



# 51<sup>ST</sup> ANNUAL MONETARY STUDIES CONFERENCE



Hosted by the Eastern Caribbean Central Bank

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*This is a lightly edited version of the presentation made at the 51<sup>st</sup> Annual Monetary Studies Conference, 19<sup>th</sup> -22<sup>nd</sup> November, 2019.*

In our paper written in 2009, we noted that “Casual evidence of financial integration in the Caribbean is abundant, even though complaints about the failure to implement formal agreements for regional integration are a media staple. The far flung regional implications of the intervention of CL Financial by the government of Trinidad and Tobago are the most dramatic illustration of the extent and strength of regional financial linkages, but there are numerous other examples of cross border ownership links, and announcements of mergers, acquisitions and intra-regional lending and investments. It would appear that, at least as far as financial transactions are concerned, the Caribbean region, or parts of it, are already deeply integrated, without the benefit of regional enabling mechanisms at the official level.”

Over the past decade the events that occurred have highlighted how interconnected the financial systems of the world are. Recent experiences with debt default and financial failure in the Caribbean provide us with material for assessing the risks to which the regional financial systems are exposed, as a result of the degree of integration.

This paper is still a work in progress and today, I present to you what we have found to date.






## AIM OF STUDY

Examine and update the analysis of our earlier study "***Financial Integration in the Caribbean,***" (Caribbean Centre for Money and Finance, 2009), which found abundant evidence of financial integration in the Caribbean, albeit with links of different intensity in different parts of the region.

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Recent studies that have examined the cross-border positions of financial institutions within the region, following the limited information examined in Worrell and Jhinkoo (2009), are the Caribbean Financial Stability Report 2015 and Canetti (2017). They both provide network maps of these regional financial balances, which show clearly that financial institutions' cross border claims are surprisingly little, in relation to the regional ownership and operations of major financial institutions.

A snapshot of the current state of Caribbean economies is highlighted below, to give a backdrop to what financial Institutions are facing.



## OVERVIEW OF THE CARIBBEAN FINANCIAL SECTOR

<h3 style="margin: 0;">CARIBBEAN MACROECONOMIC ENVIRONMENT</h3> <ul style="list-style-type: none"> <li>• Economic activity in the region remains subdued in 2018.</li> <li>• Inflationary pressures relatively low.</li> <li>• Unemployment remains high, particularly in service based economies</li> <li>• Most countries registered overall deficits on their fiscal accounts in 2018, although many were fiscally stringent – expenditure cuts and imposed taxes.</li> <li>• On average the debt to GDP ratio are lower in 2018 reflecting improved growth and declining debt stock.</li> </ul>	<h3 style="margin: 0;">CARIBBEAN FINANCIAL SECTOR ENVIRONMENT</h3> <ul style="list-style-type: none"> <li>• The Caribbean Financial sector is highly interconnected both within the Caribbean and with the global financial system.</li> <li>• Capital adequacy ratios which remain in excess of statutory norms, in part because banks shifted from private sector lending to holding more cash; and</li> <li>• Liquidity ratios are relatively high</li> <li>• Moderate decline in non-performing loans;</li> <li>• Recovery of profitability</li> <li>• The insurance sector is adequately capitalised.</li> </ul>
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There are a number of regional financial conglomerates that operate in the CARICOM region; here we highlight the ones with notable CARICOM presence that might be labelled as Significantly Important Financial Institutions (SIFIs):

1. **Scotiabank:** This Canadian owned bank has had a widespread Caribbean presence for more than 120 years. However, in November 2018 it was announced that Scotia will be selling its banking operations to Republic Financial Holding Limited in 9 Caribbean countries: Guyana, St. Maarten, Anguilla, Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines. Also, Scotiabank TT and Scotiabank Jamaica have agreed to sell their insurance subsidiary, ScotiaLife TT Ltd, to Sagicor.
2. **CIBC First Caribbean Bank:** CIBC FirstCaribbean's presence in the Caribbean is reflective of its almost 250 years of banking experience, starting with its heritage organisations, Barclays PLC and CIBC. FirstCaribbean was formed in 2002 with the merger of CIBC West Indies Holdings and Barclays Bank PLC Caribbean operations. In December 2006, CIBC acquired Barclays' stake and became the majority shareholder in FirstCaribbean. CIBC FirstCaribbean is Canadian owned but operates as a Caribbean-managed business within the CIBC group of companies.
3. **Royal Bank of Canada:** Royal Bank of Canada and its subsidiaries operate under the master brand name RBC. With more than 100 years of dedicated service to the Caribbean, RBC has a presence in 17 countries across the Caribbean, serving more than one million clients. In June 2008, the Royal Bank of Canada (RBC) acquired RBTT Financial Group (RBTT) creating RBC Financial Caribbean.
4. **Sagicor Financial Corporation Limited:** Sagicor has been in business since 1840; they have been in this field of offering financial services in the Caribbean for over 175 years. They became publicly traded in 2002 when they established Sagicor Financial Corporation Holding company. Sagicor now operates in 22 countries throughout the Caribbean, Latin America, the United Kingdom, and the United States. The firm has discontinued as a Barbados company in 2006, where it has been based for 170 years, and redomiciled to Bermuda.
5. **JMMB:** Domiciled in Jamaica, the JMMB Group is another leading financial group in the Caribbean, with operations in Jamaica, Trinidad and Tobago and the Dominican Republic. They offer financial services such as Investments, Banking, Remittances and Insurance Brokering.
6. **Nagico:** The NAGICO Group has been in existence since 1982 and provides a myriad of property and casualty as well as life products and risk solutions to its customers, who are situated throughout the Caribbean; their corporate Head Office is in St. Maarten.
7. **First Citizens:** The First Citizens Group is one of the leading financial services groups in Trinidad & Tobago. They offer a full range of retail, corporate and merchant banking services as well as asset management, trustee and brokerage services. The Group is headquartered in Trinidad & Tobago. In 2009 First Citizens acquired Caribbean Money Market Brokers Limited (now rebranded as First Citizens Investment Services Limited), the largest full service securities trading company in the Caribbean, with offices in Trinidad & Tobago, Barbados, St. Vincent and St. Lucia.

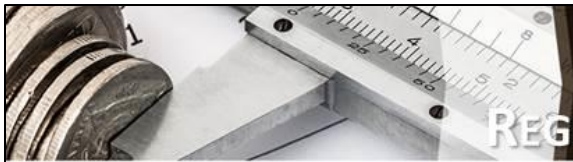
In January 2012 the Group ventured into the Central American market and opened a representative office in Costa Rica, which is expected to propel the First Citizens brand abroad. The Group's growth and expansion continued in August 2012 with the acquisition of Butterfield Bank in Barbados (now called First Citizens Bank [Barbados] Limited). On 15 July 2013, First Citizens launched the largest Initial Public Offering (IPO) of shares in the history of the TTSE to date.

8. **National Commercial Bank Financial Group:** is a Jamaican based financial group. NCB Financial Group Limited ("NCBFG") was incorporated in April 2016 to be licensed under the Banking Services Act as the financial holding company for National Commercial Bank Jamaica Limited ("NCBJ"). NCB is the largest and most profitable financial services group in Jamaica with roots dating back to 1837. NCBFG provides a wide array of financial products and services such as banking, wealth management, life and general insurance, and offshore banking subsidiaries. The NCB Group includes NCBJ, NCB Capital Markets Limited and its subsidiaries in Barbados and Cayman, NCB Insurance Company Limited, NCB (Cayman) Limited, Clarien Group Limited and its subsidiaries in Bermuda, Guardian Holdings Limited (Trinidad and Tobago) and its subsidiaries as well as NCB Global Finance Limited in Trinidad and Tobago.
9. **PanAmerican Life:** Pan-American Life Insurance Group (PALIG) is a leading provider of life, accident and health insurance for more than 100 years. A USA (New Orleans, LA) based financial services company, they have operations in 22 countries across the Americas. In 2011 they acquired the business and assets of ALIGICO along with all its operations. The Group has branches and affiliates in Costa Rica, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, and 13 Caribbean markets, including Barbados, the Cayman Islands, Curaçao, and Trinidad and Tobago.
10. **MASSY:** Massy United Insurance began operations on January 1st, 1977, having been incorporated in Bridgetown, Barbados on September 30th, 1976. The new company amalgamated the former agencies of the Royal Co., Guardian Royal Exchange and the Sun Alliance. Barbados' then largest conglomerate Massy (Barbados) Limited became the major shareholder. Today, Massy United Insurance is a member of the Massy Group. Massy United Insurance provides comprehensive coverage in over 19 Caribbean countries.
11. **Republic Bank Financial Holdings Limited:** Originally called Colonial Bank, RBL was founded in 1837 as the first commercial bank in Trinidad and Tobago. In December 2015, Republic Financial Holdings Limited was created under the Financial Institutions Act, Chap 79:09, of the Laws of Trinidad and Tobago. Headquartered in Trinidad and Tobago, Republic Financial Holdings Limited (RFHL) is the registered owner of all of the banks in the Republic Group -The Group currently has 16 subsidiaries in Trinidad and Tobago, Grenada, Guyana, the Cayman Islands, Barbados, Ghana, and Suriname. Across these markets, RFHL offers an extensive range of banking services, including credit and debit card issuance and processing, leasing, trustee services, mutual fund and investment management, and merchant banking.



The table below gives a summary of the geographical spread of the financial institutions in the Caribbean that were deemed significant by regional regulators; the red X indicates the country of incorporation of the institution. The spread of some of these firms is extensive across the region. Spillover risk between banking and insurance sectors seems to be mainly driven by ownership linkages in the Caribbean. (Canetti, 2017). Insurance firms appear to have a greater regional spread than banks, for example Massy United (15 countries) and Guardian General (13 countries). Note that Guardian General is owned by The National Commercial Bank Financial Group (Jamaica) which also owns National Commercial Bank.





# CARIBBEAN FINANCIAL SECTOR: REGIONAL FINANCIAL CONGLOMERATES

Table 1: Geographical location of Regional Financial conglomerates as at November 2019.

NAME OF COMPANY	Aruba	ANG	ANB	BAH	BDS	BZ	DOM	GRE	GUY	JAM	MONT	NAnt	SKN	SLU	SVG	SUR	TT	Total no. of countries
Scotiabank			x/PA1	x	x	x			x/PA1	x							x	7
CIBC First Caribbean	x		x	x	x		x	x		x		x	x	x	x		x	12
Royal Bank of Canada	x		x	x	x		x	x			x	x	x	x	x		x	12
Republic Bank		x	x/PA1		x		x	x	x/PA1				x	x	x	x	x	11
First Citizens					x									x	x		x	4
JMMB										x							x	2
Citibank	x			x	x					x							x	5
National Commercial Bank										x							x	2
Guardian Life		x			x			x		x				x	x		x	7
Sagicor Life	x		x	x	x	x	x	x		x			x	x	x		x	12
Scotia Life		x	x		x	x	x	x		x/PA2			x	x	x		x/PA2	11
Pan-American Life	x		x		x		x	x				x	x	x	x		x	10
Guardian General	x	x	x	x	x	x		x		x	x		x	x	x		x	13
Sagicor General			x	x	x		x							x			x	6
Massy United	x	x	x	x	x	x	x	x	x	x	x		x	x	x		x	15
Nagico	x	x	x	x			x	x			x	x	x	x	x		x	12

Notes: PA1: waiting for approval to sell to RFHL; PA2: waiting for approval to sell to Sagicor

Source: The Various Company Annual Reports.

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There is a great degree of financial integration occurring within the Caribbean region, driven by market forces. Nonresident banks have entered domestic markets and there is nonresident participation in insurance markets and pension funds; securities are traded abroad, and domestic firms borrow directly in overseas markets.

## Interest Rate Convergence.

The rationale for interest rate convergence test is that more integrated financial markets should promote competition between banks across borders, leading to convergence of interest rates. Exchange rate uncertainties could inhibit cross border transactions between countries; to get around this problem, we focus our analysis on fixed exchange rate countries only.

We look at :

- (1) Trends in comparable interest rates in country pairs;
- (2) "Sigma" convergence, which measures trends in the dispersion of interest rates for fixed rate countries as a group and sub-groups; and
- (3) "Beta" convergence, which measures the autoregressive behaviour of interest rates in country pairs, using the US as the benchmark country.

# FINANCIAL INTEGRATION IN THE CARIBBEAN: INTEREST RATE CONVERGENCE

## Interest Rate Convergence Tests:

1. Trends in comparable interest rates in country pairs.
2. Sigma convergence : Trends in the dispersion of interest rates for fixed rate countries as a group and sub-groups.
3. Beta convergence : The autoregressive behaviour of interest rates in country pairs, using the United States as the benchmark country.

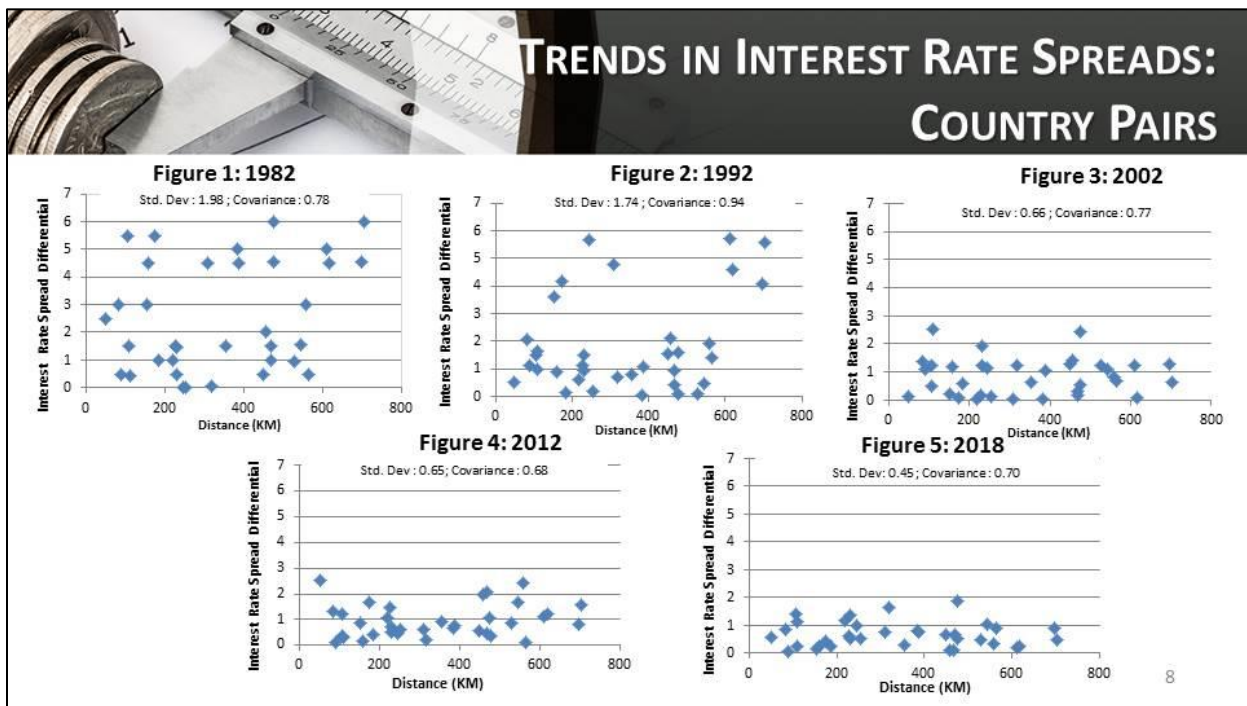
## The Data :

- Interest Rate Spread = Lending rate - Deposit rate of Commercial Banks.
- Time periods : 1981 to 2018 ; Jan.1982 to May 2019.
- Source : International Financial Statistics and Central Banks.

Note: The cross sectional dispersion of interest rate spreads (using sigma convergence and beta convergence tests) or asset-return differentials are the most frequently used price-based indicators mentioned in the literature on Interest Rate Convergence. *Adam et al (2002), Sy (2006), Cowen et al (2006), Saah and Vacher 2007, and Herrero and Wooldridge (2007).*

Trends in Interest Rate Spreads (IRS) – country pairs, which is the difference in IRS of ANB to ANG ; ANB to BDS and so on. The data used here is monthly and it is from Jan 1982 to May 2019.

From these graphs there appears to be a tendency for IRS to cluster more closely overtime, suggesting a trend of strengthening financial integration. We thought that countries that were close neighbours might have shown greater tendencies to converge that more distant pairs, but that appears not to be the case.



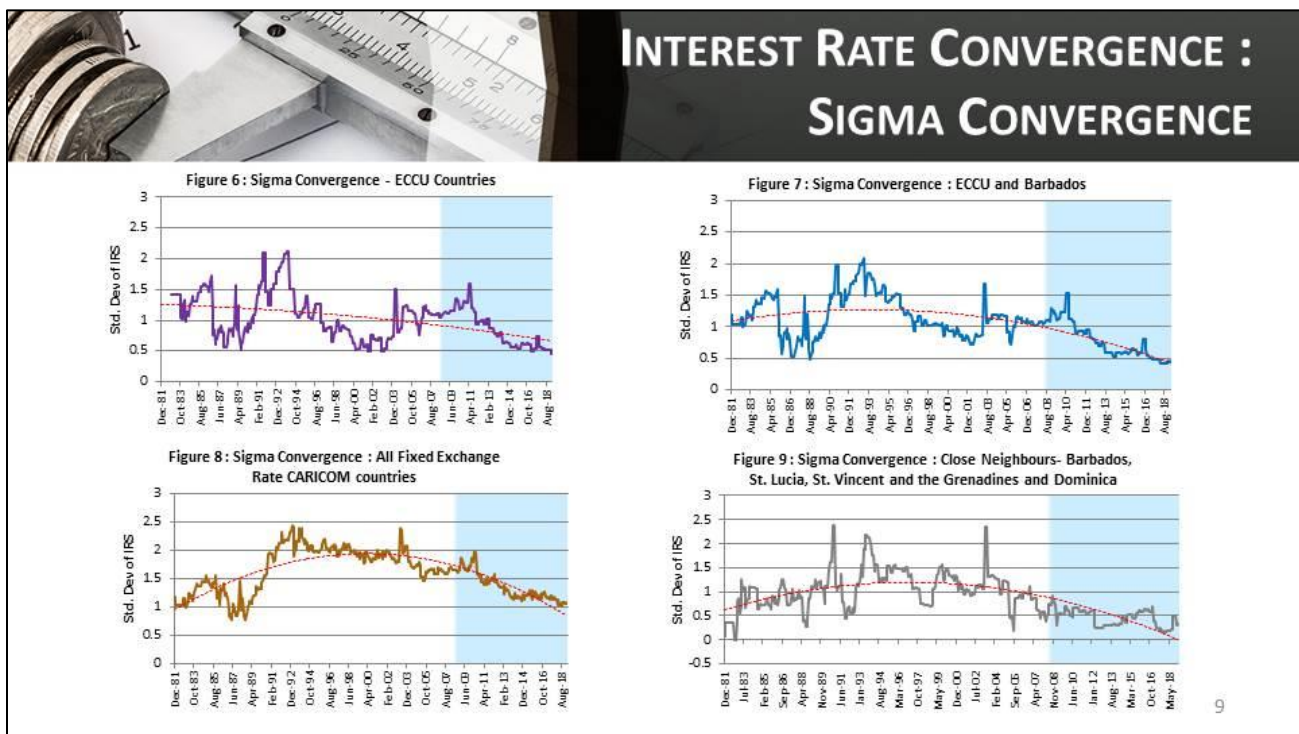


The second measure of interest rate convergence, sigma convergence, uses the standard deviation of the IRS for all countries in each time period as the measure of convergence. A high degree of financial integration is indicated by a narrow dispersion of the IRS across the countries.

We use the period Jan 1982 to May 2019 and we examine 4 groups of countries within the Caribbean:

1. ECCU countries
2. ECCU and Barbados
3. All fixed ER countries of CARICOM
4. A group of close neighbours- Barbados, SLU, SVG and Dominica


All the groups show a high degree of convergence with the most noticeable for the groups of close neighbours and the ECCU. The ECCU has shown the most consistent trend of convergence overtime based on the sigma measure.



The third measure is a “beta” which measures the rate at which interest rates converge, based on the premise that countries with relatively high IRS need to lower their IRS in order to be competitive. Implying that in a region with a high degree of financial integration the IRS tends to decline in countries with initially high levels of IRS. We estimate it using the equation shown on the slide below.

For the fixed exchange rate countries of CARICOM, the benchmark interest rate is the comparable rate in the US, because financial flows ensure that domestic interest rates in these countries follow the trend of US interest rates. The benchmark spread is the difference between the US loan and deposit interest rates.

A negative coefficient of beta is an indicator that financial integration is strengthening.



## INTEREST RATE CONVERGENCE : BETA -CONVERGENCE

The  $\beta$  Convergence equation is estimated as follows:

$$\Delta S_{i,t} = \alpha_i + \beta S_{i,t-1} + \sum_{l=1}^L \gamma_l \Delta S_{i,t-l} + \varepsilon_{i,t}$$

Where  $\Delta S_{i,t}$  is the deviation of the interest rate spread from a benchmark.

$$\Delta S_{i,t} = S_{i,t} - S_{b,t}$$

where:  $S_{i,t}$  is the interest rate spread of a country,  $i$ ;  $S_{b,t}$  is the interest rate spread of the benchmark country,  $b$ .  
 $\Delta S_{i,t-1}$  is the lagged deviation of the interest rate spread of country,  $i$ ;  $S_{i,t-1}$  is the lagged of the interest rate spread of country,  $i$ ;  $\alpha_i$  is the constant,  $\varepsilon_i$  is the error term,  $i$  denotes the country and  $t$  denotes the time indices.

Country example:

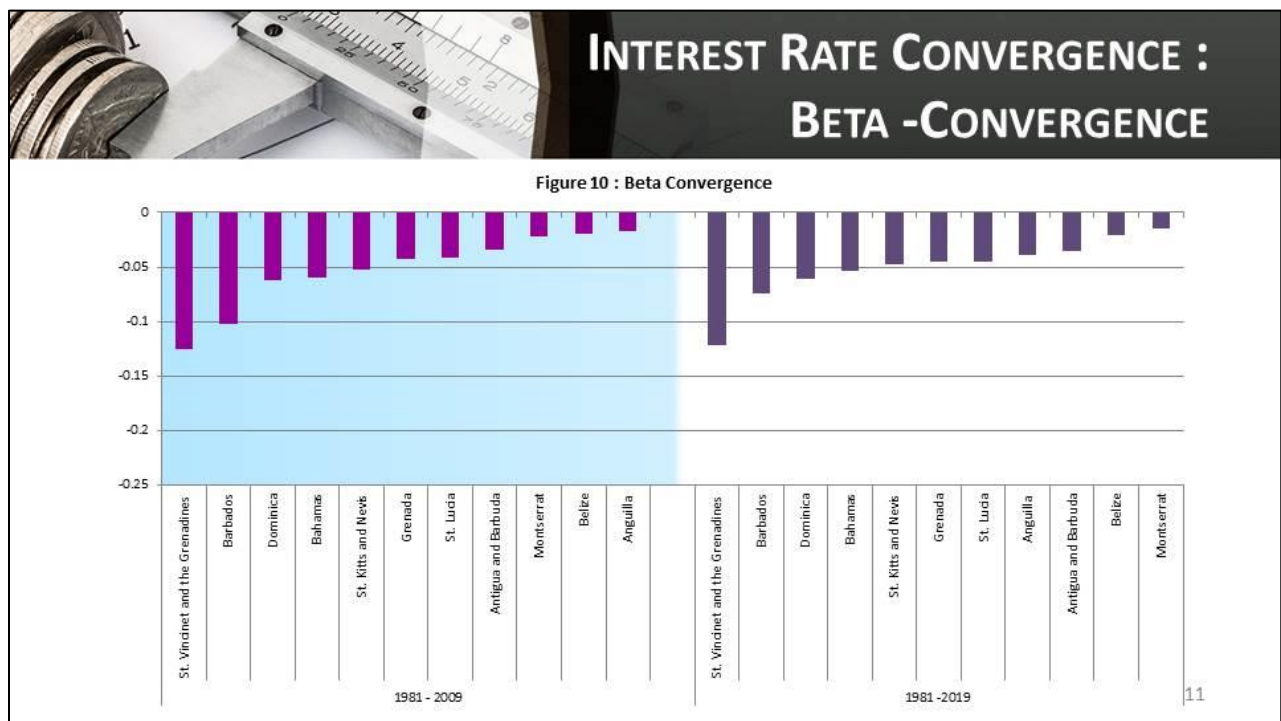
$$D\_SKN = \alpha + \beta * SKN(-1) + \gamma * D\_SKN(-1) + \varepsilon$$

Where :

- D\_SKN = IRS of SKN – IRS of US
- D\_SKN(-1)= Lag of D\_SKN
- SKN(-1)= Lag of IRS for SKN

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Plotting the Beta values : we see the result of this test confirms that close neighbours (Barbados, SLU, SVG and Dominica) are among the countries that are converging most rapidly. This results remained relatively unchanged from 1981 – 2009 when we first did this work when compared to the period 1981 to 2019.



Quantity based measures attempt to determine the effects of frictions in the demand for and supply of investment opportunities, such as statistics on the ease of market access, cross-border interbank loans, cross-border lending to the public by commercial banks, and the cross listings firms. Studies by

In 2009 there were 14 firms listed on at least two of the regional stock exchanges; that number has fallen dramatically since then.

Some firms became delisted because of mergers and acquisitions:

- RBTT was bought over from Royal Bank of Canada in June 2008.
- Neal and Massy Holdings Ltd's (N&M) request in May 2012 to have its Barbados Shipping & Trading Company Ltd (BS&T) delisted from the T&T Stock Exchange (TTSE) was made as a result of the T&T-based conglomerate acquiring all 100 % of its shares.
- Neal and Massy Holdings Limited was delisted from the BSE in September 2016 because they found that, in the absence of harmonization of laws and regulations between T&T and Barbados, there is an additional cost of regulatory compliance in Barbados.
- ANSA McAl was delisted from BSE in 2013. AMCL Holdings Ltd. bought Sagicor Financial Corporation shares in ANSA McAl operations in Barbados. This meant that AMCL Holdings would have 70% control of its Barbados operations and as a result delisted from the BSE.
- Trinidad Cement Limited delisted from the BSE and ECSE in March 2015 and the JSE in March 2017.
- Guardian Holdings is now owned by National Commercial Bank Jamaica.
- Berger delisted from both JSE in 2017 (because ANSA McAl bought over the majority interest in the company) and from the TTSE in October 2019, because as from Dec.2018 ANSA McAl Holdings owned 94% control of Berger Paints Limited. It now falls totally under the Ansa McAl group of companies.
- Capital and Credit Financial Corporation - delisted from the JSE in 2012 because JMMB acquired 92% of its shares.





Reflective of those changes, this is what the current cross listing of firms look like.

Note three things:

1. TCL is listed on the TTSE and Caribbean Cement Company limited is listed on the JSE. Both are under the same parent company TCL Group.
2. As at October 22nd, 2019 JMMB was delisted from the BSE. The recommendation to delist from the BSE is primarily due to the low levels of trading in JMMBGL shares on that exchange, which, unfortunately, does not justify the cost to maintain that listing.
3. Sagikor Financial Corporation is listed on JSE, but is a subsidiary of Sagikor Holdings which is listed on TTSE. Also in November 2018 it was reported that Alignvest will take over Sagikor operations. Alignvest is a special purpose acquisition corporation that is listed on the Toronto Stock Exchange (May 2017). Alignvest has no current operations and this proposed business combination with Sagikor is intended to be its sole and only qualifying acquisition. On 5<sup>th</sup> December, 2019 Sagikor was listed on the Toronto Stock Exchange (TSX); consequently, Sagikor has suspended trade on the Barbados Stock Exchange, the Trinidad and Tobago Stock Exchange and the London Stock Exchange.

Currently there are only 6 firms that are cross listed on regional stock exchanges:

1. One Caribbean Media (BSE and TTSE)
2. First Caribbean International Bank (BSE and TTSE)
3. JMMB (JSE and TTSE)

4. National Commercial Bank Financial Group ( JSE and TTSE)
5. Grace Kennedy ( JSE and TTSE)
6. Sagicor Financial Corporation (BSE and TTSE) but once regulatory approval is received, Sagicor will be listed on the Toronto Stock Exchange (TSX); consequently, Sagicor will delist from the Barbados Stock Exchange, the Trinidad and Tobago Stock Exchange and the London Stock Exchange.



The following charts track the share prices of the remaining cross-listed firms, comparing the patterns we would have observed in the 2009 study with recent data.

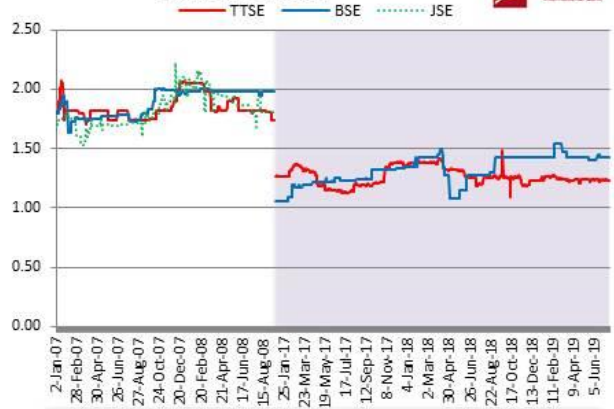
# STOCK MARKET PRICES : CROSS LISTED FIRMS

**Figure 11: National Commercial Bank Financial Group Limited Share Prices (US Dollars)**



Notes:  
May 14th ,2019 : NCBFG completed the merge acquisitions of Guardian Holdings Limited (GHL). GHL used to be listed on JSE and TTSE.

**Figure 12: First Caribbean International Bank Share Prices (US Dollars)**



Notes:  
February 2014: FCIB delisted from the Jamaica Stock Exchange.  
March 2018 : FCIB delisted from the Eastern Caribbean Stock Exchange.

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## National Commercial Bank Financial Group Limited Share Prices (US Dollars):

- The share price increased over time.
- May 14<sup>th</sup>, 2019: NCBFG completed the merge acquisitions of Guardian Holdings Limited (GHL). GHL used to be listed on JSE and TTSE.

## First Caribbean International Bank Share Prices (US Dollars) :

- The share price declined over time.
- February 2014: FCIB delisted from the Jamaica Stock Exchange.
- March 2018: FCIB delisted from the Eastern Caribbean Stock Exchange.



# STOCK MARKET PRICES

Figure 13: Grace Kennedy Share Prices (US Dollars)



Notes:  
 June 30th, 2010 - GK delisted from the BSE and ECSE.  
 August 11th, 2016 - GK had a 3-for-1 stock split. The main objective of the stock split was to allow the stock to be more accessible to investors and so lead to increased liquidity in the trading of the stock. It was also intended to widen the Company's ownership base as more persons would be able to invest in the Company's stock. The greater activity in the trading of the stock should allow the stock price to move towards its true value.

Figure 14: JMMB Group Limited Share Prices (US Dollars)



Notes:  
 October 22nd, 2019: JMMB Group Limited delisted from the Barbados Stock Exchange.

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## Grace Kennedy Share Prices (US Dollars) :

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## JMMB Group Limited Share Prices :

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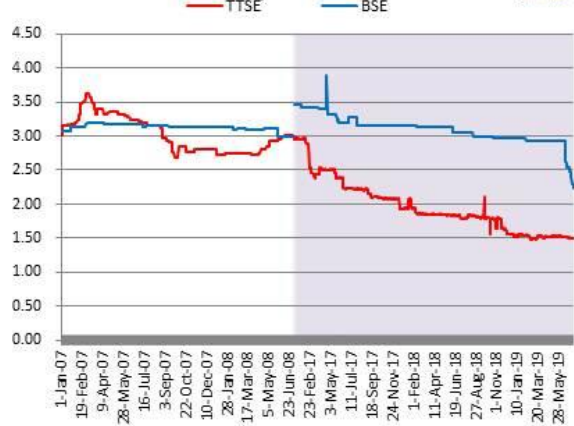
## One Caribbean Media Share Prices

- Share prices seem to be declining over time.

Sagikor was not included here because of limited data on share prices for the previous period 2007 to 2008.

## STOCK MARKET PRICES : CROSS LISTED FIRMS

Figure 15: One Caribbean Media Share Prices (US Dollars)



- There seems little active day-to-day coordination of trades across stock exchanges.
- The longer term trends of stock prices for the cross listed firms appear to have the same trend for the Jamaica Stock Market and Trinidad and Tobago Stock Market.
- Although the number of firms cross lists is only 4 on the JSE – the JSE was the world’s best performing stock index in 2018.

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The third aspect we look at is the financial interconnectedness of firms within the Caribbean region.

The term “*financial interconnectedness*” commonly refers to the interlinkages among financial institutions and markets, which have increased with financial globalization. The most important consequence of deep financial integration is the spillover of financial problems from one country to others in the region. The Global Financial Crisis and, in the Caribbean, the Clico Crisis, raised awareness of the risks to financial stability from financial interconnectedness.

The Clico crisis is the one major example of a financial spillover in recent years in the Caribbean: the intervention of CL Financial by the Central Bank of Trinidad-Tobago in 2009, and the subsequent winding up of the conglomerate’s operations elsewhere in the Caribbean. The regional spillovers of the CL Financial experience are discussed briefly in Ogawa, Park, Singh and Thaker (2013), where it is mentioned that exposures were as high as 17 % of GDP for the ECCU region, with consequences for all other CARICOM states except Jamaica and Haiti. IMF (2011) contains information on the extent of the conglomerate’s reach, and there is an update on the resolution initiatives across the region in the Caribbean Financial Stability Report 2015.

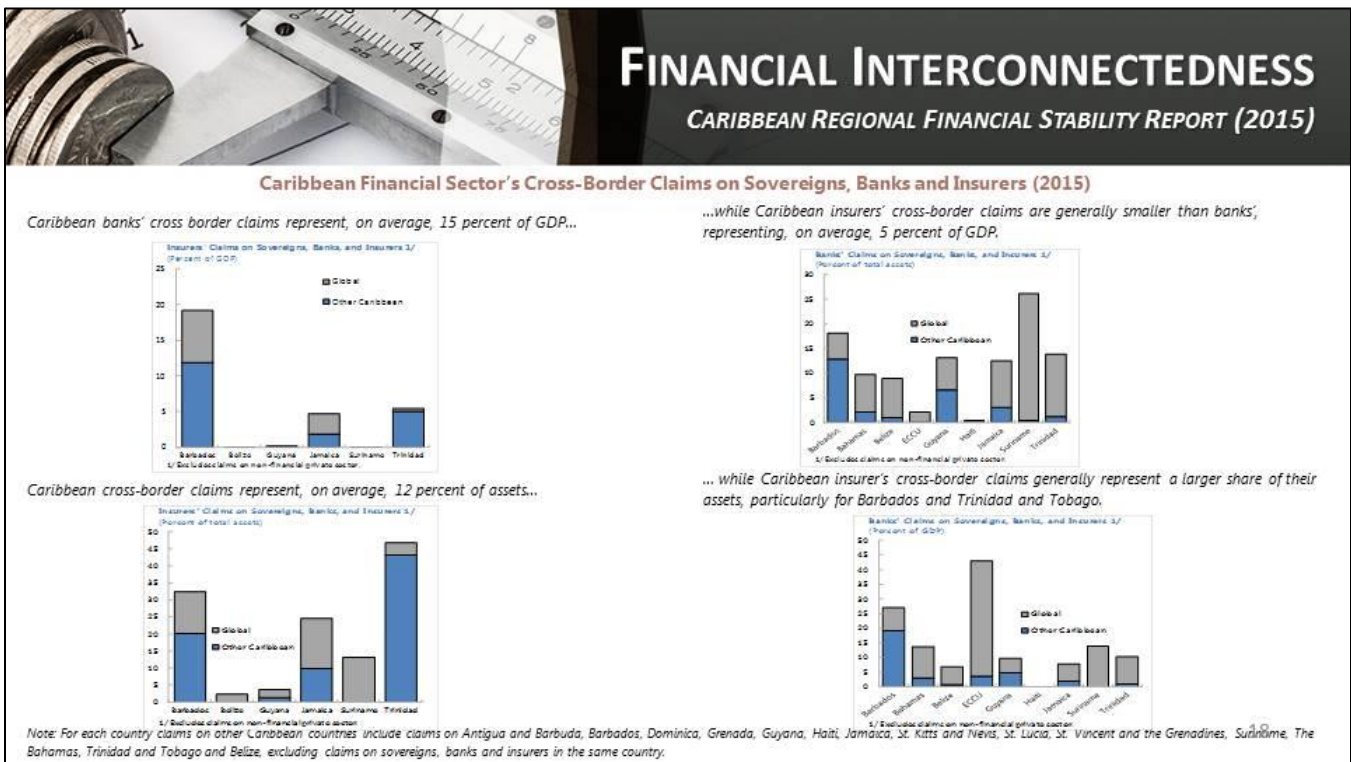
# FINANCIAL INTERCONNECTIONS

- The term “*financial interconnectedness*” commonly refers to the interlinkages among financial institutions and markets, which have increased with financial globalization.
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We look at the findings of the Caribbean Financial Stability Report 2015 as an initial point of assessment of the financial interconnectedness within the Caribbean region.

## Overview of the Caribbean Financial Sector's Cross-Border Claims on Sovereigns, Banks and Insurers:





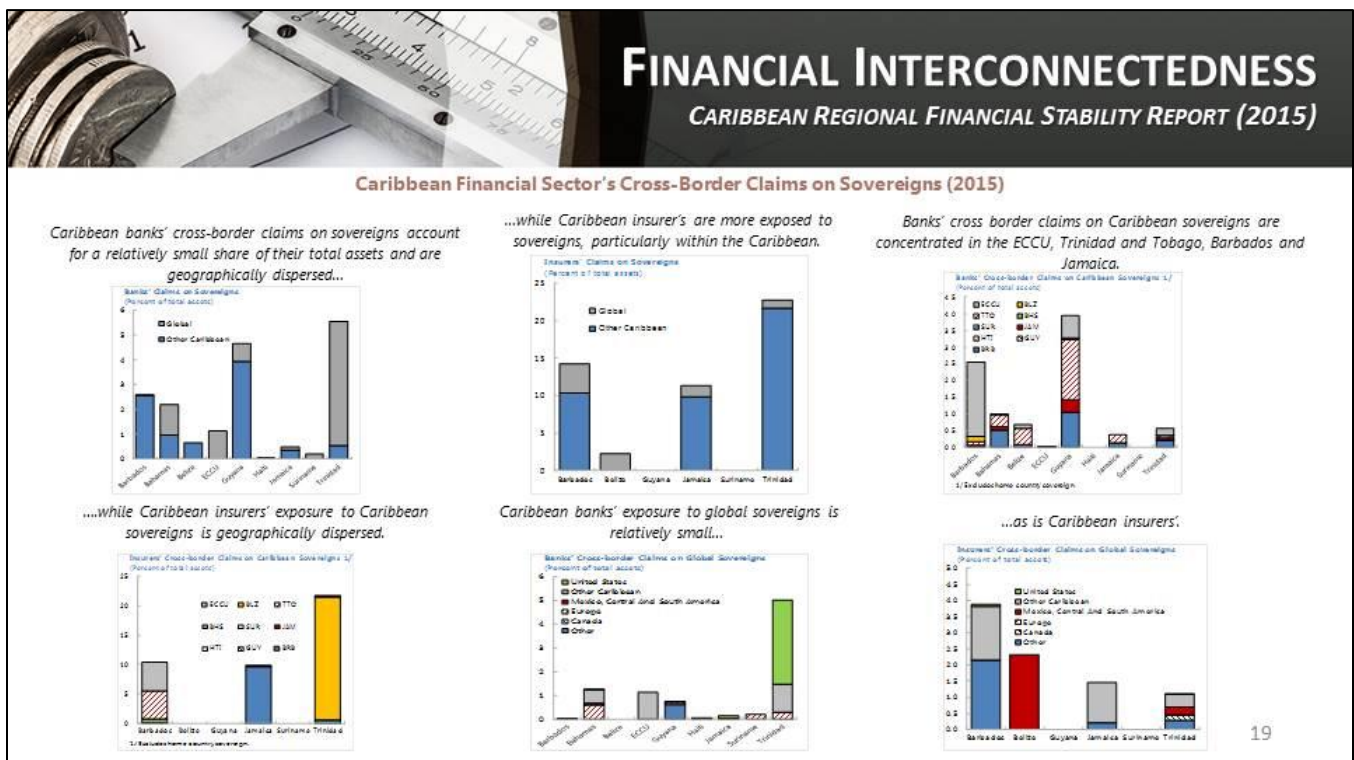
Caribbean banks in particular, have important cross-border claims on sovereigns, banks, and insurers, representing, on average 15 % of GDP and 12 % of total assets as at 2015.

Banks based in Barbados have notable cross-border exposures within the Caribbean, consistent with Barbados' importance as a banking hub for the region. A surprising finding from the data was that within-Caribbean cross-border exposures of banks from Trinidad and Tobago, another Caribbean banking hub, were reported to be relatively minor.

In contrast to banks, Caribbean insurers' cross-border claims are relatively small compared to the size of the economy, representing, on average 5 % of GDP, but are considerably larger as a share of their total assets than banks' cross-border claims, suggesting a larger degree of interconnectedness in the insurance segment of the financial sector.

This was reflective of the presence of two regional insurance conglomerates based in Barbados and Trinidad and Tobago. The cross-border claims of these two regional insurance conglomerates represented a greater share of both economic activity and insurer's assets than those for insurers from other Caribbean countries, and are primarily concentrated within the Caribbean. **This will change since 2016 one of these Insurance Conglomerates are no longer based in Barbados.**

*Caribbean Financial Sector Cross-Border Claims on Sovereigns:* The Caribbean financial sector's exposure to cross-border sovereign risk seemed to be concentrated primarily in the insurance sector as at 2015.

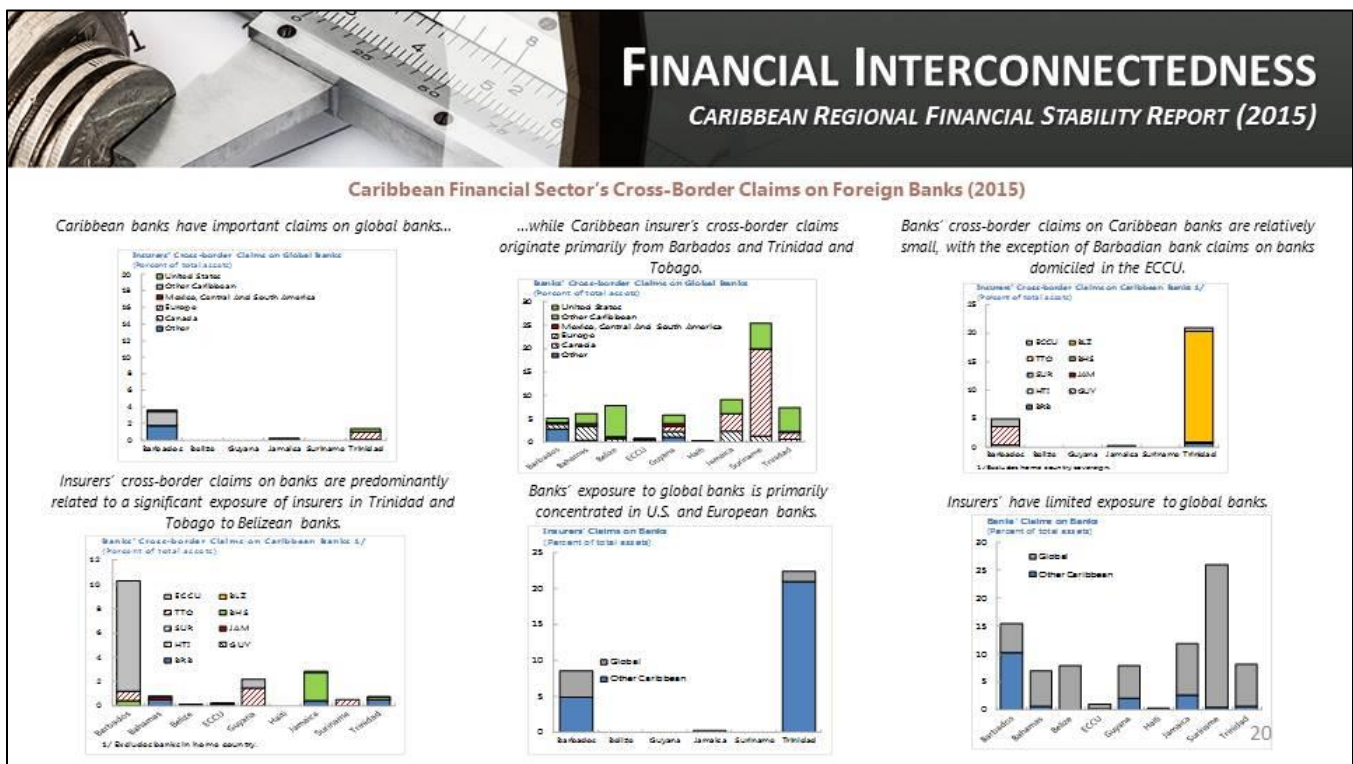


According to the data reported by banks, their cross-border claims on sovereigns represented a relatively small share of their total assets and these claims are relatively diversified across the Caribbean and globally.

In general, banks' claims on Caribbean sovereigns are primarily concentrated in the larger sovereigns of the region including Trinidad and Tobago, Barbados, and Jamaica, although banks in Barbados are also exposed to ECCU sovereigns. Banks' exposure to global sovereigns is relatively small, with the exception of banks based in Trinidad and Tobago, which have significant exposures to global sovereigns, particularly the United States.

Caribbean insurers appear to be more exposed to cross-border sovereign risk than Caribbean banks. Insurance companies from Barbados, Jamaica and Trinidad and Tobago have significant exposure to sovereign risk from other Caribbean sovereigns. The insurance companies in Barbados exposure to Caribbean sovereign risk appears to be concentrated in the ECCU and Trinidad and Tobago, while those based in Jamaica had exposure that was concentrated in The Bahamas. The Trinidad and Tobago based insurance companies, have by far the largest exposure to sovereign risk amongst Caribbean insurers, exposure is concentrated in Belize. As with Caribbean banks, Caribbean insurers' exposure to global sovereigns appears to be relatively small.

**Caribbean Financial Sector's Cross-Border Claims on Foreign Banks (2015):** Caribbean banks are interconnected to other banks while Caribbean insurers display limited interconnections to banks.



In 2015 it was found that Caribbean banks reported relatively significant claims on global banks, while their claims on banks domiciled in other Caribbean countries are relatively minor. The exception was banks from Barbados, which had important cross-border claims on other Caribbean banks, particularly banks located in the ECCU primarily through their holdings of deposits in banks in the ECCU. Caribbean banks' claims on global banks are concentrated in the United States, Europe, and Canada, with the latter exposure likely related to the significant presence of three Canadian banking groups in the Caribbean. The majority of Caribbean banks' claims on global banks are concentrated in deposit holdings with a few exceptions.

Banks from Jamaica's claims on European banks are split roughly equally between deposit holdings and deposits, while their claims on Canadian banks are primarily composed on equity holdings.

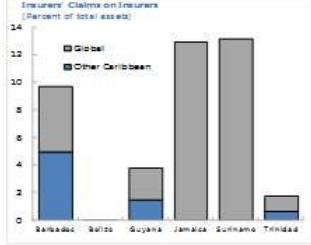
Banks from Trinidad and Tobago's claims on European banks, although primarily composed of deposit holdings, also included some relatively small holdings of loans and debt securities.

(4 - 6) Caribbean insurers', in contrast, had limited exposure to banks with the exception of insurers' located in Barbados and Trinidad and Tobago. The greater exposure of the insurance companies from Barbados and Trinidad and Tobago to banks may have been reflected of the larger scale of the operations of the insurers in these countries, which were the largest in the Caribbean region. Barbados based insurance companies cross-border exposure to banks was concentrated primarily in Trinidad and Tobago and the ECCU and comprised primarily of loans and debt securities while it is unclear where its exposure to global banks is concentrated from the information reported. Similarly too, the Insurance companies' exposure to sovereign risk, the cross-border exposure of Trinidadian banks to banks, is concentrated in Belizean banks, particularly in deposits in Belizean banks.

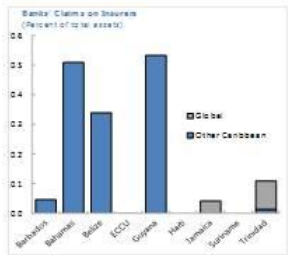
*Caribbean Financial Sector's Cross-Border Claims on Insurers (2015):* Caribbean banks' exposures to cross-border risks from the insurance sector appear to be negligible, but Caribbean insurers appear to have important exposures to global insurers.

### Caribbean Financial Sector's Cross-Border Claims on Insurers (2015)

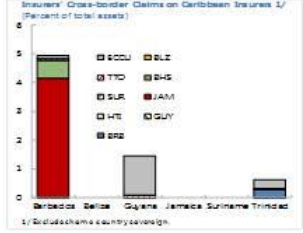
Caribbean banks have limited cross-border exposure to insurers..



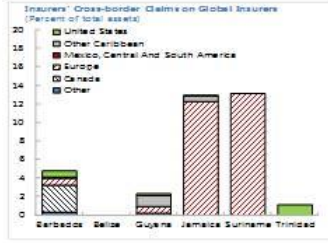
...however, Caribbean insurers are exposed to global insurers.



Insurers' cross-border claims on Caribbean insurers are concentrated in Jamaica and the ECCU.



...while their global claims on insurers are concentrated in Europe.



Caribbean insurers' cross-border claims on insurers were primarily on global insurers, with most countries reporting relatively minor cross-border claims of insurers within the Caribbean. Insurers' cross-border claims on Caribbean insurers vary by reporting country.

The insurance companies located in Barbados within Caribbean cross-border claims were concentrated primarily in equity holdings of Jamaican insurers, perhaps reflecting the relatively large operations of a subsidiary of Sagicor Ltd. (headquartered in Barbados at that time) in Jamaica. Insurance companies in both Guyana and Trinidad and Tobago cross-border claims on insurers within the Caribbean are, to a large extent, concentrated on insurers operating in the ECCU and composed primarily of loans and debt securities rather than equity holdings.

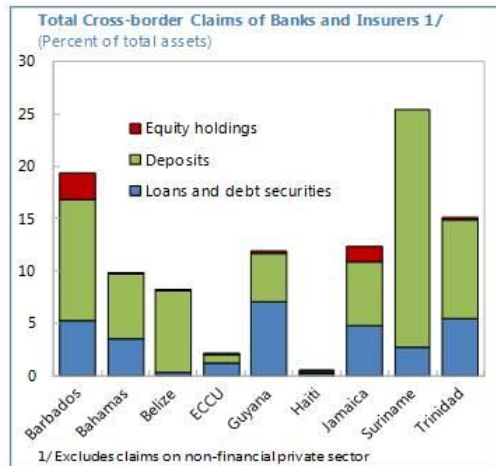
Insurance companies operating in Jamaica and Suriname, despite having little cross-border exposure to Caribbean insurers, have some significant cross-border claims on global insurers, particularly those of European origin.

*Caribbean banks' and insurers' cross-border* claims are primarily concentrated in deposits and, to a lesser extent, loans and debt securities.



# FINANCIAL INTERCONNECTEDNESS

CARIBBEAN REGIONAL FINANCIAL STABILITY REPORT (2015)



- These findings are from the Caribbean Regional Financial Stability Report (2015) and may not be reflective of the current state of Financial Interconnectedness within the Caribbean region.
- There is need for this type of data to be not only collected but also be made publicly available.
- Canetti (2017) provides network maps of these regional financial balances, which show clearly that financial institutions' cross border claims are surprisingly little, in relation to the regional ownership and operations of major financial institutions.

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In the aggregate, banks and insurers from the region have very small cross-border equity claims, with only financial institutions operating in Barbados and Jamaica reporting notable cross-border equity claims on banks and insurers. The concentration of banks' and insurers' cross-border claims in bank deposits is consistent with their larger cross-border exposure to banks relative to insurers and sovereigns. Moreover, that cross-border claims are concentrated in deposits is suggestive of a relatively lower risk profile for Caribbean financial institutions' cross-border claims than if they were concentrated in loans and debt securities, as well as equity claims.


It should be noted that:

- These findings are from the Caribbean Regional Financial Stability Report (2015) and may not be reflective of the current state of Financial Interconnectedness within the Caribbean region.
- There is need for this type of data to be not only collected but also be made publicly available.
- Canetti (2017) provides network maps of these regional financial balances, which show clearly that financial institutions' cross border claims are surprisingly little, in relation to the regional ownership and operations of major financial institutions.

In concluding our finding to date show that

1. Strong financial integration exists within the Caribbean mainly via ownership linkages;
2. There is no evidence of convergence of interest spreads within the region;

3. Over time, spreads are converging on the US spread;
4. There seems little active day-to-day coordination of trades across stock exchanges, although longer term trends for the same stock are similar in Jamaica and Trinidad and Tobago.



## CONCLUSIONS

- Strong financial integration, mainly via ownership;
- There is no evidence of convergence of interest spreads within the region;
- Overtime, spreads are converging on the US spread;
- There seems little active day-to-day coordination of trades across stock exchanges, although longer term trends for same stock are similar in Jamaica and Trinidad and Tobago.

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This is a work in progress; the completed version of our paper will:

- Discuss the regional fallout of the Central Bank of Trinidad-Tobago's intervention of CL Financial in 2009;
- Explore the regional implications of external debt operations in Barbados, Belize, Grenada, Jamaica and St Kitts; and
- Explore other vulnerabilities that have the potential for cross-border spillovers and assess the measures taken by the Caribbean's financial regulators to improve the regional resilience in the face of financial stress, and to cope with the unexpected.



## WORK TO BE DONE

- Analysis of the regional implications of CL Financial;
- Analysis of the regional implications of debt restructurings;
- Recommendations for improving regional financial stability and the efficiency of the financial sector.

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*We thank you  
for your time and  
attention.*