initiatives include a digital securities trading platform, the drafting of regulatory sandbox guidelines, the development of a "regtech/suptech" framework, the enactment of electronics payments acts and the introduction of public education programmes on Fintech. The Bank of Jamaica has already drafted Fintech Regulatory Sandbox Guidelines. These Guidelines are aimed at facilitating Fintech related innovations and providing a platform to encourage innovations in financial services, as well as to promote competition and financial inclusion.

With regard to cyber-risks, attacks that are targeted against the information technology infrastructure of financial institutions can lead to disruptions in financial services, identity and financial theft and fraud. This can lead to high costs related to settlement, liquidity, AML/CFT and reputational risks. In this context, countries in the Region recognized that they were vulnerable to such attacks and are focused on establishing proper safeguards and controls to increase their resilience to these attacks, as digitalisation in the financial sector progresses.

The Region is also focusing on SIFI identification and monitoring frameworks. Additionally, CARICOM countries are also advancing proposals to establish and strengthen bank resolution regimes. The key purpose of these regimes is to enable an orderly resolution of a failing bank in a manner that protects the public interest. In particular, these resolution regimes can help by maintaining financial stability, preserving confidence in the banking sector and protecting both depositors and taxpayers from unnecessary losses or costs when financial institutions get into difficulties. In terms of the development of macro-prudential frameworks and indicators, countries in the Region are at varying stages with the implementation of enhancements to their frameworks and systems.

The majority of counties in the Caribbean have started the process to introduce the new Basel II/III framework. In particular, Jamaica has established the leading macro-prudential policy framework. A high-level inter-agency Financial System Stability Committee (FSSC) has also been established by way of an amendment to the BoJ Act. The Central Bank of Suriname (CBvS) has also taken steps to develop its macro-prudential surveillance framework with the establishment of a Financial Stability Department (FSD). Focus is also being placed on non-bank regulations, with revisions to various central bank acts being pursued to facilitate a more risk-based approach to the supervision of institutions such as credit unions and insurance companies.

Improvements to traditional payments systems are also being pursued with jurisdictions focusing on the reduction of paper-based cheques and the promotion of electronic settlement systems. Countries in the Region have also been enacting or amending their national payments system legislation to incorporate a comprehensive set of provisions on important aspects of the payments system.

5.3 Policy Recommendations

The Region has acted swiftly and effectively to stem the negative fallout from the pandemic and maintain financial stability. There are, however, still several ways in which the Region can improve its policy response. In particular, there is a need for more frequent, granular and complete information to inform central bank policy. Up to date information on non-bank financial institutions is still a problem area in some jurisdictions. The Region should increasingly focus on key nodes within jurisdictions and across the Caribbean which could disrupt the financial system whether they be institutions, markets or countries. The interconnectedness data is therefore even more important now since the pandemic has intensified interconnectedness between sovereigns, households, corporates and financial institutions and the associated exposures. The fallout from the pandemic in the household and corporate sectors also requires more granular information on household and corporate debt be collected for financial stability analysis.

In terms of the regulatory and supervisory systems, regional central banks should all build out a ladder of sequential intervention options to help organise their response to the pandemic. The ongoing enhancement of the regulatory and supervisory framework for SIFIs must be accelerated and national resolution frameworks must also be integrated into a regional framework and finalized. Moreover, cyber security protocols to maintain information security is even more important now due to the greater use of electronic platforms. Importantly, in this highly uncertain environment, central banks' communication strategy has to be more frequent and carefully calibrated to prevent cognitive dissonance amongst important agents in the financial sector, in an environment often characterized by misinformation.

It should also be noted that the policy interventions are not without risks that need to be mitigated. Moral hazard must be minimised by ensuring that interventions are time-bound and there is a clear exit strategy. Risks from some policy interventions should also be shared with the fiscal authorities where necessary to maintain central bank independence.

Very importantly, the maintenance of foreign exchange liquidity is very important during the pandemic. The use of low-cost development financing options such as the IMF's new Short-Term Liquidity Line (SLL) should be used to bolster reserves. Each jurisdiction must also address idiosyncratic factors that drive their vulnerability, but the regional and international mechanisms in place should also be used intensively to navigate the challenges facing the Region during the pandemic.

5.4 Recommendations to Improve the RFSR

The 2020 RFSR have highlighted several risks to financial stability in the context of the COVID-19 pandemic. The most important include the increasing interconnectedness between sovereigns and other stakeholders such as households, corporates and financial institutions, given the larger footprint of the government during the pandemic. This implies there is a need to improve and extend the analytical dimension of the Report. Numerous bottlenecks primarily on the data availability and quality fronts, however, still bedevil the preparation of the RFSR.

In this context, it is recommended that the approach to data collection and monitoring, as well as regulatory collaboration for Region-wide financial interconnectedness analysis, be improved. An important building block for this approach is for jurisdictions to collect as a matter of course national financial interconnectedness data for their jurisdiction which can be seamlessly synced to regional financial interconnectedness data. This would require the use of entity-level data for regional financial interconnectedness monitoring and analysis.

In addition, a more granular level of data should be collected from financial institutions to support a more comprehensive systemic analysis of emerging risks to the household and corporate sectors, as well as to allow for the introduction of borrower-based measures such as loan-to-value, loan-to-income and debt service-to-income ratios in the RFSR. In this context, there is a need for a Memorandum of Understanding and updated Terms of Reference Agreement for the regional Financial Stability Coordination Committee (RFSCC) on cooperation and coordination for assessing regional financial stability data and for addressing cross-border financial stability threats amongst CARICOM central banks.

To backstop this effort, it is recommended that central banks in the Region develop harmonized data templates and analytical approaches for the monitoring of SIFIs and regional financial interconnectedness analysis. There is also a need to develop a common set of macro stress test scenarios to improve cross-country comparative assessment of vulnerabilities in the RFSR. The inclusion of regional financial stability indices rather than national indices is also important to highlight the regional dimensions of risks. Furthermore, harmonized reporting requirements and mechanisms for the timely receipt of data from financial regulators in the Region, as well as the development of data quality checks should be pursued as a matter of urgency.

APPENDIX

Appendix 1: Summary of Policy Responses of Regional economies to the COVID-19 pandemic

				Eastern Caribbean Currency Union											
	Bahamas	**Barbados**	**Belize**	**Anguilla**	**Antigua and Barbuda**	**Dominica**	**Grenada**	**Montserrat**	**St. Kitts and Nevis**	**St. Lucia**	**St. Vincent and the Grenadines**	**Guyana**	**Jamaica**	**Suriname**	**Trinidad and Tobago**
Fiscal measures															
Tax relief for affected sectors	■				■	■	■	■	■	■		■	■		■
Financing from international financial institutions (IMF, World Bank)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Reinforce the prioritisation of capital spending	■	■				■						■	■	■	■
Freeze on annual salary wages/filling of vacancies in the public sector			■										■		■
Removal of VAT on certain goods and services												■			■
Social measures															
A targeted increase in social spending: unemployment grants, food cards and hampers	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Offering training and skills programmes for the unemployed		■													■
Financial support for businesses															
Financial support provided to SMEs	■	■	■		■	■	■	■	■	■		■	■	■	■
Work retention programmes	■	■				■	■					■	■		
Tax deferrals to companies that meet specific requirements	■											■			
Monetary and Macro-financial measures															
Lower policy rates (Repo Rate)				■	■	■	■	■	■	■	■	■			■
Lower reserve requirements	■	■	■									■		■	■
Lower foreign currency reserve requirements													■		
Foreign Exchange Conversation measures imposed	■		■												
Halt repatriation of dividends		■											■		
Deferral on repayments on credit facilities – loans, credit cards etc.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Source: Compiled from National Central Banks; IMF Policy Tracker (The International Monetary Fund, 2021)