EASTERN CARIBBEAN CENTRAL BANK

FINANCIAL STABILITY REPORT 2017

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The ECCB welcomes your questions and comments on this publication.

EASTERN CARIBBEAN CENTRAL BANK

FINANCIAL STABILITY REPORT

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The Financial Stability Report is a publication of the Eastern Caribbean Central Bank. It contributes to the Eastern Caribbean Central Bank's financial stability objective by identifying, monitoring and communicating on systemic risks. The view is to enhance the resilience of the ECCU financial system by taking action to reduce or remove any threat to financial system stability. This is a key strategic priority of the Eastern Caribbean Central Bank and supports the bank's objectives as it relates to growth, sustainability and employment.

Preparation of this Report is the primary responsibility of the *Financial Stability Team*, a unit within the Research Department. The following staff members contributed to the preparation and editing of the Report:

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Preface – From the Governor

The mission of the ECCB is "advancing the good of the people and the Currency Union by maintaining monetary and financial stability and promoting growth and development." This mission is the driving force for our current stability report. This edition is the second instalment of our Financial Stability Report. The Annual Publication continues its evolutionary path with improvements to the analytical frameworks used for assessing and mitigating systemic risk. Systemic risk may be defined as the risk of disruptions to the financial system, which can have serious adverse effects on the functioning of the financial system and the real economy (IMF, 2013). Systemic risk is considered within a two-dimensional framework, which are; (1) the time dimension and (2) the cross-sectional dimension (Freixas, Laeven, & Peydro, 2015).

Given the nature and structure of oversight of the Eastern Caribbean Currency Union's (ECCU's) financial system, this Report represents the combined effort and cooperation of the regulatory authorities within our member countries. These authorities operate at both the domestic and the regional level and we remain grateful for their cooperation. Data limitations in the credit union and insurance sectors still exist, and as such restrict the scope of coverage in this Report.

The ECCB is dedicated to ensuring the achievement of a strong, diversified and resilient financial sector, in keeping with its Strategic Plan 2017-2021. Consequently, the process of developing our macroprudential framework has begun. This Financial Stability Report provides an assessment of the main financial developments, trends and vulnerabilities within the ECCU's financial system during the year. The Report is divided into four (4) chapters and covers:

1. The Macro-financial environment and key risks impacting the ECCU region;
2. Financial performance and soundness of deposit taking institutions: banking and credit union sectors;
3. Financial performance and soundness of non-deposit taking institutions: insurance companies;
4. Policy initiatives for enhancing financial stability in the ECCU region.

Additionally, this edition of the Financial Stability Report assesses the state of the ECCU financial system and identifies four (4) major risks to financial system stability. The commercial banking sector continues to be dominant within the analyses, given the lack of data for non-bank financial institutions.

The Report makes use of boxes to highlight key issues within the ECCU. Moreover, key research techniques such as network analysis were utilised to inform macro-surveillance and the analysis in this publication. Going forward, this presentation and analyses will be a staple of such ECCU reports.

We will continue to work assiduously to clarify and fully institutionalise arrangements for publication of future editions of this Report, within the context of a clearly defined and articulated framework for financial stability in the ECCU. It is our hope that, you the reader find this Report useful and informative.

1. Overview of Financial Stability in the ECCU

Financial stability developments were positive in in the ECCU during 2017. Improved economic conditions buoyed this stability coupled with policy actions to strengthen the resilience of the financial sector. At an aggregate level, most financial stability indicators point to a reduction in financial stability risks. Across each segment of the financial sector (commercial banking, credit unions and insurance), there were noticeable general improvements, although pockets of weakness still exist at the firm level.

Following the passage of hurricanes Irma and Maria in September 2017, risks linked to rising household debt emerged within the credit union sector while additional risks such as solvency were linked to the insurance sector. As is typical with the passage of natural disasters; households suffer both a loss of wealth and income. As such, these households are unable to service debt in the short term. Additionally, with natural disasters, insurance firms are at times unable to meet claim obligations due to several reasons and as such, may become insolvent. Further, there were a number of risks, both cyclical and structural in nature that continued to prevail in the financial sector.

Within this issue of the Financial Stability Report (FSR), four main risks to ECCU financial stability are identified. The first is structural in nature and concerns the growing levels of concentration across the financial sector and on financial institutions' balance sheets. The second is both structural and exogenous and is linked to the impact of natural disasters on the financial sector. The increasing frequency of severe hurricanes can wreak havoc on the financial sector due to the localised effects of these storms. The third risk concerns the continued weak profitability and elevated levels of poor asset quality for the banking sector. A fourth type of risk is hinged on the movements in international interest rates as Central Banks in advanced economies aim to normalise their balance sheets. This type of risk is expected to affect most institutions with large foreign bond portfolios. In this interest rate environment, a sudden repricing in fixed income markets could lead to substantial capital losses for institutions with large bond holdings.

Areas of additional concern are first, the increasing household debt amid tepid national economic growth, and second, the impact of de-risking on the banking sector. Firstly, income growth has been modest, while simultaneously,

there has been an increase in lending to households. Secondly, de-risking poses a challenge to the banking sector as the discontinuation of correspondent banking services can hamper the smooth and efficient delivery of payments globally, which can lead to negative effects on the real economy. In addition to the aforementioned, the requirements of Anti-Money Laundering/Counter-Terrorism Financing (AML/CTF) and the risks associated with the lack of compliance are also under consideration. Following a tightening of the AML/CTF requirements on an international level (also referred to as de-risking), stricter requirements governing the management of the AML/CTF risk and in-depth customer identification have been imposed on credit institutions. The increased attention to AML/CTF measures are contributing to the stricter requirements on Know Your Customer (KYC) metrics and has resulted in loss of correspondent banking business for some banks in the region. Despite these losses, external independent audits are continually being carried out on credit institutions and the capacity of the supervisory authorities is being strengthened to meet these compliance standards. These measures are, therefore, essential to secure further sustainable development of the ECCU financial sector.

An overview of the systemic risk sources and resilience of the financial system is provided in graphical form by the Financial Stability Cobweb (FSC). This *'Cobweb'* is a map of indicators grouped into five categories:

i. The credit category groups together indicators measuring the changes in and the degree of imbalance in total credit (commercial banks and credit unions) and banking sector credit to households and non-financial corporations. Additionally, these sectors (commercial banks and credit unions) level of debt and debt burden; the interest rate gap and the ratio of non-performing loans along with the overall growth rate of credit are included;

ii. The profitability and capital dimension captures the resilience of the domestic financial system to shocks, and includes the capital adequacy ratio (CAR), leverage ratio and the ratio of return on assets and equity;

iii. The liquidity category includes indicators of banking and market liquidity. It is constructed from metrics such as the ratio of liquid assets to total assets, and the ratio of liquid assets to short-term liabilities as well as the level of excess reserves and the ratio of M2 to external reserves;

iv. The concentration category includes indicators of total and banking credit concentration in different economic sectors in addition to differentiation by borrower type (households, Non-Financial Corporations and Government);

v. The domestic economic environment category includes the following indicators; (1) the ECCU economic growth, (2) the rate of inflation, (3) the fiscal balance as a percentage of GDP, (4) public-sector debt as a percentage of GDP and (5) the current account balance as a per cent of GDP;

vi. The external economic environment category analyses risks from the external sector. This dimension examines GDP growth in advanced economies, global commodity prices and US ten-year bond yield,

vii. Finally, the financial markets category – included in the analysis but not exhibited on the chart - groups together indicators, which measure the degree of correlation and interconnectedness of banking institutions and of systemic stress in different markets within the ECCU.

These various categories are used to construct concentric lines within the chart (Figure 1). The concentric line closest to the centre of the chart corresponds to the normal situation. The degree of risk as measured by the Cobweb increases as the line extends farther from the centre. In the analysis below, the indicator which measures concentration, though having extended farther than the other indicators in the model has in fact declined from its previous levels in 2015 and 2016 (Figure 1 and Figure 2).

FIGURE 1: FINANCIAL STABILITY COBWEB

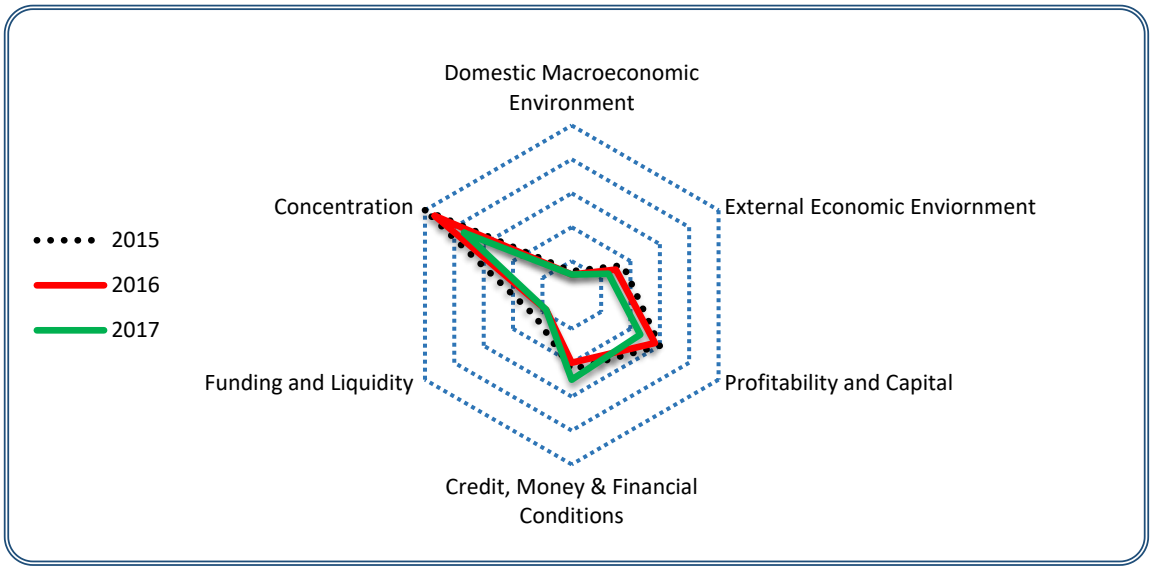
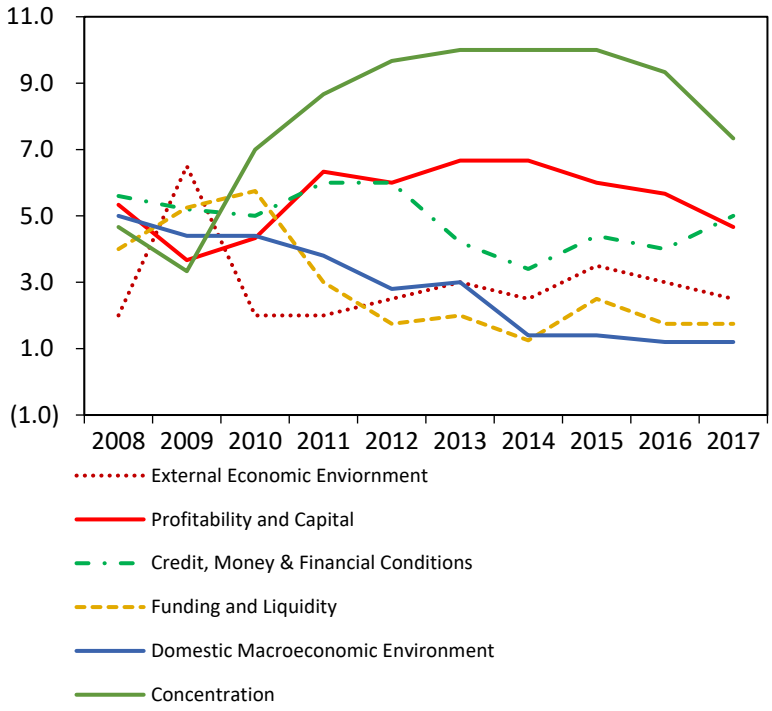


FIGURE 2: DIMENSIONS OF FINANCIAL STABILITY COBWEB



Source: the ECCB and staff calculations

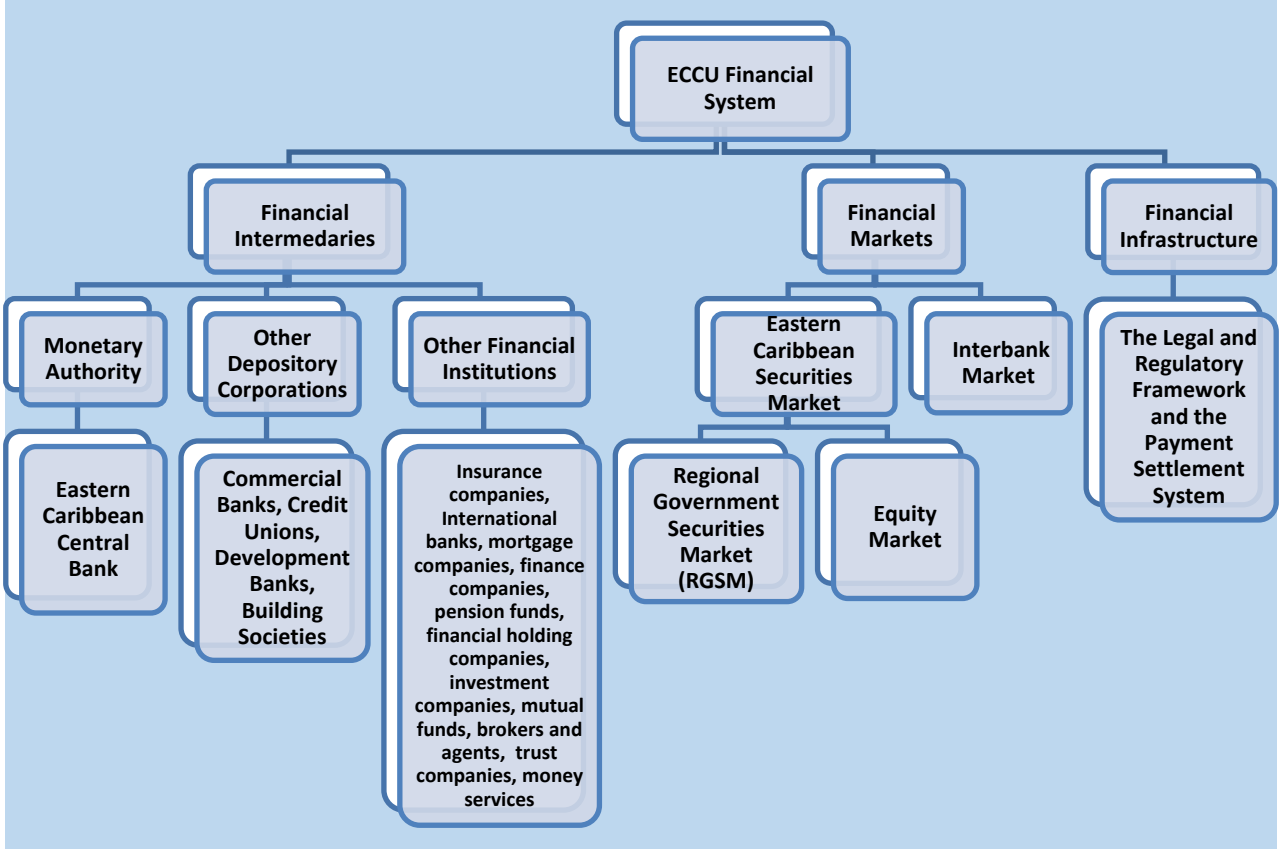
In addition to the risks highlighted in the Cobweb, IT security risk has the potential to become a systemic vulnerability to financial institutions in the ECCU. This is against the backdrop of credit institutions increasingly relying on Information Technology (IT) in their operations, as well as with the development of innovative financial technology products. Therefore, the role of IT as a contributor to systemic risk is an issue for consideration by policy makers and regulatory authorities.

2. Overview of the Financial Sector in the ECCU

The ECCU is comprised of six (6) sovereign countries (Antigua and Barbuda, the Commonwealth of Dominica, Grenada, the Federation of Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines) and two (2) UK overseas territories (Anguilla and Montserrat) with overall combined population of approximately 600,000 persons. As at end of December 2017, the banking sector in the Currency Union was organised around 20 licensed commercial banks, 12 of which were indigenous commercial banks owned by resident investors including governments, and eight (8) foreign owned entities (which in turn operate 23 subsidiaries or branches across the ECCU). Several of these subsidiaries are affiliates of Canadian banks.

In addition to commercial banks, the financial system also comprises of approximately 160 insurance companies, 49 credit unions, 6 development banks/boards, offshore banking entities and a range of other non-bank financial institutions including investments and securities firms, building societies and money services business. The financial markets are the interbank market, the Regional Government Securities market (RGSM) and the Eastern Caribbean Securities Exchange (ECSE) which make up the money and capital markets and the financial infrastructure. These markets along with the payment settlement system and the legal and regulatory framework facilitates the effective operation of financial intermediation (Figure 3). For the purposes of the report and due to a paucity of data, the analysis will focus on institutions licensed under the Banking Act, Credit Unions and Insurance companies.

FIGURE 3: STRUCTURE OF THE ECCU FINANCIAL SYSTEM



Source: the ECCB

I. Financial Intermediaries

Financial intermediaries operating in the ECCU include institutions licensed under the Banking Act (commercial banks and Non-Bank Financial Institutions (NBFIs)), credit unions and insurance companies. The ECCU financial system is dominated by the commercial banking sector. The passage of the new Banking Act (Banking Act, 2015), inter-alia, facilitated the establishment of a single financial space in ECCU. As such, a licensed entity is equally licensed to operate across the union and pan-ECCU banks are no longer required to obtain a license for each subsidiary or branch. The number of licensed entities therefore fell from 40 in 2015 to 31 in 2017. This smaller number of licensed entities represents twenty (20) commercial banks and eleven (11) NBFIs licensed under the Banking Act (including finance companies). The reduction in the number of commercial bank licenses also reflects the resolution of three failed banks and the consolidation of some RBTT/RBC

operations. The dominance of the banking sector is evident in areas such as asset size, deposit base and credit to the private sector. At the end of 2017, total assets of the sector accounted for about 74.0 per cent of total domestic assets of the financial sector. The system also included 49 credit unions distributed among 7 member states and approximately 160 insurance entities.

II. Financial Markets

The financial markets in the ECCU are primarily the interbank market and the Eastern Caribbean Securities Market (ECSM), which comprise the Regional Government Securities Market (RGSM) and the Eastern Caribbean Stock Exchange (ECSE). An official Interbank Market was established in 1986 in an attempt to strengthen the infrastructure for liquidity management in the ECCU. The Interbank Market (IBM) was meant to provide a transparent platform for the lending and borrowing of funds between licensed commercial banks in the region. As at end of December 2017, the value of placements on the market was EC$195.6 million, down from EC$255.2 million at the end of 2016.

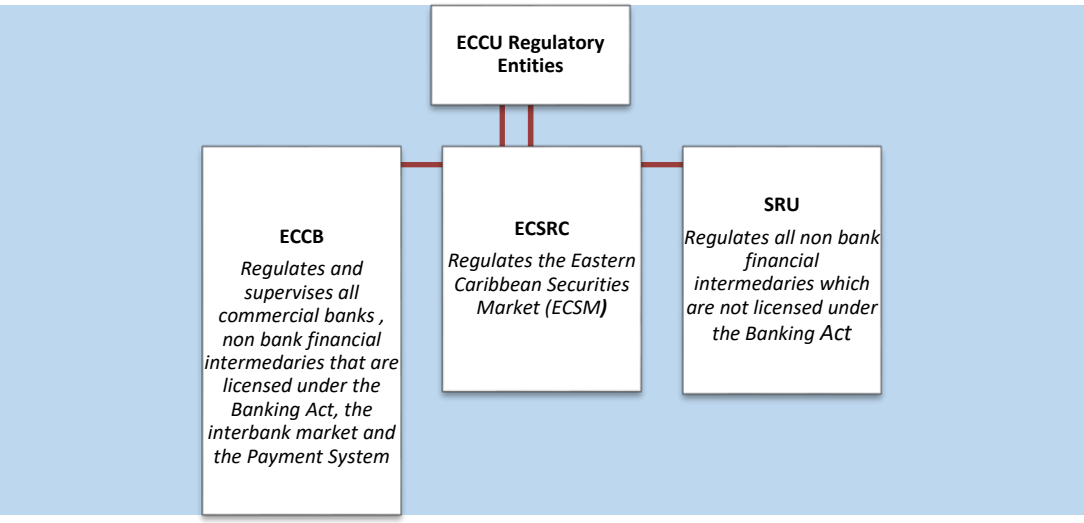
The ECSM was designed to provide an alternative mechanism for institutions to raise capital within the regional financial system. It facilitates primary and secondary market trading, thereby giving investors an opportunity to raise capital through new issues of securities as well as by trading in existing securities. The RGSM, one component of the ECSM, was established in November 2002 to facilitate and further the improvement of fiscal management in the ECCU. Data at the end of 2017 indicates that five member governments were active participants and EC$1.23 billion were raised in 2017. On the equity side, there are presently fourteen (14) corporate securities listed on the market. In 2017, there were 8.6 million trades valued at EC$0.54 million compared to 1.5 million trades valued at EC$17.8 million in 2016. The market capitalisation of the 14 listed equities on the exchange totalled EC$8.41 billion as at 31 December 2017, rising from its EC$8.12 billion value at the end of 2016. This marked decline in overall market value stemmed from two major developments on the exchange. Firstly, Trinidad Cement Ltd (TCL) (a cross-listed firm) was delisted from the exchange, owing to low trading activity. This

combined with a decline in the share price of the CIBC First Caribbean International Bank (Barbados) Ltd (ticker - FCI) led to an overall lower market value. FCI accounts for 78.1 per cent of the total market value of the 13 equities listed on the exchange.

III. Regulations

The regulation and supervision of financial system is conducted by three principal entities namely the Eastern Caribbean Central Bank (ECCB), the Eastern Caribbean Securities Regulatory Commission (ECSRC) and the Single Regulatory Units (SRU) of each member state (Figure 4).

FIGURE 4: ECCU REGULATORY FRAMEWORK



IV. The Eastern Caribbean Central Bank

The ECCB is the monetary authority for the eight (8) participating member countries of the ECCU. The primary responsibility of the ECCB is to maintain the stability of the Eastern Caribbean currency and the integrity of the financial system. Article 3 of the Eastern Caribbean Central Bank Agreement Act (The Agreement) authorises the ECCB to regulate and supervise institutions engaging in banking business. The regulatory and supervisory functions of the ECCB are carried out through the Bank Supervision, and Banking and Monetary Operations Departments. The Banking Act governs the regulation and supervision of institutions engaging in banking business in the ECCU. In 2015, a new uniform Banking Act was passed

in the member states, mainly to address revealed legislative and regulatory gaps and to allow regulators to undertake a more risk focused approach to supervision. The ECCB regulates and supervises all institutions licensed under the Banking Act i.e. the 20 licensed commercial banks and 11 NBFIs.

V. The Eastern Caribbean Securities Regulatory Commission

The Eastern Caribbean Securities Regulatory Commission (ECSRC) is responsible for licensing all individuals and companies who wish to engage in the securities business in the Eastern Caribbean Securities Market (ECSM). This directive, contained in Article 4 of the ECSRC Agreement, requires the Commission to "license any person engaged in securities business and to monitor and supervise the conduct of such business by a licensee." The primary functions of the ECSRC are:

- To maintain the integrity of the ECSM;
- To protect investors;
- To promote market efficiency; and
- To facilitate market development.

VI. The Single Regulatory Units

The Single Regulatory Units (SRUs) in each country regulate and supervise financial institutions, which are not licensed under the Banking Act. These include international (offshore) banks, insurance companies, credit unions, cooperative societies, building societies and money services businesses. The main functions of the SRUs are to:

- Provide more effective protection for consumers;
- Assist with minimising systemic risk;
- Promote market confidence; and
- Contribute towards strengthening the performance of financial institutions.

VII. Financial Infrastructure - The Payment System

The Payments and Settlement System, which operates in all eight territories, is centred on the commercial banking sector, which is the direct provider of payment services in the ECCU, along with the ECCU governments. Non-banks such as the credit unions and building and loan societies also provide payment services with settlement through the commercial banks. Cheques and cash are the dominant payment instruments in

the ECCU. Operations of the payment system are governed by the Payment System Act (2007), which designates the ECCB as the regulatory authority.

The ECCB operates a Real Time Gross Settlement (RTGS) system, based on straight-through processing with the use of SWIFT messaging. The commercial banks, member governments, the Securities Registry and the Eastern Caribbean Automated Clearing House (ECACH) are participants in the Interbank Settlement System. Large value transactions (values above EC$150,000) are settled on a RTGS basis through the Interbank Settlement System while retail payments (payments below EC$150,000) are settled through the ECACH. The Automated Clearing House (ACH) provides clearance for cheque based transactions but settlement occurs through the Interbank Settlement System at the Central Bank. Securities, which include regional government and private sector securities are settled through the Securities Clearance and Settlement System; operated by the Eastern Caribbean Central Securities Depository (ECCSD).

CHAPTER 1: THE MACRO-FINANCIAL ENVIRONMENT AND KEY RISKS IMPACTING THE ECCU REGION

1.0 MACRO- FINANCIAL RISK

1.1 External Economic Environment

The main risks to financial stability in the ECCU from the external economic and financial environment are rising interest rates and volatility in financial markets. Global economic growth is estimated to have expanded by 3.8 per cent in 2017 according to the IMF April 2018 World Economic Outlook report. Global economic growth was buoyed by increased global trade and supported by a rebound in investment across advanced economies. Global trade is estimated to have expanded by 4.9 per cent in 2017 compared with 2.0 per cent in 2016. The improvement in global trade was led primarily by emerging and developing economies where trade increased by 6.4 per cent following growth of 2.2 per cent in 2016.

Across major advanced economies --the ECCU's main trading partners - growth was estimated at 2.3 per cent for 2017 compared with growth of 1.7 per cent in 2016. The USA and Europe contributed to the expansion in advanced economies output. Among emerging market economies growth was estimated at 4.8 per cent, representing a 0.4 per cent increase over the 2016 growth rate of 4.4 per cent.

The outlook for the global economy in 2018 is largely positive, global economic growth is projected to strengthen from 3.8 per cent in 2017 to 3.9 per cent in 2018 and 2019, driven by a rise in economic activity in emerging markets and developing economies coupled with resilient growth in advanced economies. The main downside risk to the outlook are policy uncertainties especially as they relate to global economic trade, rising geo-political tensions, climatic events (hurricanes, floods etc.) and finally, risks that might occur as the result of an abrupt tightening of global financial conditions.

Despite the broad based improvements in global economic activity, the IMF

highlighted that risks to global financial stability are precarious. According to the Global Financial Stability Report 2018 [1], accommodative financial and monetary conditions are contributing to a build-up of short term risks in the global financial system. Some of the key risk factors that the Report highlights are the rise of crypto assets (example Bitcoin), risks of rising interest rates and higher market volatility and liquidity mismatches. Key recommendations made by the Report include a gradual withdrawal of accommodative monetary policy stimulus measures to ease the pace at which financial conditions tighten.

Given that the countries of the ECCU are small open economies, external developments help to shape domestic economic and financial conditions. Against this backdrop, the ECCB sets out to assess in this Financial Stability Report the risks to the ECCU financial sector given global developments and their impact on the domestic economy and ultimately the ECCU's financial sector.

[1] Global Financial Stability Report October 2018: A Decade after the Global Financial Crisis: Are We Safer?

1.2 Domestic Economic Environment

Domestic economic conditions are favourable towards improving financial conditions.

Real GDP in the Currency Union is provisionally estimated to have expanded for the sixth consecutive year, at a rate of 1.8 per cent (attributable to hurricanes Irma and Maria), compared with 2.9 per cent in 2016. Notwithstanding the deceleration, economic growth was facilitated by positive global developments, particularly in the economies of the major trading partners, and supported by increased output in a number of sectors in the regional economy. Expansions in value added were recorded in a few key sectors, namely construction, transport, storage and communications and wholesale and retail trade. On a per country basis, economic activity is estimated to have expanded in six of the eight territories and was partially moderated by contractions in Anguilla and Dominica. Inflationary conditions prevailed in all of the ECCU's member states in contrast to overall deflation during the prior year.

The overall surplus on the consolidated fiscal operations of member governments' was lower, largely attributable to developments on the current account, exacerbated by higher capital outlays. Notwithstanding the deterioration on the overall fiscal accounts, the outstanding debt of the public sector fell, driven by lower external obligations. In the banking sector, monetary liabilities and net foreign assets expanded while domestic credit contracted. Liquidity in the commercial banking system improved, associated in part with an expansion in the deposit base, coupled with the decline in credit. The spread between commercial banks' weighted average lending and deposit interest rates narrowed. On the external side, the merchandise trade deficit widened, largely driven by growth in import payments, coupled with a contraction in export receipts.

The forecast for growth in the ECCU economy for the short to medium-term is favourable, with expectations for further expansion in 2018 and 2019. This outlook is premised, inter alia, on anticipated buoyancy in the construction sector, supported by a turnaround in the hotels and restaurants and agriculture, livestock and forestry sectors. Any improvement in these sectors is likely to have associated positive knock-on effects on a number of the other key sectors, including transport, storage and communications, wholesale and retail trade and real estate, renting and business activities. Inflationary pressures are likely based on developments in commodity prices. It is anticipated that the positive economic performance, coupled with continued fiscal and debt consolidation efforts may contribute to an overall surplus, albeit smaller, given an expected increase in spending. Importantly, the economic outlook for the ECCU region remains contingent on developments in the global economy, which is forecasted to continue the current momentum. On the upside, global growth is projected to expand at a faster pace in 2018, driven by improved activity in the advanced economies, particularly the USA. Downside risks include increasing commodity prices, a sudden stop in foreign direct investment inflows, and an escalation in geopolitical tensions, a very active hurricane season and other climatic events.

1.3 Risks Stemming from the Macroeconomic Environment

Macroeconomic risks to financial stability were judged as moderate during 2017 despite the impacts of hurricanes Irma and Maria and decelerating economic activity. This assessment is predicated on steadily improving domestic and global economic conditions. For instance, risk emanating from the fiscal sector to financial stability continues to diminish with a positive overall fiscal surplus and ensuing lower public sector debt level. Continued broad based fiscal reform measures will support a reduction in sovereign risk to the financial sector.

However, the threat of the increasing frequency of large natural disasters continues to be a risk to financial stability. Large natural disasters directly affect bank and credit unions through higher non-performing assets and insurance companies through large claims. Additionally, the narrow domestic economic base gave rise to an elevated degree of concentration in the banks' lending portfolio, particularly towards household real estate lending (mortgages) - this is discussed further below. Although this vulnerability is structural in nature, banks should do more to reduce this vulnerability and diversify their risks.

1.4 Risks Stemming from the Performance of the Non-Bank Financial Sector

The non-bank financial institutions (NBFIs) remained relatively sound and do not at this time pose systemic risks to the region's financial system. Growth of the assets of the NBFIs sector remained positive. Both credit unions and insurance companies recorded an increase in total assets. However, insurance companies remain susceptible to interest rate risks given the structure of their investment portfolio. Secondly, insurance companies' risk to natural disasters (particularly hurricanes) are higher as the intensity and frequency of these disasters is increasing due to climate change and has far-reaching effects for the insurance sector due to the potential of large claim payments. Nonetheless, the insurance sector remains well capitalised as judged by the ratio of capital to total assets and technical reserves ratios.

1.5 Risks Stemming from Domestic Household and Non-Financial Corporations

Despite an increase in lending to households, household leverage remains low by historical standards. Falling interest rates, longer loan duration and refinancing have allowed households lower debt service capacity in the face of low to no increase in income growth and the relatively slow pace of employment creation. However, increasing levels of concentration to households poses a risk to credit institutions, as economic conditions remain vulnerable. Negative shocks to the economies can have significant adverse impacts on credit institutions.

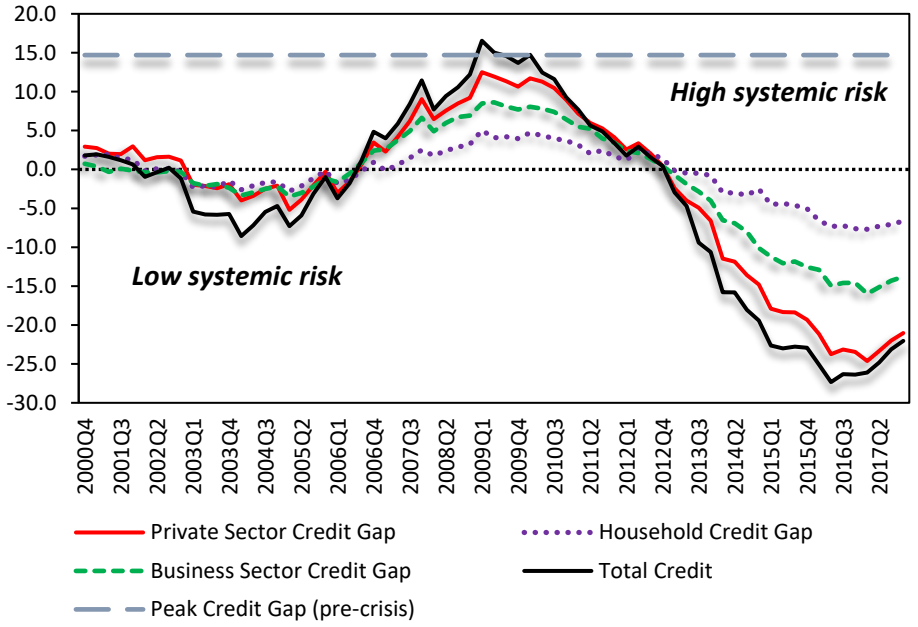
In contrast, non-financial corporations continue to deleverage as evidenced by the falling stock of credit to these firms. Additionally, it is expected that as the economic conditions continue to improve that the outlook for NFC's profitability and performance to improve coupled with declining indebtedness.

1.6 Measures of Excessive Credit Growth and Leverage

Excessive credit growth has been identified as a key driver of asset price bubbles and subsequent financial crises, with leverage acting as an amplifying channel. The most popular measure of excessive credit growth is the credit to GDP gap or financial cycle, which has become the cornerstone of financial stability analysis globally. This measure covers the cyclical (time) dimension of systemic risk. The credit-GDP gap measures the excess of credit in terms of output relative to its long-term or equilibrium level. The credit-GDP gap is calculated as the percentage-point difference of the ratio of total credit to the non-financial private sector, divided by GDP, less the long-term trend of this ratio estimated using a statistical filter. At the end of December 2017, this indicator stood at negative (-22.0 pp) compared with negative (-26.4 pp) recorded at the end of December 2016 (Figure 5). However, in negative territory the financial cycle is showing signs of an upswing, indicating a reduction in pressures from excessive leverage and cyclical factors. The shift into a growth phase of the financial cycle is associated with an increase in cyclical risks, mainly as a result of an increase in new loans to the private sector in particular loans to households for house and land purchase.

The increase in loans for this segment may be a driver of both supply and demand conditions. On the supply side, it may be for banks having a more optimistic outlook for the economy and on the demand side due to the decline interest rates for this segment. However, given the significant negative gap there are no signs of credit overheating relative to GDP growth or its long-term trend.

FIGURE 5: CREDIT TO GDP GAP (MEASURED IN DEVIATIONS)



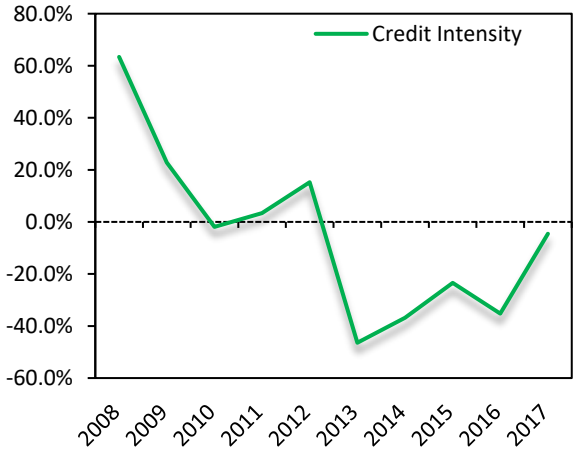
Source the ECCB and staff calculations

A second indicator of excessive leverage is the credit intensity metric. The indicator of credit intensity seeks to capture information on the acceleration in credit growth in terms of output over a period of one year. The indicator is calculated as the annual change in aggregate credit (numerator) divided by the cumulative output for the same period (denominator). A high value for the indicator should point to unsustainable expenditure levels.

Figure 6 reveals that although there is a change in trend in this indicator from December 2013, because of a slowdown in the decline in aggregate credit, it remains negative territory at the end of December 2017. This indicator is, therefore, still clearly

below levels symptomatic of an excessive acceleration.

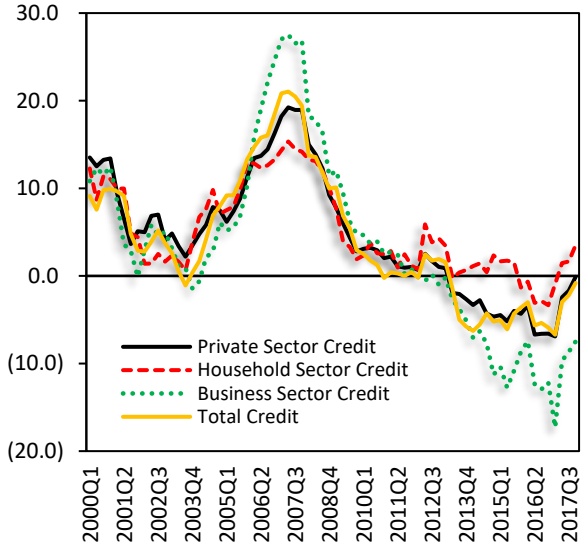
FIGURE 6: CREDIT INTENSITY



Source: the ECCB and staff calculations

Consistent with the decline in the credit to GDP gap, credit contracted by 0.8 per cent for 2017 compared with a contraction of 5.9 per cent in 2016 (Figure 7). This occurred against the background of favourable domestic credit conditions, high liquidity and a further expansion in economic growth. Despite the overall decline in credit, there was an expansion in credit to the household sector, which increased by 3.5 per cent in contrast to 3.3 per cent reduction recorded in the prior year. The increase in credit to households has caused the loan portfolios of credit institutions to become increasingly concentrated in this sector.

FIGURE 7: CREDIT GROWTH BY SECTOR, PERCENT CHANGE



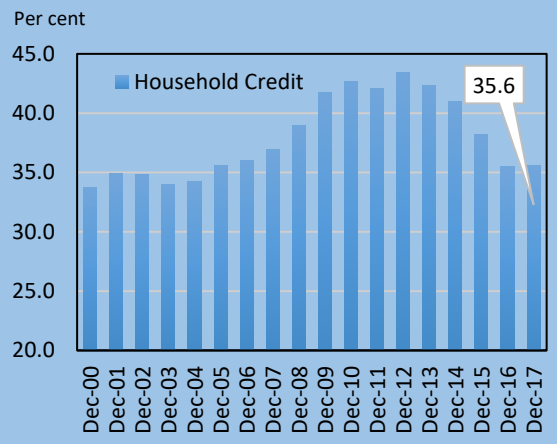
Source: the ECCB and staff calculations

Box 1

Household Debt, Risks and Likely Impact

Credit extended to households have grown since 2000, with credit being extended primarily for purposes other than mortgages and the purchase of durables. The chart below (Figure 8), reveals the current level of household debt as a percentage of GDP (market prices) issued by commercial banks within the ECCU. As at end December 2017, household credit was estimated to be 35.7 per cent of GDP, marginally greater than its end December 2016 value.

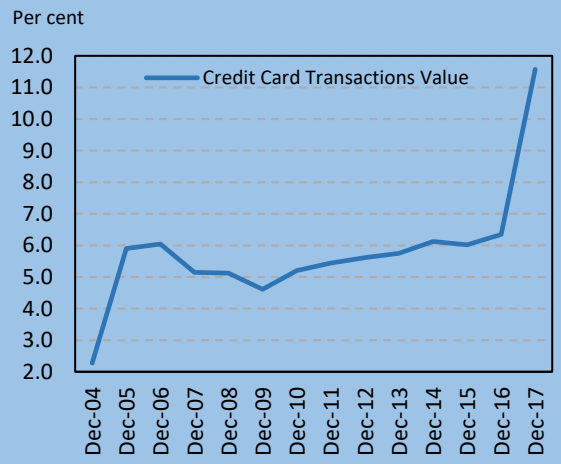
Figure 8: *Household Credit as a Percentage of GDP*



Source: the ECCB and staff calculations

The rising levels of household debt are expected to have implications for macroeconomic and financial stability. With rising household debt within small island states, it is expected that with lower incomes, individuals will be unable to service their debt in a sustainable manner. Consequently, higher levels of debt are expected to influence future growth, consumption and employment. Though, credit can contribute to higher levels of growth, increasing levels of household debt have been found to have a negative relationship with long-term growth and can lead to declines in future consumption. Moreover, with increasing exposure to households by commercial banks in the ECCU, it is expected that the default of multiple households will affect several institutions since consumers most often acquire debt from several sources.

Figure 9*: Credit Card Transaction Values as a Percentage of GDP*



Source: the ECCB and staff calculations

In a low-income environment, consumers who have not acquired personal loans are likely to use credit cards to supplant consumption. Figure 9 reveals the value of credit card transactions relative to GDP over the period 2004 to 2017. Credit card transaction values are estimated at 11.6 per cent of GDP as at the end of December 2017, up from 2.3 per cent in 2004. Thus, as consumers increase their debt to income ratios, they become more vulnerable to income related shocks.

1.7 Measures of Excessive Maturity Mismatches and Market Liquidity

Another intermediate target of macroprudential policy is excessive maturity mismatches and market illiquidity. Reliance on short-term and unstable funding may lead to fire sales, market illiquidity and contagion when the financial cycle turns, initiating or reinforcing systemic risk events. The measures of excessive maturity mismatches and market illiquidity can cover both the cyclical and structural dimensions of systemic risk. Some of the popular measures include; the loan-to-deposit ratio, excess liquidity of banks, and market rate spreads.

In the ECCU, there has been no evidence of negative strains on liquidity, as measures of liquidity have remained high. At the end of 2017, the loan to deposit ratio stood at 61.0 per cent, indicating that there exists an adequate amount of liquidity for any unexpected funding requirements. Moreover, commercial banks held EC$1.9 billion in excess reserves at the end of 2017, compared to EC$1.7 billion in the corresponding period of 2016, additional evidence of favourable liquidity conditions.

1.8 Measures of Interconnectedness and Systemic Importance

The segments of the financial sector are interconnected both directly and indirectly. Direct links arise through exposures in the form of mutual deposits and loans, and through ownership interests. The financial segments are also interconnected indirectly via exposures to the same sectors and borrowers. These common exposures can give rise to systemic contagion across financial sector segments.

1.9 Interconnectedness

The evolution of financial assets and liabilities forming the links between institutions in the financial sector indicates growing interconnectedness. At the end of 2017, the total stock of deposits for NBFIs placed in the banking sector increased by EC$133.9 million (11.5 per cent) to EC$1.3 billion (Figure 10). These deposits accounted for roughly 6.2 per cent of the total deposits of the commercial banking sector up from 5.8 per cent in 2016. Simultaneously, commercial banks have increased their exposure to the NBFI sector, commercial banks deposits held in NBFI's increased by

EC$227.5 million to EC$1.6 billion at the end of 2017 from EC$1.4 billion at the end of 2015. The analysis implies a growing connection between the NBFI and commercial banking sector, which ought to be carefully monitored. On a net basis, commercial banks have more deposits placed in the NBFI sector relative to the level of deposits that the NBFI sector has placed in the commercial banking system (Figure 11).

By contrast, the interconnectedness within the banking sector decreased slightly; net flows between commercial banks in the ECCU (as measured by the due to and due from) fell during 2017. The reduction in net flows between commercial banks in the region is indicative of reduced exposures between the banks thus reducing the impact of contagion risk in the financial sector. The banking sector's large liquidity buffer is also suppressing contagion risks. Research measuring interconnectedness can be found in Box 2.

FIGURE 10: NBFI DEPOSITS AT COMMERCIAL BANKS

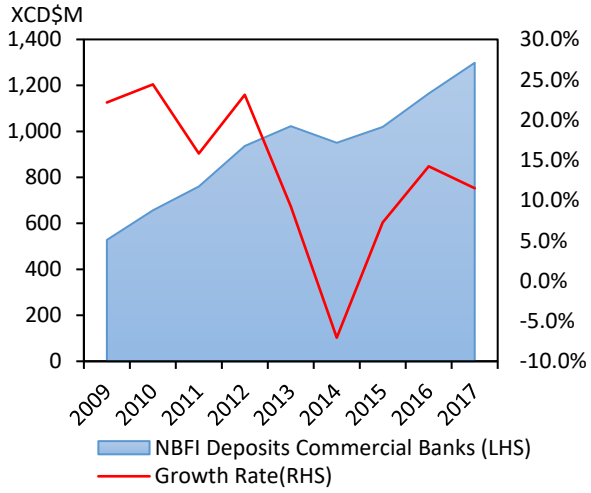
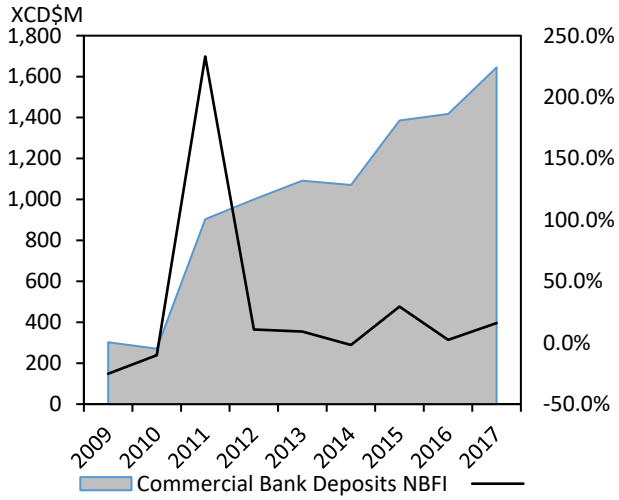


FIGURE 11: COMMERCIAL BANKS DEPOSITS AT NBFI



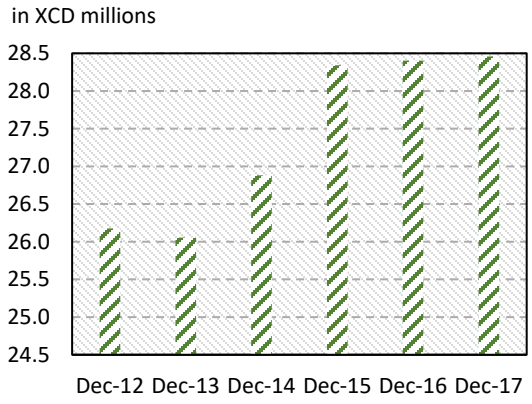
Source: the ECCB and staff calculations

1.10 Systemic importance

Figures 12 to 14 are used to analyse systemically important financial institutions (SIFIs) or those firms that are Too-Big-To-Fail. In examining the growth in assets amongst SIFI's, SIFI Groups and Non-Bank Financial Institutions, the performance of financial system assets (including NBFIs)

should be included in the analysis. Figure 12 illustrates that financial system assets have risen to approximately EC$28.5 billion from EC$26.0 billion in December 2012. A large portion of this growth in assets can be attributed to assets from the banking system, supported by growth in. assets by NBFIs.

Figure 12: Growth in Financial System Assets



Source: the ECCB and staff calculations

As a share of Total Financial System Assets, SIFIs accounted initially for approximately 9.9 per cent of assets as at December 2012 and steadily rose to 66.5 per cent as at December 2017. As a share of total financial system assets, NBFIs are estimated to represent approximately 4.3 per cent at the end of 2017. This share of assets is little changed from the estimate of 3.6 per cent recorded as at December 2012. Extracting firms (specifically foreign branch banks) within this framework reveals that banking groups account for an estimated 54.3 per cent at the end of December 2017.

FIGURE 13: SHARE OF FINANCIAL SYSTEM ASSETS BY SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTION

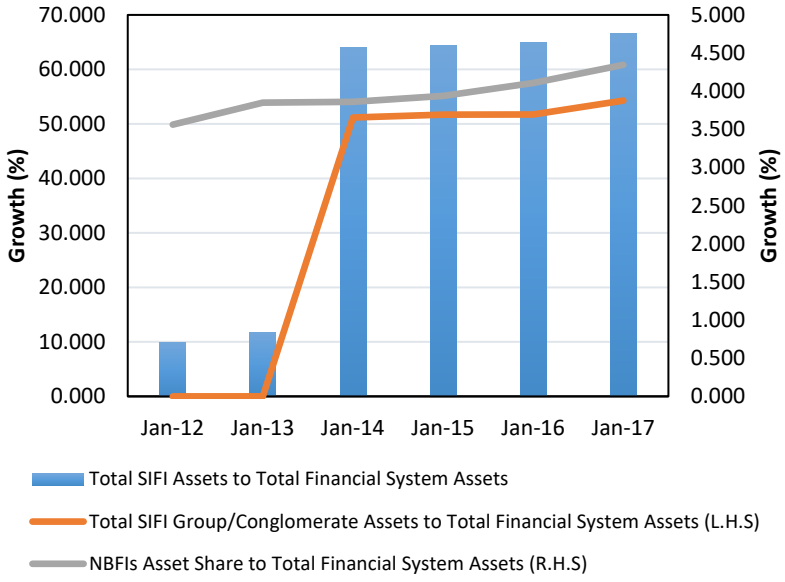
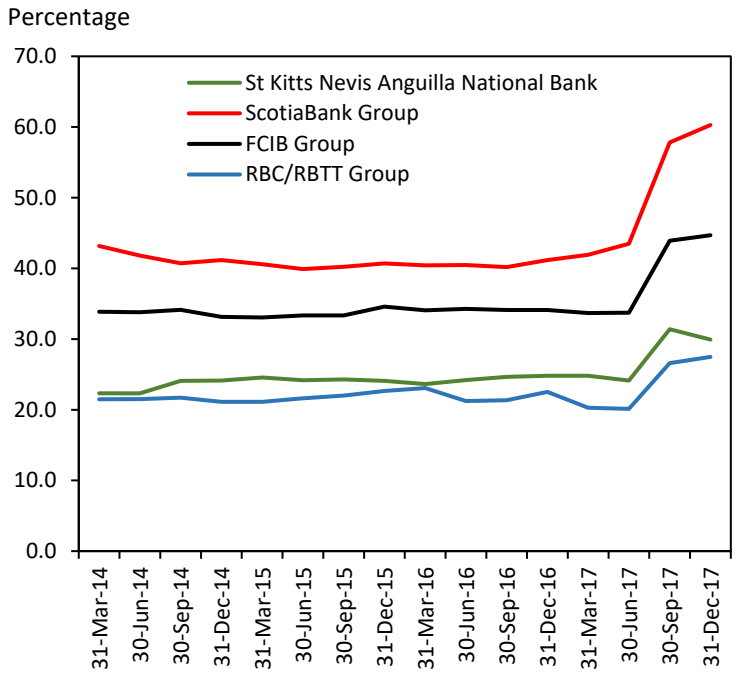


FIGURE 14: SHARE OF ASSETS AMONGST, SIFI GROUPS AND NBFIS



Source: the ECCB and staff calculations

Of this aforementioned value, the Bank of Nova Scotia accounted for approximately 60.3 per cent of assets as at December 2017, followed by First Caribbean International Bank (44.7 per cent), St Kitts Nevis Anguilla National Bank (29.9 per cent) and the RBC/RBTT Group (27.5 per cent).

1.11 Measures of Direct and Indirect Exposure Concentration

Measures of direct and indirect exposure concentration in the financial sector reflect the structural (cross sectional) dimension of systemic risk and can arise due to bilateral exposures between financial institutions and within the balance sheet of financial institutions such as exposure to a single borrower or economic sector. Exposure concentrations make a financial system (or part of it) vulnerable to common shocks, either directly through balance sheet exposures or indirectly through fire sales and contagion.

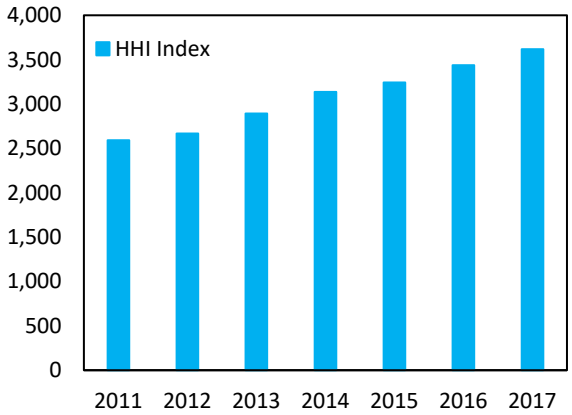
The sources of the structural component of systemic risk are gradually strengthening, in particular concentration in the loan portfolio and in the financial sector. Concentration in the loan portfolio stems from an increasing amount of loans to the

personal sector in particular for property market-related loans (loans for house and land purchases). The increase in this type of exposure was broad based across the banking sector. Coupled with growth in household debt and muted income growth, the financial sector remains vulnerable in the event of shocks such as hurricanes or cyclical shocks such as a sharp drop in economic activity. The risks in this area may also be intensified by increasing competition in the financial sector, which may draw a higher degree of risk-taking.

1.12 Sectoral Concentration

Sectoral concentration in the loan portfolio increased during 2017, as evidenced by the increase in the Herfindahl-Hirschman index (HHI) of concentration. The HHI increased to 3,619 at the end of 2017 from 3,438 at the end of 2016 (Figure 15). The rise in the concentration in deposit taking institutions loan portfolios render them more vulnerable to shocks. The increase in concentration risk was due to credit institutions higher exposure to the personal/household sector. Credit extended to households expanded by 3.5 per cent to EC$6.7 billion and accounted for 57.0 per cent of all lending to the economy up from 55.0 per cent at the end of 2016.

FIGURE 15: HERFINDAHL-HIRSCHMAN INDEX LOAN CONCENTRATION



Source: ECCB Data and calculation

Household borrowing for purposes other than house purchases, referred to as other personal lending, or consumer credit, accounts for approximately 46.5 per cent of credit outstanding to ECCU households. Consumer credit has been growing and this increase in lending has mirrored a rise in spending on consumer durables and, in particular, on motor vehicles, where loan durations have also been extended. It also reflects weaknesses across other loans segments of the portfolio. It is important that households remain conscious of the risks associated with taking on new debt.

Box 2

Assessing Systemic Risk in the ECCU Financial System using Network Analysis

Introduction

The global financial crisis in 2007, prompted policy makers to craft a better understanding of how financial linkages could pose systemic risks. Systemic risk is evaluated from two perspectives, the time viewpoint and the cross-sectional viewpoint. In the first instance, the creation of risk examined during upturns and downturns and in the latter, technicians and policy makers assess the distribution of risk within the financial system and have a visual depiction of the architecture of the broad financial system. Consequently, network analysis enables the latter to be undertaken and provides a framework for the design of contagion and vulnerability metrics that can be easily interpreted for use. This box aims to provide readers with an understanding of network analysis and its use in assessing systemic risk. Going forward, boxes will be used to update readers on new tools or indicators that are being employed by the ECCB in its assessments.

Financial network analysis is used as a tool for understanding complex social and economic phenomena (Gale and Kariv, 2007). A financial network is a collection of financial institutions (nodes) and connections that may be directed or undirected (Milwood, 2014). The links between nodes may be in the form of credit relationships, exposures between banks and liquidity flows in the interbank system. Additionally, links have weights attached to them, which may signify the importance of the relationship between nodes (Soromaki, et al. 2006). With respect to these nodes, these may be differentiated through connections known as; neighbours, predecessors and successors.

Data

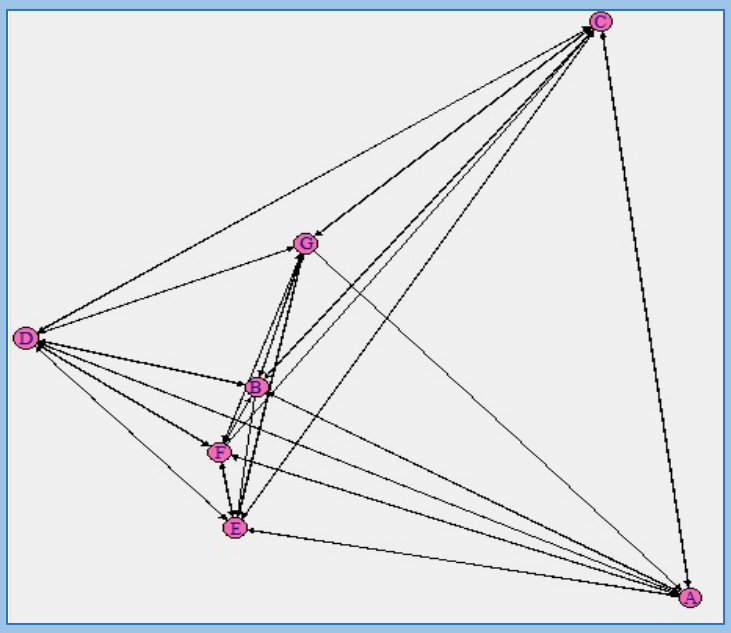
To conduct this type of analysis, the ECCB Research Department makes use of several data sources including, interbank transactions, and data from the Real Time Gross Settlements System as well as data on holdings of other deposit taking institutions and non-bank financial institutions in the commercial banking system.

Network Statistics

Network statistics are meant to provide a mathematical representation of these complex financial systems. Key statistical measures revolve around centrality. These measures are degree centrality, closeness centrality and betweenness centrality. Per Milwood (2014), degree centrality, "counts the number of directed links (edges) which are connected to (or incident upon a node). Closeness refers to the average path length and measures the shortest distance between two nodes (or each financial institution within the system). Betweenness centrality says that a vertex is central if it is needed to connect another pair of vertices. A high betweenness centrality indicates that information is likely to spread quickly throughout the network. By using these measures of centrality, analysts are able to understand the location of financial institutions within the financial network. Ergo, institutions with lower centrality measures are expected to be further away from the centre of the network, while institutions with lower closeness informs the relative location of one institution to another.

Figure 1 shows an example of a directed network of institutions. In this scenario, there are seven (7) nodes or institutions connected by various edges. The arrows reveal the direction of the flow of funds between nodes. For example, arrows pointing away (outwards) from node *G* to node *A* indicates that the outflow of funds or the exposure is from *G* to *A,* while arrows pointing towards (inwards) node *G* indicate an inflow of funds or an exposure from *A* to *G.*

Figure 1: An example of a network showing nodes, vertices and edges



Source: Author's conception

References

Gale, Douglas M, and Shachar Kariv. 2007. "Financial Networks." *The American Economic Review* 97 (2): 99-103.

Milwood, Toni-Anne. 2014. "Contagion Risk in the Jamaican Financial System." *The Caribbean Centre for Money and Finance.* Port of Spain . 01-32.

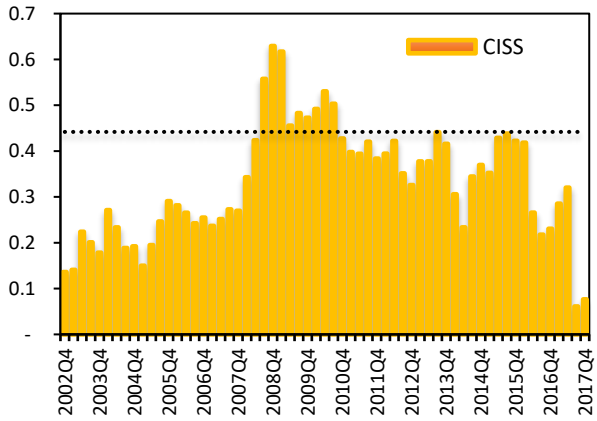
Soramaki, Kimmo, Morten L Bech, Jeffrey Arnold, Robert J Glass, and Walter R Beyeler. 2006. "The Topology of Interbank Payment Flows." *Federal Reserve Bank of New York Staff Reports* 01-11.

1.13 Composite Indicator of Systemic Stress (CISS)

There was a reduction in the CISS as the index fell to a quarterly average of 0.08 from an end of period value of 0.23 at the end of December 2016 (Figure 16).

Importantly the CISS remains well below the crisis period mean value of 0.44. The decrease in the CISS was attributed to a reduction in risk across all market segments including credit, money, housing and stock.

FIGURE 16: COMPOSITE INDICATOR OF SYSTEMIC STRESS (CISS) ECCU



Sources: the ECCB and staff calculations

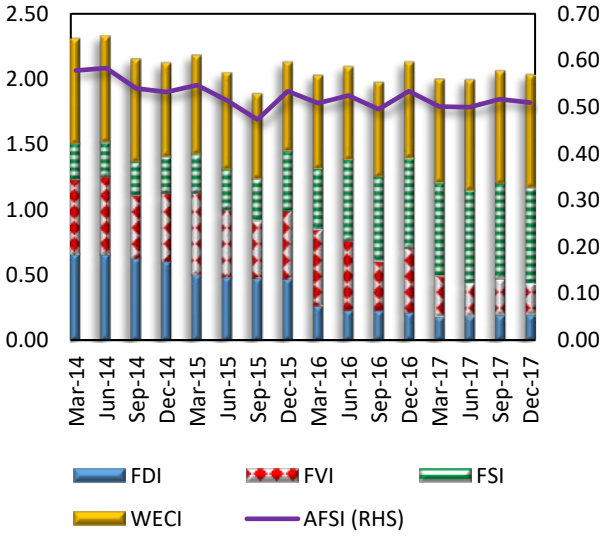
The lower risk across these sectors is reflective of mainly cyclical sources even as risk aversion remains high across financial market segments.

1.14 Resilience of Financial System

Aggregate Financial Stability Index (AFSI)

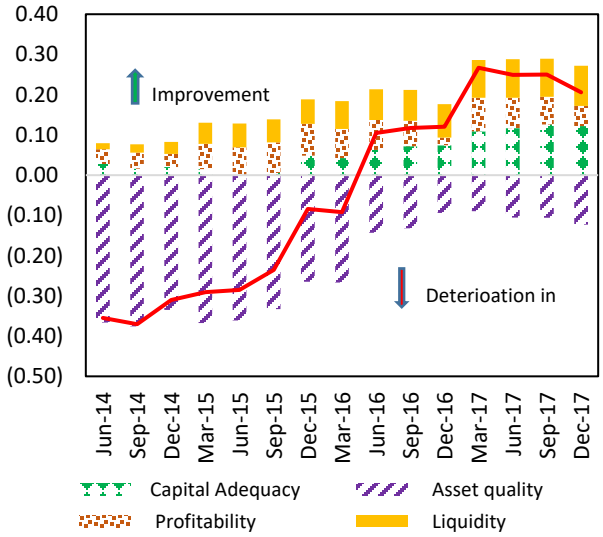
Domestic financial conditions, as measured by the AFSI, displayed signs of stability for the review period. On a yearly basis, the AFSI declined marginally by 0.03, from 0.57 in December 2016 to 0.54 points as at December 2017 (Figure 17). The lower AFSI was attributed to reductions in the financial vulnerability and financial development sub-indices, and offset by increases in the economic climate and financial soundness subcomponents. Specifically, the favourable outturn in the financial soundness sub-index was attributed to the resolutions in Anguilla and Antigua and Barbuda. The negative contribution of the financial vulnerability sub index was due to a decline in fiscal outturns, while strengthening global prospects led to an improvement in the world economic climate sub-component.

FIGURE 17: AGGREGATE FINANCIAL STABILITY INDEX(AFSI)



Source: the ECCB and staff calculations

FIGURE 18: BANKING STABILITY INDEX ECCU (BSI)



Source: the ECCB and staff calculations

1.15 Banking Stability Index (BSI)

The stability of the banking sector (the largest component of the financial sector) continued to improve during 2017. The BSI increased from 0.08 point at the end of 2016 to 0.15 points at the end of 2017 (Figure 18). The main contributors to the uptake in the BSI were an increase in the capital adequacy of the banking system coupled with higher levels of liquidity. Capital adequacy of the banking sector improved to 20.6 per cent from 18.3 per cent recorded at the end of 2016. Contributing negatively to the index was an increase in the ratio of non-performing loans during 2017.

1.16 Macro-Financial Index (MaFI)

The MaFI showed improvements for 2017 with a reduction in the quarterly average value of the index to 13.0 points relative to 20.0 points for 2016. The Macro-Financial 'Signals' Index is meant to capture changes in different variables relative to a tranquil period. The index is analysed over the period December 2014 to December 2017 and includes the variables inflation, the fiscal balance to GDP, net exports to GDP, interest rate volatility, the ECCB-US T-bill rate differential, 12-month growth in private sector credit, household debt to GDP, stock

market volatility, interest rate spread and the real Treasury bill rate.

1.17 Micro-prudential Index (MiPI)

At the end of December 2017, the MiPI stood at 24 points, up from 15 points in the 2016. The indicators of risk-weighted assets to total assets, capital to risk-weighted assets and loans to deposits signalled financial stress.

1.18 Stress Test Results

The stress tests demonstrate that the banking sector is highly resilient to chosen adverse scenarios. Banks have a large enough capital buffer to absorb adverse shocks and maintain their overall capital ratio sufficiently above the regulatory threshold of 8% even under a very adverse scenario.

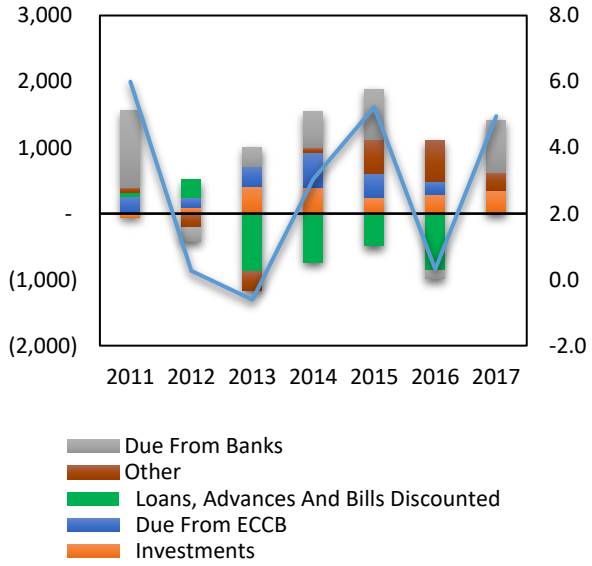
CHAPTER 2: FINANCIAL PERFORMANCE AND SOUNDNESS OF DEPOSIT-TAKING INSTITUTIONS: BANKING AND CREDIT UNION SECTORS

2.0 Overview

Developments in the ECCU banking system were mixed during 2017, while deposits, assets, liquidity and credit increased there was a minor deterioration in the asset quality and overall profitability in the sector. These developments were largely country specific, to two countries rather than for the entire ECCU. Developments for the majority of ECCUs banking system, however, were mostly positive.

Total Assets of the banking sector rose for the fourth consecutive year. The assets of the banking sector expanded by 5.0 per cent during to 2017 to EC$29.6 billion, representing a EC$1.4 billion increase in banking system assets. The increase in banking system assets was driven by '*due from banks*' and increased investments. Due from banks expanded by EC $790.0 million largely on account of due from banks outside the ECCU area (Figure 19). Over the course of 2017, commercial bank investments rose by EC$354.0 million marking the sixth consecutive year of increase. The increases in investments are driven primarily by increased holdings of ECCU countries' sovereign debt. Since 2012, commercial banks have expanded their investment portfolios in an effort to maintain profitability even as the creditworthiness of borrowers worsened and credit extension to decrease.

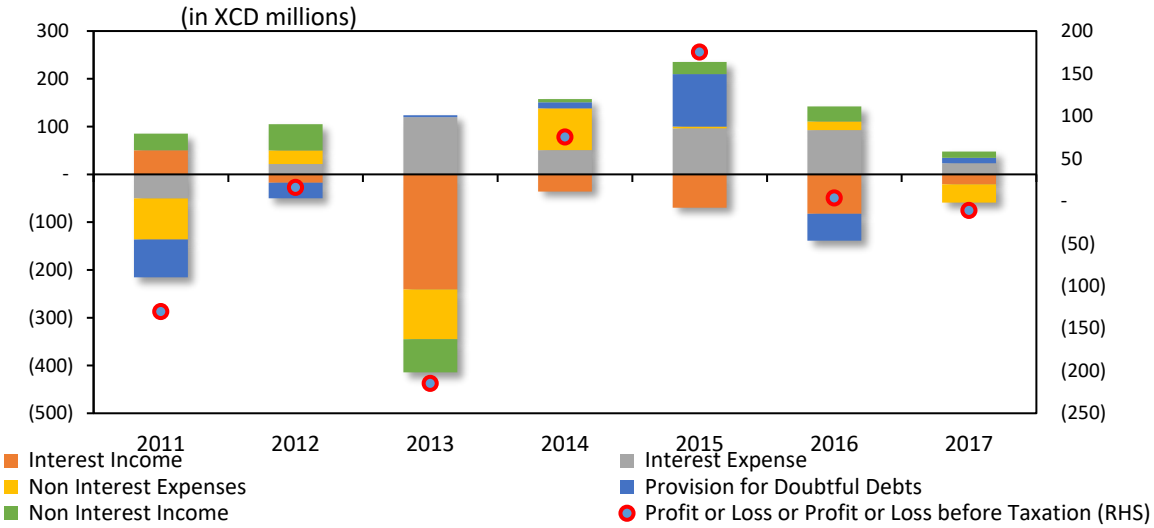
FIGURE 19: ECCU, KEY FINANCIAL INDICATORS, 2011 TO 2017



Source: the ECCB and staff calculations

After rebounding in 2016, the profitability of the ECCU banking sector fell in 2017 but remained positive. Aggregate banking sector profits totalled EC$214.1 million in 2017 compared with profits of EC$225.3 million recorded in 2016. The reduction in profits in the banking sector was attributed to the continual fall in interest income (which fell for its sixth consecutive period) largely because of lower credit extension, deteriorated credit portfolios, and a reduction in lending rates (Figure 20). Additionally, there was a EC$38.0 million expansion in the non-interest expenses of the banking sector. Contributing positively to the bottom line was a reduction in interest expenses (EC$23.0 million), non-interest income (EC$13.0 million) and a release in provisions (EC$11.0 million). The key contributor to profitability of the banking sector over the last several years has been a reduction in credit expenses due to a change in the minimum savings rate and a re-fixing of interest rates paid on time deposits, however this is not a durable strategy to drive profits over the medium to long term for the banking sector. Banks must begin to optimise their business models towards strategies that drive their profits and contribute to economy.

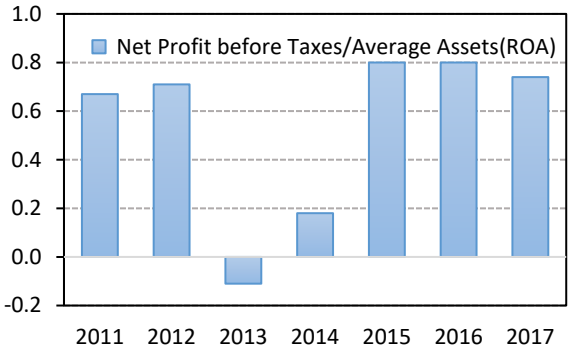
FIGURE 20: ECCU FINANCIAL SECTOR, KEY INDICATORS, 2011 TO 2017



Source: the ECCB and staff calculations

Return on assets, which measure how efficiently banks utilise their assets to derive profits, recorded a slight decrease as well. The ROA fell to 0.74 at the end of December 2017 from 0.80 at the end of 2016. The reduction in ROA is consistent with the acceleration in assets, relative to the decline in profits.

Figure 21: Net Profit before Taxes/Average Assets (ROA)



Source: the ECCB and staff calculations

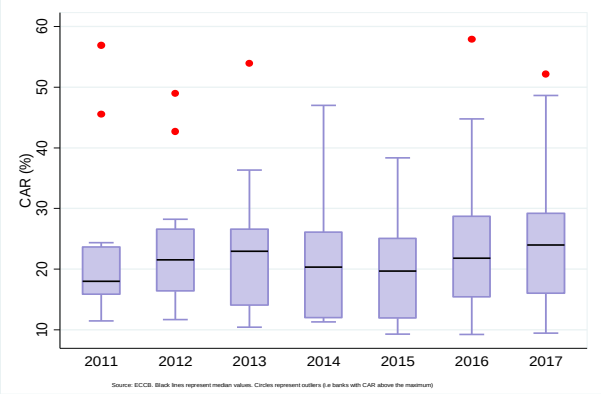
2.1 Capital Adequacy

The main metric used in assessing the solvency of commercial banks is the capital adequacy ratio which measured as the banks' capital (own funds) relative to its risk weighted assets. Based on the Banking Act 2015, the regulatory minimum set for banks in the ECCU is 8.0 per cent (i.e. no bank should have a CAR, which is below 8.0 per cent). As the end of 2017, the capital adequacy of the banking system rose to 20.6 per cent from 18.3 per cent. It is worthwhile to note that this this is the highest that this metric has been since 2011 (Figure 22).

The capital position across banks is heterogeneous. Several banks are well

above the minimum at over 50.0 per cent while some are near to the minimum regulatory standards. The median points to a sufficiently well capitalised banking system. The heterogeneity highlights that some banks need closer attention than others as those close to the regulatory minimum are vulnerable to negative shocks.

FIGURE 22: ECCU CAPITAL ADEQUACY RATIOS, 2011 TO 2017

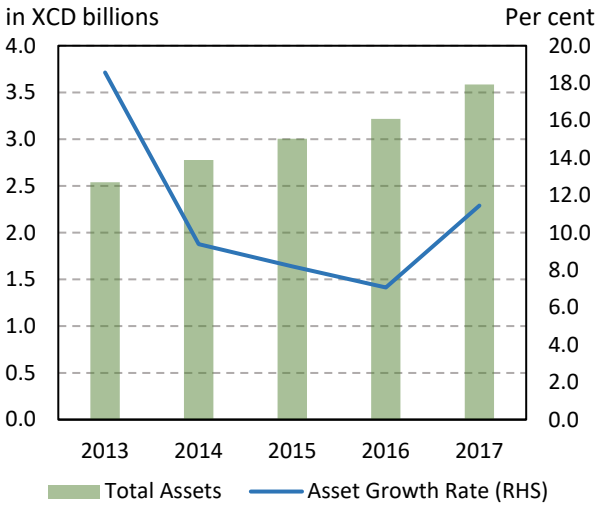


Source: the ECCB and staff calculations

2.2 Credit Unions

The credit union sector grew at a faster pace in 2017 compared to 2016.[2] Total assets of the sector increased from EC$2.4 billion to EC$2.7 billion; a growth of 12.3 per cent **(**Figure 23**)**. This is significantly higher than the expansion in the asset base experienced in 2016 (5.0 per cent) and the growth in the assets of the commercial banks. Similarly, total deposits grew significantly; rising by 8.9 per cent to EC$1.9 billion compared with a 2.8 per cent decline in deposits for 2016 **(**Figure 24**)**.

FIGURE 23: TOTAL ASSETS OF CREDIT UNIONS IN THE ECCU

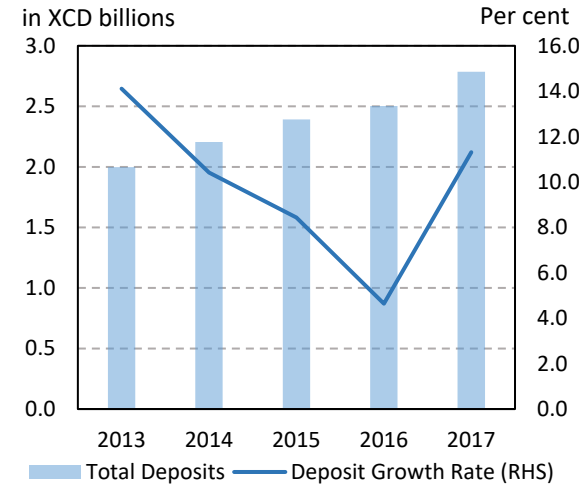


Source: the ECCB and staff calculations

Loans extended increased sharply in 2017 (Figure 25). Total loans extended by the credit union sector rose by 14.0 per cent to approximately EC$2.0 billion compared with an increase of 2.1 per cent in the previous year (2016).

[2] The analysis includes credit union data for five of the seven territories with an active credit union sector.

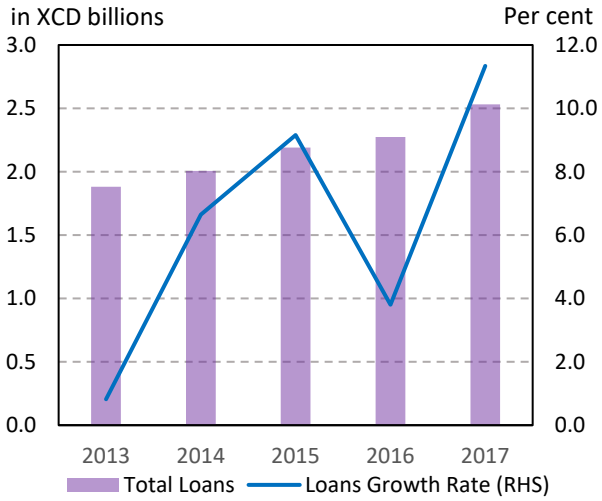
FIGURE 24: TOTAL DEPOSITS OF CREDIT UNIONS IN THE ECCU



Source: the ECCB and staff calculations

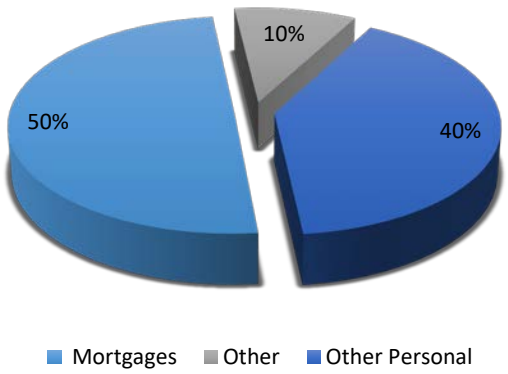
This gave rise to an equivalent growth in the sector's loan contribution to GDP. Mortgages continue to constitute a substantial part of the credit union portfolio, accounting for 48.0 per cent of total loans in 2017 compared with 45.0 per cent in 2016 (Figure 26).

FIGURE 25: ECCU, CREDIT UNION LOANS



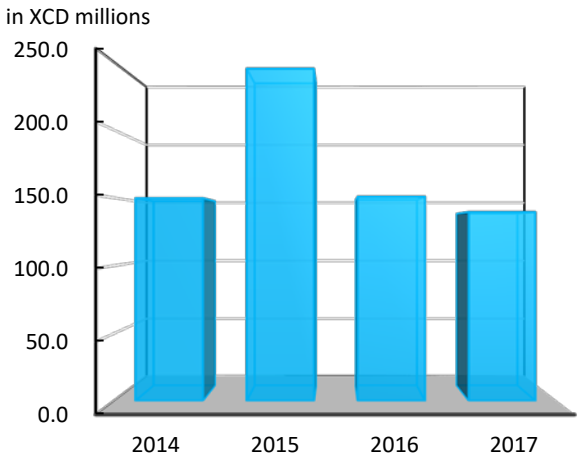
Source: the ECCB and staff calculations

FIGURE 26: ECCU, CREDIT UNION LOANS BY SECTOR



Although the NPL ratio remains above the 5 per cent regulatory benchmark, a slight decline was reported for 2017 (Figure 27). The NPL ratio stood at 6.0 per cent or 1.0 percentage point lower than that reported for 2016.

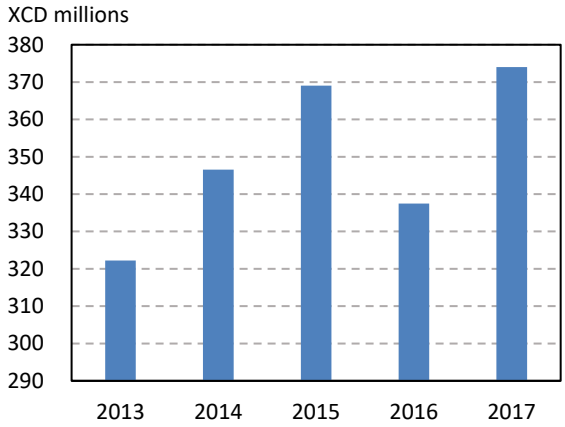
FIGURE 27: CREDIT UNION, NON-PERFORMING LOANS



Source: the ECCB and staff calculations

Membership in the credit union sector continues to report increases (Figure 28). At the end of 2017, membership grew by 1.3 per cent after a decline was reported in 2016. All but one of the countries represented in the analysis recorded growth in membership indicating that the credit union sector continues to play an important part in the provision of financial services in the ECCU.

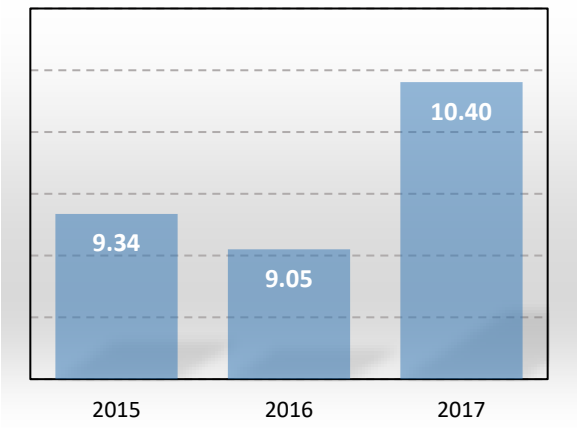
FIGURE 28: ECCU, CREDIT UNION MEMBERSHIP



Source: the ECCB and staff calculations

The ratio of institutional capital to total assets rose above the minimum 10 per cent benchmark in 2017 (Figure 29). The ratio, which was below the benchmark at 8.1 million per cent in 2014, has been trending steadily upwards exceeding the minimum standard at 11.4 per cent in 2017. This indicates that efforts are being made to ensure that the sector is well capitalised and members' savings are protected.

FIGURE 29: ECCU, CREDIT UNION, INSTITUTIONAL CAPITAL TO TOTAL ASSETS, 2015 TO 2017



Source: the ECCB and staff calculations

CHAPTER 3: FINANCIAL PERFORMANCE AND SOUNDNESS OF NON-DEPOSIT-TAKING INSTITUTIONS: INSURANCE COMPANIES

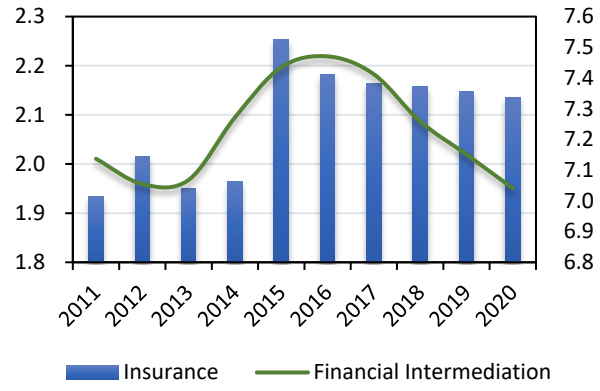
3.0 Overview

The insurance sector continues to remain a relevant part of the ECCU financial system, especially as it relates to the transfer of risk. Moreover, the role that the sector played during the recent passage of hurricanes' Irma and Maria is even more relevant. In instances of natural disasters, insurance companies either are able to restore wholly or partially the financial position of households and firms. In these instances, non-life insurance performance is monitored quite closely while other segments such as life would gain relevance when loss of life is unusually high.

Insurance companies in the ECCU can be separated into life, non-life (general insurance) and composite insurance companies. Composite insurance companies are firms whose business lines function within the realm of both life and non-life insurance. Revenue within the insurance industry is generated in the form of premiums that are paid up-front. An insurance premium is the value which an individual or business must pay for an insurance policy. Premiums represent income and conversely a liability – as the firm must provide coverage for the claims that can be made against the policy.

Within the ECCU, the insurance industry is the second largest contributor to real economic output within the financial sector. As at the end of December 2017, the sector contributed approximately 2.16 per cent to economic activity while, commercial banks were estimated to contribute 5.0 per cent to economic output. This contribution to economic activity was marginally lower than that of the previous period – which was estimated at 2.18 per cent. The insurance sector is expected to continue contributing to economic output into 2020 by an average of 2.2 per cent over the next three (3) years (Figure 30).

FIGURE 30: ECCU INSURANCE SECTOR CONTRIBUTION TO REAL ECONOMIC ACTIVITY, 2011 TO 2020



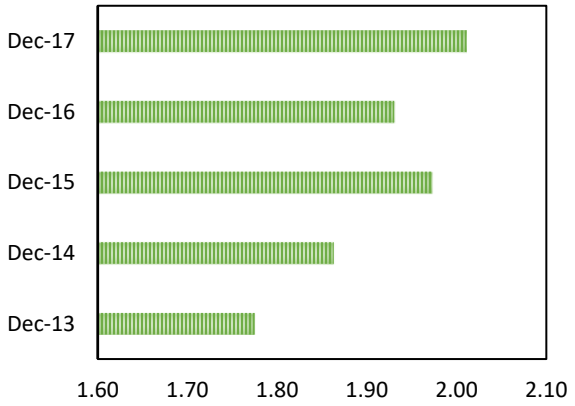
Source: the ECCB and staff calculations

3.1 The ECCU Insurance Industry

Total Assets

Data on the ECCU insurance industry – for the purposes of the financial stability report remains limited. For analysis, five (5) countries were used, including Antigua and Barbuda, Grenada, Saint Lucia, St Kitts and Nevis and St Vincent and the Grenadines. Total assets in the insurance sector as at end December 2017 was estimated to have grown by 4.2 per cent ($80.3m) to EC $2.01b (figure 31). Examining the quality of assets held by insurance companies in the ECCU indicates that approximately 27.2 per cent of assets during 2017 were held as cash and deposits, while fixed income instruments accounted for an estimated 25.9 per cent of total assets. Equities, also important within industry were estimated at 11.8 per cent while loans represented 7.7 per cent and 5.3 per cent respectively. The composition of assets implies that insurance firms are not overly exposed to the real estate market, thus limiting the effect of a decline in real estate market prices. Additionally, their exposure to fixed income instruments is reflective of their search for yield in the current macroeconomic construct as well a risk adverse approach to investing.

FIGURE 31: ECCU INSURANCE SECTOR TOTAL ASSETS, 2013 TO 2017 (IN EC BILLIONS)



Source: the ECCB and staff calculations

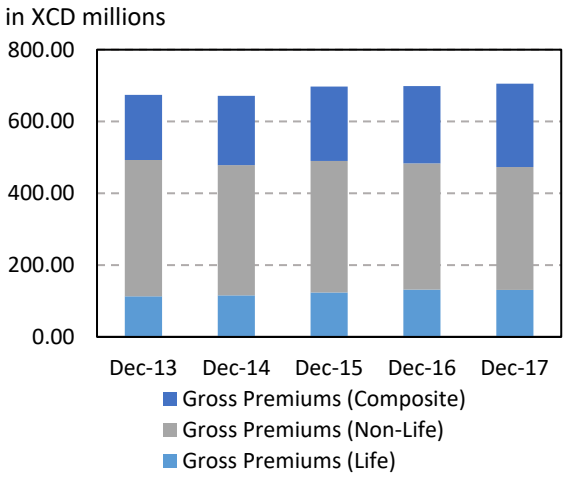
3.2 Financial Performance of Life, Non-Life and Composite Firms within the ECCU

Gross Premiums

Gross premiums for the insurance sector within the context of the analysis was estimated at EC$705.5 million as at the end of December 2017, an increase from EC$698.5 million in the previous period. The increase in gross premium is due to the composite segment of the industry (Figure 32).

Gross premiums collected for the composite insurance segment of the industry rose to EC$232.4 million as at December 2017 while premiums collected in the *Life* and *Non-Life* segments declined to EC$130.8 million and EC$342.3 million respectively (Figure 33 and Figure 34).

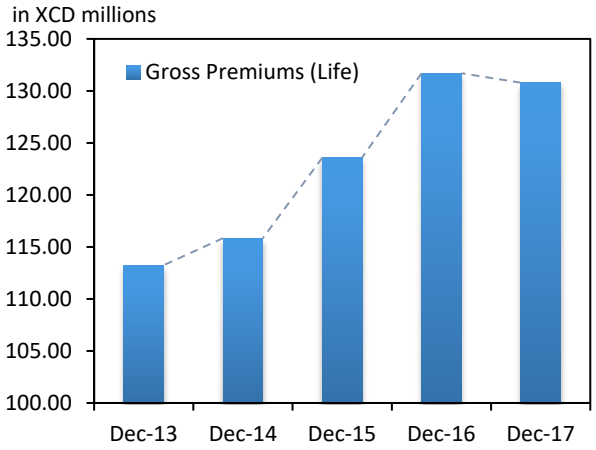
FIGURE 32: GROSS PREMIUMS BY SECTOR, 2013 TO 2017



Source: the ECCB and staff calculations

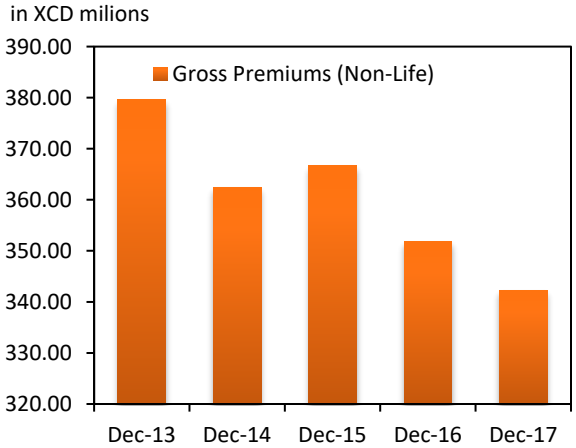
Expenses for the period also rose in line with the increase in gross premiums. Expenses for the industry grew to EC$429.2 million as at December 2017 from EC$426.6 million as at December 2016.

FIGURE 33: GROSS PREMIUMS FOR THE ECCU, LIFE INSURANCE INDUSTRY, 2013 TO 2017



Source: the ECCB and staff calculations

FIGURE 34: GROSS PREMIUMS FOR THE ECCU, NON-LIFE INSURANCE INDUSTRY, 2013 TO 2017



Source: ECCB Data and calculation

On a consolidated basis, the capital (including technical reserves) of insurance companies rose to EC$1.51 billion in 2017 from EC$1.43 billion in 2016 and EC$1.48 billion in 2015. The increase in capital can be traced to growth in capital for the *Life* and *Non-Life* portions of the industry. Capital (including technical reserves) in the *Life* insurance sector of the industry rose by EC$39.1 million to EC$539.4 million in 2017 from EC$500.3 million in 2016. In the *Non-Life* insurance segment of the industry, capital (including technical reserves) rose by EC$45.4 million to EC$578.2 million in 2017 from EC$532.8 million in 2016.

Assessment of the insurance sector was done using the CARAMELS framework. This framework makes use of capital adequacy, asset quality, reinsurance and actuarial issues, management soundness, earnings and profitability, liquidity and sensitivity to market risks. In the *Life* insurance segment of the market, capital to technical reserves rose to 16.0 per cent at the end of 2017 from 6.6 per cent in 2016 (Table 1). The increase in this ratio was due to a rise in capital (without technical reserves) by 58.3 per cent in 2017 and offset by a marginal decline in technical reserves. Analysing asset quality reveals holdings in longer-term assets such as real estate rose to 7.2 per cent in 2017 while shorter-term assets such as equities, rose to 5.2 per cent in 2017. Examining the capital to total assets ratio remained relatively stable at 46.4 per cent in 2017.

TABLE 1: ECCU LIFE INSURANCE SECTOR, TABLE OF SELECTED FINANCIAL RATIOS, 2013 TO 2017

Table of Selected Financial Ratios[1]	Life Insurance				
	2013	2014	2015	2016E	2017E
Capital Adequacy					
Net premium/capital	NA	NA	NA	NA	NA
Capital/Total Assets	NA	NA	NA	NA	NA
Capital/Technical Reserves	39.6%	44.2%	11.4%	6.6%	16.0%
Asset Quality					
(Real estate+unquoted equities+debtors)/total assets	6.7%	6.2%	8.0%	6.3%	7.2%
Equities/Total Assets	9.5%	8.0%	9.9%	3.9%	5.2%
Reinsurance and Actuarial Issues					
Risk retention ratio (net premium/gross premium)	87.4%	88.4%	88.9%	88.5%	88.3%
Earnings and Profitability					
Expense ratio (expense/net premium)	115.5%	115.1%	105.4%	119.8%	107.3%
Investment Income/net premium	NA	NA	NA	NA	NA
Investment Income/investment assets	2.5%	5.2%	9.8%	11.3%	9.7%
Revisions to Technical Reserves/Technical Reserves	0.0%	0.0%	0.0%	0.0%	0.0%
Liquidity					
Liquid assets/Current Liabilities	102.9%	109.2%	105.9%	103.5%	104.8%
Sensitivity to Market Risk					
Net Open Foreign Exchange Position to Capital (Non-Life) %	NA	NA	NA	NA	NA

1. Insufficient data exists to completely evaluate CARAMELS. Management Soundness is left out of the framework above.
2. NA indicates the unavailability of data for that specific indicator.

In assessing the asset quality held by *Non-Life* insurance companies, it can be noted that the ratio of real estate, unquoted equities and debtors to total assets remained stable at 15.8 per cent in 2017 when compared with 15.8 per cent in 2016. Shorter-term assets held by *Non-Life* insurance declined to 2.8 per cent in 2017 from 8.3 per cent in 2016 (Table 2).

TABLE 2: ECCU NON-LIFE INSURANCE INDUSTRY, TABLE OF SELECTED FINANCIAL RATIOS, 2013 TO 2017

Table of Selected Financial Ratios[1]	Non-Life Insurance				
	2013	2014	2015	2016E	2017E
Capital Adequacy					
Net premium/capital	50.20%	43.87%	55.73%	55.65%	50.34%
Capital/Total Assets	50.36%	52.42%	45.54%	45.32%	46.41%
Capital/Technical Reserves	NA	NA	NA	NA	NA
Asset Quality					
(Real estate+unquoted equities+debtors)/total assets	16.92%	10.00%	16.00%	15.78%	15.82%
Equities/Total Assets	15.84%	16.19%	9.52%	8.27%	2.80%
Reinsurance and Actuarial Issues					
Risk retention ratio (net premium/gross premium)	42.00%	42.79%	48.32%	47.64%	48.51%
Earnings and Profitability					
Expense ratio (expense/net premium)	94.54%	96.47%	91.51%	90.60%	95.88%
Investment Income/net premium	7.06%	7.58%	5.29%	5.04%	5.38%
Investment Income/investment assets	NA	NA	NA	NA	NA
Revisions to Technical Reserves/Technical Reserves	0.19%	1.70%	-1.01%	0.26%	-0.09%
Liquidity					
Liquid assets/Current Liabilities	113.31%	122.65%	126.04%	120.03%	123.56%
Sensitivity to Market Risk					
Net Open Foreign Exchange Position to Capital (Non-Life) %	0.00%	0.00%	0.00%	0.00%	0.00%

1. Insufficient data exists to completely evaluate CARAMELS. Management Soundness is left out of the framework above.
2. NA indicates the unavailability of data for that specific indicator.

Reinsurance and actuarial issues are captured using the risk retention ratio given that limited information exists in that area. The retention ratio for the *Life* insurance segment of the industry indicates that net premiums relative to gross premiums have remained relatively stable at 88.3 per cent in 2017 compared with 88.5 per cent in the previous year. Additionally, in the *non-life* segment of the industry, retention ratios have increased marginally to 48.5 per cent in 2017 compared with 47.6 per cent in 2016. Insurance companies in the ECCU, face relatively high costs as indicated by their expense ratios. In 2017, the non-life segment of the industry recorded a ratio of 95.9 per cent in 2017, when compared to 90.6 in 2016 and 91.5 per cent in 2015. Similarly, expense ratios for the *Life* insurance segment of the industry were recorded at 107.3 per cent in 2017 compared to 119.8 per cent in 2016. The

high expense ratios are reflective of the lower levels of income recorded by the industry in 2017, as seen in the tables above. Finally, liquidity within the industry continues to remain high as liquidity ratios for *Life* and *Non-life* insurance were recorded in 2017 at 104.8 per cent and 123.6 per cent respectively.

3.3 Risk Assessment

The risks emanating from the insurance sector within the ECCU are mixed. High retention ratios suggest that pay-out ratios are low overall, while the impact of hurricanes on specific territories would have affected the retention ratios in those areas. It is anticipated that insurance firms within some territories may have been adversely affected by the natural disasters of September 2017. Consequently, some insurance firms were unable to meet customer claims. Additionally, it is expected that in areas where devastation was greatest that pay-out ratios are substantially higher and where firms may not be solvent, are likely to cause some instability. The relatively stable and improving capital levels are congruent to the high retention ratios in the region. Insurance firms continue to reposition themselves towards more liquid assets, as the cash and other short term investments retain approximately 25.0 per cent of total assets held. Expenses, however, remain quite high for the industry over the period of analysis and investment income remains relatively low (non-life insurance). Revisions to technical reserves also remain low. Market risks for insurance firms in the ECCU are quite high, given portfolio structures concentrated in investment instruments of fixed income and equities.

CHAPTER 4: POLICY INITIATIVES FOR ENHANCING FINANCIAL STABILITY IN THE ECCU REGION

4.0 Overview

In the ECCU, several initiatives are being continued which are expected to assist in enhancing financial stability in the monetary union. These initiatives are mainly geared towards new legislative developments, new and improved supervisory arrangements, and infrastructural upgrades. These enhancements include the following (1) the establishment of the ECCU Credit Bureau, (2) new supervisory arrangements, and (3) payment system developments.

4.1 The Establishment of the ECCU Credit Bureau

The Harmonised Credit Reporting Bill (HCRB) was developed to provide for the proper administration and licensing of credit bureaus. Additionally, the Bill provides for the compilation and maintenance of databases, evaluation, update and dissemination of the data (to subscribers) and other data related adjustments. Enactment of the Bill, however, remains outstanding in four (4) member countries having been passed in the parliaments of Antigua and Barbuda, St Vincent and the Grenadines, Grenada and St Kitts and Nevis. Supervision and oversight of this new credit reporting system will be conducted by the ECCB. It is expected that upon completion of passage in all member countries and establishment of the Credit Bureau that the bureau will address the issue of asymmetric information, accelerate the speed with which credit applications are processed, provide credit granting firms with greater means to assess risk and facilitate the extension of credit to underserved segments of the population.

4.2 New Supervisory Arrangements

Within the ECCB, the Bank Supervision Department (BSD) works to provide the highest level of financial stability assurance and supports monetary policy of a strong and stable Eastern Caribbean Dollar. In keeping with Article 4, the BSD's operations

are centred on the powers granted to the Bank under Article 3(2) of the ECCB Agreement. The ECCB is committed to the implementation of Basel II/III for its licenses as the current Basel I framework is considered insufficiently risk sensitive to account for the risks confronting financial institutions in the ECCU. Consequently, a Basel II/III implementation group/working team has been formed and the ECCB has received assistance from CARTAC for the aforementioned purpose. Further, the ECCB has engaged in consultative efforts with the banking industry to ensure effective communication and consultation. In addition to this, efforts have been made on drafting Basel II/III standards for bank financial institutions and establishing protocols for interacting with the Banking Industry among others.

4.3 Risk Based Supervision

In addition to the Basel II/III implementation group/working team, the ECCB has received Technical Assistance (TA) from the World Bank and the IMF. This TA is focused on strengthening the resilience of the ECCU financial sector. The TA includes assistance from a long term Consultant, to provide technical advice on the implementation of an enhanced risk-based supervisory regime. This regime includes a more strategic approach to the identification and assessment of risks, using an adequate range of regulatory tools that have the full force of law, in order to bring about timely corrective actions.

The Risk Based Supervision (RBS) framework focuses attention and supervisory resources on activities that pose the greatest material risk to an institution. In March 2018, the ECCB introduced the RBS framework to Licensed Financial Institutions (LFI) at a joint meeting of commercial banks and non-bank financial institutions licensed under the Banking Act. The ECCB has to date conducted pilot studies using the RBS methodology at two licensed financial institutions. The framework is scheduled to be fully implemented by 2019.

4.4 Status of Prudential Standards/Guidelines

To date, a number of guidelines have been issued, and the ECCB has intensified its efforts to facilitate the drafting of other

relevant prudential standards. The ECCB received initial assistance from CARTAC to draft Basel Standards; which were previously circulated to the industry for comments and are currently being finalised.

The ECCB will continue to implement the requisite prudential standards that support the provision of financial services in an effective manner and ensure that licensed financial institutions comply with applicable standards to adequately manage their risks. This process is in keeping with the Central Bank's ultimate objective of ensuring financial stability and confidence in the ECCU financial system.

4.5 Payment System Developments

A critical component in the stability of financial systems is that of a well-functioning payments system. The ECCB has legal responsibility for the payment system and seeks to ensure that they payments network is safe, secure, efficient, accessible, reliable and very responsive to technological development. Ergo, the ECCB has established several development initiatives, which are in keeping with the strategic priorities of the Bank. These are, (1) the revival of the Eastern Caribbean Payments Council (ECPC), (2) the second phase of the Automated Clearing House Project, (3) rules and procedures of the Real Time Gross Settlements System (RTGS), (4) the establishment of a payment system, risk and oversight management unit and (5) continued work on legislative issues especially as it relates to the issuance of electronic money or digital currency.

The revival of the ECPC under the leadership of the ECCB is expected to lead to an enhancement of the governance framework to support the harmonised Payment Systems Act. This council will provide advice on policy issues of relevance to the Payments System and function as a forum for supporting efficient payments and settlements clearance. In line with the aforementioned development is the implementation of the second phase of the Automated Clearing House Project – Electronic Funds Transfer (EFT). Upon completion, it is expected that transfers between commercial banks in the ECCU will be completed on the same day – thereby offering persons a more secure and efficient method of transferring funds in the

monetary union. Supporting the enhancements to the payment system infrastructure is the establishment of rules and procedures for the RTGS – which will also assist the EFT. Congruent to this is the development of a payment system oversight and risk management unit within the ECCB, which will work to ensure that the ECCB maintains functional segregation to avoid any actual or perceived conflicts of interest.

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