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# IMF Working Paper

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## Loss of Correspondent Banking Relationships in the Caribbean: Trends, Impact, and Policy Options

Trevor Alleyne, Jacques Bouhga-Hagbe, Thomas Dowling, Dmitriy Kovtun,  
Alla Myrvoda, Joel Okwuokei and Jarkko Turunen

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I N T E R N A T I O N A L M O N E T A R Y F U N D

## IMF Working Paper

Western Hemisphere Department

### Loss of Correspondent Banking Relationships in the Caribbean: Trends, Impact, and Policy Options

Prepared by Trevor Alleyne, Jacques Bouhga-Hagbe, Thomas Dowling, Dmitriy Kovtun, Alla Myrvoda, Joel Okwuokei and Jarkko Turunen<sup>1</sup>

Authorized for distribution by Trevor Alleyne

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#### Abstract

Banks across the Caribbean have lost important Correspondent Banking Relationships (CBRs). The macroeconomic impact has so far been limited, in part because banks either have multiple relationships or have been successful in replacing lost CBRs. However, the cost of services has increased substantially, some services have been cut back, and some sectors have experienced reduced access. Policy options to address multiple drivers, including lower profitability and risk aversion by global banks, require tailored actions by several stakeholders.

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<b>ABSTRACT</b>	<b>2</b>
<b>I. INTRODUCTION</b>	<b>4</b>
<b>II. WHY DO CBRS MATTER?</b>	<b>5</b>
<b>III. THE WITHDRAWAL OF CBRS – HOW SEVERE HAS IT BEEN?</b>	<b>9</b>
A. Global Trends	9
B. Caribbean Developments	9
C. Potential Factors Behind the Withdrawal of CBRS in the Caribbean	15
<b>IV. POLICY OPTIONS TO ADDRESS THE LOSS OF CBRS</b>	<b>23</b>
<b>V. CONCLUSION</b>	<b>28</b>
<b>ANNEX 1. MACROECONOMIC IMPLICATIONS OF A CONTINUED LOSS OF CBRS: AN ILLUSTRATIVE CASE FOR BELIZE</b>	<b>30</b>
<b>ANNEX II. CASE STUDIES</b>	<b>32</b>
<b>ANNEX III. AN ECONOMETRIC ANALYSIS OF THE DETERMINANTS OF THE WITHDRAWAL OF CBRS</b>	<b>38</b>
<b>VI. ANNEX IV. IMF SURVEY</b>	<b>43</b>

## I. INTRODUCTION

1. **A correspondent banking relationship (CBR) is a bilateral arrangement between banks, often involving a reciprocal cross-border relationship in multiple currencies.**

According to Erbenova *et al.* (2016), a correspondent banking arrangement involves one bank (the correspondent – for example a major international bank) providing a deposit account or other liability accounts, and related services, to another bank (the respondent – for example a bank located and doing business in the Caribbean). The arrangement requires the exchange of messages to settle transactions by crediting and debiting those accounts. Correspondent banking relations are a key component of a well-functioning international financial system. They enable a range of crucial transactions and services including the execution of third-party payments such as wire transfers and credit card transactions, trade finance, as well as transactions related to the banks’ own cash clearing, liquidity management and short-term borrowing or investment needs.

2. **Following the global financial crisis, global banks have reduced their involvement in less profitable and riskier activities globally, including correspondent banking.** Large

global banks have recently come under increasing pressure to raise their capital, streamline their business models and to re-evaluate their risk exposures (Lagarde, 2016). As a result, these banks have been reducing activities in areas that they perceive as either less profitable or, more generally, detrimental to their risk tolerance -- a process that is sometimes referred to as “de-risking”<sup>2</sup>. The underlying drivers of this global “de-risking” trend are multi-dimensional. They include advanced country regulators’ attempts to strengthen prudential regulations and enhance economic and financial stability; their concerns about tax avoidance, money laundering and terrorist financing; sanctions; and business decisions by correspondent banks in a new macroeconomic environment characterized by low interest rates and increased costs of regulatory compliance. This global trend has been most evident in the reduction of CBRs.

**Table 1. Banks That Lost Correspondent Banking Relationships (share of total<sup>1</sup>)**

	IMF (2016)	CAB (2016)
Bahamas, The		
Belize		
Barbados		
Guyana		
Jamaica		
Suriname		
Trinidad and Tobago		
ECCU		
Montserrat		
St. Vincent and the Grenadines		
Antigua and Barbuda		
Anguilla		
Dominica		
St. Kitts and Nevis		
St. Lucia		
Grenada		

Source: IMF Survey (2016); and Caribbean Association of Banks (2016).  
<sup>1</sup> Blank cells indicate missing observations.  
 Legend:  
 More than 75%  
 Between 25 and 75%  
 Less than 25 %

<sup>2</sup> IMF (2007) has argued that that the indiscriminate use of the term “de-risking” has confused the dialogue on the trends and drivers of the withdrawal or termination of CBRs.

(continued)

3. **Banks across the Caribbean have lost CBRs, negatively affecting some services and sectors.** Surveys show that the extent of CBR loss varies across Caribbean countries (Table 1 and Annex IV).<sup>3</sup> Existing studies of the withdrawal of CBRs in the Caribbean draw from diverse and sometimes anecdotal sources to document the loss of CBRs and its impact on financial institutions and the economy, more broadly. Further analysis is hampered by a lack of timely data on the number CBRs; the value and volume of related financial flows; and the nature of the factors driving the loss of CBRs. This paper aims to fill a gap by compiling available evidence to reach an informed view of how the loss of CBRs has impacted the region. It brings together existing evidence on the loss of CBRs in the Caribbean, drawing from global surveys (such as World Bank, 2015); regional surveys by Caribbean authorities (CARICOM, 2016), Caribbean Association of Banks (September 2016); and discussions with both authorities and banks in the context of IMF bilateral surveillance. The analysis also draws from an IMF survey that was conducted in September 2016 with standard questionnaires sent to all central banks in the Caribbean region, who in turn coordinated survey responses from banks in their jurisdiction. The survey covers commercial banks operating in the domestic banking system (see Annex IV for details). Using this information and available data on changes in SWIFT transactions between 2012 and 2015 (BIS, 2016), this paper documents evidence on the loss of CBRs (with detailed country case studies for The Bahamas, Belize and St. Lucia) and examines potential drivers. The paper also analyzes the potential economic effect of a substantial loss of CBRs through a simulation based on the experience in Belize. Finally, the paper reviews policy responses thus far and discuss available policy options for the Caribbean.

## II. WHY DO CBRs MATTER?

4. **Caribbean economies, characterized by their extensive links to the global economy,** depend on the reliable functioning of CBRs. In addition, there are additional potential linkages arising from the presence of the offshore sectors in several countries. The loss of CBRs can affect the economy through reduced international trade, remittances or investment flows (Figure 1):

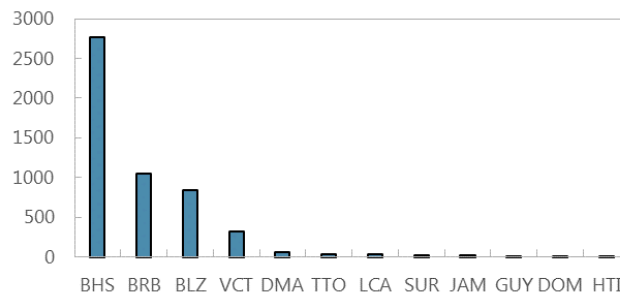
- **International trade and commerce.** All countries in the Caribbean rely heavily on international trade, including tourism and other services, requiring CBRs to carry out cross-border transactions. The average openness ratio (the sum of exports and imports of goods and services divided by GDP) in the Caribbean amounted to 95 percent of GDP over 2011-15, which is slightly higher than the world average of 91 percent of GDP. An increase in the cost of making payments or a disruption in the ability to make or receive international payments would seriously undermine economic activity.

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<sup>3</sup> Data in the adjoining chart show the number of banks that have been impacted as a share of banks that were surveyed. Differences across the two surveys can be explained by different samples and time periods. In particular, IMF (2016) covers all commercial banks in many countries, while CAB (2016) represents a sample of members of the Caribbean Association of Banks.

- Remittances.** There is a considerable variation in the degree to which Caribbean countries rely on remittances. Remittances amounted to 6.3 percent of GDP on average in 2011-15, which was marginally higher than the world average (4.8 percent of GDP). Of note were Guyana (13 percent of GDP), Haiti (nearly 22 percent of GDP), and Jamaica (15 percent of GDP), indicating a high degree of dependence on these flows. Thus, a reduced ability to receive remittance inflows would pose a significant risk in these economies. In addition, reduced access to money transfer services or an increase in transfer costs could push remittances to informal channels, making them more difficult to monitor.
- Financial account flows.** These flows contribute a major part to financing investment. The average of financial account balances in the region was close to 9 percent of GDP over 2011-15. Foreign direct investment (FDI) is especially important for the Caribbean, with the total inflows averaging nearly 8 percent of GDP in 2011-15. A disruption in CBRs could constrain these investment flows, including through challenges in repatriating reinvested earnings.
- Offshore banks.** Risks to offshore banks and subsequently to the economy depend on the size of the offshore sectors and their linkages with the domestic economies. Many countries in the region have large offshore sectors, consisting of offshore banks, other financial institutions and international business companies that provide various services. In principle, the “firewall” between the domestic and offshore sectors should limit the risks to domestic economies, but large offshore sectors can nevertheless be an important source of employment and government revenue. In the Bahamas and Barbados, for example, the offshore sector contributed 0.7 (2015) and 4.1 (2013) percent of fiscal revenues, respectively. There are also examples of more direct linkages between these sectors – for instance, Belize’s offshore banks play an important role in the economy as a source of external financing for the domestic economy and have direct ties with the domestic banking system (Box 1, Annex I and II).

Liabilities of BIS-reporting banks to the Caribbean (percent of GDP)

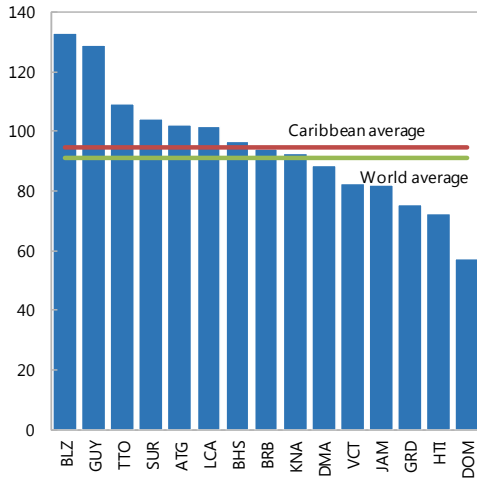


Source: BIS, WEO and Fund staff estimations.

**Figure 1. The Caribbean: Balance of Payments Linkages**

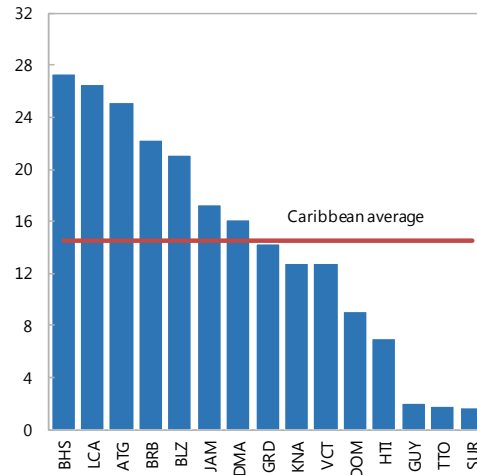
*The Caribbean's openness to trade is slightly higher than the world's average.*

**Trade Openness - Goods and Services**  
(Percent of GDP, 2011-15 average)



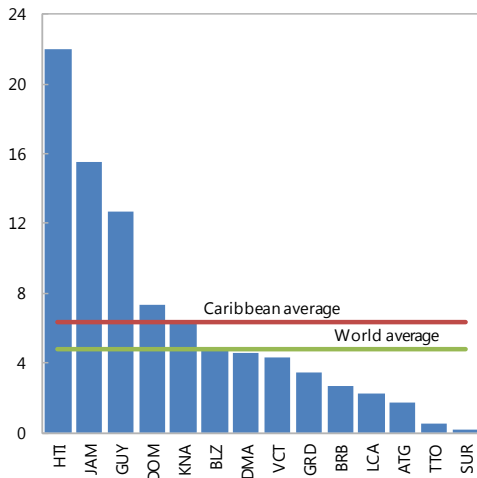
*...due to large tourism sectors in many of the countries.*

**Tourism Receipts**  
(Percent of GDP, 2015 or latest available)



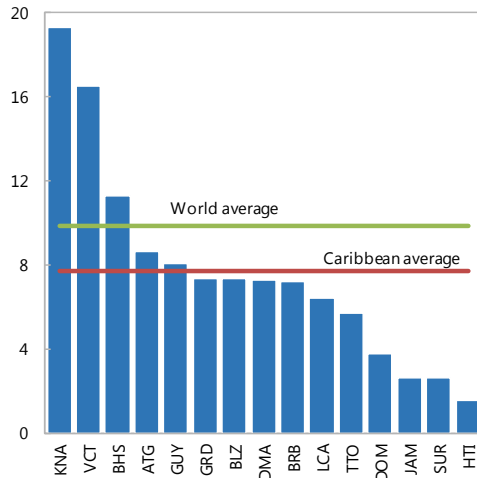
*Several countries critically depend on the inflows of remittances.*

**Remittances**  
(Percent of GDP, inflows, 2011-15 average)



*The FDI inflows are important source for investment.*

**Net FDI Inflows**  
(Percent of GDP, 2011-15 average)



Sources: The IMF, World Economic Outlook; and World Bank, Remittances Database.

### Box 1. Potential Macroeconomic Impact of loss of CBRs: An Illustrative Case for Belize<sup>4</sup>

Following the taxonomy of channels through which CBRs can affect an economy described above, we use bank-level data to illustrate the potential impact of the withdrawal of CBRs in Belize, the country that has experienced the largest loss of CBRs in the Caribbean. We examine the effect on exports and imports, FDI, remittances, bank deposits, disposable income, and bank balance sheets from the inability of economic agents to send or receive cross-border payments (see Annex I). The exercise simulates two scenarios, a “low stress” scenario that assumes that loss of CBRs reduces the value of cross-border transactions by about 10 percent; and a “high stress scenario, where about 70 percent of transactions are eliminated.

#### Key Findings

The loss of CBRs could have a sizeable impact on economic activity and financial stability. Fewer CBRs, the different business models of the local banks, and stricter due diligence requirements could kick many economic agents out of formal trade and finance channels. Under the high stress scenario, real GDP growth could drop by as much as 5.3 percentage points annually relative to the baseline during 2017-2021. Trade (i.e., the value of exports and imports of goods and services) would fall by 23–26 percentage points of GDP during the same period. Annual FDIs drop by about 1.9-2.5 percentage points of GDP. The banking system’s CAR would fall by close to 7.5 percentage points but would remain above the prudential minimum of 9 percent, though some banks, including the systemic bank, could become insolvent.

Impact of the loss of CBRs: Stress Scenarios Relative to the Baseline					
	2017	2018	2019	2020	2021
<b>Low Stress Scenario</b>					
Changes in Real GDP (US\$ million)	-14.2	-13.9	-14.4	-14.2	-14.4
Changes in real GDP growth (percent)	-1.0	-1.0	-1.0	-0.9	-0.9
Changes in exports (in percent of GDP)	-3.3	-3.3	-3.3	-3.3	-3.3
Changes in imports (in percent of GDP)	-3.7	-3.6	-3.5	-3.5	-3.5
Changes in FDI (in percent of GDP)	-0.3	-0.4	-0.4	-0.4	-0.4
Changes in bank's NFA (US\$ million)	-3.2	-6.9	-6.8	-6.0	-5.3
In months of import	-0.03	-0.07	-0.07	-0.06	-0.05
Changes in bank's CARs (percent)	-3.6	-3.5	-3.4	-3.2	-3.1
<b>High Stress Scenario</b>					
Changes in Real GDP (US\$ million)	-75.6	-76.2	-76.4	-77.1	-78.9
Changes in real GDP growth (percent)	-5.3	-5.2	-5.1	-5.1	-5.1
Changes in exports (in percent of GDP)	-23.3	-23.1	-22.8	-22.8	-22.8
Changes in imports (in percent of GDP)	-25.7	-24.9	-24.6	-24.6	-24.6
Changes in FDI (in percent of GDP)	-1.9	-2.6	-2.5	-2.5	-2.5
Changes in bank's NFA (US\$ million)	-22.2	-48.2	-47.6	-41.7	-36.9
In months of import	-0.2	-0.5	-0.5	-0.4	-0.3
Changes in bank's CARs (percent)	-7.4	-7.3	-7.1	-7.0	-6.9

Source: Central Bank of Belize; IMF staff calculations

<sup>4</sup> For details, see Belize: Selected Issues, IMF Country Report No. 16/335, October 27, 2016.



### III. THE WITHDRAWAL OF CBRs – HOW SEVERE HAS IT BEEN?

#### A. Global Trends

5. **Recent surveys have highlighted key features of the global pressure on CBRs.**

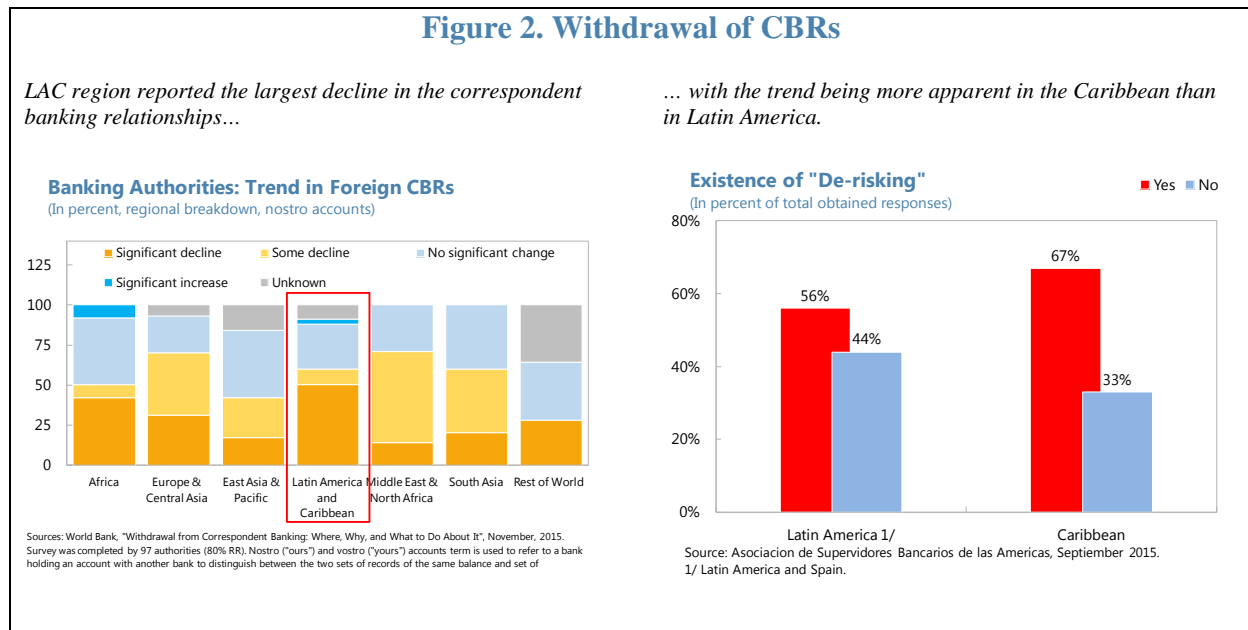
Global evidence on loss of CBRs is largely based on surveys of banks (such as World Bank, 2015a and 2015b; IMF with the Union of Arab Banks, 2015; and the Association of Supervisors of Banks of the Americas, 2015), complemented by other evidence collected in the context of IMF bilateral surveillance. Erbenova et al. (2016) summarizes this survey evidence, as well as regional implications based on a few specific country case studies. Finally, BIS (2016) and IMF (2017) have analyzed global trends in cross-border transactions using SWIFT data. While the information and data are far from comprehensive, they point to the following stylized facts:

- **Globally, no clear trends in CBRs.** The BIS study indicates that while CBR trends vary widely across countries, the aggregate data on volumes and values of transactions show no clear trend in correspondent banking activity. However, based on median statistics, the number of correspondent banks and the value of transactions fell during 2012–2015, even as the volume of transactions increased.
- **Loss of CBRs has affected different types of countries.** The largest declines in CBRs as measured by transaction values were observed in advanced economies under economic stress (for example, Cyprus and Greece), fragile states under sanctions or involved in social and political conflict (for example, Chad, Syria, Ukraine, and Yemen); and small island states (for example, Dominica, Timor-Leste, and Seychelles).
- **Limited economic impact thus far.** There is critical pressure on CBRs in some countries, especially in smaller countries in the Caribbean and the Pacific, the Middle East and North Africa (MENA) region, Central Asia, Africa, and Europe, but with limited economic and financial stability impact thus far. Financial institutions have typically found other arrangements to compensate for the loss of CBRs.
- **Accentuated financial fragilities in affected countries.** The pressures on CBRs exacerbate financial fragilities in some affected countries due to the concentration of cross-border flows through fewer CBRs or CBR maintenance through alternative arrangements.

#### B. Caribbean Developments

6. **Respondent banks have largely avoided serious disruption to correspondent banking services.** In most cases, Caribbean banks have found alternative cross-border means of payment, including relying on remaining CBRs and/or finding replacement CBRs. The World Bank Survey (2015) suggests that Latin America and the Caribbean has experienced a greater

loss of CBRs than many other parts of the world and that within the LAC region, the incidence of withdrawals of CBRs was greater in the Caribbean (Figure 2). According to a more recent survey by the Caribbean Association of Banks (2016) 58 percent of the banks that responded to their survey had lost at least one of their CBRs, directly affecting 12 countries.



**7. Results from the 2016 IMF survey confirm that banks in several Caribbean countries have experienced loss of CBRs.** However, only 5 out of 14 countries that responded to the survey experienced a decline in the aggregate number of CBRs in the past five years, up to September 2016 (Annex X). Belize saw by far the largest decline, losing more than two thirds of its CBRs, with most of the decline taking place from mid-2015 to early 2016. Loss of CBRs has been less dramatic in other Caribbean countries. Among commercial banks, the smaller indigenous banks have tended to be the most affected. These banks generate a relatively small volume of cross-border business for correspondent banks, and are less likely to have sophisticated transaction monitoring mechanisms to satisfy correspondent bank's own AML/CFT protocols. On the other hand, the foreign-owned branches and subsidiaries, which often have the backing of the larger parent institution and can rely on its network of CBRs, do not seem to have been affected at all. In many Caribbean countries, this includes subsidiaries of large Canadian banks that play an important role in the domestic banking system. Banks in several countries have found replacement CBRs (also in line with CAB, 2016), although some banks had difficulties finding replacements. Case studies in Annex II provide more detailed analysis of individual country experiences in The Bahamas, Belize and St. Lucia. Overall, based on the IMF (2016) survey, most countries assessed the macroeconomic impact from withdrawal of CBRs (from commercial banks) as either low or moderate.

8. **Even in cases where respondent banks have maintained CBRs, certain types of services have been adversely affected.** Bank services that have been impacted most include operations that are cash intensive or involve large numbers of relatively small transactions. Thus, all countries that responded to the IMF (2016) survey reported that money transfer services have been impacted, including *cambios* in Jamaica, where a leading bank no longer accepts foreign instruments and remittances from some money services businesses. A bank in The Bahamas has lost its cash intensive Western Union money transfer business. Other bank services that have been negatively affected include foreign currency check clearing, cash letter deposits, bank draft settlement, trade finance and routing of funds for charities and foundations (IMF, 2016, CAB, 2016, CARICOM, 2016).

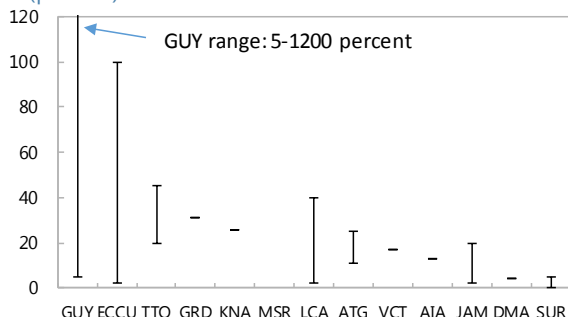
9. **Costs of maintaining correspondent banking services have risen substantially in some cases.** These include explicit costs (i.e., charges by correspondent banks for accessing CBRs) and implicit costs, such as arising from more robust due diligence efforts; expenses dedicated to improvements in AML/CFT compliance; and training of employees. The IMF (2016) survey found that correspondent banking fees have increased at least for some of the banks in each Caribbean jurisdiction (Figure 3). In the ECCU, for example, correspondent banking fees doubled or tripled on some occasions (IMF, 2016b). In Belize, costs for cross-border transactions, particularly wire transfers, have also increased significantly over time (CARICOM, 2016). The IMF (2016) survey found that some of the explicit and implicit costs may be transmitted to consumers: jurisdictions that noted an increase in explicit correspondent banking fees, generally reported significant increases in fees charged to bank customers for wire transfers and foreign currency drafts. At the same time, available data do not definitively point to an increase in the cost of inbound remittances.

**Figure 3. Cost of CBRs and Transfers**

*In many jurisdictions, banks-correspondents have increased their CBR fees.*

*... and the respondent banks have increased fees for CBR-related transactions to their customers.*

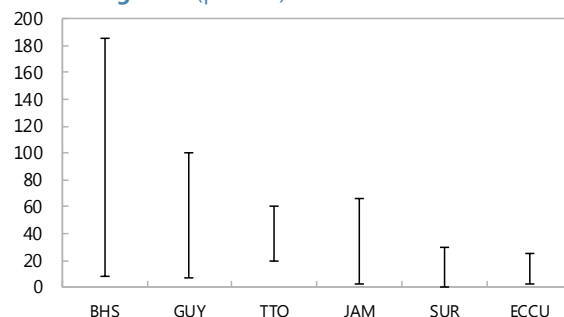
**Increases in CBR fees by correspondent banks (percent)**



Note: The bars represent ranges of increases in fees over last 5 years as reported in the IMF survey.

Source: Country authorities and banks.

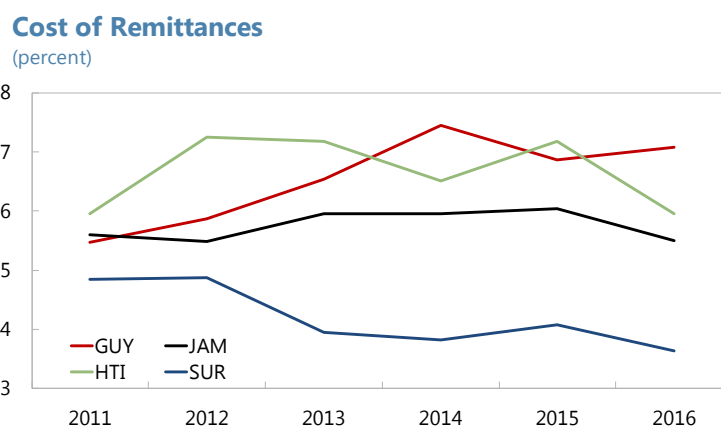
**Increases in fees to customers for transactions involving CBRs (percent)**



Note: The bars represent ranges of increases in fees over last 5 years as reported in the IMF survey.

Source: Country authorities and banks.

Available data on the cost of remittances are patchy and do not suggest any increase in the cost of sending remittances.



Note: The bars represent an average cost of sending an equivalent of \$500 to a particular destination from sources covered by the database.

Source: The World Bank, Remittance Prices Worldwide, available at <http://remittanceprices.worldbank.org>.

10. **To safeguard their CBRs, some respondent banks have terminated relations with clients from certain sectors, notably those undertaking seemingly riskier businesses.** In Belize, for example, banks have discontinued processing international wire transfers for credit unions, as this represents nesting, i.e., a situation in which a financial institution uses the CBR of another bank to carry out cross-border transactions. Nesting is strongly discouraged, and in many cases, prohibited by the correspondent bank because of concerns about the inability of the respondent bank to carry out appropriate customer due diligence on the customer of the financial institution that is generating the transaction. For similar reasons, foreign-owned banks in St. Vincent and the Grenadines discontinued deposit services to local credit unions in mid-2016, resulting in a consolidation of credit unions' deposits in an indigenous bank. Termination of banking services to online gaming establishments in some ECCU jurisdictions has forced these companies to search for a banking services provider in Asia. According to the IMF (2016) survey results, services to customers in gambling and gaming sectors have also been negatively impacted in The Bahamas, Suriname and Trinidad and Tobago. Although statistics are unavailable at this stage, anecdotal evidence suggests that some banks have increased the level of scrutiny for deposits associated with the citizenship programs in some ECCU jurisdictions, refusing to accept these deposits in some cases.

11. **As respondent banks have replaced lost CBRs, there has been a change in type of correspondent banks serving the region.** Historically, banks in the Caribbean had CBRs with the major international banks, mainly of U.S. origin, given the importance of US dollar transactions. As these banks have withdrawn from the region, some Caribbean banks report establishing replacement relationships with smaller, less known (i.e., "second tier") banks (IMF, 2016b). In Belize, some banks managed to establish often-restricted relationships with banks in Europe and Asia, or with smaller banks in the US.

12. **The withdrawal of CBRs has had a more serious impact on the offshore financial sector.** CBRs are particularly important for offshore banks, which rely on international transactions for their core business. Regulations in several jurisdictions also require an offshore bank to have an active CBR before a license is granted or renewed. Declines of CBRs in this sector and the resulting decline in the number of license applications have put the future growth of the offshore sector at risk in many Caribbean economies.

- In St. Lucia, for instance, several offshore banks have experienced termination of CBR relationships, some of which were unable to find replacements. Some newly licensed offshore banks have been unable to commence operations, while others had to surrender their licenses largely due to inability to establish CBRs (Annex II).
- In Belize, where the five offshore banks were the most affected, 13 out of 15 CBR accounts were lost over the last two years. Thus, offshore banks have scaled down operations, while domestic banks now play a greater role in the banking system.
- In The Bahamas, responses to a 2016 central bank survey revealed that ten offshore banks had CBRs terminated or restricted, up from just three banks the year before.<sup>5</sup>
- The provision of banking services to international business companies (IBCs) has seen the greatest and most consistent decline across the Caribbean, largely affecting Barbados and the ECCU.
- In Barbados, banks have terminated relationships with some corporate vehicles established in the International Business and Financial Services sector, which is depressing its growth prospects.<sup>6</sup> This phenomenon has been largely reflected in the closing of entire business lines, termination of services, or placement of arduous restrictions on IBC accounts. Some IBCs reportedly have also had to search for alternative financial partners in other jurisdictions. Along with greater due diligence and scrutiny, account terminations and waiting periods for new accounts have increased significantly, jeopardizing further development of the IBC sector in the future.

13. **Data on cross-border transactions also suggest that the number of active correspondents has declined in the majority of the Caribbean jurisdictions** (Figure 4).<sup>7</sup>

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<sup>5</sup> The central bank warns, however, that the apparent rise in affected banks could partly be explained by the difference in coverage between the 2015 and 2016 surveys.

<sup>6</sup> See Worrell et al (2016) for a discussion of how more stringent regulations by advanced-country regulators have driven IBCs away from offshore financial centers in the Caribbean to those in advanced countries, despite equal or sometimes stronger institutional frameworks in the Caribbean.

<sup>7</sup> Based on SWIFT data reported in BIS (2016) for a sample of 204 economies, which includes estimates of changes between 2015 and 2011 (in percent) in the number of active correspondents, volume, and value of SWIFT transactions. Given that statistical evidence is often lagging, and since the loss of CBRs intensified in some jurisdictions in late-2015 to early-2016, the

(continued)

SWIFT data are the most commonly used standard for cross-border payments and is likely to capture a large part of transactions related to correspondent banking (BIS, 2016). Available SWIFT data show that the decline in active correspondents was accompanied by falling value of cross-border flows. Data also indicate that the volume of transactions has increased in the overwhelming majority of jurisdictions, including in the Caribbean, albeit with some heterogeneity. Some of this growth may be associated with the rise in cross-border transactions due to economic recovery in a number of jurisdictions after the global financial crisis. However, the overall value of transactions has declined in most Caribbean economies; and the average Caribbean decline in the value of SWIFT transactions is largely comparable to the offshore financial centers, Commonwealth of Independent States, and Middle East and Africa. The declining number of CBRs, combined with the increasing volume of transactions, suggests increasing concentration of relationships, potentially increasing financial stability risks from further withdrawal of CBRs.

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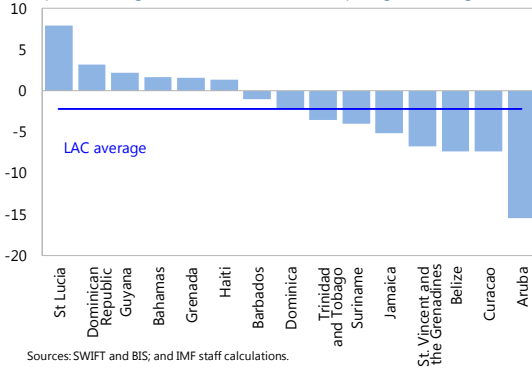
available SWIFT indicators fail to reflect the latest developments. Caribbean countries with data include: Aruba, Curacao, Grenada, The Bahamas, Barbados, Belize, Dominica, Guyana, Dominican Republic, Haiti, Jamaica, St. Lucia, St Vincent and the Grenadines, Suriname, Trinidad and Tobago.

**Figure 4. Caribbean Evidence**

The number of active correspondents has largely declined across the Caribbean, albeit with significant heterogeneity across the region.

**Number of Active Correspondents**

(In percent, change between 2011 and 2015, simple regional average)

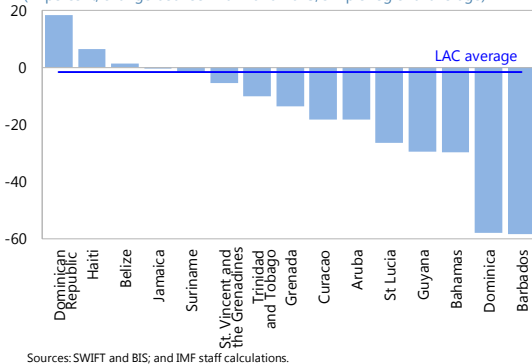


Sources: SWIFT and BIS; and IMF staff calculations.

... the value of cross-border operations has declined in most countries, ...

**Value**

(In percent, change between 2011 and 2015, simple regional average)



Sources: SWIFT and BIS; and IMF staff calculations.

1/ Caribbean region includes: Aruba, Curacao, Grenada, The Bahamas, Barbados, Belize, Dominica, Guyana, Dominican Republic, Haiti, Jamaica, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago.

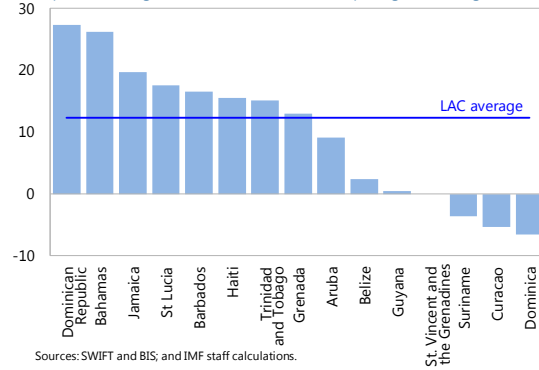
2/ LAC includes Latin America and Caribbean.

3/ Overall data sample covers 204 economies, of which 13 outliers were excluded (observations where estimates for at least one variable – change in number of CBRs, change in volume, change in value – fall above 99<sup>th</sup> or below 1<sup>st</sup> percentile).

While the volume of operations has increased, ...

**Volume**

(In percent, change between 2011 and 2015, simple regional average)

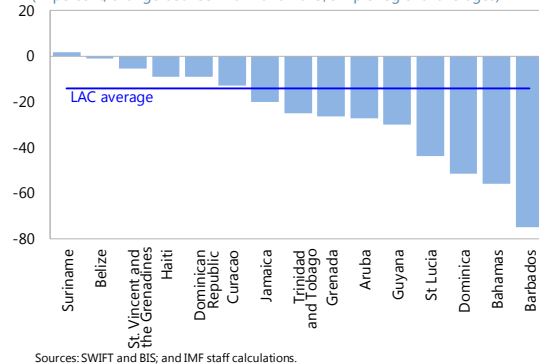


Sources: SWIFT and BIS; and IMF staff calculations.

... suggesting a decline in the average transaction value.

**Implied Average Transaction Value**

(In percent, change between 2011 and 2015, simple regional averages)



Sources: SWIFT and BIS; and IMF staff calculations.

**C. Potential Factors Behind the Withdrawal of CBRs in the Caribbean**

14. **Loss of CBRs reflects business decisions by global banks.** Global banks have reassessed their individual business models, deciding on different strategies in response to changes in the macroeconomic and regulatory environment. In general, macroeconomic conditions, such as persistently low interest rates post-Global Financial Crisis, together with changes in regulatory frameworks have reduced the attractiveness of high-volume, low-return business lines like correspondent banking.

15. **Four main groups of factors have contributed to global banks' decisions to end their CBRs.** First, compliance issues related to anti-money laundering (AML) and combating the finance of terrorism (CFT) regulations are the most often cited reasons for termination of CBRs in the context of more aggressive enforcement by regulators, especially in the United States. Second, tax transparency agreements impose an additional regulatory burden that carry

their own set of compliance costs. Third, trade and economic sanction violations have very large fines and require another layer of due diligence. Fourth, additional profit and risk-related reasons for withdrawing CBRs, not directly related to AML/CFT compliance, reflect shifts in the banking landscape since the global financial crisis. These factors are not mutually exclusive and any one of them can be a sufficient reason for a bank to decide terminate a CBR. Examining these factors can help explain the extent to which Caribbean countries have been impacted by the withdrawal of CBRs (see Erbenova et al., 2016).

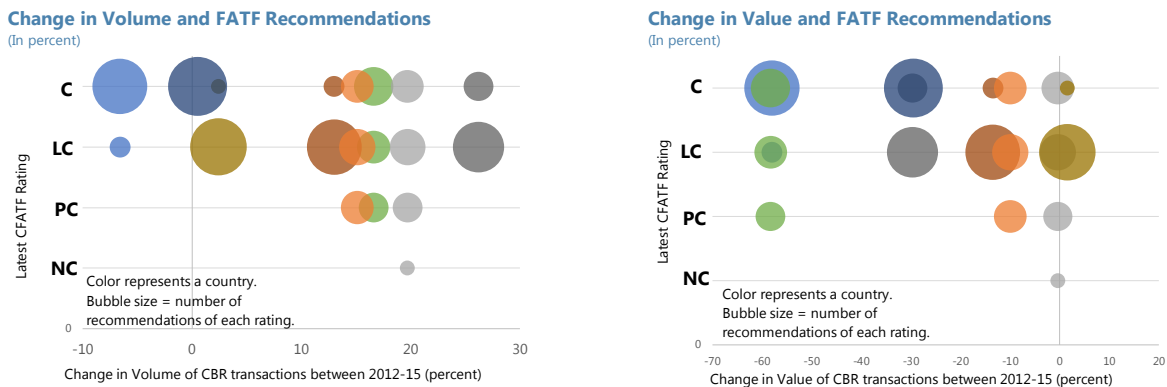
### *More Intense AML/CFT Efforts*

16. **AML/CFT compliance-related issues are the most widely referenced reason for withdrawal of CBRs.** The international standard for anti-money laundering (AML) and combating the finance of terrorism (CFT) efforts was updated by the Financial Action Task Force (FATF) in 2012 with a view to broadening the assessment to include effective implementation and with a greater emphasis on a risk-based approach. The compliance costs associated with the due diligence required to meet these standards, combined with low expected profits and the large fines and reputational damage for violations, are primary reasons given for withdrawing CBRs (World Bank, 2015). Banks have identified potential channels of exposure to AML/CFT risks though shortfalls in the supervisory or legal frameworks in the countries of the respondent banks; uncertainty about the quality of the customer due diligence processes of respondent banks; and the presence of relatively higher risk businesses, such as money or value transfer services, payment settlement services, offshore sectors or gaming, especially those with a lack of a physical presence (IMF, 2017).



**Figure 5. CFATF Ratings and Changes in Cross-border Transactions**

*CFATF ratings from the latest follow-up report of the 3<sup>rd</sup> Mutual Evaluation Report.*



Sources: CFATF; BIS; and IMF staff estimates and calculations.

Notes: (1) The charts plot percent change in volume/value of CBR transactions during 2012-15 against the ratings (authors' assessment) based on the latest follow-up reports of the 3<sup>rd</sup> CFATF Mutual Evaluation Report.

(2) NC = non-compliant; PC = partially compliant; LC = largely compliant; C = compliant. Higher values on the vertical axis represent better AML/CFT compliance. Each color represents a country.

(3) Bubble size represents the number of categories corresponding to a particular rating (for each color-coded country). For example, looking at the light-blue color-coded country, although the CFATF ratings are high (i.e., all categories compliant or largely compliant), the country still experienced a large decline in the volume of CBR transactions.

(4) Follow-up reviews of the 3<sup>rd</sup> Mutual Evaluation Reports based on the 2002 FATF standard are used except for Jamaica and Trinidad and Tobago, where the latest CFATF ratings refer to the 4<sup>th</sup> Mutual Evaluation Report (based on the 2012 FATF standard).

17. **Various characteristics of the Caribbean economies make them more vulnerable to perceptions of potential AML/CFT risks.** For example, many Caribbean countries tend to transact a higher than average volume of remittances per capita (Figure 1). Money or value transfer services can be a channel through which banks face exposure to AML/CFT violations owing to the large number of cash transactions (often in relatively small amounts per transactions), which makes due diligence more challenging. Another common feature of several Caribbean economies is the presence of cash-intensive casino operations and/or on-line gambling. In some cases, regulation and supervision of both money or value transfer services and gaming operations are less established than for the banking system and, as a result, may elicit concerns from correspondent banks. Several Caribbean jurisdictions also offer offshore services, which are sometimes perceived to be higher-risk businesses.

18. **Available evidence reveals no clear relationship between the loss of CBRs and compliance with the 2002 FATF standard in the Caribbean** (Figure 5). This is consistent with results in Collin, Cook and Soramaki (2016) who examine the impact of AML/CFT regulation on cross border transactions using detailed SWIFT payment data. They find that while inclusion of a country in a list of high risk countries reduces the number of payments received from other jurisdictions, there is no impact on outgoing payments. This finding is also aligned with the results presented by IMF (2017), indicating that correspondent banks are more

focused on the quality of an individual relationship with a respondent bank than on the country's AML/CFT framework.

**19. Caribbean countries have made significant progress since their initial assessments.**<sup>8</sup>

To address new and emerging issues, and to clarify and strengthen many of the existing obligations, FATF released a set of revised standards in 2012 that seek to assess the effectiveness of the AML/CFT institutional framework, with a focus on a risk-based approach. However, at this stage, only two countries, Jamaica and Trinidad and Tobago, have completed the initial evaluation based on the 2012 FATF recommendations. Both countries were assessed with at least “moderate” level of effectiveness in about half of the categories and “low” rating in the other half.

*Increased Focus on Tax Transparency*

**20. Increased global pressure in recent years to enhance tax transparency may have contributed to the loss of CBRs.** This issue is particularly relevant for jurisdictions that have offshore financial service centers, including several Caribbean countries, and which have traditionally relied on zero or low tax rates to attract business. Offshore financial services are a major industry in many Caribbean countries.<sup>9</sup> As a result, several jurisdictions that in the past have been identified as destinations for tax avoidance have come under increasing international pressure to share more information in a timelier fashion. For example, failing to comply with the United States' Foreign Account Tax Compliance Act (FATCA) can have serious consequences for countries doing business with U.S. firms. Compliance with tax information agreements, such as FATCA and the OECD's tax information exchange agreement and Common Reporting Standard, impose an additional regulatory burden that increases compliance and transaction costs (Erbenova et al., 2016). This increase in costs, as well as the cost of potential fines and associated reputational risks are likely to reduce global banks' appetite to deal with offshore financial institutions (Worrell et al., 2016).

**21. Several Caribbean jurisdictions have or are in the process of entering agreements to share tax information.** Most Caribbean countries are already implementing FATCA or are moving towards FATCA compliance (Table 2). The OECD Global Forum assesses jurisdictions by three key criteria for tax transparency: (i) compliance with the standard for exchange of information on request (EOIR); (ii) commitment to implement the Common Reporting Standard (CRS) on automatic exchange of information; and (iii) participation in the Multilateral Convention on Mutual Administrative Assistance in Tax Matters. Many Caribbean countries comply with at least two out of the three criteria. Many countries have agreed to a multilateral agreement on tax information sharing and are committed to the CRS, which standardizes the

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<sup>8</sup> Initial CFATF 3<sup>rd</sup> mutual evaluation of compliance with the 2002 FATF standards was conducted between 2007 and 2010 for most countries. Most countries were found to be noncompliant or partially compliant in the majority of categories. Follow-up assessments were conducted to assess on-going improvements in compliance.

<sup>9</sup> IMF (2008).

(continued)

financial account information to be shared and implements an automatic exchange of information technology (Table 2).<sup>10</sup> However, implementation of the CRS is at an early stage, requires significant effort in terms of both domestic legislation and international negotiations, and is not expected to be completed before 2018.

Jurisdiction	United States		OECD		
	FATCA	Convention on Mutual Administrative Assistance in Tax Matters	Committed to First Exchange Under CRS <sup>1</sup>	Multilateral (MCAA) or Bilateral Exchange Agreement	Compliance with EOIR <sup>2</sup>
Anguilla	✓	✓	2017	MCAA	PC
Antigua and Barbuda	✓	✗	2018	MCAA	PC
Aruba	✗	✓	2018	MCAA	LC
Bahamas	✓	✗	2018	Bilateral	LC
Barbados	✓	✓	2017	MCAA	LC
Belize	✓	✓	2018	MCAA	LC
Curaçao	✓	✓	2017	MCAA	PC
Dominica	✓	✗	2018	Bilateral	PC
Grenada	✓	✗	2018	MCAA	LC
Guyana	✓	✗	-		
Jamaica	✓	✓	-		LC
Montserrat	✓	✓	2017	MCAA	LC
St. Kitts and Nevis	✓	✓	2018	MCAA	LC
St. Lucia	✓	✓	2018	MCAA	LC
St. Vincent and the Grenadines	✓	✓	2018	MCAA	LC
Suriname	✗	✗	-		
Trinidad and Tobago <sup>3</sup>	✗	✗	2017	Bilateral	NC

Sources: US Treasury, OECD.  
<sup>1</sup> As of 19 September 2016  
<sup>2</sup> NC = non-compliant; PC = partially compliant; LC = largely compliant; C = compliant.  
<sup>3</sup> In Trinidad and Tobago, FATCA legislation was passed by the House of Representatives and the Senate in early 2017, and currently is awaiting proclamation by the President.

### *International Sanctions*

**22. Economic and trade sanctions lead to another layer of compliance and due diligence that are required of banks.** Like AML/CFT violations, these can result in very expensive fines and increase the cost of maintaining CBRs. There is evidence that countries that face U.S. economic and trade sanctions have seen a larger decline in CBRs as well as in the volume and value of CBR transactions. For Caribbean countries and their domestic banking systems, this is unlikely to be an important driver of CBR withdrawals in the region. However, while Caribbean countries have not been directly impacted by those sanctions, they are indirectly affected (and therefore subject to increased scrutiny for customer due diligence) because offshore banks in the region facilitate international transactions from all over the world;

<sup>10</sup> Worrell *et al.* (2016) compare several Caribbean international financial centres with comparators outside the region, including advanced countries, and argue that Caribbean compliance is comparable or superior.

citizenship-by-investment programs that receive applicants from around the world, including from countries subject to sanctions.

### *Lower Profitability and Risk Aversion by Global Banks*

23. **The decision by global banks to withdraw CBRs has also been affected by the macroeconomic environment and enhanced prudential regulations that they face.** Since the global financial crisis, banks have been re-examining their business practices for exposure to risk. Vulnerabilities in banking systems as well as in individual banks during the crisis have led to consolidation of the banking sector, particularly in the United States and Europe. Regulators have also sought to increase buffers, requiring banks to hold more capital and more liquid assets, thus increasing the cost of holding risk in their balance sheets. In addition, the low growth, low interest rate environment has prompted banks to become leaner and more risk averse while concentrating on higher profits and core business, leading them to withdraw their CBRs particularly from jurisdictions with low volumes or regulatory shortfalls (Erbenova et al., 2016).

24. **The relatively small volume of business generated by respondent banks make them less attractive for correspondent banks.** As small states, the Caribbean countries are likely to generate a relatively low level of CBR transactions, making it more difficult for correspondent banks to generate economies of scale and therefore higher profits from CBR activity given their escalating costs of regulatory compliance. In countries with smaller or less developed financial systems, there may also be fewer opportunities for “bundling” less profitable CBR activities with other financial services activities that can generate profits. However, there is no statistical evidence that the size of the country or the domestic banking sector matter for CBR loss (Figure 6).<sup>11</sup> On the other hand, many Caribbean countries have experienced relatively low real GDP growth since the global financial crisis and there is some evidence that stronger economic activity is associated with an increase in the number of CBRs and in the value of CBR transactions.

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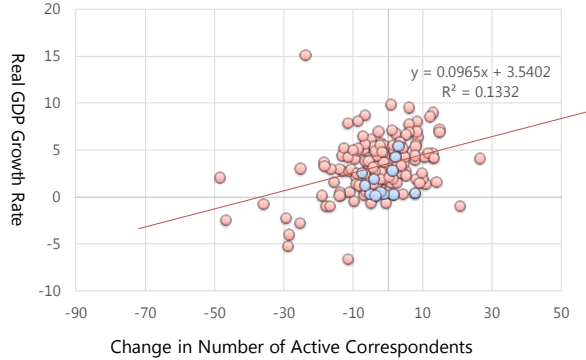
<sup>11</sup> The opportunity to generate profits from a higher volume of transactions is likely to depend more on the size of the financial institution, rather than the size of the country or the financial system as a whole. However, data on CBRs and correspondent banking transactions are not available at the bank level.

**Figure 6. Growth, Size and Offshore Activity as Drivers of CBRs**

Weaker real GDP growth is associated with loss of active CBRs ...

**Change in Number of Active Correspondents and Growth**

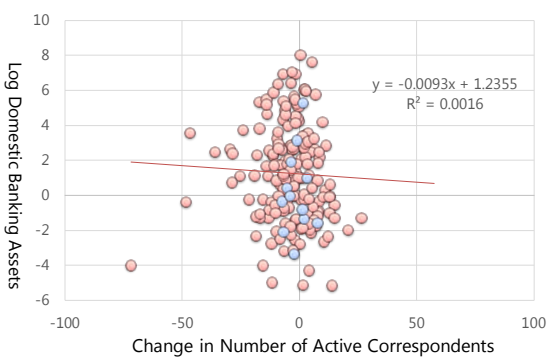
(In percent)



There is no clear evidence that the size of the banking system matters for active CBRs ....

**Change in Number of Active Correspondents and Size**

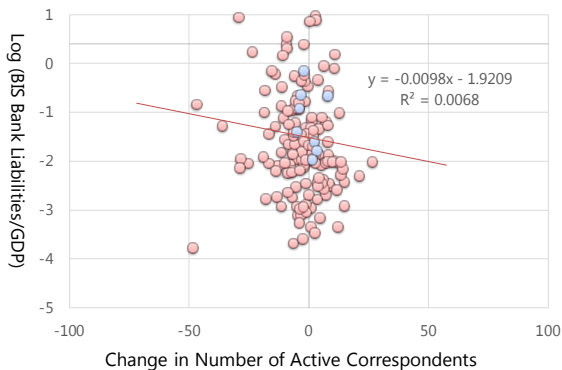
(In percent)



Offshore activity as measured by the ratio of BIS bank liabilities to GDP seems to matter in CBR termination...

**Change in Number of Active Correspondents and BIS Bank Liabilities**

(In percent)

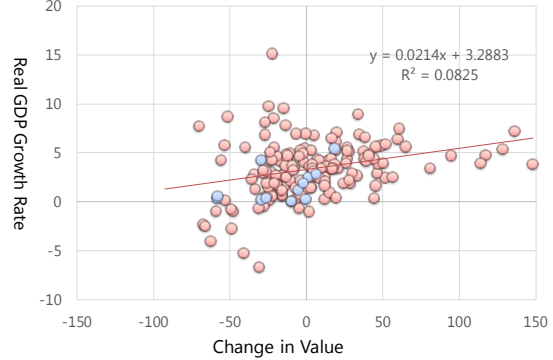


Note: Blue dots represent Caribbean countries.

...and lower value of CBR transactions.

**Change in Value and Growth**

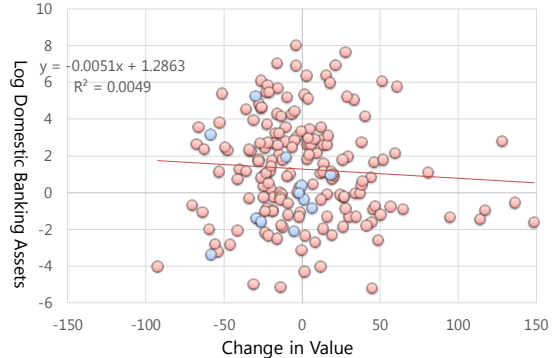
(In percent)



...nor value of transactions ....

**Change in Value and Size**

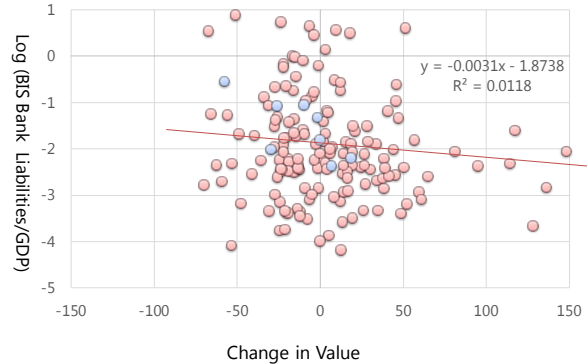
(In percent)



...but does not have a clear relation with the value of CBR activity.

**Change in Value and BIS Bank Liabilities**

(In percent)



Source: Bank for International Settlements: locational banking statistics.

<sup>1</sup>Offshore banking sector size is proxied by the BIS bank liabilities.

25. **Regression analysis suggests that some of the drivers mentioned above may have played a role in the withdrawal of CBRs.** The regressions are based on data from BIS (2016) on the percent changes in the number of CBRs, values of transactions, and the number of transactions as dependent variables, and a set of explanatory variables that proxy for potential drivers at the country level. The results point to statistically significant correlations between CBR loss and potential drivers although these drivers explain a relatively small part of the change in CBR activity (Table 3 and Annex III):

- **Size and growth.** The proxy for size, log of nominal GDP, has the expected positive sign (but not statistically significant) for the change in active CBRs and change in the value of transactions. Somewhat counterintuitively, it is significant and negatively correlated with the change in volume of transactions. The regressions suggest that an increase in economic activity is perhaps the most important determinant of changes CBR activity. Economic expansion is significantly correlated with growth in the number active correspondents. This result suggests that banks remain profit driven and will increase CBRs in a country experiencing growth. Values and volumes of transactions are also positively correlated with growth.
- **Other.** As expected, U.S. economic and trade sanctions are an important determinant of changes in CBR activity. The EU crisis indicator variable is also highly significant and with large negative estimates for all three dependent variables. This is in line with the notion that banking crises have negative effects on foreign transactions and on CBRs. The significant negative estimate for the constant term in the regression modeling changes in active CBRs suggests that, to some extent, the decline of CBRs may be a general phenomenon that is due to reasons not captured in the econometric model.
- **Caribbean.** Controlling for several possible determinants of CBR activity, the regressions point to the expected negative (albeit not always statistically significant) estimates of the regression coefficients on the Caribbean dummy variable, suggesting that the decline of CBR activity may be more pronounced in the Caribbean for reasons not captured in the other explanatory variables. In addition, we observe a negative sign for changes in the values and volumes for offshore financial centers as expected.

**Table 3. Regression Results**

VARIABLES	(1) Change in CBRs	(2) Change in Volumes	(3) Change in Value
Caribbean	-0.439 (0.865)	-5.982 (0.367)	-18.23* (0.0732)
Offshore Financial Center	1.013 (0.607)	-6.320 (0.213)	-3.193 (0.680)
Real GDP growth, 2011-15 avg	0.498*** (0.000840)	1.169*** (0.00225)	0.998* (0.0847)
Log (Nominal GDP in USD)	0.0935 (0.751)	-1.816** (0.0176)	0.812 (0.484)
US Sanctions	-7.336*** (0.00872)	-6.605 (0.355)	-24.13** (0.0278)
EU Crisis	-20.10*** (2.42e-07)	-33.29*** (0.000676)	-47.60*** (0.00143)
Constant	-3.151** (0.0277)	20.31*** (1.03e-07)	1.341 (0.810)
Observations	176	176	176
R-squared	0.231	0.168	0.129

Source: IMF staff estimates and calculations.

p-val in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### IV. POLICY OPTIONS TO ADDRESS THE LOSS OF CBRs

26. **The loss of CBRs has generated great concern throughout the Caribbean.** At the regional level, via CARICOM, Caribbean policy makers have established a task force to study the “de-risking” phenomenon, and have made it a key aspect of their engagement and dialogue with international financial institutions and advanced-country financial regulators and political leaders.<sup>12</sup>

27. **Given the various drivers, there is no “silver bullet” to solve the problem of withdrawal of CBRs.**<sup>13</sup> Coordinated efforts by various stakeholders are called for to mitigate the risk of financial exclusion and the potential negative impact on financial stability. Policy initiatives must address drivers related to risk or risk perceptions as well as those related to profitability.

<sup>12</sup> The CARICOM Task Force on De-Risking is led by the Prime Minister of Antigua and Barbuda with technical work coordinated by the Central Bank of Barbados.

<sup>13</sup> See IMF (2017) for a detailed analysis of policy options to address the loss of CBRs.

### *Initiatives to Address Drivers Related to Risk or Risk Perceptions*

- **Ensure compliance with international standards.** Caribbean countries need to continue to prioritize efforts to meet international AML/CFT and tax transparency standards. For example, national programs to ensure compliance with the 2012 FATF standards should move ahead expeditiously; as should those aimed at complying with the OECD’s Common Reporting Standards on tax transparency and exchange of information. One notable example has been the ECCU’s move to consolidate national AML/CFT supervision into one regional operation at the ECCB to maintain consistent standards of supervision across the region and mitigate concerns about AML/CFT risks. Technical assistance by international financial institutions and the U.S. Treasury has been provided to assist capacity building. The efficacy of a regional information repository that could share information on suspicious transaction flows among regional financial intelligence units could enhance the effectiveness of countries’ AML/CFT frameworks and should be explored.
- **More clarity by regulators of their expectations of global banks.** Although regulators and international standard setting agencies (such as FATF) have recently issued clarifications, correspondent banks still remain concerned about the clarity and consistency of regulatory expectations. Thus, more outreach by regulators would be beneficial. Authorities in some home countries of global banks are already taking steps to clarify regulatory expectations. For example, the U.S. Department of the Treasury has put considerable resources into educating financial institutions on the precise nature of transactions and behaviors that are subject to sanctions. In a recently issued [fact sheet](#), it noted that 95 percent of AML/CFT-related violations are corrected without penalties, and of the very few instances in which large fines have been imposed, this was as a result of repeated failure to correct practices that had been ongoing for over 5 years. In addition, regulators should provide more guidance and oversight to banks regarding their voluntary remedial actions undertaken in lieu of formal enforcement actions by regulators. These voluntary actions, which in some cases go beyond what might be have been required by regulators, have also influenced the bank behavior in ways not necessarily intended by regulators. It is within this context that the FATF issued revised guidance on correspondent banking clarifying, among other things, that “know your customer’s customer (KYCC)”, which correspondent banks had come to view as an obligatory part of their customer due diligence process, was not required.
- **Improve information sharing and communication between respondent and correspondent banks.** Respondent banks in the Caribbean have at times been taken aback by the withdrawal of CBRs by correspondent banks after many years of the business relationship without any reason provided for the decision or an opportunity to correct whatever the unknown problem was. Enhanced communication could provide an opportunity for global banks to clarify their own risk tolerance policies to respondent banks or their reasons for terminating a specific CBRs. It would also allow respondent banks to better convey the steps that they have taken to address drivers of CBR withdrawal. Some global correspondent banks that maintain a strong presence in the region have highlighted their close engagement with their respondent banks as key to sustaining the relationship by



allowing them to understand their clients' customer due diligence protocols and provide guidance on what changes they require. Similarly, some respondent banks have indicated that their success in maintaining CBRs has been attributable to the close lines of communication they maintain with their correspondent bank. The Caribbean Development Bank is launching a program to assist commercial banks to raise their capacity to address the growing requirements associated with customer due diligence and transaction monitoring. Some respondent banks have noted that an important factor in maintaining CBRs has been their investment in automated transactions monitoring IT systems, which can quickly transmit information to correspondent banks when requested. To facilitate enhanced communication, countries may need to ensure that there are no legal barriers that prevent cross-border information sharing.

- **Improve the quality of payment messages.** The quality of information contained in payment messages can be improved to enhance information available to banks, helping reduce compliance costs and reduce concerns about the legitimacy of cross-border payments. Toward this end, all commercial banks regulated by the ECCB have complied with its instruction to adopt the SWIFT system. Establishing guidelines that would increase the amount of mandatory information contained in the SWIFT messages would also be useful. Over the longer term, the development of KYC utilities that allow respondent banks to store and update their customer information, which could be easily accessed by correspondent banks, should continue to be pursued. Similarly, the wider adoption of standardized legal entity identifiers, to identify and trace distinct legal entities as they engage in financial transactions, should be promoted.
- **Special protocols for higher-risk activities by respondent banks.** Terminating relationships with clients in high-risk sectors (e.g., gaming, offshore business, money transfer services, charities, citizenship-by-investment) may indeed lower the overall risk level of CBRs and assuage concerns by global banks. However, such actions may exclude legitimate but risky business and hamper financial inclusion. This is the case of remittances, which are generally considered to be a high-risk activity, but have an overall positive social and economic impact. In this context, respondent banks should develop special protocols, in consultation with their correspondent banks for customer due diligence with respect to higher-risk but legitimate activities. A longer-term solution, which has been proposed by some regulators in the Caribbean, would be to replace the use of cash with digitized payments for commercial transactions, which would facilitate tracking the trail of the funds underlying the transactions.
- **Purchase/establish a bank in the U.S.** Either individually, or collectively respondent banks might obtain their own U.S. bank to be able to maintain CBRs.<sup>14</sup> This solution would not obviate the need for strong customer due diligence and other KYC processes nor would it diminish the risk of enforcement penalties for breaching US regulations. However, it does

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<sup>14</sup> Anecdotal reports suggest that at least one Caribbean bank has already received a license to set up a bank in the US, and another one has started the application process for such a banking license.

address the problem of extreme risk aversion of some correspondent banks that has prompted them to indiscriminately withdraw from providing correspondent banking services. However, the establishment of a US Federal Reserve approved, US dollar clearing facility, which has been mooted as an option in regional policymakers necessitates a lengthy, complex, and costly process. The purchase of an existing commercial bank may be a more practical undertaking.

- **Use the central bank’s CBRs on behalf of commercial bank’s clients.** This could be a short term/emergency measure in the event of a complete loss of CBRs in a country and has already been used in the case of Belize. However, it would be important to assess the legal and operational feasibility of this solution and the central bank’s ability to mitigate potential risk exposures so as not to jeopardize its own CBRs.

### *Initiatives to Address Drivers Related to Profitability*

- **Consolidate transactional traffic to exploit economies of scale.**
  - The Caribbean’s small size and the high-volume, low-return nature of correspondent banking may imply that region could be “over-banked” from the standpoint of the number of correspondent banks serving the region. Coordination among correspondent banks to maintain or establish CBRs with a fewer number of specific correspondent banks could provide economies of scale and increase the volume of transactions and the income for those correspondent banks and reduce their average costs associated with providing correspondent banking services. Such consolidation is already taking place because of the exit of some correspondent banks. The consolidation of transactional traffic through “down-streaming” has been another positive development that is gaining traction in the region. Down-streaming refers to a situation where the correspondent bank has a relationship with an intermediary bank, which has relationships with other correspondent banks and provides for a transparent flow of customer and transaction information to correspondent bank.
  - An alternative way to consolidate transactional traffic is for correspondent banks to bundle correspondent banking services with other products. Thus, a correspondent bank can offer its correspondent bank additional business lines (e.g., credit card clearing, letters of credit and wealth-management operations). This would generate economies of scale by allowing the correspondent bank to use the same robust compliance system to spread the cost of compliance over a wider set of banking services.
  - The consolidation/merger of small-sized correspondent banks is another potential solution that could produce sufficient volume and profitable traffic to large foreign correspondent banks, as well as providing economies of scale to reduce average due diligence costs for both correspondent and correspondent banks. For the latter, the investment in more sophisticated information technology systems and implementation of better risk management protocols for higher-risk activity are more

feasible, thereby also addressing risk concerns of the correspondent bank. The ECCU is promoting this solution for the sub-region but this will take some time. However, there are some banks that are already exploring possible mergers.

- **Increase fees charged by correspondent banks.** This has already occurred across the Caribbean, and respondent banks have passed some of these costs on to customers. There may also be scope for risk-based pricing by correspondent banks to allow them to factor compliance costs into their fee structure and make the risk-return profile more favorable. However, the higher prices for cross-border transactions, while allowing CBRs to be maintained in some cases, will have a negative effect on competitiveness, by raising the cost of doing business; and on financial inclusion. There is, of course, a limit to which a respondent bank might pass on costs to its customers, making this solution one of limited scope and short-term effectiveness.
- **Explore technological innovations to reduce costs and improve risk management.** Emerging Fintech solutions could provide a more efficient alternative to CBRs for carrying out cross-border transactions. For example, blockchain providers have suggested that their technology could alleviate some correspondent banking issues by reducing costs of transfers, improving risk management and transparency, and shortening the time required to settle transactions. However, these technologies, which correspondent banks are already exploring, seem to be longer-term solutions. Moreover, effective oversight frameworks for new payment methods would still need to be developed to safeguard public confidence and financial stability.
- **Subsidize compliance costs.** Where the compliance costs exceed the benefits from maintaining the business relationship and prevent financial inclusion, the public sector may need to consider subsidizing part of the compliance costs of respondent banks and/or the fees charged to their customers. This may be required to sustain remittances or safeguard access to finance for charitable organizations or trade finance for SMEs. However, such a solution may create market distortions and face budgetary constraints and would face the practical challenge of defining the scope of categories at risk of being financially excluded.
- **Establish CBRs with smaller second or third tier U.S. banks.** For these banks, the provision of correspondent banking services to small Caribbean banks could constitute a more significant income stream than for the major international banks and hence better fit into their business model. Given the smaller scale, the costs and fees would likely be higher than those charged by large banks, but (a) respondent banks would avoid withdrawal of CBRs; and (b) given the importance of the relationship to both sides, the correspondent bank would have an incentive to get to understand the business model, customer due diligence processes, etc. of the respondent bank, and potential cost savings could be explored. Caribbean banks have been reasonably successful in establishing new CBRs with smaller correspondent banks to replace lost CBRs with major international banks. However, moving towards second or third tier providers may also carry reputational costs for respondent

banks, including because these banks may be less efficient in processing transactions than their first-tier counterparts.

## V. CONCLUSION

**28. Global banks have reassessed their individual business models, deciding on different strategies in response to changes in the macroeconomic and regulatory environment that has lowered the expected profitability of correspondent banking.**

Depending on specific country characteristics and those of the correspondent and respondent banks, we see a full spectrum of outcomes. At one end of the spectrum, some global banks have broadly withdrawn from CBRs worldwide; others have withdrawn from the Caribbean region or a particular country (e.g. Belize); others have targeted individual banks; and others have maintained services but to a restricted set of clients of respondent bank and charged higher fees.

**29. Available evidence confirms that the number of CBRs and value of CBR transactions has indeed fallen in several Caribbean countries over the past few years.**

Some services, such as international wire transfers, and sectors, such as offshore financial services and gaming, have been particularly affected. However, the loss of CBRs has so far not resulted in major disruptions to financial intermediation. Most Caribbean banks have found replacements or are coping with a reduced number of CBRs. While there are a confluence of factors potentially driving this phenomenon, evidence for the Caribbean points to specific (perceived) risk factors related to respondent bank business models. For example, banks in various countries are involved in activities that are considered riskier by global banks, such as offshore financial services and banking services to the gaming industry. Indeed, there is some evidence that the reduction in CBR activity has been more pronounced in countries that are offshore financial centers. In contrast, there is little support in the available data to suggest that the size of the economy or the banking system is an important driver. The size of the bank could be important, however.

**30. Further loss of CBRs remains a significant risk to the region and could have large economic costs.** Caribbean countries are small open economies with extensive links to the global economy, making them vulnerable to a loss of CBRs. A disruption in CBRs could adversely impact the economy through several links, including: (i) reduced international trade, remittances and investment flows; (ii) higher costs of doing business; and (iii) direct negative impact to key sectors or activities (e.g. gaming, offshore financial sector and citizenship-by-investment programs). Stress scenarios that attempt to model these linkages using bank level data in Belize, suggest that the loss in CBRs could have a sizeable reduction in real economic activity, ranging from 1 percent of GDP in a low stress scenario and up to 6 percent in a high stress scenario.

**31. Caribbean authorities have taken several steps to address risks.** Caribbean authorities are strengthening the region's voice in global fora and are improving communication

across stakeholders. There are also country-specific efforts to improve compliance with international standards and enhance risk-based supervision even though challenges remain in ensuring effective implementation of national AML/CFT frameworks.

32. **Nonetheless, enhanced international coordination and action by all stakeholders are still required to address CBR challenge.** Home authorities of global banks should continue to proactively communicate their regulatory expectations to correspondent banks. International standard setters need to be more mindful of the unintended consequences on developing countries of efforts to improve the resilience of the international financial system. At the same time, the affected countries should continue to strengthen their regulatory and supervisory frameworks, including for AML/CFT to meet relevant international standards, with the help of technical assistance where needed. Respondent banks need to proactively engage correspondent banks to give them comfort on the adequacy of their own customer due diligence, transaction monitoring, and AML/CFT frameworks. Similarly, correspondent banks need to be more forthcoming to respondent banks on their expectations with respect to these issues. Industry initiatives will be crucial to facilitate the enhanced customer due diligence expectations and help reduce compliance costs. Small respondent banks in the region should actively explore options, including through mergers or other forms of collaboration, to bundle transactions to generate more business volume for correspondent banks and improve their own risk management processes. In countries facing a severe loss of CBRs and diminishing access to the global financial system, the public sector may need to consider the feasibility of temporary emergency mechanisms, such as the use of the central bank's CBRs to avoid a disruption of crucial cross-border transactions. The Fund has launched a Caribbean CBR initiative to help the region find solutions in line with these recommendations. The initiative includes technical assistance in the area of AML/CFT as well as forums involving correspondent and respondent banks aimed at coming up with actionable policies, including those related to improving communication and information sharing; consolidating transactions to exploit economies of scale; and addressing gaps in risk management.<sup>15</sup>

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<sup>15</sup> IMF (2017) provides some detail on the results of the first roundtable held in Barbados in February 2017.

## ANNEX 1. MACROECONOMIC IMPLICATIONS OF A CONTINUED LOSS OF CBRs: AN ILLUSTRATIVE CASE FOR BELIZE

**Theoretical Framework.** The loss of CBR is a complex phenomenon that can affect the economy through multiple channels, which includes disruptions in external trade and finance that go through banks affected by loss of CBRs, direct effects on local businesses that escape the financial system, and the second-round knock on effect via local linkages among various sectors of the economy. Considering the taxonomy of channels through which CBRs can affect an economy (see para.4), the potential impact of the loss of CBRs in Belize, is illustrated using bank-level data. The analysis isolates four channels relevant for the small open economies of the Caribbean: international trade, remittances, financial flows, and banks' balance sheets. Among others, it examines changes in exports, imports, FDI, remittances, bank deposits, disposable income, and banks' balance sheets, reflecting the inability of economic agents to send or receive foreign payments.

**Estimation.** The analysis applies plausible "CBR stress scenarios" using the above-mentioned framework to estimate the potential impact of the loss of CBRs on banks' capital, maximum lending capacity, their net foreign assets (NFAs), and GDP, as follows:

- The **impact on banks' capital** is estimated as the sum of income changes due to banks' inability or reduced ability to process wire transfers or sell foreign exchange and specific provisions for new NPLs caused by borrowers' inability to wire loan payments to the bank or borrowers' reduced revenue.
- The **impact on the maximum lending capacity** is estimated as the impact on the bank's capital divided by the minimum capital adequacy ratio (CAR).
- The **impact on NFAs** is estimated as the sum of changes in exports, imports, deposit and FDI changes due to investors' inability to wire funds into or out of the country.
- For the **impact on nominal GDP**, the contributions to nominal GDP of one (nominal) unit of bank credit, exports, imports, remittance inflows, remittance outflows, and FDI are first estimated, using prior econometric studies. The coefficients are then multiplied by the changes in the values of exports, remittance inflows, remittance outflows, import, bank credit, and FDI assumed in the CBR stress scenarios to arrive at the estimate of the overall impact on GDP. The change in bank credit is assumed to equal to the change in the maximum lending capacity.
- The **impact on real GDP** is estimated as the ratio of the impact on nominal GDP to the GDP deflator, which is assumed to be unaffected by the loss of CBRs.

**The following three scenarios are examined:**

- The “**baseline scenario**” does not incorporate any impact from the loss of CBRs, reflecting the fact that there are banks with CBRs with full banking services and wire transfer arrangements, which are assumed to continue in the baseline (see case study in Annex III). Moreover, the CBB continues to step in to facilitate the flow of foreign exchange between banks in Belize and partly correct the uneven distribution of foreign exchange among banks.
- The “**low CBR stress scenario**” assumes that only the banks that currently have CBRs with full banking services and one with wire arrangement will continue to process wire transfers. These banks will only process 90 percent of transactions affected by CBR losses in other banks because of their different business models, capacity constraints or stricter due diligence requirements. Other banks will only be able to process credit card transactions through their accounts with credit card networks or restricted accounts such as brokerage accounts. The CBB will not be able to facilitate flows of foreign exchange between banks, possibly to allow the affected banks to offset the impact of the loss of CBRs with more income from investments abroad. The banks that will continue to process wires will be constrained by the amount of foreign exchange their own customers generate. It is assumed that lower financial transactions are associated with lower economic activity associated with these financial transactions in the same proportions. For example, if only 90 percent of the baseline value of an exporter’s financial transactions can be processed through banks in a CBR stress scenario, it is assumed that under this scenario, the value of its exports would amount to only 90 percent of their baseline level.
- The “**high CBR stress scenario**” is similar to the “low CBR stress scenario” with difference that the banks with CBRs with full banking services and some with wire arrangements will only process 30 percent of the transactions affected by CBR losses. These banks will be constrained by the (lower) amount of foreign exchange their own customers generate.

**In the low CBR stress scenario, the impact of the loss of CBRs on trade links is limited, but is more sizeable through balance sheets links.** Assuming that 90 percent of the affected transactions find workarounds, real GDP could drop by about 1 percentage point every year relative to the baseline during 2017-2021. The value of annual exports of banks’ customers drops by about 3.2 percentage points of GDP, and the value of their annual imports by about 3.5 percentage points of GDP during the same period. Annual FDIs drop by about 0.3 percentage point of GDP. The banking system’s CAR would fall by close to 3.5 percentage points but would remain above the prudential minimum of 9 percent, though some banks’ CARs could fall to close to the prudential minimum, including the systemic bank. The impact on banks Net Foreign Assets would also be marginal as both assets and liabilities are affected in a similar manner.

## ANNEX II. CASE STUDIES

### Case Study 1. The Bahamas

#### Impact

Based on a recent survey by the central bank of the Bahamas, a total of 14 institutions (about 25 percent of survey respondents), comprising three domestic commercial banks, one money transmission service provider and ten international (“off-shore”) banks have been affected or impacted by the withdrawal of CBRs.<sup>16</sup> The Bahamas hosts large global international banks with diverse business models, offering overnight sweep accounts services, private banking/wealth management, and investment banking. The largest entities act as a booking center for intra-group funding operations, and do not receive deposits or other funding from external third-parties. As of June 2016, there were 235 banks and trust companies and 174,161 international business companies in the offshore sector. Thus far, there is no evidence of significant impact on the domestic financial system as a whole or on financial intermediation in the domestic economy. This reflects the dominant role of Canadian-owned banks, which hold almost 70 percent of total banking system assets and have not lost any CBRs. Financial institutions that were not able to replace lost CBRs, continued to rely on existing CBRs or their parent companies for correspondent banking services.

Nevertheless, banks report higher investment and staffing costs stemming from additional reporting requirements and scrutiny; disruptions in services to money service providers; impact on check clearing, trade finance, international wire transfers, and cash management transactions; as well as sometimes sizeable increases in customer fees (e.g. fees for wire transfers have increased about 20 percent on average over the last five years). A majority of financial institutions rely on few (i.e., one to four) CBRs, suggesting vulnerability to further losses.

The largest fallout from the withdrawal of CBRs has occurred in the offshore financial services sector. The business models of offshore institutions are diverse and include wealth management services, investment banking and other high value added services. The offshore financial services sector has been shrinking in recent years due to heightened regulatory uncertainty related to ongoing global initiatives and the overall decline in risk appetite since the onset of global financial crisis. Global trends of withdrawal of correspondent banking have led to even more scrutiny, further reducing the sector’s contribution to growth and employment, and thus complicating efforts to diversify the economy.

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<sup>16</sup> The survey was conducted in August 2016. It covers all public bank and/or trust companies, credit unions and non-bank money transmission service providers. The full results are available on: <http://www.centralbankbahamas.com/>



## Factors Behind the Withdrawal of CBRs

According to survey respondents, CBR losses are driven by AML/CFT concerns and heightened risk aversion by foreign financial institutions.

- *Size.* Smaller, standalone financial institutions with fewer international transactions, in both domestic and international sectors, have been more vulnerable. The general view is that in several cases the costs of AML/CFT compliance outweigh the profits generated by CBR services, making it particularly difficult for smaller local institutions with fewer international transactions to maintain their CBRs.
- *Risk perceptions.* Some terminations also appear to be driven by implementation of a risk-based approach. In particular, consistent with experiences across the region, anecdotal evidence suggests that international correspondent banks are uncomfortable providing services to domestic banks that do business with either MTBs or on-line gaming operators (so called “web-shops”), which are perceived as a higher AML/CFT risk.
- *AML/CFT framework.* The 2007 Caribbean Financial Action Task Force (CFATF) assessment identified strategic deficiencies, including with respect to application of AML/CFT preventive measures. However, the CFATF recognized progress made in addressing deficiencies, thus ending the annual follow-up process of the 3<sup>rd</sup> Mutual Evaluation Report.

## Policy Response and Recommendations

In addition to strengthening their overall risk-based framework for regulation and supervision, the authorities have taken several steps to address risks from loss of CBRs. The central bank has conducted two surveys of its licensees (in summer 2015 and 2016) to gain a better view of correspondent banking activities and the impact of recent measures. In order to address areas of potential concern in advance of the December 2015 CFATF evaluation, the central bank finalized amendments to its AML/CFT Guidelines and introduced new Wire Transfer regulations. In an effort to better regulate the online gaming industry, “web-shops” that fulfilled regulatory requirements were issued conditional licenses in November 2015. The Bahamas has also made progress in the area of tax information exchange, including several tax information exchange agreements (TIEAs). Reporting under the U.S Foreign Accounts Tax Compliance Act commenced in September 2015. The authorities are also actively participating in regional CARICOM initiatives that aim to create collective solutions to the loss of CBRs.

Looking forward, authorities should ensure strong compliance and take a proactive approach to strengthening implementation of their AML/CFT framework in line with recommendations emerging from the forthcoming CFATF evaluation against the 2012 FATF standards. Financial institutions should be encouraged to formulate effective contingency plans. Following U.S FATCA reporting, which commenced in September 2015, authorities should act promptly to comply with international standards (such as the OECD’s Common Reporting Standard) on tax

transparency. Continued evaluation of the supervisory and regulatory framework for both banks and non-banks to proactively identify and address risks in a timely and assertive manner is critical.

## Case Study 2. St. Lucia

### Impact

Just as with other ECCU economies, the consequences of the withdrawal of global correspondent banks in St. Lucia has varied between onshore and offshore banking sectors, with the greater negative impact on the offshore banking sector.

Within the commercial (onshore) banking system, the brunt of the impact so far has fallen largely on the indigenous banks, whose small size of operations puts them at a disadvantage. Branches and subsidiaries of large foreign-owned banks have not been affected, having the advantage of relying on CBRs of their parent institutions. While some indigenous commercial banks have reported losing CBRs or receiving unofficial notifications of impending termination, new replacements were found. Thus, the effect of the withdrawal of CBRs until now has been reflected mainly in rising correspondent banking fees and discontinuation of certain types services, such as the EURO check clearance by some indigenous banks. Bank surveys and discussions with regulators and banking community representatives indicate that indigenous banks' correspondent banking fees have increased by about 30-40 percent over the last 5 years. Faced with the rising costs, some indigenous banks have raised fees levied on their clients for cross-border transactions by about 25 percent over the same period. In addition, most domestic banks have been forced to dedicate more resources to due diligence and increased data reporting in order to maintain existing relationships.

Discussions with the authorities and the banking sector community, supported by statistics on the change in the number of CBRs, value, and volume of SWIFT transactions, suggest that, overall, the St. Lucian financial system has fared relatively well in recent years in comparison to other Caribbean economies (BIS, 2016). Cross-country data indicate that the number of CBRs and volume of transactions have increased between 2011 and 2015, although the value of transactions have declined.

Offshore banks, which represent a smaller portion of the financial system, report facing more severe consequences from the withdrawal of CBRs. Offshore banks' contribution to the domestic economy is largely limited to the employment generated in St. Lucia, and the money collected in the form of licensing and registration fees. The Financial Services Regulatory Authority, the regulator for the offshore institutions, reported collecting EC\$ 1.3 million in 2015/16, 50 percent lower than the year before. Moreover, the difficulty in obtaining CBRs has led to a decline in new applications and, in some cases, the surrender of licenses due to the inability to satisfy the regulatory requirement of having a CBR with an OECD-based institution.

## **Factors Behind the Withdrawal of CBRs**

While in many cases global correspondent banks have been reluctant to provide reasons for terminating CBRs, the incidence of the withdrawal of CBRs appears to be negatively correlated with the size of the client institution. Thus, the termination of CBRs with the onshore banks is often justified by the low volume of transactions or insufficient activity on their accounts. This generally stems from the global banks' view that greater due diligence, perceived risk, and compliance costs exceed the revenues generated by the provision of correspondent banking services. Terminations with the offshore international banks, on the other hand, are usually justified by correspondent banks' discomfort with the increased perceived risk associated with the offshore sector.

## **Policy Response and Recommendations**

To address the concern of higher perceived risk of St. Lucian banks, country authorities, jointly with the ECCB, are continuing to strengthen their regulatory frameworks, including for AML/CFT and international tax cooperation. All ECCU countries are committed to the Financial Sector Assessment Program (FSAP), Caribbean Financial Action Task Force (CFATF), the Global Forum, OECD Common Reporting Standards, and the Foreign Account Tax Compliance Act (FATCA).

- St. Lucia is an active member of the CFATF. St. Lucia has made progress with compliance with 2002 FATF recommendations. its AML/CFT framework and has been removed from the CFATF – ICRG (International Cooperative Regulatory group) follow-up process. Authorities are preparing for the next round of CFATF evaluations, which will assess compliance against the revised 2012 FATF standard and will include an evaluation of the effectiveness of the AML/CFT framework.
- On November 19, 2015, St. Lucia also signed an intergovernmental agreement with the United States to facilitate compliance with the Foreign Account Tax Compliance Act (FATCA).
- On February 29, 2016 St. Lucia entered into a Competent Authority Arrangement with the US Internal Revenue Services to put in place the automatic exchange of financial account information.
- St. Lucia has also committed to the implementation of the OECD Common Reporting Standards – a standardized automatic exchange model to share financial account information between governments – with the intent to undertake the first exchange by 2018.

The ECCU banking regulator (ECCB) and the Financial Services Regulatory Authority should continue to work on a timely and effective implementation of risk-based supervision and the BASEL II framework. The authorities should also address remaining deficiencies in meeting the

standards of the OECD’s Global Forum on Transparency and Exchange of Information for Tax Purposes, and conduct 4<sup>th</sup> Mutual Evaluation and achieve compliance with the 2012 FATF recommendations. At the ECCU level, to address the issue of small scale of operations of indigenous banks, authorities should continue to encourage mergers among the indigenous banks.

### **Case Study 3. Belize**

#### **Impact**

Belize has been the hardest hit of all Caribbean countries by the loss of CBRs. During 2015 up to early 2016, major global banks terminated some 22 CBR accounts (71 percent) in 9 banks out of 31 total accounts in the banking system. The largest indigenous bank in terms of assets lost all its CBRs; only a Canadian-owned bank that accounts for 19 percent of system’s asset did not lose any of its own. The Central Bank of Belize (CBB) lost two of its five CBRs, including one that was being used to temporarily process selected wires for commercial banks that lost their CBRs.

Certain sectors and business lines have been seriously affected. Many of the local banks have closed the accounts of their money transfer business clients, which are considered high-risk. In addition, banks have decided against processing incoming and outgoing wire transfers of credit union members on the ground that the business segment is considered as ‘nesting’, prohibited by correspondent banks. The cost of wire transfers has increased three-fold in one bank. The processing times of wire transfers was reported to have increased from “within twenty-four hours” to “several days.” Offshore banks’ deposits declined by more than 20 percent in 12 months to March 2016.

Presently, all affected banks in Belize have CBRs but most of the new ones are wire transfer arrangements, with less known banks and non–bank service providers. Currently, every bank has at least two CBRs but the situation is still fragile because most of the banks rely on the same correspondent bank. Cross-border financial transactions have not been disrupted as initially feared due to the support from CBB and major credit card companies, some of which raised credit limits on the cards they issue, thus facilitating payments that had previously gone through wire transfers and trade credit lines. Overall, the macroeconomic impact of the loss of CBRs is mainly reflected in restricted access to financial services of certain customers and business lines, delays in international payments, higher transaction costs, higher cost for due diligence, and delays in the settlement of remittances.

#### **Factors Behind the Withdrawal of CBRs**

The loss of CBRs in Belize is believed to be related to concerns regarding the enforcement of global regulatory standards such as on AML/CFT and prudential regulations. At the same time, Belize recently exited from the CFATF follow-up and monitoring process indicating that progress has been made on AML/CFT. Moreover, a major U.S. correspondent bank continues to

have correspondent banking relations with the Central Bank and one commercial bank, despite closing the accounts of other banks. The situation has been complicated by the fact that in the termination notices, major correspondent banks did not provide specific reasons for the termination of the relationships, making it particularly difficult for the affected banks to establish replacement correspondents because prospective CBR providers require such information. Some customers, business lines, markets and jurisdictions are evidently being perceived as too risky and costly in terms of compliance, and are therefore being cut off.

The money laundering and terrorist financing risks related to the misuse of legal persons and arrangements (e.g. companies, trusts, and foundations), the service providers licensed by the International Financial Services Commission (IFSC), and offshore banks could be significant. IFSC offers, through a high number of registered agents and their intermediaries abroad, the services of establishing complex entities without a proper mechanism to have the related beneficial ownership information available, accessed, and disseminated in a timely manner.

### **Policy Response and Recommendations**

The CBB assisted affected banks by temporarily processing their cash documents and limited amount of wire transfers using its own CBR account with a U.S bank. In addition, the authorities have met with the major U.S. bank that terminated CBRs of many banks to understand the reason for CBR termination. They have also met with U.S. officials for similar purpose and in attempt to secure replacement CBRs. Some local banks indicated that they were considering acquiring small US-licensed banks.

There is clearly a need to further strengthen the effectiveness of the AML/CFT framework and enhance entity transparency, especially in the offshore sector. The authorities should continue the dialogue with the US Treasury (UST), which conducted a preliminary assessment of TA needs. Stronger focus on risk-based supervision of banks and imposing corrective actions and sanctions, when relevant, is needed. The IFSC's registered agents and service providers should be subject to proper licensing requirements and be monitored for compliance with the AML/CFT requirements on a risk basis. In addition, the authorities should develop mechanisms (e.g. public registry for beneficial ownership) that would allow timely access to adequate, accurate, and current information on beneficial ownership of all types of entities created in Belize. Furthermore, entities' registers should immediately publish basic information related to entities created in Belize with severe sanctions for noncompliance.

### ANNEX III. AN ECONOMETRIC ANALYSIS OF THE DETERMINANTS OF THE WITHDRAWAL OF CBRs

Complementary to the survey-based methodology, this annex builds on empirical evidence to examine the determinants of the withdrawal of correspondent banking relationships. The estimation is based on the following model:

$$\Delta Y_i = c_1 + b_1 * GDP_i + b_2 * LnGDP_i + b_3 * BIS_{Liab}_i + b_4 * Carib_i + b_5 * OFC_i + b_6 * EU_{crisis}_i + b_6 * US_{sanction}_i + u_i,$$

where  $\Delta Y_i$  is the dependent variable used to measure the withdrawal of correspondent banking relationships using percent change in the number of active correspondents, change in volume of correspondent banking transactions, and change in the value of correspondent banking transactions between 2011 and 2015 for each economy  $i$ ;  $GDP_i$  denotes real average GDP growth between 2011 and 2015, in percent;  $LnGDP_i$  denotes size of economy defined as the natural log of GDP in USD in 2015;  $BIS_{Liab}_i$  denotes BIS liabilities – taken in percent of GDP and in percent of onshore banking sector assets – used as a proxy for the size of the offshore financial sector;  $Carib_i$  is a dummy variable which attains the value of 1 for Caribbean economies, and 0 otherwise;  $OFC_i$  is defined to take on 1 for offshore financial centers and 0 otherwise;  $EU_{crisis}_i$  dummy variable denotes countries affected by the European crises during the period of 2011 to 2015<sup>17</sup>;  $US_{sanction}_i$  is a dummy variable which denotes countries sanctioned by the U.S.<sup>18</sup>

Regressions are based on a cross-country sample of 191 economies. While the original sample included 204 economies, 13 were excluded as outliers, defined as observations where estimates for at least one variable – change in number of CBRs, change in volume, change in value – fall above 99th or below 1st percentile. Data on percent changes in the value, volume, and the number of active correspondents were taken from SWIFT (BIS, 2016). Data on BIS liabilities were taken from BIS, meanwhile series on real GDP growth, and nominal GDP originated from the World Economic Outlook (WEO).

Overall, while the country regressions point to interesting patterns in data, they explain a relatively small part of the change in CBR activity. Importantly, the regressions do not account for respondent bank-specific factors (size, business model, capacity to do due diligence etc.), which are likely to be important. Several specifications were explored to look for patterns in data (see Tables A1-A3 for alternative specifications).

The estimated signs are broadly in line with the expected correlations between the variables. Real GDP growth is potentially the most important determinant of changes in CBR activity. Specifically, the results suggest that economies with higher economic growth on average saw a

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<sup>17</sup> Dummy variable taken on value of 1 for Cyprus, Greece, Ireland, Italy, Portugal, and Spain.

<sup>18</sup> Includes Belarus, Myanmar, Burundi, Central African Republic, Cote d'Ivoire, Cuba, Democratic Republic of the Congo, Iraq, Lebanon, Libya, North Korea, Somalia, Sudan, South Sudan, Syria, Russia, Venezuela, Yemen, Zimbabwe.

larger increase in the number of active correspondents, and the value and volume of CBR transactions between 2011 and 2015. Dummy variables denoting sanctions imposed by the U.S., and the E.U. crises indicator are found to be statistically significant in most model specifications. Variables used to proxy for the size (log of nominal GDP) have the expected sign but are not statistically significant. Controlling for several possible determinants of CBR activity, the regressions point to the expected negative, although not always statistically significant, estimate of the coefficient on the Caribbean dummy variable. The coefficients on the dummy variable identifying offshore financial sectors, while not statistically significant, often point to a negative correlation with the CBR activity.

**Table A1. Regression Results**  
**Dependent Variable: Change in Active Correspondents<sup>1</sup>**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dummy: Caribbean	0.986 (0.707)	1.363 (0.617)	1.180 (0.665)	0.812 (0.772)	0.207 (0.941)	-0.439 (0.865)	0.282 (0.926)	0.286 (0.926)	1.392 (0.616)	1.026 (0.711)
Dummy: OFC		-0.993 (0.601)	-0.201 (0.924)	-0.371 (0.862)	-0.470 (0.823)	1.013 (0.607)	-0.192 (0.946)	-0.595 (0.854)	-0.466 (0.842)	-1.297 (0.586)
Real GDP growth, 2011-15 ave			0.532*** (0.000521)	0.533*** (0.000524)	0.413*** (0.00936)	0.498*** (0.000840)	0.505** (0.0160)	0.498** (0.0187)	0.627*** (0.000126)	0.610*** (0.000178)
Ln (Nominal GDP in USD 2015)				-0.186 (0.559)	-0.177 (0.573)	0.0935 (0.751)	-0.152 (0.715)	-0.200 (0.662)	-0.0256 (0.933)	-0.0678 (0.824)
Dummy: U.S.-imposed Sanctions					-7.072** (0.0189)	-7.336*** (0.00872)	-6.421 (0.122)	-6.315 (0.131)	-6.502** (0.0200)	-6.735** (0.0156)
EU Crisis						-20.10*** (2.42e-07)	-19.60*** (1.28e-06)	-19.59*** (1.44e-06)	-19.84*** (2.31e-07)	-19.66*** (2.61e-07)
Liabilities, BIS (% onshore banking assets)							-0.0432 (0.913)	-1.870 (0.790)		
x OFC dummy								1.824 (0.795)		
Liabilities, BIS (% GDP)									0.0337 (0.900)	-1.690 (0.125)
x OFC dummy										1.830 (0.107)
	-3.280*** (1.37e-05)	-3.127*** (0.000109)	-4.032*** (6.68e-06)	-3.311** (0.0295)	-2.515 (0.101)	-3.151** (0.0277)	-1.900 (0.347)	-1.359 (0.640)	-2.987** (0.0484)	-2.354 (0.129)
Number of observations	191	191	176	176	176	176	117	117	163	163
R-squared	0.001	0.002	0.068	0.070	0.100	0.231	0.249	0.250	0.269	0.281

Sources: SWIFT; BIS; World Bank; US Treasury; IMF, WEO, and staff estimates and calculations.

<sup>1</sup> P-values in parenthesis. Dependent variable defined as change between 2011 and 2015 (percent), based on SWIFT transactions data. OFC - offshore financial centers (IMF definition).

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table A2. Regression Results**  
**Dependent Variable: Change in Volume<sup>1</sup>**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dummy: Caribbean	-3.920 (0.556)	-2.694 (0.696)	0.117 (0.986)	-4.385 (0.519)	-4.913 (0.472)	-5.982 (0.367)	-5.649 (0.461)	-5.680 (0.458)	-4.334 (0.540)	-4.724 (0.506)
Dummy: OFC		-3.227 (0.502)	-6.613 (0.207)	-8.689* (0.0940)	-8.775* (0.0911)	-6.320 (0.213)	-14.50** (0.0423)	-10.43 (0.197)	-12.00** (0.0450)	-12.88** (0.0360)
Real GDP growth, 2011-15 ave			1.122*** (0.00307)	1.133*** (0.00227)	1.028*** (0.00855)	1.169*** (0.00225)	1.119** (0.0324)	1.184** (0.0247)	1.590*** (0.000132)	1.572*** (0.000165)
Ln (Nominal GDP in USD 2015)				-2.272*** (0.00360)	-2.264*** (0.00375)	-1.816** (0.0176)	-2.623** (0.0130)	-2.144* (0.0611)	-1.784** (0.0229)	-1.829** (0.0204)
Dummy: U.S.-imposed Sanctions					-6.168 (0.402)	-6.605 (0.355)	-10.42 (0.314)	-11.49 (0.269)	-3.400 (0.630)	-3.649 (0.606)
EU Crisis						-33.29*** (0.000676)	-28.06*** (0.00408)	-28.16*** (0.00394)	-32.98*** (0.000534)	-32.79*** (0.000591)
Liabilities, BIS (% onshore banking assets)							0.435 (0.662)	18.88 (0.283)		
x OFC dummy								-18.41 (0.293)		
Liabilities, BIS (% GDP)									0.910 (0.186)	-0.927 (0.742)
x OFC dummy										1.950 (0.501)
	13.75*** (0)	14.25*** (0)	11.84*** (1.42e-07)	20.67*** (6.67e-08)	21.36*** (5.48e-08)	20.31*** (1.03e-07)	22.54*** (1.90e-05)	17.08** (0.0197)	18.62*** (2.65e-06)	19.30*** (2.62e-06)
Number of observations	191	191	176	176	176	176	117	117	163	163
R-squared	0.002	0.004	0.059	0.105	0.109	0.168	0.199	0.207	0.211	0.214

Sources: SWIFT; BIS; World Bank; US Treasury; IMF, WEO, and staff estimates and calculations.

<sup>1</sup> P-values in parenthesis. Dependent variable defined as change between 2011 and 2015 (percent), based on SWIFT transactions data. OFC - offshore financial centers (IMF definition).

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A3. Regression Results**  
**Dependent Variable: Change in Value<sup>1</sup>**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dummy: Caribbean	-17.22*	-13.79	-14.97	-14.69	-16.70	-18.23*	-12.32	-12.31	-19.02*	-19.09*
	(0.0726)	(0.164)	(0.142)	(0.161)	(0.109)	(0.0732)	(0.312)	(0.315)	(0.0855)	(0.0866)
Dummy: OFC		-9.025	-6.505	-6.375	-6.704	-3.193	-17.93	-19.48	-6.403	-6.548
		(0.190)	(0.408)	(0.423)	(0.395)	(0.680)	(0.113)	(0.132)	(0.490)	(0.492)
Real GDP growth, 2011-15 ave			1.196**	1.196**	0.797	0.998*	1.608*	1.583*	1.410**	1.407**
			(0.0343)	(0.0349)	(0.177)	(0.0847)	(0.0528)	(0.0594)	(0.0271)	(0.0282)
Ln (Nominal GDP in USD 2015)				0.143	0.172	0.812	-0.312	-0.495	-0.231	-0.238
				(0.904)	(0.883)	(0.484)	(0.851)	(0.785)	(0.849)	(0.845)
Dummy: U.S.-imposed Sanctions					-23.50**	-24.13**	-27.89*	-27.48*	-22.61**	-22.65**
					(0.0368)	(0.0278)	(0.0917)	(0.0995)	(0.0409)	(0.0414)
EU Crisis						-47.60***	-42.74***	-42.69***	-46.99***	-46.96***
						(0.00143)	(0.00589)	(0.00616)	(0.00150)	(0.00157)
Liabilities, BIS (% onshore banking assets)							2.710*	-4.337		
							(0.0886)	(0.877)		
x OFC dummy								7.034		
								(0.801)		
Liabilities, BIS (% GDP)									-0.123	-0.424
									(0.908)	(0.923)
x OFC dummy										0.319
										(0.944)
	1.032	2.417	0.757	0.203	2.848	1.341	3.846	5.932	5.511	5.622
	(0.700)	(0.400)	(0.815)	(0.971)	(0.619)	(0.810)	(0.632)	(0.608)	(0.356)	(0.364)
Number of observations	191	191	176	176	176	176	117	117	163	163
R-squared	0.017	0.026	0.050	0.051	0.075	0.129	0.165	0.165	0.154	0.154

Sources: SWIFT; BIS; World Bank; US Treasury; IMF, WEO, and staff estimates and calculations.

<sup>1</sup> P-values in parenthesis. Dependent variable defined as change between 2011 and 2015 (percent), based on SWIFT transactions data. OFC - offshore financial centers (IMF definition).

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## VI. ANNEX IV. IMF SURVEY

The survey was conducted in September 2016 with standard questionnaires sent to all central banks in the Caribbean region, who in turn coordinated survey responses from banks in their jurisdiction. The survey instrument is provided below. The survey covered commercial banks operating in the domestic banking system. It did not include international (“offshore”) banks, which primarily focus on providing services to non-resident customers. Responses were received from 14 countries, including The Bahamas, Belize, Guyana, Jamaica, Trinidad and Tobago, and the ECCU. Response rates varied by jurisdiction, data provided were aggregated directly by the Central Banks and shared with the authors. While in most cases the survey responses cover the whole banking system, for some countries (in the ECCU), responses relied on a few individual banks. Survey results are summarized in Table A4.

**Table A4. Survey of Caribbean Banks on Correspondent Banking Relationships**

	BHS	BLZ	JAM	ECCU	SUR	GUY	TTO
Banks with fewer CBRs (share)	38%	75%	33%	0-100%	--	50%	17%
Banks with replacement CBRs	No	Yes	Yes	Yes	--	Yes	--
Banks with higher CBR fees (share)	--	25%	50%	up to 100%	--	67%	67%
Increase in CBR fees (percent)	--	--	2-20%	2-100%	0.2-5%	5-1200%	20-45%
Increase in processing time (days)	--	Yes	Yes	No	2-7 days	3 days	No
Increase in fees to customers (percent)	8-186%	Yes	2-66%	2-25%	0.5-30%	7-100%	20-60%
Discontinuation in service (yes/no)							
MTBs	Yes	Yes	Yes	some countries	Yes	Yes	Yes
Gaming			Yes		Yes		Yes
Impact on transactions (categories)							
Check clearing	Yes	Yes	Yes	some countries	Yes	Yes	Yes
Trade finance	Yes	Yes	Yes	some countries	Yes	Yes	Yes
International wire transfers	Yes	Yes	Yes	some countries	Yes	Yes	Yes
Credit card transactions							
Overall impact	Low	Moderate	Low	Moderate 1/	Moderate	Moderate	Low
Notes							
1/ Banks report impact ranging from Low to Significant							

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