# Financial Stability Board

# Regional Consultative Group for the Americas

# Working Group on Non-Bank Financial Intermediation

# Fifth Report

***Notice***

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***A list of members of the RCG for the Americas can be found at:***
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30 June 2020

# Financial Stability Board
# Regional Consultative Group for the Americas

# Working Group on Non-Bank Financial Intermediation

# FIFTH REPORT

## 30 June 2020

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## 1. Executive Summary

Since December 2012, the Financial Stability Board (FSB) Regional Consultative Group for the Americas (RCG Americas) has conducted a regional monitoring exercise of the non-bank financial intermediaries sector (NBFI) within its member jurisdictions, following the work done by the FSB's Non-bank Monitoring Experts Group (the Experts Group).[1] This Report presents the results of the fifth exercise.[2] The aim of this monitoring exercise is to assess the size, structure and recent trends of the NBFI sector in the region, recognising that this information is crucial in order to identify potential risks to financial stability at the local jurisdiction level, as well as those arising from potential cross-border linkages. At the same time, understanding the potential risks is important to identify financial entity types or activities for which size or rapid growth, in combination with heightened risks, may call for an assessment of existing regulation by the relevant authorities.

The monitoring exercise is based on time series financial sector data from 16 participating jurisdictions, representing about 98% of GDP of the Americas' region. The Report uses data up to end-2018 based on balance sheet data from national financial account statistics and other (regulatory or private sector) sources. This exercise also captures offshore activities in several jurisdictions in the RCG Americas that provide significant offshore financial services as international financial centres (IFCs).

This regional monitoring exercise follows the FSB methodology in the same manner as carried out by the FSB's Non-bank Monitoring Experts Group (the "Experts Group") in the case of the Global monitoring exercise which considers a two-step approach.[3] In the first step, the exercise seeks to "cast the net wide" and obtain a broad measure of all financial assets held by each group of non-bank financial entities. In the second step, the exercise seeks to "narrow down" the focus of monitoring by excluding entities prudentially consolidated into a banking group, and any other entities/activities not involving credit intermediation, and focuses on those activities that may pose bank-like financial stability risks, using the FSB's economic functions approach.

Several observations resulted from this year's monitoring of non-bank financial intermediation activities. The most important include:

- Total regional financial assets, as per the macro-mapping (domestic and offshore), reached over USD 127.0 trillion at end-2018, experiencing only minimal growth of

[1] In 2018, the FSB replaced the term "shadow banking" with "non-bank financial intermediation" (NBFI), to emphasise the forward-looking aspect of the FSB's work. This change in terminology did not affect either the substance or the coverage of the monitoring exercise.

[2] The fourth Report was published in March 2018 using data up to end-2016.

[3] The practical two-step approach is based on the monitoring framework to assess bank-like financial stability risks from NBFI as set out in FSB (2011) Shadow Banking: Strengthening Oversight and Regulation, October.

0.15% during the last year, which contrasts with an annualised growth of 5.6% for the period between 2012 and 2017;

- IFCs' total financial assets[4] registered as offshore were at USD 8.7 trillion at end-2018, down from USD 9.3 trillion at end-2017. The dominant type of entity within offshore financial assets is non-public investment funds, which makes up 78% of total offshore financial assets, followed by offshore banks with 10% of the share;
- The onshore Monitoring Universe of Non-bank Financial Intermediaries (MUNFI), comprised of Other Financial Intermediaries (OFIs), insurance companies and pension funds' assets declined to USD 72.9 trillion at end-2018, down from USD 73.2 trillion at end-2017. The offshore MUNFI total assets were USD 7.9 trillion at end-2018, down from USD 8.2 trillion at end-2017;
- Financial assets belonging to entities that have been registered as prudentially consolidated into a banking group rose to USD 2.8 trillion at end-2018, with all belonging to the OFIs sector—a 5.2% annual growth;
- Overall, the aggregate data shows a slowdown in total OFI assets largely driven by the largest jurisdiction (United States). However, for most jurisdictions at the individual level, the sector presents positive growth rates;
- The regional narrow measure as per the FSB methodology (net of prudential consolidation) reached USD 22.9 trillion at end-2018, up from USD 22.1 trillion at end-2017. The annual growth rate for the aggregate narrow measure net of prudential consolidation is consistent with past annualised growth rates (around 3.7%);
- Within the narrow measure, non-bank financial intermediaries are categorised into five economic functions (EF):
  - Collective investment vehicles with features that make them susceptible to runs (EF1) grew by 2.3% in 2018 and made up 76.9% of the narrow measure of NBFI
  - Non-bank financial entities engaging in loan provision that is dependent on short-term funding (EF2), net of prudential consolidation, grew by 3.2% in 2018 and made up 6.5% of the narrow measure
  - Market intermediaries that depend on short-term funding or secured funding of client assets (EF3), net of prudential consolidation, grew by 12.2% in 2018 and made up 6.7% of the narrow measure
  - Entities involved in the facilitation of credit creation (EF4), such as financial guarantors and credit insurers net of prudential consolidation, and taking into account the reported off-balance sheet positions, grew by 9.8% in 2018 and made up 0.3% of the narrow measure
  - Securitisation-based credit intermediation (EF5) grew by 6.3% in 2018 and made up 6% of the narrow measure
  - Unallocated assets represent about 3.3% of the total narrow measure[5]

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[4] Exhibit A-1 in the Annex shows a comparison of the evolution of the share of financial assets by sector for participating jurisdictions.

[5] The "unallocated assets" captures financial entities that the authorities assessed to be involved in bank-like financial stability risks from NBFI, but which could not be assigned to a specific EF.

- With regards to financial intermediaries' interconnectedness data and data collected to assess the potential risks to financial stability, including risk concentration (risk metrics) associated with narrow measure entities/activities, the submission rate is still very low and quality may be insufficient for some of the reporting jurisdictions. Therefore, these present important areas for improvement in the future.

Finally, some recommendations going forward regarding monitoring the NBFI sector are included. In particular, the continuation of the annual exercise, and its improvements on the closing of data gaps and the risk-measurement, are considered important areas for further development.

## 2. Introduction

Non-Bank Financial Intermediation (NBFI) is broadly defined as credit intermediation involving entities and activities (fully or partly) outside the regular banking system.[6] Intermediating credit through non-bank or market-based channels has important advantages, specifically in terms of innovation, efficiency, diversification and competition. Non-bank financing provides a valuable alternative to bank funding and helps support real economic activity. It is also a valuable source of diversification of credit supply from the banking system and provides healthy competition for banks. However, if non-bank financing is involved in bank-like activities, such as maturity and liquidity transformation and/or the creation of leverage, it can become a source of systemic risk. To this end, the Financial Stability Board (FSB) along with financial authorities in the Americas region have coordinated efforts to assess trends and risks in the NBFI system and to help identify rapidly growing new activities that pose bank-like risks that may need to be addressed.[7, 8]

This report presents the results of the fifth NBFI monitoring exercise in the Americas.[9] This exercise was designed and conducted by the Non-Bank Financial Intermediation Working Group (NBFIWG) set up by the FSB's RCG Americas. The main objective of the NBFIWG monitoring exercise is to achieve a better understanding of the scope and structure of non-bank credit intermediation in the Americas and to monitor its development over time.

Following RCG Americas' previous consideration of the usefulness stemming from this periodic international effort to maintain robust surveillance of the region's financial system and, in particular, those portions where risks may be accumulating due to the natural evolution

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6 See *Shadow Banking Scoping the Issues*, FSB, 2011.

7 Previously, non-bank financial intermediation was referred to as "shadow banking". The change in terminology, which was announced by the FSB on 22 October 2018, is intended to emphasise the forward-looking aspects of the FSB's work to enhance the resilience of non-bank financial intermediation. This change in terminology does not affect the substance of the agreed monitoring framework and policy recommendations, which aim to address bank-like financial stability risks arising from non-bank financial intermediation. See FSB, *Global Monitoring Report on Non-Bank Financial Intermediation 2018*, February 2019.

8 To see the key FSB documents related to Non-Bank Financial Intermediation and all past Global NBFI Monitoring Reports (2011-2019) see FSB, *Enhancing Resilience of Non-Bank Financial Intermediation*.

9 The previous report was published on 5 March 2018 and used data up to end-2016.

of financial intermediation, this annual exercise proves important. In particular, results show important data gaps are still largely present. In addition, there is some heterogeneity in the understanding of the FSB methodology, and owing to this, some corrections have been discussed bilaterally with jurisdictions. Going forward, the data collection process may benefit from increased cooperation and interaction among international authorities with the aim of closing data gaps and increasing consistency.

The remainder of this report unfolds as follows. Section 3 describes the methodology employed for this report and the main differences from past reports. The results from the monitoring exercise using the macro-mapping to obtain a MUNFI measure are presented in Section 4 along with a description of the main trends, and the narrow measure is presented in Section 5. Section 5 also examines the main observations gathered from the risk metric data collected for each Economic Function. An analysis of recent innovations and adaptations is presented in Section 6. Finally, the main conclusion and some recommendations for future RCG Americas exercises are presented in Section 7.

## 3. Monitoring Methodology

This report applies the narrowing down methodology introduced in the FSB's 2013 high-level *Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities.*[10] The methodology uses a two-step approach.

As a first step, it focuses on a data collection process that enables a broad overview of participating jurisdictions' financial system assets on a resident basis. That is, domiciled entities and financial assets are under the scope of analysis for any given jurisdiction. Jurisdictions may use different data sources in order to populate the data templates required for the purpose of this exercise; however, the original construct was based on flow of funds statistics. Some jurisdictions, however, use data from other sources, such as supervisory and commercial data, to complement and/or supplement the flow of funds statistics.[11] The total information provides a broad measure of the NBFI sector, and allows an assessment of recent trends. This first step is referred to as macro-mapping.

The second step involves taking the former broad measure as a starting point to analyse in further detail the activities and potential risks to financial stability of the different sectors within the broad measure but restricting the analysis to those entities or activities involved in credit intermediation. The outcome of the analysis is a refinement of the broad measure referred to as

[10] See FSB, *Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities*, August 2013. The Global Shadow Banking Monitoring Report 2015 was the first to narrow the focus of the Global Exercise to those non-bank financial entities classified into five economic functions.

[11] To aggregate amounts across jurisdictions, national data is converted into US dollars (USD) using market exchange rates. Measures of growth throughout this Report are adjusted for exchange rate effects by applying a constant end-2018 exchange rate across all past years to convert data denominated in local currencies into USD.

the narrow measure. To arrive at the narrow measure, an economic (activities) function-based approach is followed.

This Economic function-based approach centres on classifying the different entities identified as part of the narrow measure into five Economic Functions based on the type of risks associated with the activities these entities carry out. [12] The approach is conservative because it is both inclusive in scope and assumes that policy measures and/or risk management tools have not been exercised. More precisely, it is the result of a pre-mitigant analysis, that is, in producing the entities to be included in the narrow measure their current risk-mitigating regulation is not considered in order to produce a consistent and comparable measure across participating jurisdictions from which the analysis can then be improved upon. As a result, the narrow measure may overestimate the degree to which non-bank credit intermediation currently gives rise to post-mitigant financial stability risks. Nevertheless, this pre-mitigant assessment can help authorities to assess existing structural features and policy tools to address financial stability risks that may arise from NBFI and identify any residual risks that may warrant policy responses. [13]

In addition, this classification approach is flexible in that the five Economic Functions are not conceptualised to be mutually exclusive – thus, if an entity takes on more than one activity or function and regulators are able to determine the split of financial assets involved in each, the classification process reflects that split and will be more aligned with reality. [14] Participating jurisdictions classify their specific entities according to guidance designed to promote classification in a consistent manner. [15] Authorities also discuss classification of new activities and adjust guidance if necessary so that the monitoring approach is also forward looking. With this approach, the goal is to focus on the specific sectors that have the potential to accumulate systemic risk if vulnerabilities should persist. Furthermore, the narrow measure filters out non-bank financial entities prudentially consolidated (in all aspects) into a banking group.

Regarding the first step of the process, there are three differences between the RCG Americas NBFIWG 'Macro-mapping' template and the corresponding FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation' template. First, investment funds are split into money

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[12] Work on the type of risk-taking and vulnerabilities present in different entities/activities that led to systemic risk accumulation in the run-up to the Global Financial Crisis has been identified and discussed extensively by FSB (see Shadow Banking: Strengthening Oversight and Regulation, FSB (2011)).

[13] The analysis of regulation and the policy toolkit available to regulators/supervisors is not part of the scope of this report. Thus, the inclusion of non-bank financial entities or activities in the narrow measure does not constitute a judgement that policy measures applied to address the financial stability risks from credit intermediation of these entities and activities are inadequate or ineffective, nor necessarily reflect a judgement that regulatory arbitrage is a relevant factor. It is based on a conservative (i.e., inclusive) assessment of the potential risks they may pose during stressed events on a pre-mitigant basis (i.e. assuming policy measures and/or risk management tools are not exercised).

[14] Some entity types may be classified into more than one EF. In those few cases, its value is proportionally allocated between the EFs into which it was classified so as to only count once towards the jurisdiction's narrow measure.

[15] The FSB Policy framework takes into account that there may exist differences across jurisdictions due to varying legal and regulatory settings and guidance is meant as a tool to help authorities in their assessment of the underlying economic functions and risks of certain entities or activities.

market funds (MMFs), public funds and non-public funds.[16] This contrasts with the FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation' template that divides investment funds into MMFs, hedge funds and other funds categories. The NBFIWG believes that the non-public funds category reflects the characteristics of hedge funds whilst capturing other funds with very similar characteristics that are not labelled as "hedge funds" in participating jurisdictions.[17] Second, the NBFIWG template asks for assets of commodity funds.

The third difference is that the exercise includes, as in earlier reports by the NBFIWG, an additional template to be submitted only by IFCs. Monitoring NBFI activities in IFCs merits special attention as they are significant and represent a material data gap in the Global Monitoring Exercise.[18] Six member jurisdictions of the NBFIWG have been identified as IFCs.[19] For IFC jurisdictions, financial assets registered with domestic authorities are split into those held by local and offshore institutions. Offshore institutions are defined on a *de jure* basis as those that by regulation are precluded from participating in local financial markets or are restricted from offering financial services to domestic residents. One example is the Class B bank category in Panama and the Cayman Islands, which cannot take on deposits from residents.[20, 21] The NBFIWG is aware that this approach to separating offshore and onshore financial institutions and activities has limitations because market contacts suggest that many IFC institutions that are allowed to offer services to resident investors *de facto* focus exclusively on providing services to non-resident clients. However, the current lack of sufficiently granular data makes it difficult to implement a *de facto* separation.

The monitoring exercise is based on time series data gathered from 16 participating jurisdictions with final data observations up to end-2018. The participating jurisdictions that

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16 Public funds were defined as funds that have no restrictions on the type of investor, minimum subscription amount or sales method (i.e. not restricted to private placements). Under this definition, both closed-ended and open-ended funds are included. Non-public funds, in contrast, are not public and have similar characteristics to hedge funds.

17 See IOSCO, *Hedge Funds Oversight*, June 2009. IOSCO notes that there is no universal definition of a "hedge fund", although hedge funds are normally seen as sharing certain common characteristics. IOSCO considered as hedge funds all those investment schemes displaying a combination of some of the following characteristics: borrowing and leverage restrictions, which are typically included in collective investment schemes related regulation, are not applied, and many (but not all) hedge funds use high levels of leverage; significant performance fees (often in the form of a percentage of profits) are paid to the manager in addition to an annual management fee; investors are typically permitted to redeem their interests periodically, e.g. quarterly, semi-annually or annually; often the manager invests significant amounts of his or her own funds; derivatives are used, often for speculative purposes, and there is an ability to short-sell securities; and more diverse risks or complex underlying products are involved. See IOSCO, *Hedge Fund Oversight (2009)* at 4-5. Some of these common characteristics differ from the characteristics of public funds. Hedge funds are not subject to the same legal provisions applicable to mutual funds in terms of investment strategies, disclosure/transparency and daily redemption.

18 For this reason, although not a FSB member, Cayman Islands, the largest IFC in this report by asset size, has participated since 2014 in the FSB's Global Monitoring Report.

19 See IMF, *Concept of Offshore Financial Centers: In Search of an Operational Definition*, April 2007.

20 In the Cayman Islands, the holder of a "B" licence is not allowed to take deposits from any person resident in the Islands, other than another licensee or an exempted or an ordinary non-resident company, which is not carrying on business on the Islands.

21 Importantly, there is no unique definition for international financial centre but for the scope of this report, assets and liabilities of entities in this particular sector are with non-resident counterparties. However, no particular rationale regarding taxation treatments of the offshore assets should be implied in this context or for this report's purposes.

have submitted data for this year's Report include: Argentina[22] (AR), Bahamas (BH), Bermuda (BM), Brazil (BR), British Virgin Islands (BVI), Canada (CA), Cayman Islands (KY), Chile (CL), Colombia (CO), Costa Rica (CR), Jamaica (JA), Mexico (MX), Panama (PA), Peru (PE), United States (US) and Uruguay (UR). Together, these jurisdictions represent about 98% of the Region's GDP. The report covers the period from 2000 through 2018, using annual data (end-of-year).

Whilst the data submission quality is very heterogeneous across jurisdictions, coverage has improved relative to the last publication. However, there remains important scope to improve the information available to authorities with the aim of enhancing the overall assessment process. Some of the jurisdictions participate as part of the FSB Non-bank Monitoring Experts Group which undertakes the Global Monitoring Exercise.[23] Their involvement and proficiency in the methodology, as well as the data collection process, has continuously helped in the improvement of data among the RCG Americas members.

## 4. Macro-mapping of Financial Intermediation

This section provides an overview of the composition, size and growth of the different financial sectors of participating jurisdictions through time. The information described is the result of the FSB monitoring framework and corresponding analysis as applied to the particular countries, in a similar fashion to the Global Monitoring Report on NBFI produced by the FSB on an annual basis. One difference, however, is that this exercise splits financial system assets in two categories: domestic (onshore) and offshore – in line with the definition of IFCs described in the methodology section. A macro-mapping data template is filled both for the domestic and the offshore sectors for participating jurisdictions.

### 4.1 Overview and Trends

Exhibit 4-1 gives an overview of the domestic and offshore sectors' total asset trends from 2002 to 2018. In recent years, the two sectors have grown at similar rates, but from largely different levels, however, their growth evolution differs significantly for 2018.[24] In terms of growth trends, 2018 was an atypical year for many of the analysed sectors with many of them presenting important contractions. Whilst domestic financial assets grew by 0.6% in 2018, the offshore financial assets contracted by 6%.

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[22] In the report, growth rates in the particular case of Argentina reflect a high rate of inflation.

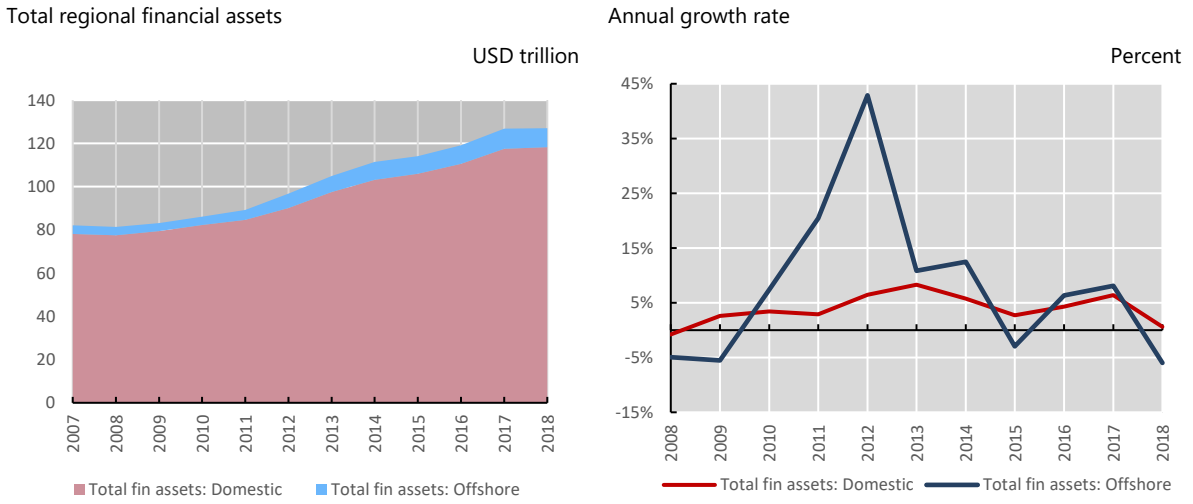
[23] The following jurisdictions participate in the FSB's Global Monitoring Exercise: Argentina, Australia, Belgium, Brazil, Canada, Cayman Islands, Chile, China, France, Germany, Hong Kong, Indonesia, India, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Turkey, United Kingdom, and the United States. The 19-member euro area as a whole is also used in certain sections of the Report.

[24] The annualised growth rate for the 2012-2017 period is 5.5% and 6.8% for the domestic and offshore sectors, respectively.

Macro-mapping of the financial system: domestic and offshore[1,2]

16 jurisdictions

Exhibit 4-1




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial auxiliaries are excluded.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

The next subsections contain an overview of the recent trends observed in the onshore and offshore sectors, respectively.

### 4.2 Domestic /Onshore Sector

Exhibit 4-2 provides a broad overview of the size and evolution of the key parts of the region's domestic sector financial systems. [25, 26] During 2018, total regional financial assets grew by 0.6% to a level of USD 118.2 trillion. Deposit-taking institutions represents the largest sector outside of other financial intermediaries (OFIs).[27] The banking sector is the predominant entity type for most of the region's financial systems; however, the large OFI sector in the United States brings down the share of the banking sector for the aggregate.

[25] Domestic data includes only financial system assets domiciled in the corresponding jurisdiction that are related to financial services with no restriction on being offered to domestic residents.

[26] Financial auxiliaries' data have been excluded from all the analysis in this report as only a few jurisdictions reported data on them. The purpose of the exclusion is to set a common base for comparison with a special focus on the relevant entities.

[27] OFIs are financial entities other than central banks, deposit-taking institutions, insurance corporations, pension funds, public financial institutions and financial auxiliaries in the Flow of Funds statistics. However, as some jurisdictions lack these data and as some other entities involved in credit intermediation and non-banks financing have been identified as a result of this and the Global Monitoring Exercise, there have been adaptations in order to include them as part of OFIs.

Macro-mapping of the financial system: domestic sector[1,2]

16 jurisdictions

Exhibit 4-2

| | Total regional financial assets | Central Banks | Deposit Taking Institutions | | Public financial institutions | Insurance corporations | Pension funds | OFIs |
|---|---|---|---|---|---|---|---|---|
| | | | Total | Of which Banks: | | | | |
| **Size at the end-2018** (USD Trillion) | 118.3 | 5.8 | 29.5 | 23.8 | 10.0 | 10.9 | 25.0 | 37.0 |
| **Share of total regional financial assets (%)** | 100 | 4.9 | 24.9 | 20.1 | 8.5 | 9.2 | 21.1 | 31 |
| **Growth in 2018** (year-over-year , %) | 0.6 | -5.1 | 3.6 | 3.9 | 3.2 | -0.8 | 0.8 | -1.0 |
| **Growth in 2017** (year-over-year, %) | 6.4 | 0.5 | 2.9 | 3.2 | 3.5 | 6.4 | 5.7 | 11.6 |
| **Growth 2012-2017** (annualised growth, %) | 5.5 | 8.3 | 4.8 | 5.5 | 3.3 | 4.5 | 6.0 | 6.1 |

[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial auxiliaries are excluded.

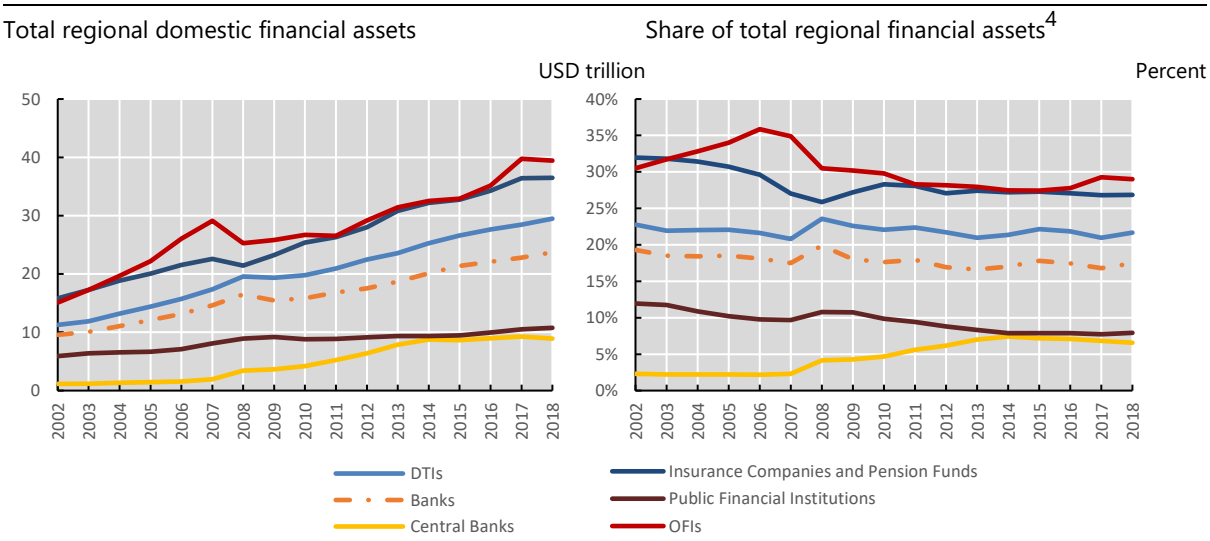
Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

In the same period, the banking sector grew at a rate of 3.9%, slower than the annualised growth rate observed during the prior five-year period (5.5%). Other sectors decreased in size during the last year. For example, insurance corporations and OFIs' assets decreased by 0.8% and 1.1%, respectively. Overall, most sectors experienced a marked slowdown during 2018 that contrasts with growth rates previously observed for a sustained period of time. This slowdown is the result of the relative share of some jurisdictions since when looking at individual data, one can see that some financial sectors in many of the smaller jurisdictions showed moderate growth rates (see Annex I for each jurisdiction's financial assets by sector evolution).[28] Exhibit 4-3 shows the relative asset size of different sectors within the region's financial systems.

[28] These results may be affected by inflation in some jurisdictions.

Assets of financial intermediaries: domestic[1, 2, 3]

16 jurisdictions | Exhibit 4-3




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial Auxiliaries are excluded. [3] Deposit-taking institutions (DTIs) include banks and other deposit-taking entities. [4] Total regional financial assets include all financial assets domiciled in the corresponding jurisdictions (i.e. onshore and offshore).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

### *4.2.1 MUNFI and Other Financial Intermediaries (OFIs): The Broad Measure of NBFI*

In the FSB Methodology, the aggregate measure of the insurance corporations, pension funds and other financial intermediaries (OFIs) is known as Monitoring Universe of Non-Bank Financial Intermediation (MUNFI), and it is the starting point for the broad measures. The main reason for including such institutional investors in the broad measure is that, in some instances, insurance corporations and pension funds have been found to contribute to non-bank financing. For example, these institutional investors participate in the credit intermediation chain through the purchase of credit assets and, occasionally, engaging in direct lending activities.[29] The latter activity has caught the attention of authorities, as it is a deviation from these entities' core activities and a likely result of search for yield by institutional investors.

Total onshore MUNFI decreased by 0.4% during the year, whilst its share in total financial assets decreased by 0.4 percentage points. Exhibit 4-2 shows that pension fund assets grew during 2018, albeit at a slow rate. Meanwhile, insurance corporations contracted. At the same time, the share of DTIs and public financial institutions increased (See Exhibit 4-3).

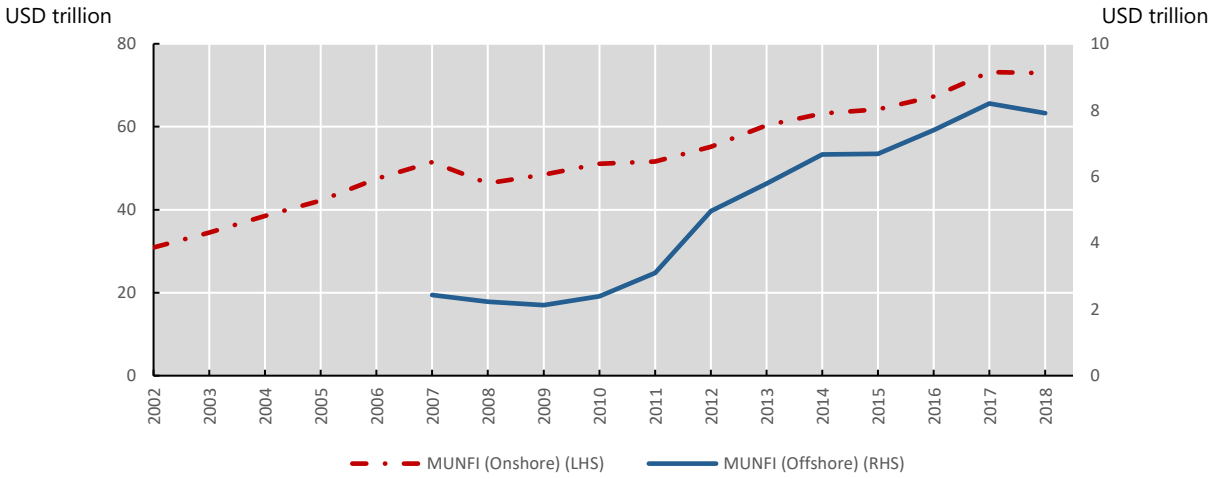
[29] See FSB, Section 2.2 and Annex 7 in Global Shadow Banking Monitoring Report 2016, May 2017.

Exhibit 4-4 shows the evolution of the MUNFI assets for both the domestic and offshore sectors. The domestic MUNFI sector stands out since its size is tenfold that of the offshore sector. Nevertheless, the offshore MUNFI sector registered important growth during the 2011-2015 period, driven particularly by non-public funds. At end-2018 both series decreased in size relative to the previous year, however, the decline was steeper in the case of the offshore sector. Neither one had contracted since around the crisis.

MUNFI assets: domestic and offshore[1, 2]

16 jurisdictions — Exhibit 4-4

Total regional financial assets




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial auxiliaries are excluded. [3] Offshore assets series are poorly reported before 2007 and therefore are not presented in the graph.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

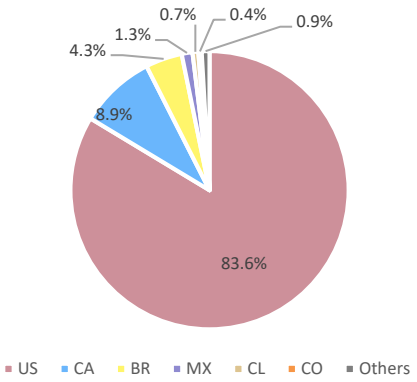
Exhibit 4-5 shows jurisdictions' share in the total regional domestic financial assets, with the United States, Canada, Brazil and Mexico constituting 98% of the total assets. The United States alone comprises 84% and thus its weight in the region is an important driver of results. By individual jurisdiction, it is interesting to note the heterogeneity in the composition of the different financial systems. With regard to domestic OFIs' assets as a share of GDP, there are also significant differences, as some are more financially developed. Many of the onshore financial systems in the region have an important bank presence, and therefore a lower participation of OFIs.

Total regional onshore financial assets[1, 2]

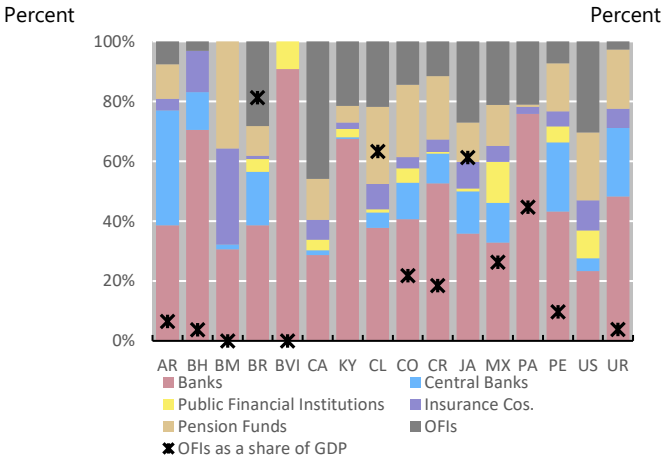
16 jurisdictions

Exhibit 4-5

Share of regional financial assets [3]




Composition of financial assets by entity type [4, 5]




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Some jurisdictions' data reflect high inflation rates. Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial auxiliaries are excluded. [3] Others include: AR, BH, BM, BVI, CR, JA, KY, PE, PA and UR. [4] OFIs as a share of GDP is 296% for CA; 182% for KY and 147% for US (not shown in graph). [5] Banks corresponds to DTIs in the right hand side graph.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

Regarding how the evolution of the onshore OFI sector has fared; for the region as a whole OFIs' financial assets have, for the first time in many years, decreased in size in absolute terms and with a minor fall relative to total financial assets (Exhibit 4-6). This trend is mainly driven by a decrease in size in the largest jurisdiction.[30, 31] Excluding the largest jurisdiction's data from this calculation, the OFI assets for the rest of the region experienced an annual growth rate of about 4.9% for 2018.

Despite the decline of OFI assets in the aggregate, the majority of the jurisdictions registered positive domestic growth rates for both OFI and total financial assets. Cayman Islands (KY) is an exception and presents significant falls in both OFI and financial assets' growth rates due to specific sectors contracting. Nonetheless, its contribution to the onshore assets in the region is small and decreasing as seen from the evolution of OFI shares' within the region (Exhibit 4-6, LHS). Interestingly, regional shares of OFIs in non-US jurisdictions (AR, BR, CA, CL, CO, CR, JA, MX) have grown relative to that of the United States, likely related to financial deepening or the increasing provision of financial services that takes place in those jurisdictions.

[30] However, there are instances where jurisdictions present important inflation growth during 2018, which affects their financial data growth rate calculations (e.g. AR). This effect is not corrected in the data.

[31] For the US, onshore OFIs contracted by 2.3% as of end- year 2018.

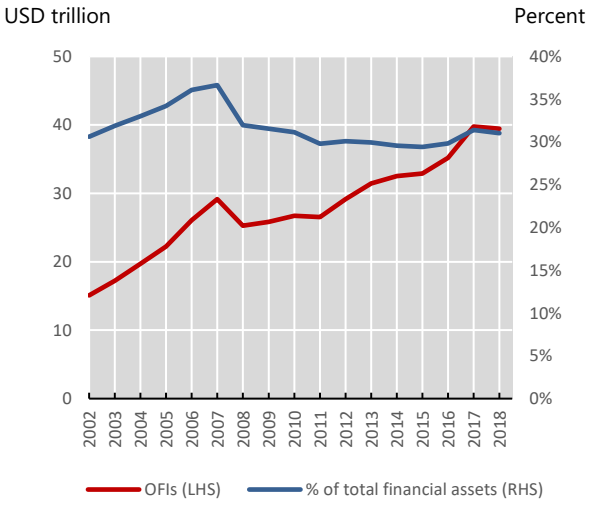
In terms of jurisdictions' participation in the regional OFIs, the US and CA dominate, as seen in Exhibit 4-7 (LHS). However, some jurisdictions have been increasing their total sector participation for a sustained period of time, albeit from a low base, as seen in Exhibit 4-7 (RHS).

Other financial intermediaries (OFIs) [1, 2]

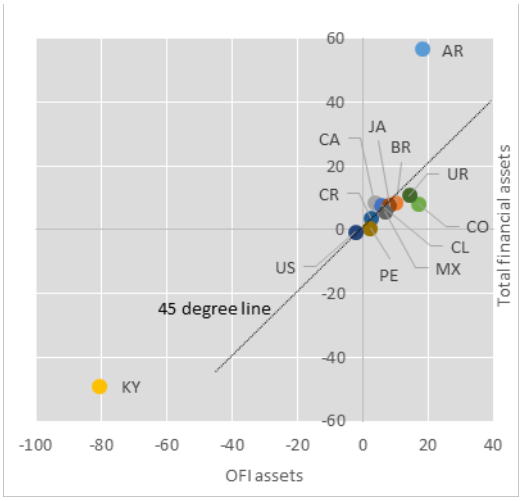
14 jurisdictions

Exhibit 4-6

OFIs financial assets




Growth rate in 2018




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial auxiliaries are excluded. Growth rates in the particular case of Argentina reflect a high rate of inflation.

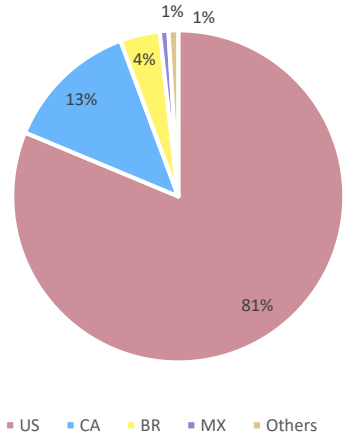
Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

Share of Regional OFIs[1]

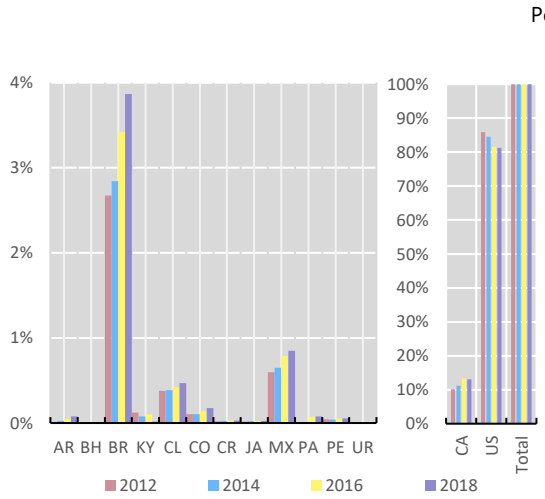
14 jurisdictions

Exhibit 4-7

Share in Regional OFI assets




Evolution of OFI shares by jurisdiction[2]




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] For those jurisdictions not listed here, there was no OFI data submitted. In some cases this is due to lack of data, but in others it is explained by the absence of the sector in the jurisdiction.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

Turning to the composition of the domestic OFI sector, Exhibit 4-8 shows the main entity types and their relative shares for the region. Public investment funds make up the largest entity type, followed by broker-dealers and MMFs. In 2018, among the largest subsectors that experienced growth rates comparable to past periods are broker-dealers and MMFs. On the contrary, other smaller subsectors grew at higher rates (e.g. trust cos., credit unions, REITs). Although Credit Unions as an entity type make up only about 0.2% of total OFIs for the region, their overall annual growth rate is among the highest within OFI subsectors.[32]

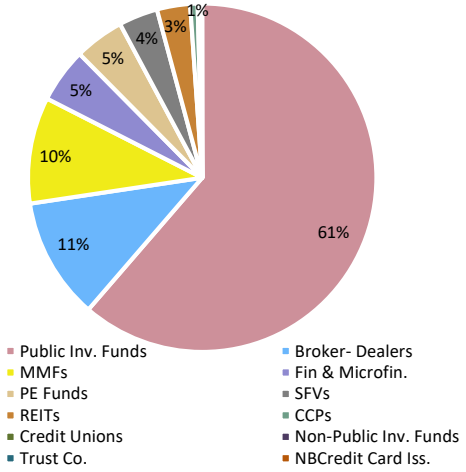
[32] Some jurisdictions in the region register Credit Unions as DTIs and therefore lay outside of the OFI scope. This is related to the structure of flow of fund statistics, however; the macro-mapping methodology used in this monitoring exercise requires taking into account if Basel-equivalent regulation applies to DTIs. Where absent, some jurisdictions register these DTIs as OFIs or at the very least include them in Economic Function classification (usually EF2).

Major OFI subsectors for the region[1, 2]

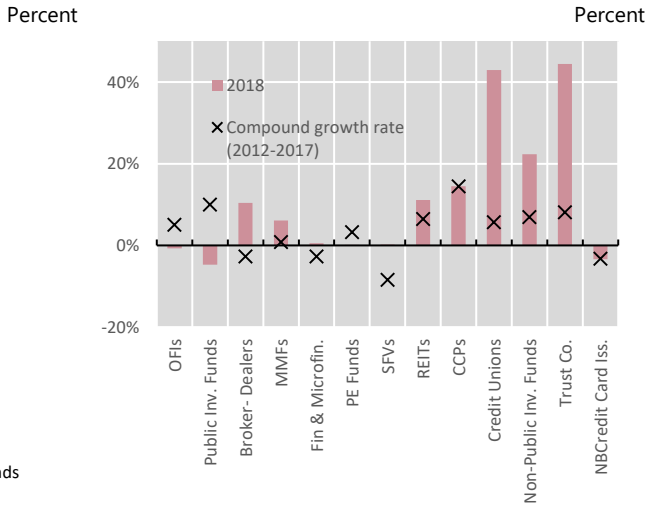
16 jurisdictions

Exhibit 4-8

End-of-year 2018




Annual Growth Rate




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. Some jurisdictions' data reflect high inflation rates. [2] Financial auxiliaries are excluded.

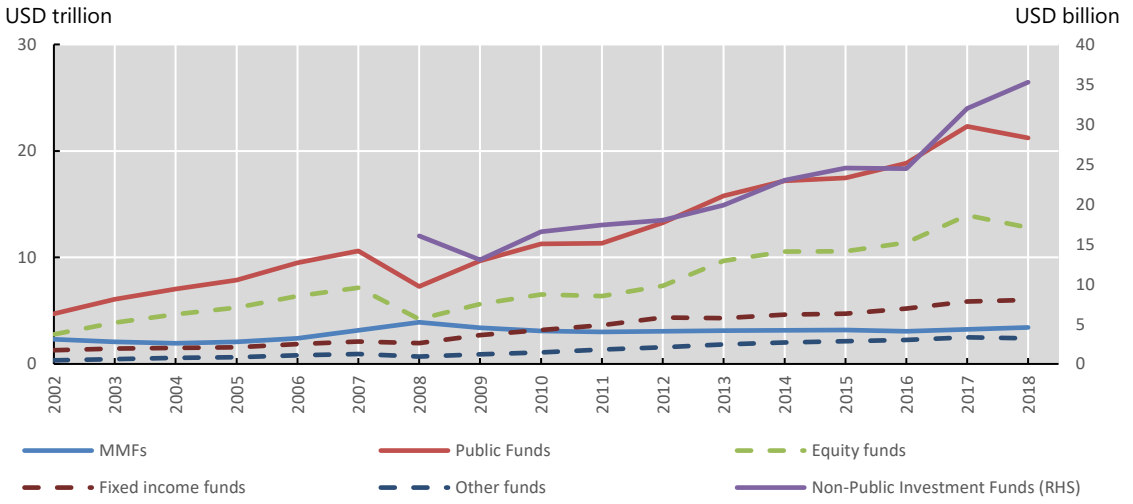
Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

When looking at the evolution of domestic/onshore collective investment vehicles (CIVs), public investment funds constitute the larger share of financial assets owing to a sustained growth trend that changed for the last year in the data (Exhibit 4-9). In contrast, MMFs' asset size for the region has been very stable over time. Within the public investment funds category, equity funds have been the main driver of growth.[33] Although non-public funds show a similar growth trend to that of public investment funds for most of the period under analysis; this subsector's relative size is very small within the onshore/domestic market; the opposite is observed in the offshore sector where private funds make up the largest subsector.

[33] This report does not adjust for changes in valuation, so year-over-year changes may be attributable in part to changes in stock market valuation.

Investment fund decomposition: Domestic/Onshore[1,2,3]

16 jurisdictions | Exhibit 4-9




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [3] Public funds includes Equity, Fixed Income and Other funds.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

### *4.2.2 Interconnectedness*

An important aspect that became apparent in the aftermath of the Global Financial Crisis (GFC) was the level of interconnection between the banking sector and the NBFIs prior to the financial crisis in 2008. Since then, the FSB in coordination with financial authorities has taken steps to improve the measurement of this interconnection. One lesson learned from the GFC was that regulators/supervisors needed better information to assess vulnerabilities. This led to different efforts directed at closing data gaps. At the time, the NBFI Sector provided limited data availability/accessibility to authorities. As a result, in some jurisdictions, entities belonging to this sector are now subject to higher reporting standards; however, work is still needed on this front.

As part of the monitoring exercise, the level of interconnection across different sectors in the economy is analysed with the data collected. Special attention is placed on the interconnection between banks and OFIs, stemming from both the asset and liability side of their balance sheet. Overall, for the Americas region, the interconnectedness data collected is limited, as some jurisdictions are either lacking statistical sources or still inexperienced in supplementing data from other sources (i.e. market intelligence, commercial and supervisory data).

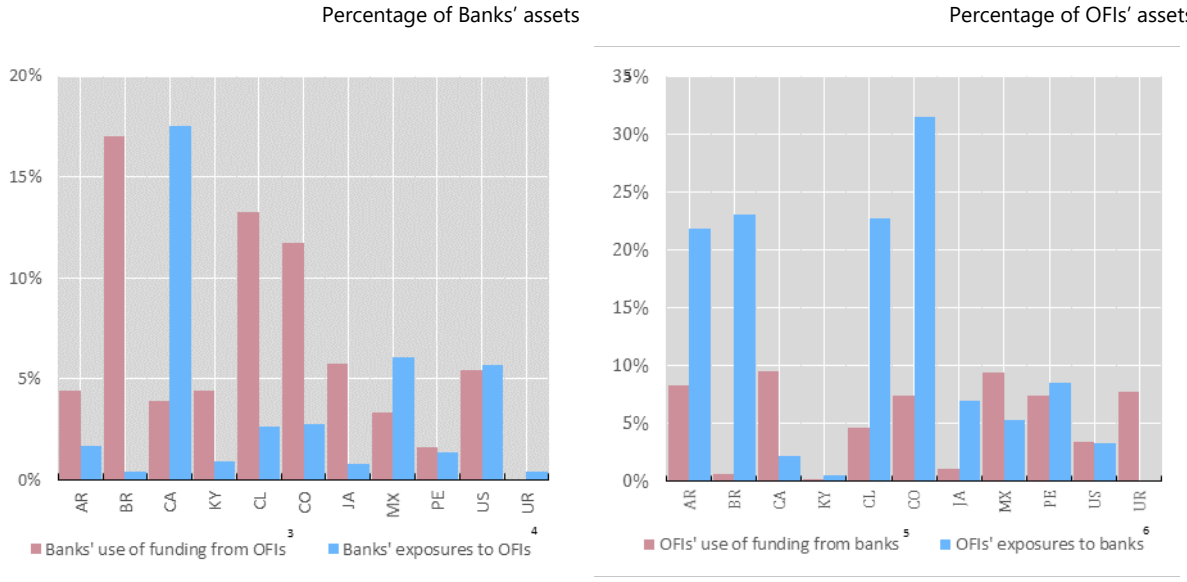
Interconnectedness data corresponds to current financial exposures among the different financial intermediaries on both sides of their balance sheet (i.e. assets and liabilities) and excludes other counterparty types (i.e. non-financial sector). With the data collected, and recognising its limitations, overall banks appear to be moderately interconnected to OFIs on

the asset side. Banks' registered claims on OFIs comprise 79% of total claims on financial entities (but represent only 8.3% of total banks' assets). Meanwhile, banks' liabilities to OFIs represent 70% of total liabilities with financial entities and about 6% of total banks' assets.

On the other hand, OFIs' claims on banks represent about 22% of OFIs' total claims on financial entities but only 3.6% of total OFIs' assets, with the majority of OFIs' claims having an OFI as counterpart (77%). OFIs' liabilities to banks represent only 14% of total OFIs' liabilities to financial entities, whilst those to OFIs and pension funds represent 36% and 34%, respectively. Exhibit 4-10 shows the level of interconnectedness between Banks and OFIs by jurisdiction. Some jurisdictions register high funding dependence on banks by OFIs.[34]

Interconnectedness between banks and OFIs[1, 2]

11 jurisdictions At end-2018 Exhibit 4-10




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Considers both onshore and offshore assets and liabilities. Bank assets and liabilities as reported by jurisdictions and do not equal DTIs figures (The FSB's Global Monitoring Report on NBFI uses DTIs instead for the same graphs). [3] Banks' liabilities to OFIs as a share of bank assets. [4] Banks' claims on OFIs as a share of bank assets. [5] OFIs' liabilities to banks as a share of OFI assets. [6] OFIs' claims on banks as a share of OFI assets.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

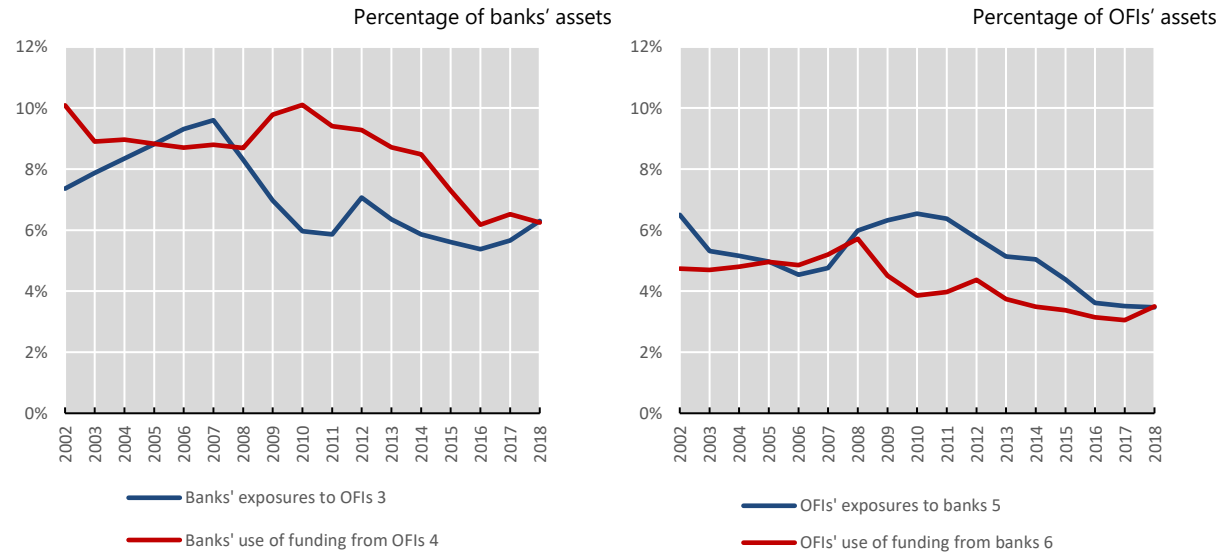
In terms of the regional evolution of interconnectedness, Exhibit 4-11 shows how the funding dependence by banks and OFIs to each other has evolved and although both present a downward trend for a sustained period of time, funding dependence has come to a more stable level. Likewise, the interconnectedness stemming from the assets side of the balance sheet (i.e. credit exposure) for both sectors has continued to decline, with banks' peak levels occurring at

[34] Another important dimension of interconnectedness is that of cross-border linkages via credit exposures and funding. In this dimension, data gaps are particularly important.

the prime of the global financial crisis. Overall, positions seem to be matched for both banks and OFIs relative to asset size and levels are at their lowest as shown in Exhibit 4-11.

Evolution of interconnectedness between banks and OFIs[1, 2]

11 jurisdictions Exhibit 4-11




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Considers both onshore and offshore assets and liabilities. Bank assets and liabilities as reported by jurisdictions and do not equal DTIs figures (Global Monitoring Report uses DTIs instead for the same graphs). [3] Banks' liabilities to OFIs as a share of bank assets. [4] Banks' claims on OFIs as a share of bank assets. [5] OFIs' liabilities to banks as a share of OFI assets. [6] OFIs' claims on banks as a share of OFI assets.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

Cross-border interconnectedness can be analysed with the data gathered despite only a small number of jurisdictions reporting some of the requested exposures. The data suggests that the Rest of the World's financial claims on OFIs are important in some jurisdictions. Disregarding the data limitations, the Rest of the World's claims on OFIs is about 78% of its total financial claims for the region. On the other hand, the Rest of the World's liabilities to OFIs is about 53% of its total financial liabilities. In both cases, the OFI sector is much more interconnected to the Rest of the World than banks, even though the OFIs' figures may be underestimated if we consider that it is likely reporting quality is higher in the case of banks. It is worth noting that, despite not having flow of fund statistics, some jurisdictions have very good coverage of the data matrix (e.g. BR).

### *4.2.3 Credit Intermediation: Credit and Lending Assets*

Data relating to credit and lending assets for the different credit intermediaries was collected in supplementary templates. Credit assets include deposits as they constitute a credit exposure to a bank or other deposit-taking entity. The entities for which data was requested include deposit-taking institutions (including banks), public financial institutions, insurance

companies, pensions funds and OFIs. Data for a selection of OFIs entities (i.e. MMFs, non-public funds, other investments funds, broker-dealers, trust companies, finance companies and structured finance vehicles) was also requested. The data template requires credit assets and their break-up, if available, between loans and deposits. Credit intermediation is thus measured by the loans granted and all investment in debt securities (i.e. all credit assets, excluding cash deposits). This data requirement proved to be demanding, and data coverage was low. In this section, we present some key highlights from the data collected.

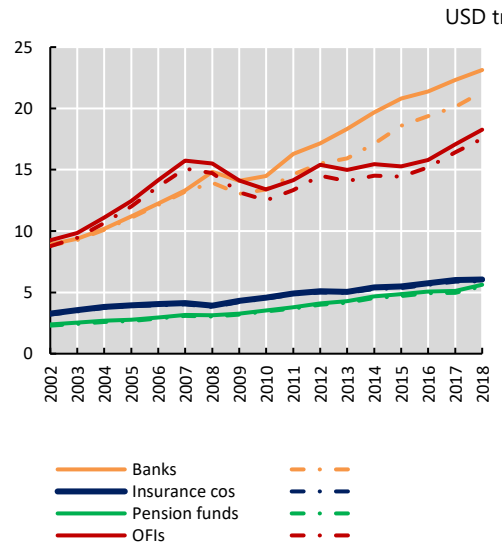
Credit assets for the aggregate of jurisdictions in the region amounted to USD 53.1 trillion as of end-year 2018. Banks hold 44% of total credit assets in the region. Overall, during the last year, credit assets by banks grew at a slower rate than OFIs' credit assets (3.7% vs 7%). When excluding deposits, the relative shares by each entity type remain very similar, but the growth rates vary across these entities. Banks' credit assets, excluding deposits, grew at 6.0% during the last year, just slightly below the rate registered by OFIs (6.8%). Total credit assets excluding deposits for the region registered at USD 50.2 trillion, with OFIs accounting for 35% of this.

OFI credit assets as a share of total OFI financial assets reached 49% as of end-year 2018[35] (Exhibit 4-12). Within OFIs, 'Other investment funds' makes up the largest category in terms of credit asset holdings; however, this category presented a low growth rate during 2018 (2.1%) relative to the rate observed between 2012 and 2017 (6.9%). Other entities registered important credit asset growth rates during the same period.

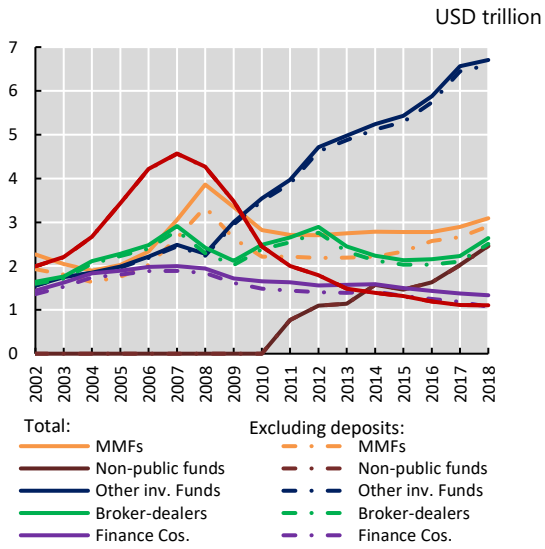
[35] Data for OFIs' credit assets was provided by: AR, BR, CA, CO, KY, CL, MX, US and UR.

Credit assets[1, 2, 3, 4] Exhibit 4-12

Credit assets held by entity type




Credit assets held by selected OFI sub-sectors



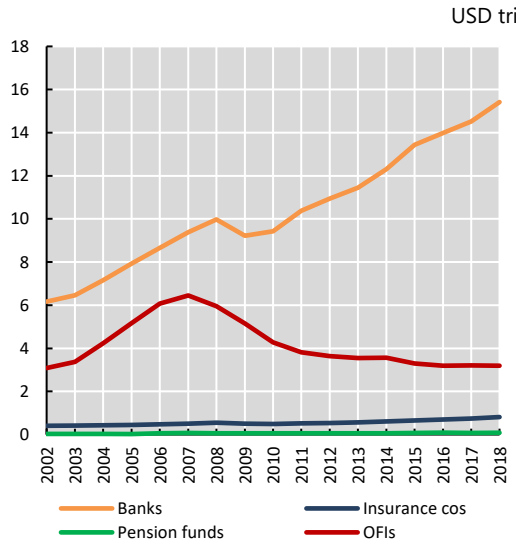

[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Considers only onshore assets. [3] Increases in aggregate data may also reflect improvements in the availability of data over time on a jurisdiction level. Ten jurisdictions provided some data on credit assets. [4] Credit assets include debt securities, loans and cash on deposit.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

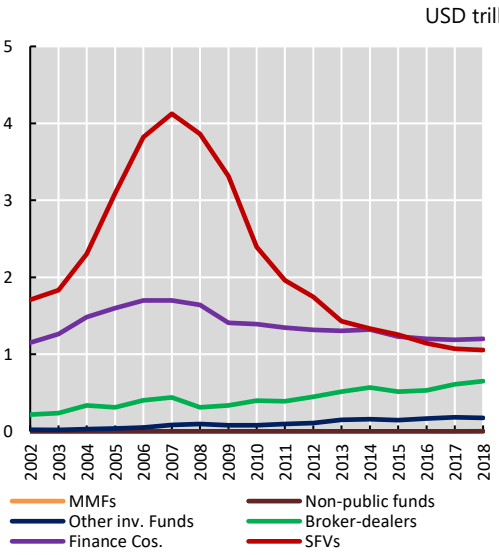
Exhibit 4-13 shows that banks continue to be the main direct lender in the region. OFIs have maintained a stable lending level during the last few years. Within OFIs' types, broker-dealers show a slight increasing trend, whilst others either decline or remain constant. Remarkably, finance companies show a gradual decrease in direct lending.

Lending[1, 2, 3] Exhibit 4-13

Lending entity type




Lending held by selected OFI sub-sectors




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Considers only onshore assets. [3] Increases in aggregate data may also reflect improvements in the availability of data over time at the jurisdiction level. Ten jurisdictions provided some data on credit assets.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

### 4.3 International Financial Centres (Offshore)

This section describes the composition, evolution and main features of the IFCs (offshore financial services sector) located in some jurisdictions within the region. IFC entities are defined on the basis that they exclusively (or almost exclusively) conduct financial transactions with non-residents. Thus, in the IFCs' context, onshore entities refer to entities that are domiciled domestically and their services and activities are managed, marketed and sold to the domestic market. Offshore entities refer to entities domiciled domestically, but their activities are marketed and sold internationally/offshore.

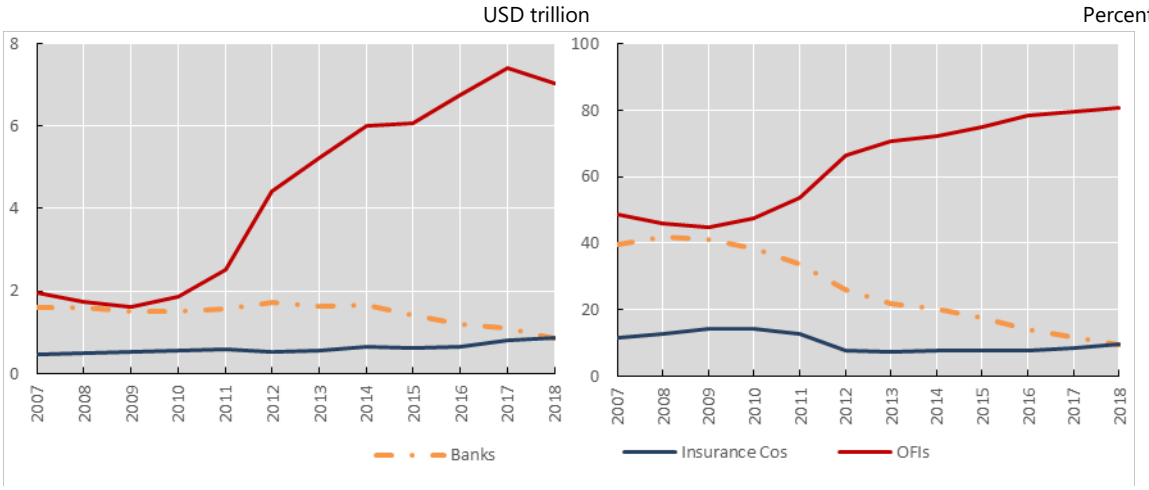
Several jurisdictions in the RCG Americas provide significant offshore financial services as IFCs.[36] Large volumes of bank and non-bank credit intermediation activities of other jurisdictions (onshore) flow through IFCs. Thus, the offshore non-bank credit intermediation activities, especially large investment funds registered in IFCs, may pose systemic risk and thus warrant close monitoring and vulnerability assessment. Overall, the results show that after several years of strong growth, IFC offshore assets slightly decreased with total financial assets

[36] Six jurisdictions in the NBFIWG are IFCs (i.e. Bahamas, Barbados, Bermuda, the British Virgin Islands, the Cayman Islands, and Panama). Barbados and Panama did not participate in the current exercise.

of USD 8.5 trillion at end-2018, down from USD 9.1 trillion at end-2017 (Exhibit 4-14). This drop is attributable to a decrease in OFIs, the largest component of offshore assets. The offshore assets of banks have also continued to gradually decrease since the GFC. On the other hand, the offshore assets of the insurance sector have been increasing slightly, albeit its share to offshore total assets is still very small.

Assets of financial intermediaries: offshore[1, 2, 3] Exhibit 4-14

Total regional financial assets | Share of total regional financial assets[4]



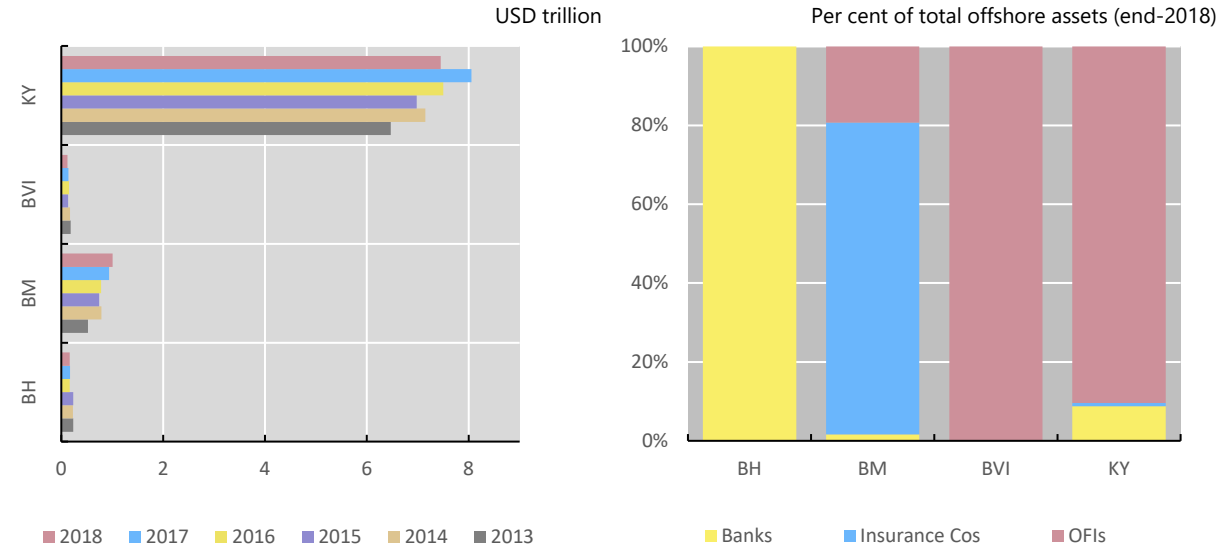

[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Increases in data may also reflect improvements in the availability of data over time at the jurisdiction level. [2] Financial auxiliaries are excluded. [3] Deposit-taking Institutions (DTIs) include banks and other deposit-taking entities. . [4] Total regional financial assets include all financial assets domiciled in the corresponding jurisdictions (i.e. onshore and offshore).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data).

Whilst some of the IFCs are specialised and concentrated in the banking sector (BH), others are focused on insurance (BM) and investment funds (BVI and KY). However, by far, the Cayman Islands hold the largest share of the offshore assets among the IFCs, see Exhibit 4-15 below.

Size of financial intermediaries in the international financial centres[1, 2, 3]

Offshore assets, 4 jurisdictions Exhibit 4-15




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Financial auxiliaries are excluded.

[3] BH= Bahamas; BM=Bermuda; KY= Cayman Islands; BVI= British Virgin Islands.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

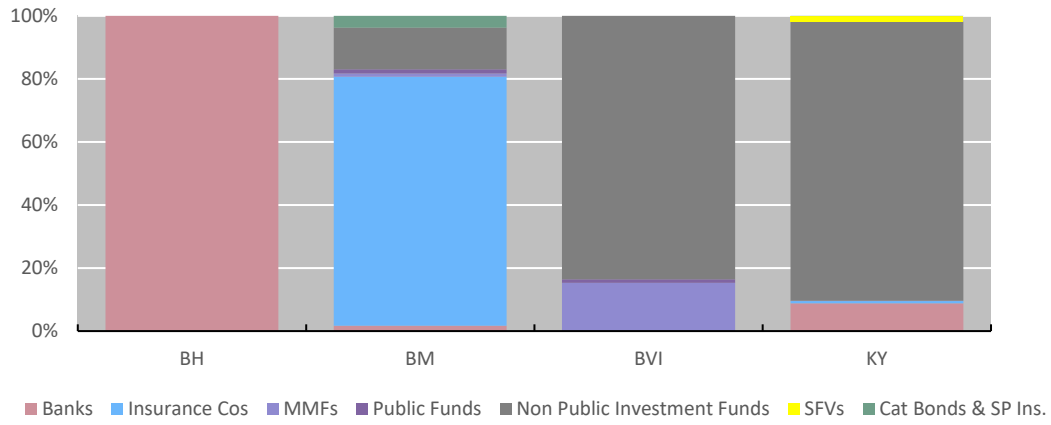
The dominant type of entity within the offshore assets is non-public/offshore investment funds which makes up 80% of total offshore financial assets; offshore focused banks follow with 10% of the share. In the Cayman Islands, offshore assets are composed of special licence banks (USD 653 billion), insurance companies (USD 59 billion) and OFIs, which include private funds (USD 6,595 billion), structured finance vehicles (USD 1132 billion), MMFs (USD 4 billion) and catastrophe bonds (USD 5 billion) (Exhibit 4-16). Bermuda has a significant insurance sector (USD 796 billion), specialising in catastrophe reinsurance. Other offshore assets in Bermuda include banks (USD 17 billion) and OFIs (USD 195 billion), which include special purpose insurers (USD 37 billion) and MMFs (USD 10 billion). Meanwhile in the British Virgin Islands, offshore assets include a small international banking sector (USD 28 million) and a large OFI sector (USD 120 billion) which is largely composed of non-public funds (USD 100 billion) and MMFs (USD 18 billion) . The Bahamas' offshore assets are predominately composed of offshore banks.

OFI composition in IFCs by subsector[1, 2, 3]

Offshore assets, 4 jurisdictions At end-2018 Exhibit 4-16

Breakdown by entity type

Per cent




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Financial Auxiliaries are excluded.

[3] BH= Bahamas; BM=Bermuda; KY= Cayman Islands; BVI= British Virgin Islands.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

It is also worth noting that there is no standard methodology for separating onshore and offshore entities/activities among the IFCs. For example, in the Cayman Islands, the special bank licences prohibit deposit-taking from residents and limit the activities that these banks can conduct in local markets to conducting business with other licensees. All offshore banks are prudentially regulated and supervised by the local authorities. In Bermuda, banks serve both domestic and international clients (e.g. global reinsurance firms headquartered in Bermuda) without separating them. For the purpose of this study, the separation between Bermuda's domestic and IFC banking activities was estimated based on the share of assets held by banks in local currency and all other currencies.

## 5. The Narrow Measure and Economic Function Classification

Turning to the narrow measure, from the broad measure already explained, jurisdictions in their analysis classify non-bank financial entities into five Economic functions.[37] In addition, they and also exclude, the portion of the non-bank financial entities' assets in each Economic function that are prudentially consolidated into a banking group, and other assets that are outside of Economic Function classification whenever entities are not part of credit intermediation or do not present bank-like risks. These risks are: maturity and liquidity transformation and/or leverage and imperfect risk transfer. The five Economic functions are described in the 2013 Policy Framework, and the monitoring exercise for the America's region

[37] The broad measure includes onshore and offshore financial assets.

uses the same general methodology as used in the FSB's Global Monitoring Report on Non-Bank Financial Intermediation. The five Economic Functions are described in Exhibit 5-1.

Economic Function Classification (EFs) Exhibit 5-1

| EF | Definition | Examples of entities: |
|---|---|---|
| **EF1** | Management of collective investment vehicles with features that make them susceptible to runs | MMFs, fixed income funds, mixed funds |
| **EF2** | Loan provision that is dependent on short-term funding | Finance companies, leasing/factoring companies, consumer credit companies |
| **EF3** | Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets | Broker-dealers, securities finance companies |
| **EF4** | Facilitation of credit creation | Credit insurance companies, financial, guarantors, monolines |
| **EF5** | Securitisation-based credit intermediation and funding of financial entities | Securitisation vehicles, structured finance vehicles, asset-backed securities |

In addition to the five Economic Functions, the narrow measure also includes assets that authorities are not able to classify in a specific economic function due to lack of information on the type of activities, but that at the same time authorities could not determine that they should be excluded from narrow measure. This asset category is referred to as "Unallocated". The collection of non-bank financial entities' assets excluded from the narrow measure is referred to as "Outside narrow measure".[38] The latter is for the purpose of registering the financial assets in a jurisdiction that, starting from the MUNFI measure, are assessed not to be involved in credit intermediation or activities with substantive bank-like risks.[39]

The narrow measure is not to be understood as the result of a judgement that regulation or policy measures to address potential financial stability risks of those entities and activities are inadequate or ineffective. It is based on a conservative assessment of the potential risks they may pose during stressed events on a pre-mitigant basis (i.e. assuming policy measures and/or risk management tools are not exercised). This pre-mitigant assessment allows authorities to then assess existing policy tools to address potential financial stability risks and identify any residual risks that may warrant policy responses. This approach also helps improve the consistency in the assessment across jurisdictions and capture potential changes in risks from NBFI. As a result, the narrow measure may overestimate the degree to which non-bank credit intermediation currently gives rise to post-mitigant financial stability risks (See Section 3 for further explanation on the methodology).

[38] Sometimes in the classification process there is a residual that arises from national financial accounts' construct that under the methodology is excluded from the narrow measure to avoid major inconsistencies across jurisdictions.

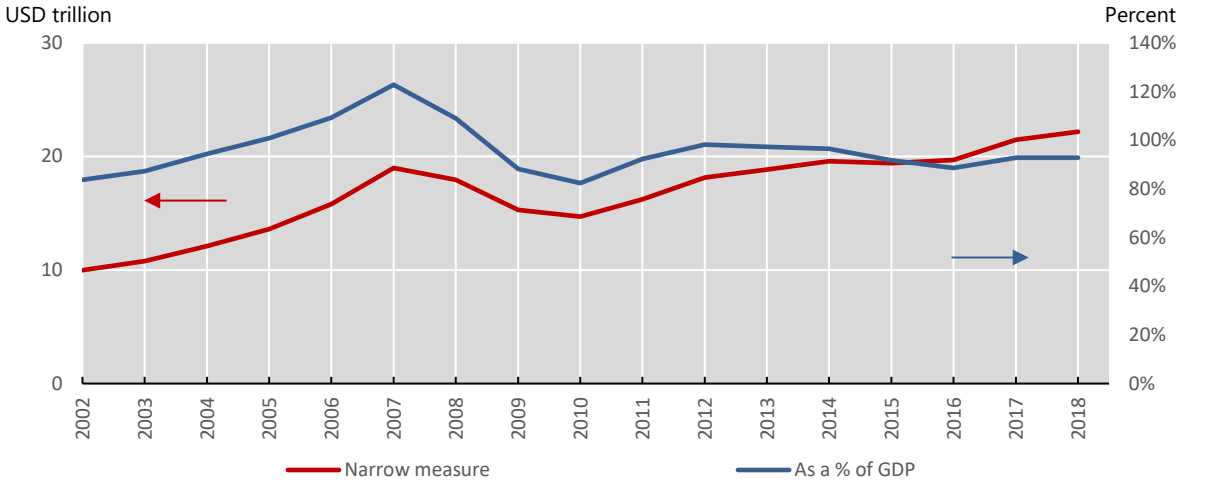
[39] For the purpose of Economic Function classification, there is common guidance established by the FSB that jurisdictions need to follow in their assessment.

Exhibit 5-2 shows the region's aggregate narrow measure over time, both in absolute terms and as a percentage of the region's aggregate GDP. The narrow measure for the region has been increasing at an almost steady rate during the last few years; however, as a share of GDP, data shows a declining trend. For the region as a whole, this narrow measure grew at an annual rate of 3.3% as of end-year 2018, very close to the annualised rate of the previous five years. All but two jurisdictions (CA, US) showed a decrease in last year's annual growth rate. In some jurisdictions, the 2018 annual growth rate was even lower than the level registered for 2009 in the aftermath of the GFC (BR, CL, CO, MX, and PE).

Narrow measure[1, 2]

15 jurisdictions

Exhibit 5-2




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Figures Include only jurisdictions that submitted specific data. Some jurisdictions were unable to provide narrowing measure (BH, BVI, CR, PA).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

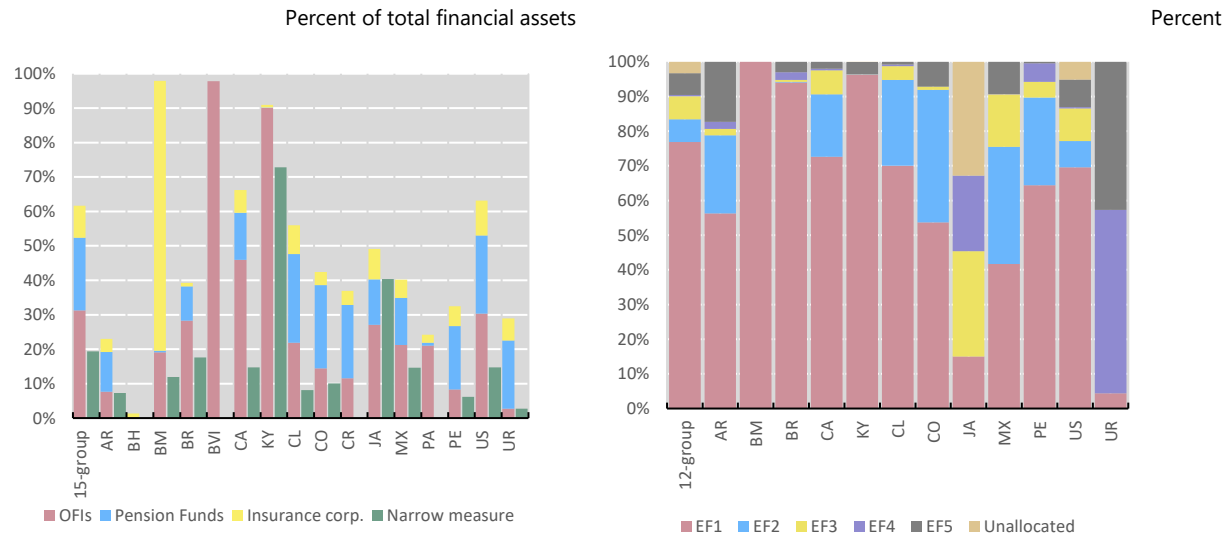
Exhibit 5-3 shows jurisdictions' narrowing down calculations starting from MUNFI aggregate (the first bar in the LHS graph). After carving out those assets not involved in credit intermediation, maturity/liquidity transformation, leverage and/or imperfect risk transfer and also those that belong to entities prudentially consolidated into banking groups, the green bar to the right is the financial stability risk-relevant universe for the monitoring exercise.

Exhibit 5-3 RHS shows the Economic Function Classification for the assets allocated in the narrow measure. Across jurisdictions, EF1 is the most important economic function by relative size, except in the case of Jamaica and Uruguay. In the case of Jamaica, EF3 has a larger share than EF1, but this may be affected by the large unallocated portion of assets that the jurisdiction was not able to identify/classify. Uruguay is a contrasting case relative to other jurisdictions' allocations as most assets have been classified into EF4 and EF5. The next most relevant

Economic Functions for the region are EF2 and EF3. This contrasts with the findings from the Global Exercise, where EF5 is the second largest, closely followed in size by EF3.[40]

Narrowing down by jurisdiction[1, 2, 3] Economic Function Classification by jurisdiction[1, 2, 3]

Exhibit 5-3




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Financial Auxiliaries are excluded. [3] Offshore and Onshore financial assets are aggregated in the narrowing down analysis and the narrow measure is net of prudentially consolidated assets.. Some jurisdictions were unable to provide narrowing and economic function classification data (BH, BVI, CR, PA).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

An analysis of each Economic Function, including the entities and/or activities with that individual Economic Function is provided below.

### 5.1 Economic Function 1: collective investment vehicles (CIVs) with features that make them susceptible to runs

EF1 included collective investment vehicles (CIVs) with features that make them susceptible to runs. CIVs may act as shock absorbers in the financial system as losses from an entity's distress or insolvency or from adverse financial market conditions are shared among a disparate group of investors. In extreme circumstances, however, some CIVs with maturity/liquidity transformation and/or leverage can be susceptible to runs. To address potential run risk, many

[40] See *FSB Global Monitoring Report on Non-Bank Financial Intermediation 2019*, January 2020.

jurisdictions have mandated risk mitigating features for some or all of their EF1 entities. As noted above, however, the classification analysis is on a pre-mitigant basis.[41]

### *Trends in Economic Function 1*

EF1 is the largest economic function by assets for the region; this is consistent with the global trends, as noted in the Global Monitoring Reports. EF1 also presents a variety of entity types involved in the pooling of investors' resources to be directed at different kinds of investments. Exhibit 5-4 shows that as of end-year 2018, EF1 reached around USD 17.6 trillion. The 2018 annual growth rate decreased to 2.3% compared to an annual growth rate of 11.6% observed in the previous year. Three jurisdiction make up the 93.5% of the total EF1 for the region (US with 57.4%, KY with 29.8% and CA with 6.4%). In addition, the largest subsector, considering both financial assets from onshore and offshore sectors, in EF1 is that of fixed-income funds, followed by money market funds (MMFs).

Fixed income funds and MMFs grew at an annual rate of 2.7% and 5.4%, respectively. The rest of the funds' categories contracted at the end of 2018.[42] The main jurisdiction driving the results for the fixed income type and MMFs is the US given its large relative size (80.7% and 95.2%, respectively); in contrast, KY comprises 96.1% of total non-public funds' assets in the region. Note that although valuation effects may be an important driver of growth for this Economic function, the report does not attempt to state the role of valuation effects relative to inflow or outflow effects. At the individual jurisdiction level, some of the other jurisdictions exhibit growth rates in one or both of these types of funds that exceed the annualised growth rate for the 2012-2017 period (e.g. AR, CA, CL, and MX). However, relative sizes for these jurisdictions vary significantly and some are starting from a relatively small share of total financial assets.[43]

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[41] For example, structural features that mitigate risk include asset allocation requirements, liquidity risk management requirements, and leverage limits. Post mitigant tools designed to limit the probability and impact of stressed scenarios include redemption fees, withdrawal gates, and swing pricing.

[42] Equity funds are not included in EF1because they are not involved in credit intermediation.

[43] In the case of AR, growth rates are affected by strong inflation rates.

Economic Function 1 trends and composition[1, 2,3]

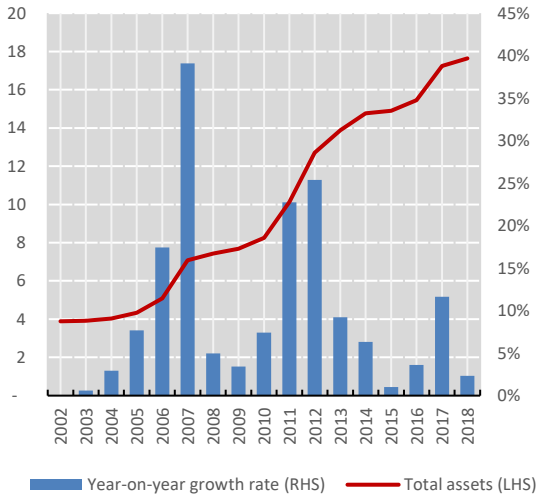
12 jurisdictions

Exhibit 5-4

Financial assets level and growth

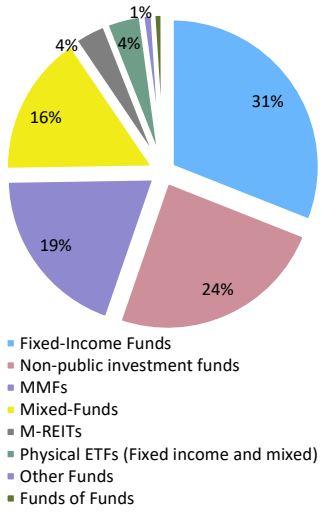
USD trillion

Percent




Breakdown by entity type at end-2018

Percent




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Some jurisdictions were unable to provide narrowing and Economic Function classification data (BH, BVI, CR, and PA). [3] Excludes funds not involved in credit intermediation and therefore excluded in classification (e.g. equity funds).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

## 5.2 Economic Function 2: Loan Provision That is Dependent on Short-Term Funding

EF2 entities engage in loan provision that could be dependent on short-term funding. This Economic function captures lending or credit provision for both retail and corporate customers, including provision of commitment lines, conducted outside of the banking system that is funded with short-term liabilities. In the case of adverse risk aversion or liquidity constraints, these entities are likely to experience stress in their operations. Liquidity strains may spread quickly due to risk aversion and through contagion. Their normal functioning may be further compromised if these entities, on top of this short-term funding dependency, hold illiquid assets.

Entity types in this category often specialise in areas such as auto finance, consumer finance, retail mortgage provision, physical equipment finance, among others. Often these entities are dependent on their parent or a related entity for funding and may suffer if the parent struggles in financial stress episodes or when operating in the lower part of the cycle. Some of these specialised companies, in addition, may have a material size within the jurisdiction concentrating credit provision of some particular kind which may also represent a vulnerability.

### *Trends in Economic Function 2*

EF2 is the third-largest economic function by assets for the region, in contrast with the Global case where it is the fourth largest category as evidenced in the Global Monitoring Reports.[44] Jurisdictions' submitted data that shows that an important share of total reported financial assets is prudentially consolidated within a banking group; prudentially consolidated assets are excluded from the narrow measure.

Exhibit 5-5 shows how the size of EF2 has been very stable through time. Finance companies were the most common entity type classified into this economic function, which totalled USD 1.5 trillion at end-2018. In contrast to the Global Exercise, there is greater heterogeneity on the type of entities reported for the region. On average, across jurisdictions that classified entities into this economic function, assets in this economic function grew by 3.2% in 2018 but grew by 0.15% annually between 2012 and 2017 considering net of prudentially consolidated data.

At the jurisdiction level, annual growth rates for end-year 2018 are in general lower than the annualised growth rate observed for the 2012-2017 period, with the exception being CA and KY. Meanwhile, the US is the only jurisdiction exhibiting a contraction but represents a big driver of aggregated data as it accounts for 73% of total regional assets. Some entity types within EF2 are specific to some jurisdictions, for example, CA is the only jurisdiction registering mortgage lending companies in this category, which is noteworthy since mortgages are long-term investments and so there may be potentially significant maturity transformation.[45]

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[44] See *FSB Global NBFI Monitoring Report 2018*.

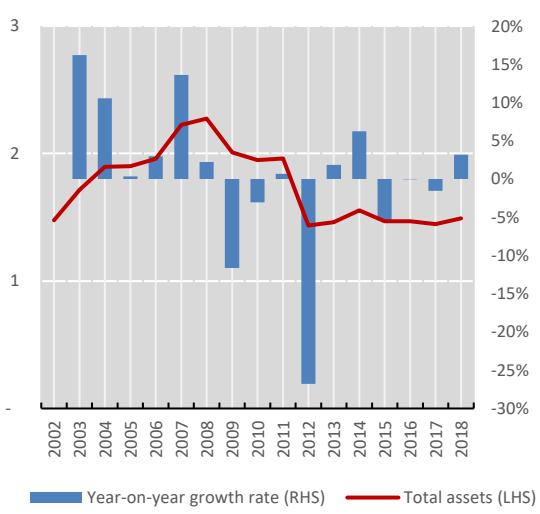
[45] There are two types: Mortgage investment companies and Mortgage finance companies. Mortgage investment companies are lending companies designed for mortgage lending for borrowers that are typically not eligible to qualify for conventional residential mortgage lending at a prudentially regulated financial institution and that are similar to REITs in that they are subject to a special tax treatment, but forced to distribute their income to investors; Mortgage finance companies are large financial institutions that underwrite and service residential mortgages (usually insured) which tend to be securitized and sold to regulated financial institutions through government-sponsored programs and therefore follow underwriting guidelines. See Bédard-Pagé, G. 2019. "*Non-Bank Financial Intermediation in Canada: An Update*." Bank of Canada Staff Discussion Paper No. 2019-2.

Economic Function 2 trends and composition[1, 2]

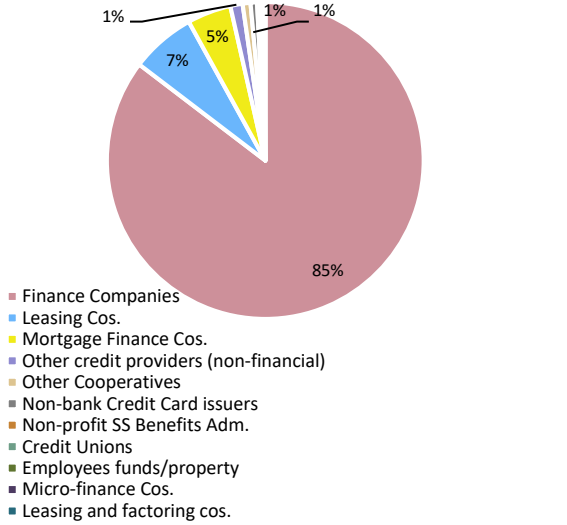
12 jurisdictions

Exhibit 5-5

Financial assets level and growth




Breakdown by entity type at end-2018




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Net of prudential consolidation into banking groups. [2] Some jurisdictions were unable to provide narrowing and economic function classification data (BH, BVI, CR and PA).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

### 5.3 Economic Function 3: Intermediation of Market Activities That is Dependent on Short-Term Funding or on Secured Funding of Client Assets

EF3 involves the intermediation of market activities that is dependent on short-term funding, including the secured funding of client assets and securities borrowing and lending. Although different legal types of entities may take on the intermediation of these activities, for the purpose of this exercise, jurisdictions reported broker-dealers as the unique entity type classified in EF3. Broker-dealers conduct the business of intermediating securities for their own account and on behalf of clients, hence the dual name broker-dealer.[46] In the purchasing and selling of these securities, broker-dealers have an important role in price discovery. They also act in the repo and securities lending markets by providing liquidity and demanded securities at market rates. Their balance sheets are particularly prone to face market risk-related movements.

#### *Trends in Economic Function 3*

EF3 assets net of prudential consolidation totalled USD 1.5 trillion as of end-2018 and have been increasing for the region as a whole in the last couple of years. The 2018 annual growth

[46] When acting on behalf of their clients, broker-dealers merely follow instructions–fiduciary duty- and so there is no credit intermediation there. However, sometimes these entities may provide credit to clients in order to cover short-term changes in their positions, but is not their primary goal.

was 12.2%, which contrasts with the annualised growth rate for the period between 2012 and 2017, when it contracted 6.9%. However, when excluding the largest jurisdiction in the data (US), remaining EF3 assets show a noteworthy increase in the annual growth rate at end-2018 (33.3%). Therefore, other jurisdictions are driving the increased growth rate (BR, CA, KY and MX), although some from a small base (Exhibit 5-6).

Economic Function 3 trends and composition[1, 2]

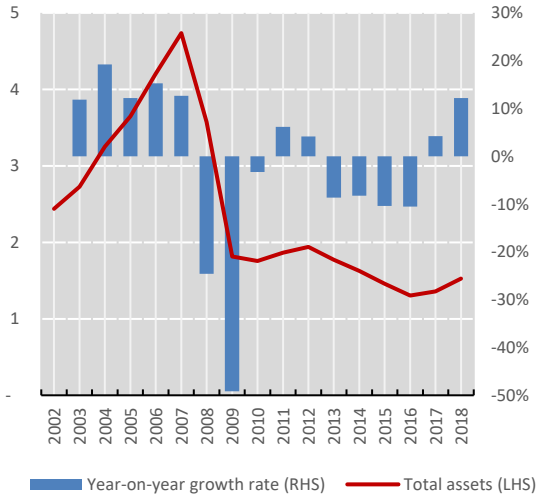
12 jurisdictions

Exhibit 5-6

Financial assets level and growth

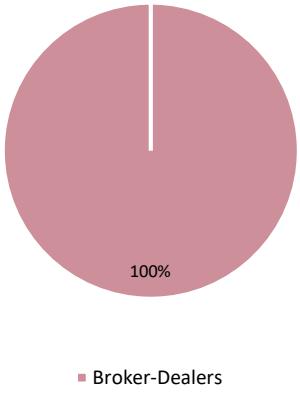
USD trillion

Percent




Breakdown by entity type at end-2018

Percent




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Net of prudential consolidation into Banking groups. [2] Some jurisdictions were unable to provide narrowing and economic function classification data (BH, BVI, CR and PA).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

### 5.4 Economic Function 4: Facilitation of Credit Creation

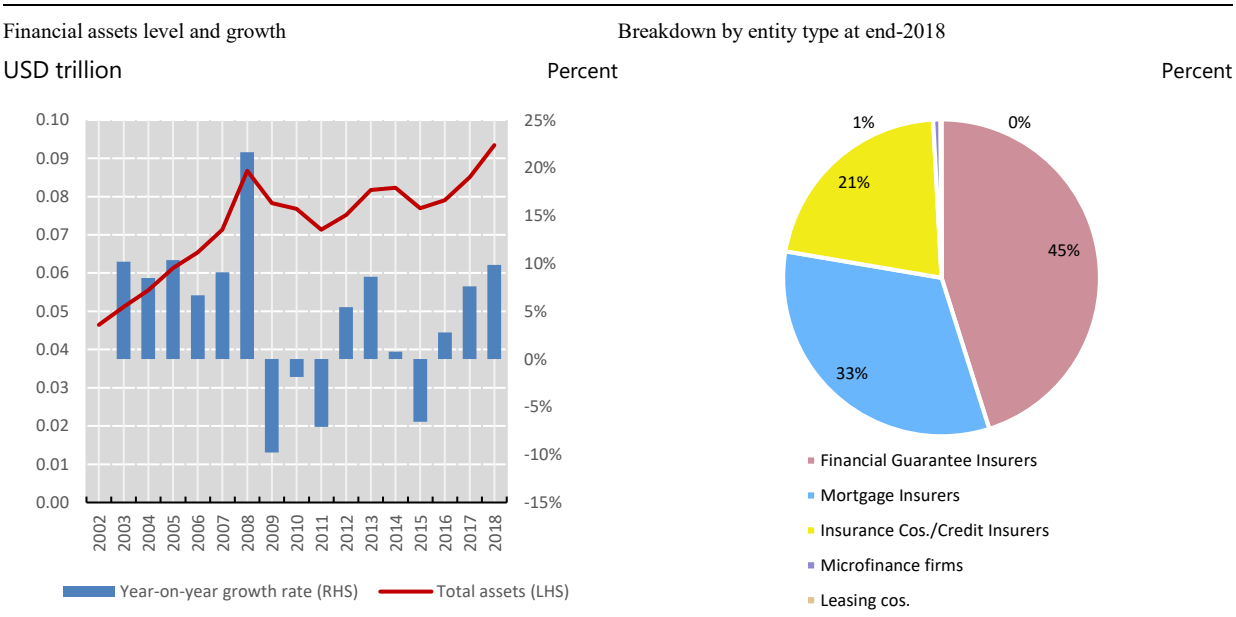
EF4 entities insure or guarantee financial products by writing insurance on structured securities, effectively providing credit enhancements to loans (e.g. guarantees or credit derivatives) made by banks as well as non-bank financial entities. This includes entities that insure or guarantee financial products by writing insurance on structured securities issued by banks and other entities, including asset-backed securitisations. EF4 entities may potentially aid in the creation of boom-bust cycles and systemic instability through facilitating credit creation that may not be commensurate with the actual risk profile of the borrowers, as well as the build-up of excessive leverage.

### *Trends in Economic Function 4*[47]

This economic function had the least assets of classified entities, at USD 77.3 billion across seven jurisdictions. On average, across jurisdictions that classified entities into this economic function, assets in this economic function grew by 9.8% in 2018, and 1.2% annually in the period between 2012 and 2017. EF4 assets are concentrated in financial guarantee insurers (45%), mortgage insurers (33%) and insurance companies/credit insurers (21%). At the country level, the EF4 assets in all jurisdictions with entities in this economic function grew, with AR and BR experiencing the largest growth (i.e. 36% and 40%, respectively).[48] Geographically, the US dominated EF4 assets as it accounted for roughly 52% of the total EF4 assets within the region, though this represented less than 1% of US' OFIs. In JA EF4 assets represented 22% of the jurisdiction's OFIs (Exhibit 5-7).

Economic Function 4 trends and composition[1, 2]

12 jurisdictions — Exhibit 5-7




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). Includes total on and off-balance sheet assets. [2] Some jurisdictions were unable to provide narrowing and economic function classification data (BH, BVI, CR and PA).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

[47] When the EF4 function is performed by a legal subsidiary of a parent company, the total balance sheet assets and off-balance sheet exposures for the subsidiary is reported. However, since the notional off-balance sheet exposure is expected to be significant for these entities, these notional amounts are converted to an on-balance sheet equivalent using credit conversion factors such as those specified in the Basel framework. If the assets of the EF4 entity cannot be identified separately, the on and off-balance sheet amount for the parent entity is reported.

[48] In the case of AR, growth rates are affected by strong inflation rates.

## 5.5 Economic Function 5: Securitisation-Based Credit Intermediation and Funding of Financial Entities

EF5 captures securitisation-based credit intermediation or funding of financial entities through investments funds (or other similar structures such as trust companies) to finance illiquid assets by raising funds from markets. Such activities, whilst they may serve other purposes, are typically used by banks and or non-bank financial entities for funding/warehousing as well as to reduce their capital requirements in bank regulations. Securitisation can facilitate the transfer of credit risk off-balance sheet and therefore reduce the funding costs for financial entities. Nonetheless, securitisations can also facilitate or aid in the creation of excessive maturity/liquidity transformation, leverage or regulatory arbitrage in the system.

### *Trends in Economic Function 5*

This economic function was the fourth most important for NBFIWG jurisdictions, as measured both by assets and share of the narrow measure. Structured finance vehicles were the most common entity type classified into this economic function, which totalled USD 1.4 trillion at end-2018. In contrast to the Global Exercise, there is less heterogeneity from the type of entities reported for the region. On average, across jurisdictions that classified entities into this economic function, assets in this economic function grew by 6.6% in 2018 but fell by 7.5% annually between 2012 and 2017. Experiences in 2018 varied, with strong growth in AR (over 31%), KY (44%) and BR (26%), and declines of 13% in CL and 16% in US (Exhibit 5-8).[49]

[49] In the case of AR, growth rates are affected by strong inflation rates.

Economic Function 5 trends and composition[1, 2]

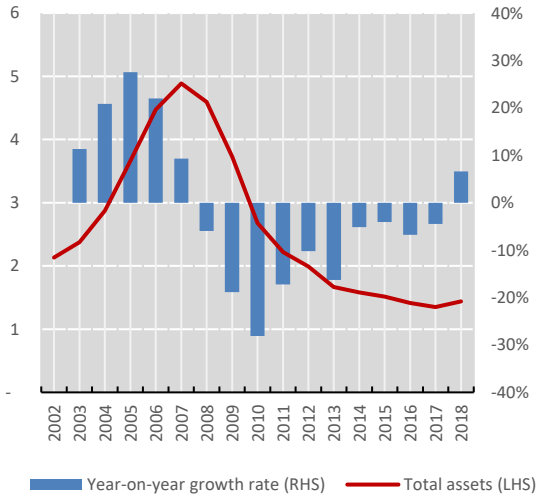
12 jurisdictions

Exhibit 5-8

Financial assets level and growth

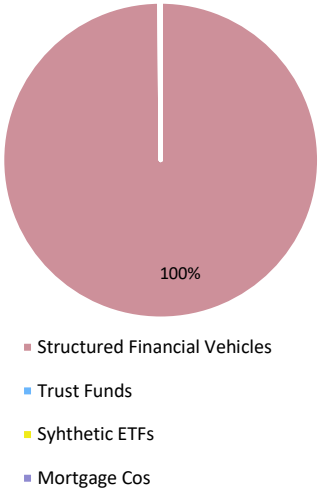
USD trillion

Percent




Breakdown by entity type at end-2018

Percent




[1] Exchange rate effects have been netted out by using a constant exchange rate (from 2018). [2] Some jurisdictions were unable to provide narrowing and economic function classification data (BH, BVI, CR and PA).

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other national data).

## 5.6 Risk Metrics

The FSB has also included a set of risk metrics or indicators tailored to help in the monitoring and assessment of potential systemic risks associated with each economic function. These indicators attempt to be informative in this regard whilst also increasing their availability and coverage across jurisdictions, as some face important data availability and granularity limitations.

A total of seven jurisdictions were able to submit partial data required as inputs for risk metrics calculations. The data collection was done for end-2017 and end-2018 data. Annex II shows the data points calculated using the data submitted for specific entity types in each economic function for the two time periods requested (2017 and 2018). The dispersion in some cases for the same type of entity types is noteworthy, and likely related in some cases to deviations of the definitions for the inputs requested. Given this possibility, any risk related conclusions need to be taken with caution. The main conclusion is that there are significant areas of opportunities for jurisdictions in the region to improve their risk metrics in the future. In particular, the

authorities are able to compare the data presented in the Annex and improve future data submissions.[50]

## 6. Innovations and Adaptation

As a final part of the monitoring exercise, jurisdictions are requested to provide information (qualitative and quantitative, if available) on the presence of innovative or non-traditional financial activities not grasped by the data collected from sectoral statistics in the macro-mapping. Overall, jurisdictions that provided this information (3 out of 16) gave a recount of the rising FinTech sectors, denoting a concern on alternative sources of financing made possible by technology. However, in some instances, the use of these technology-enabled financing platforms has moved away from credit intermediation and towards providing services that end up disintermediating instead. Notwithstanding, it is very relevant to keep track of new developments in this arena, and the monitoring exercise is committed to do so on an annual basis.

## 7. Conclusions and Recommendations

Following RCG Americas consideration about the usefulness stemming from this periodic international effort to maintain a robust surveillance of the region's financial system and in particular those portions where risks may be accumulating due to the natural evolution of financial intermediation, this annual exercise proves important. The exercise complements the FSB Global Monitoring Exercise by incorporating participation of non-FSB members. IFCs' participation, in particular, addresses an important data gap.

Whilst the NBFIWG continues to take steps to align the RCG Americas monitoring exercise with the FSB Global Exercise, the results show that important data gaps are still largely present. In addition, there is some heterogeneity in the understanding of the FSB methodology, and owing to this, some corrections have been discussed bilaterally with jurisdictions. Going forward, the data collection process may benefit from increased cooperation and interaction among international authorities with the aim of closing data gaps and increasing consistency. Risk metrics data collection is left as an area for future work. Overall, the aggregate data shows a slowdown in total OFIs' assets associated with stock market declines towards the end of 2018 and to a lesser extent with outflows from some OFIs (e.g. investment funds) largely driven by the largest jurisdiction; however, for most jurisdictions at the individual level, the sector presents positive growth rates. As for the narrow measure net of prudentially consolidated assets, the growth rate for the aggregate is consistent with past growth annualised rates.

To continue improving the monitoring and assessment of non-bank financial intermediation risks within the region, the NBFIWG recommends:

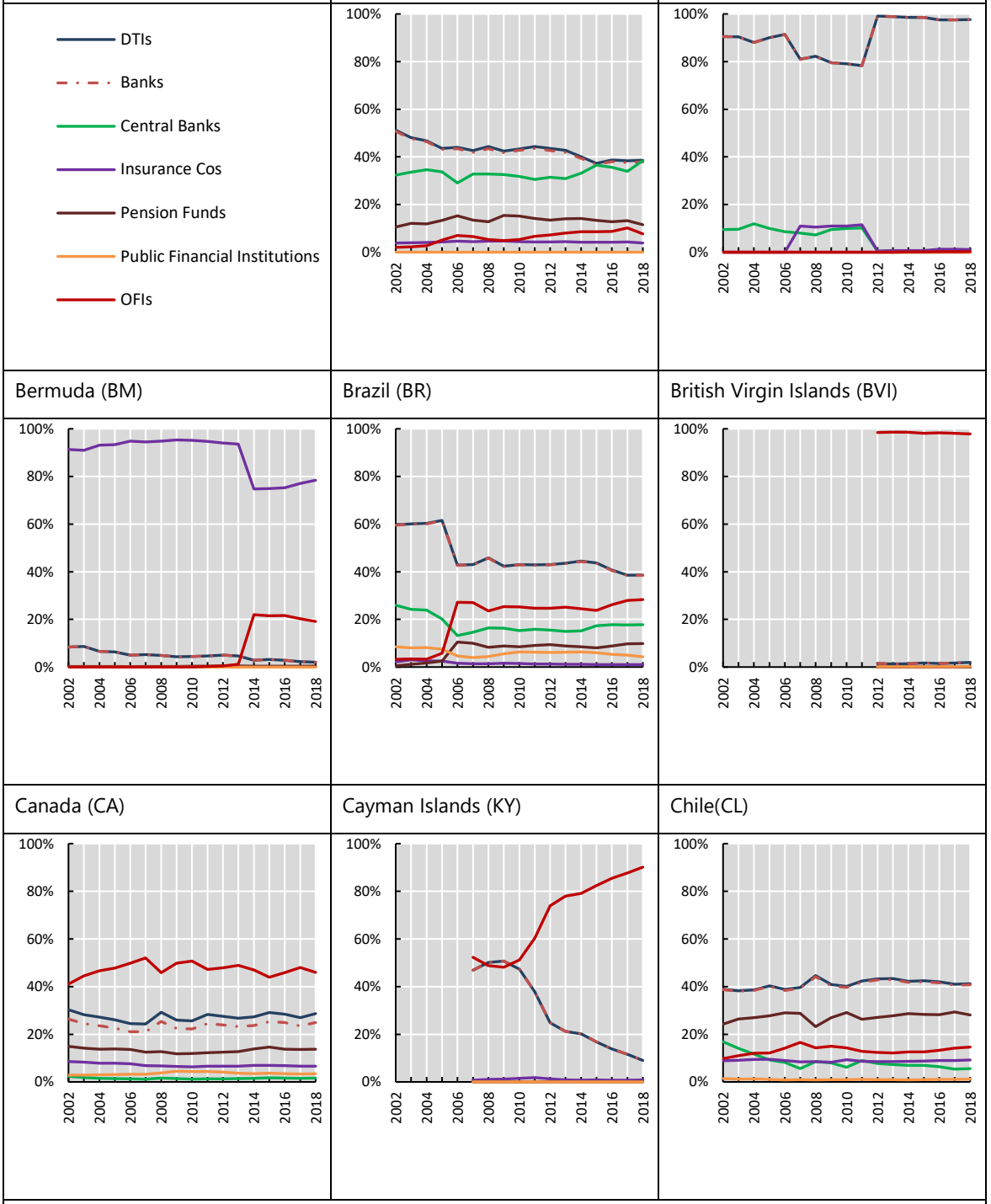
[50] To see more information on the risk metric construction, please refer to FSB's Global Monitoring Report on NBFI 2018, pp.48-49.

1. To continue enhancing and encouraging participation by jurisdictions in the region and improving data collection coverage and quality for future exercises;
2. To improve on risk metric data collection and analysis in the next report.

# Annex I: Share of total financial assets by jurisdiction

Share of total financial assets by jurisdiction (all domiciled assets)[1]
In percent

Exhibit A-1



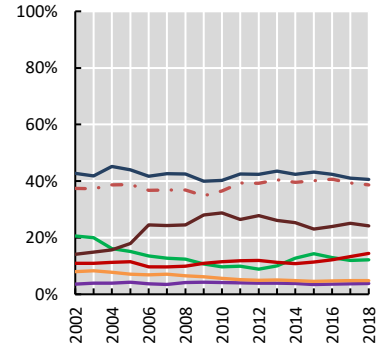

1 Based on historical data included in jurisdictions' 2019 submissions (end-2018 data).

Source: Jurisdictions' 2019 submissions (national sector balance sheet and other data); FSB RCG Americas NBFIWG calculations.

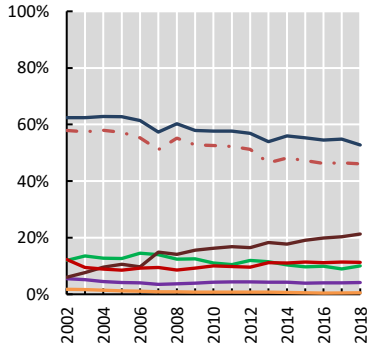
Share of total financial assets by jurisdiction (all domiciled assets)[1]

In percent

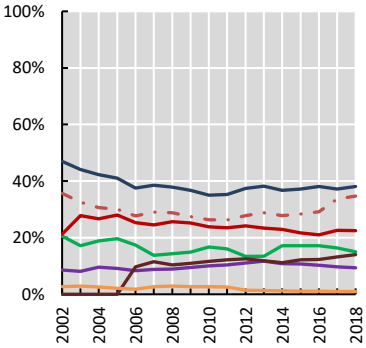
Colombia (CO)



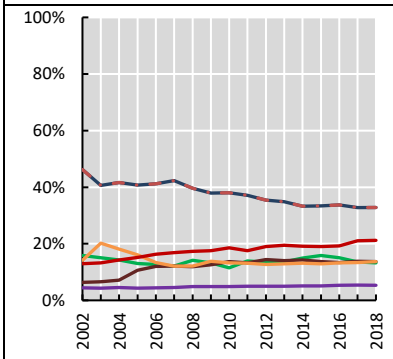

Costa Rica (CR)



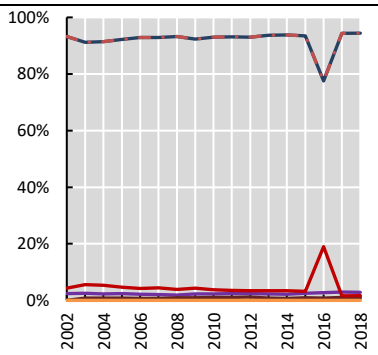

Jamaica (JA)



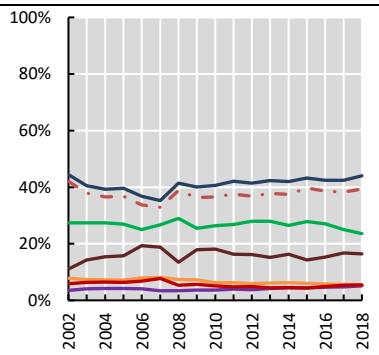

Mexico (MX)



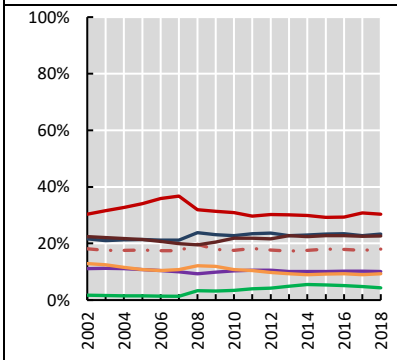

Panama (PA)



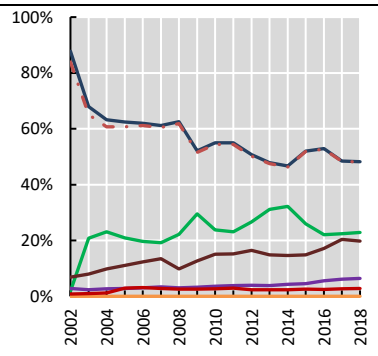

Peru (PE)



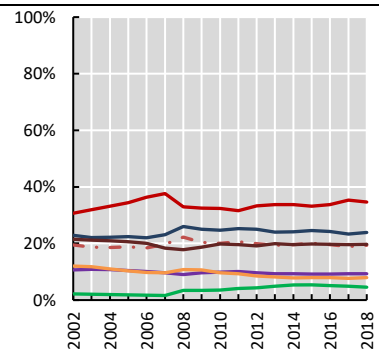

United States (US)




Uruguay (UR)




All




1 Based on historical data included in jurisdictions' 2019 submissions.

Source: Jurisdictions' 2019 submissions (national sector balance sheet and other data); FSB RCG Americas NBFIWG calculations.

# Annex II: Financial stability risk metrics

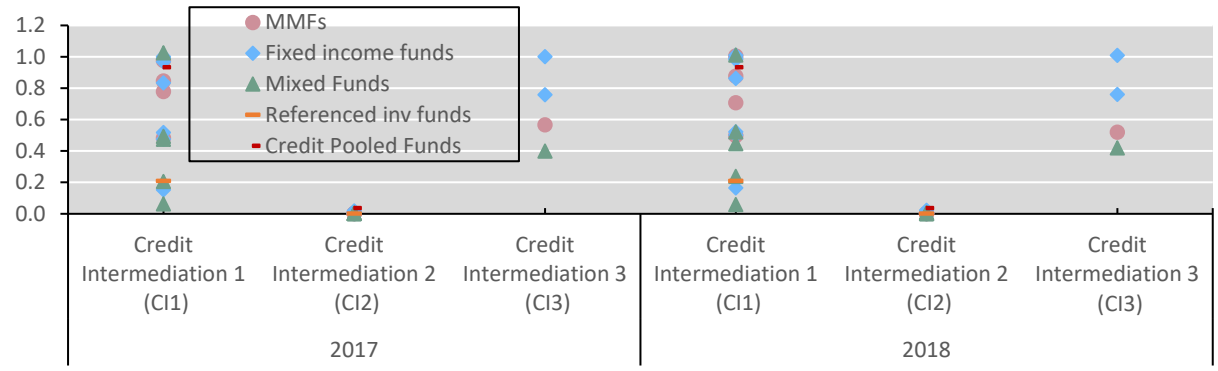
**Risk Metrics for EF1**

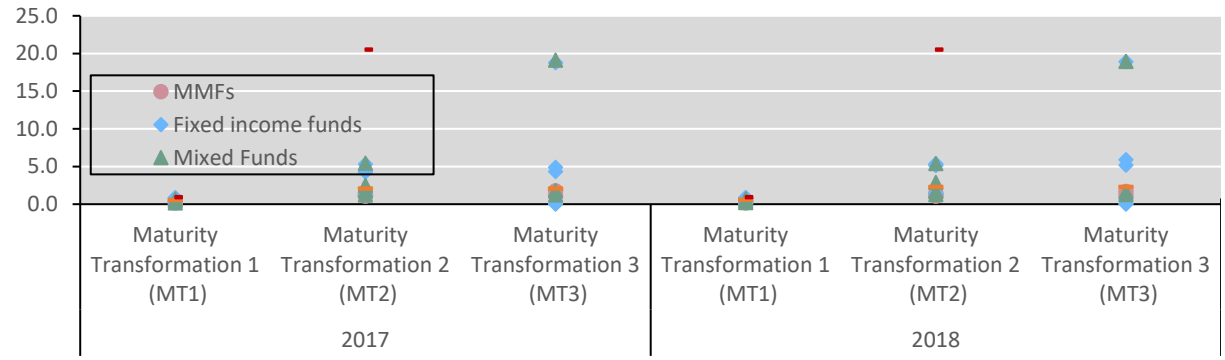
| | |
|---|---|
| **Credit Intermediation (CI)** | |
| Credit Intermediation 1 (CI1) | = credit assets / AUM |
| Credit Intermediation 2 (CI2) | = loans / AUM |
| Credit Intermediation 3 (CI3) | = (credit assets + credit off balance sheet exposures) / (AUM + total off balance sheet exposures) |
| **Maturity Transformation (MT)** | |
| Maturity Transformation 1 (MT1) | = (long term assets - long term liabilities - nonredeemable equity) / AUM |
| Maturity Transformation 2 (MT2) | = (short term liabilities [≤ 12 months] + redeemable equity [≤ 12 months]) / short term assets [≤ 12 months] |
| Maturity Transformation 3 (MT3) | = (short term liabilities [≤ 30 days] + redeemable equity [≤ 30 days]) / short term assets [≤ 3 months] |
| **Liquidity Transformation (LT)** | |
| Liquidity Transformation 1 (LT1) | = (AUM - liquid assets [narrow] + short term liabilities [≤ 30 days] + redeemable equity [≤ 30 days]) / AUM |
| Liquidity Transformation 2 (LT2) | = (AUM - liquid assets [broad] + short term liabilities [≤ 30 days] + redeemable equity [≤ 30 days]) / AUM |
| **Credit Risk Transfer (CRT)** | |
| Credit Risk Transfer 1 (CRT1) | = credit off balance sheet exposures / (AUM + total off balance sheet exposures) |
| **Leverage (L)** | |
| Leverage 1 (L1) | = AUM / NAV |
| Leverage 2 (L2) | = (AUM + total off balance sheet exposures) / NAV |
| Leverage 3 (L3) | = Gross Notional Exposure / NAV |

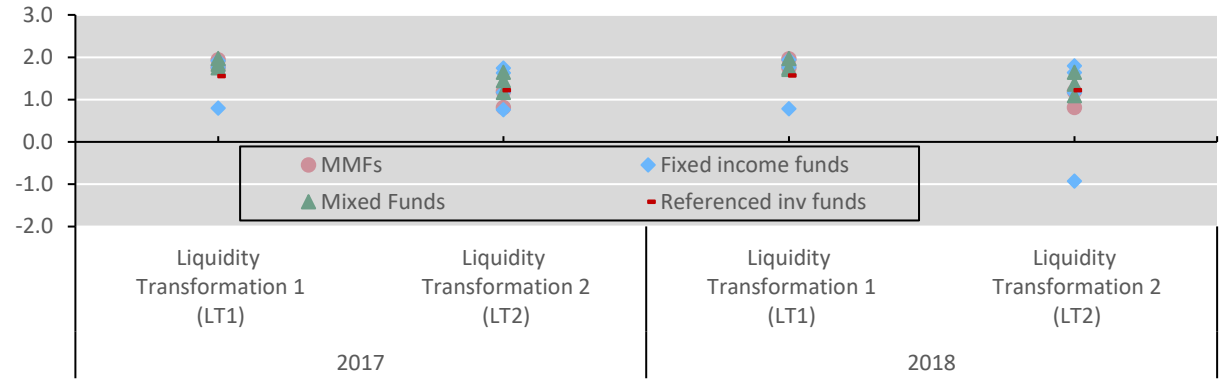
**Risk Metriics for EF2-EF5**

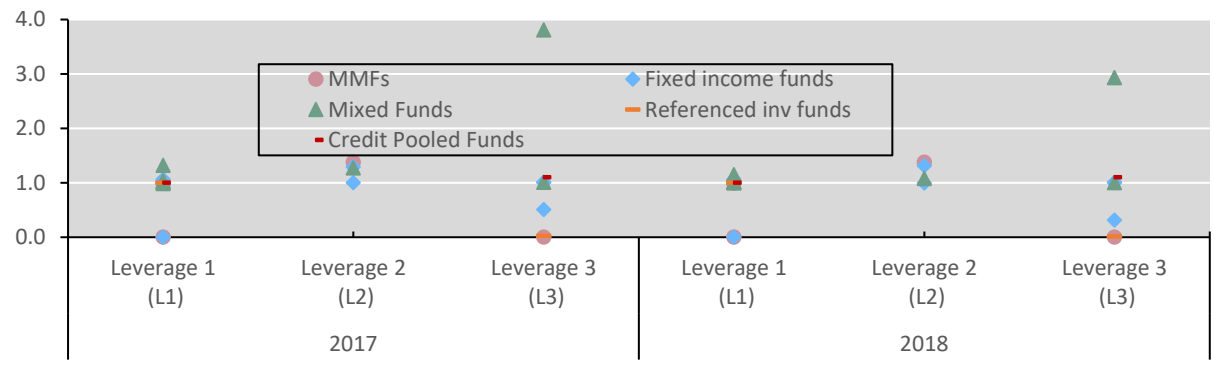
| | |
|---|---|
| **Credit Intermediation (CI)** | |
| Credit Intermediation 1 (CI1) | = credit assets / total financial assets |
| Credit Intermediation 2 (CI2) | = loans / total financial assets |
| Credit Intermediation 3 (CI3) | = (credit assets + credit off balance sheet exposures) / (total financial assets + total off balance sheet exposures |
| **Maturity Transformation (MT)** | |
| Maturity Transformation 1 (MT1) | = (long term assets - long term liabilities - equity) / total financial assets |
| Maturity Transformation 2 (MT2) | = short term liabilities [≤ 12 months] / short term assets [≤ 12 months] |
| Maturity Transformation 3 (MT3) | = short term liabilities [≤ 30 days] / short term assets [≤ 3 months] |
| **Liquidity Transformation (LT)** | |
| Liquidity Transformation 1 (LT1) | = (total financial assets - liquid assets [narrow] + short term liabilities [≤ 30 days]) / total financial assets |
| Liquidity Transformation 2 (LT2) | = (total financial assets - liquid assets [broad] + short term liabilities [≤ 30 days]) / total financial assets |
| Liquidity Transformation 3 (LT3) | = short term liabilities [≤ 30 days] / liquid assets [broad] |
| **Credit Risk Transfer (CRT)** | |
| Credit Risk Transfer 1 (CRT1) | = credit off balance sheet exposures / (total financial assets + total off balance sheet exposures) |
| **Leverage (L)** | |
| Leverage 1 (L1) | = total financial assets / equity |
| Leverage 2 (L2) | = (total financial assets + total off balance sheet exposures) / equity |

## Economic Function 1

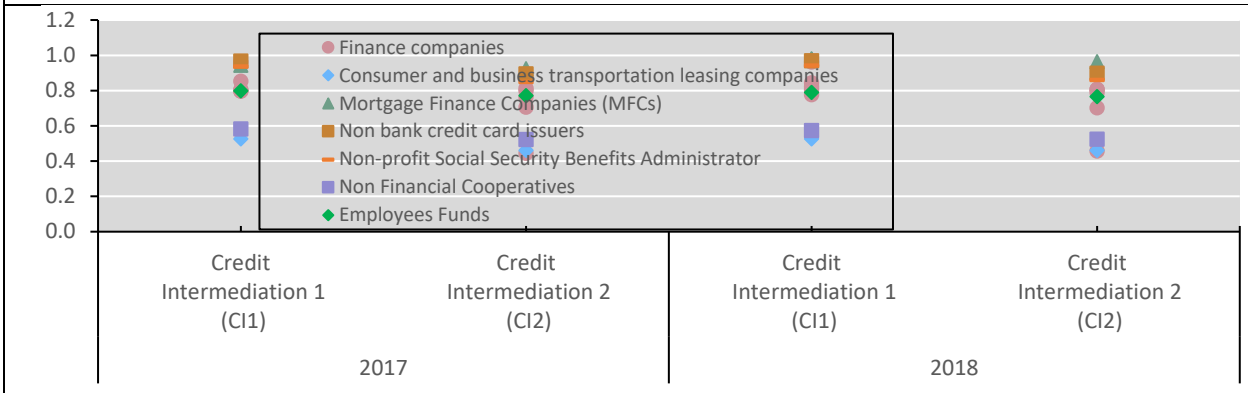


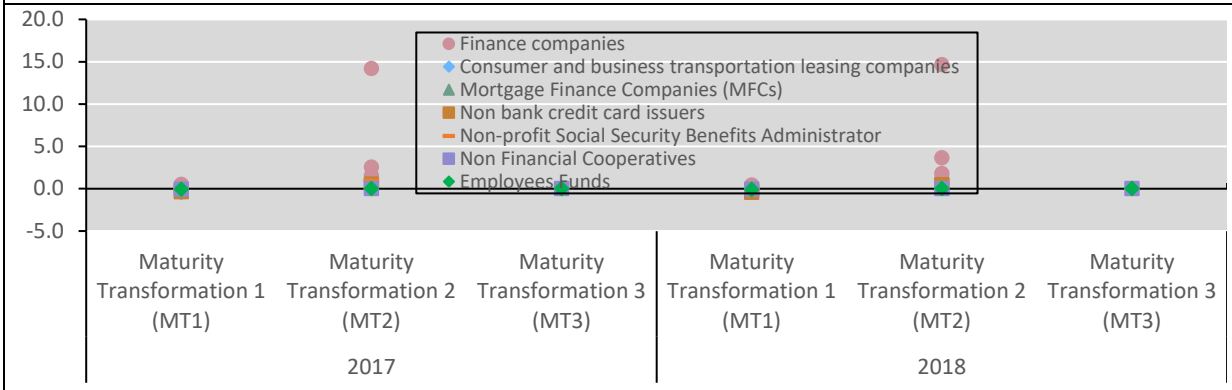



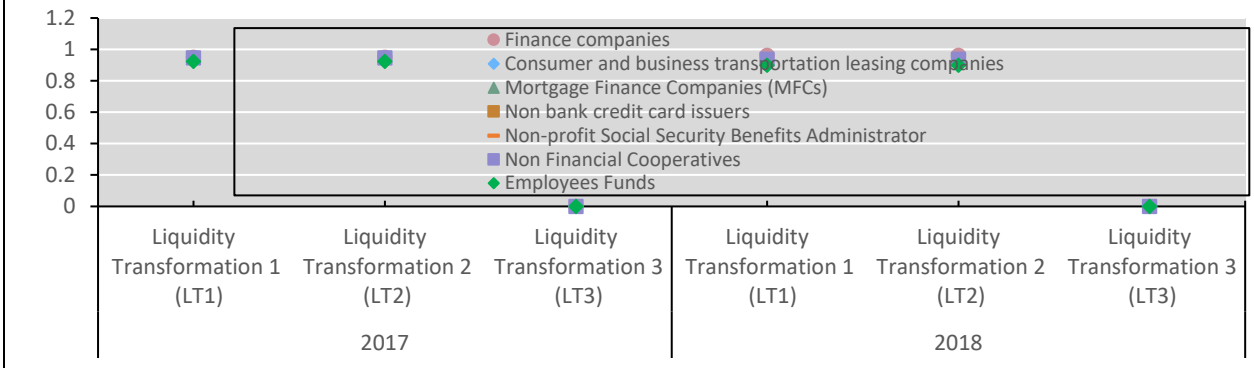



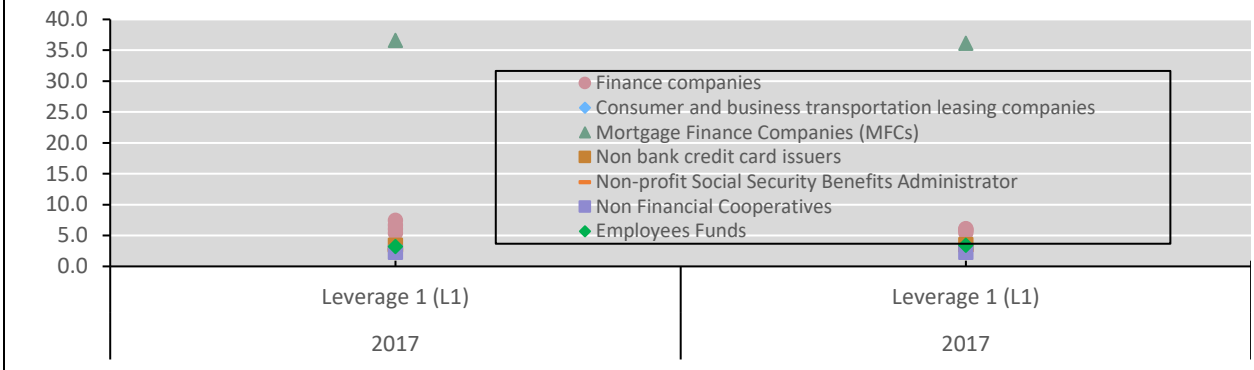



## Economic Function 2

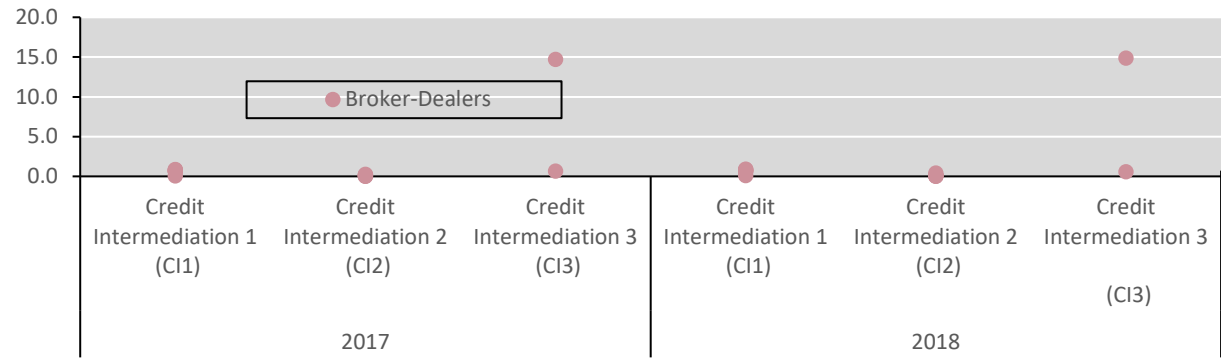


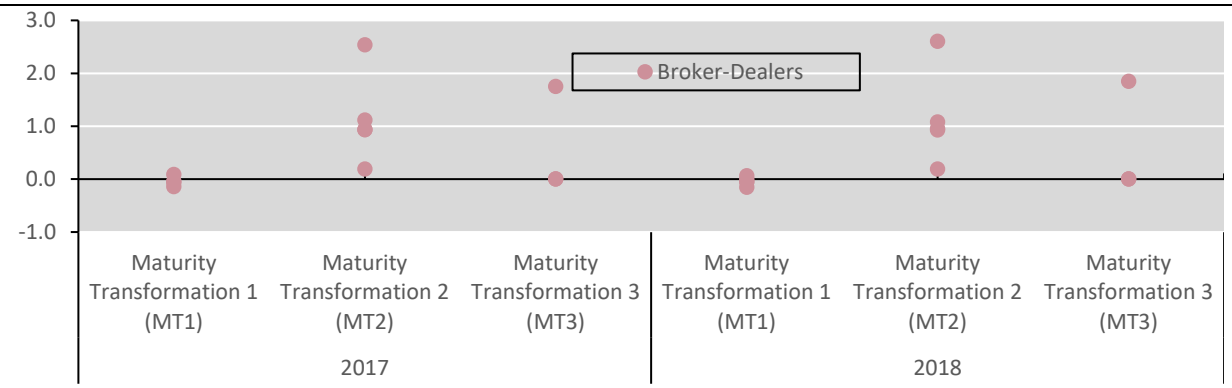



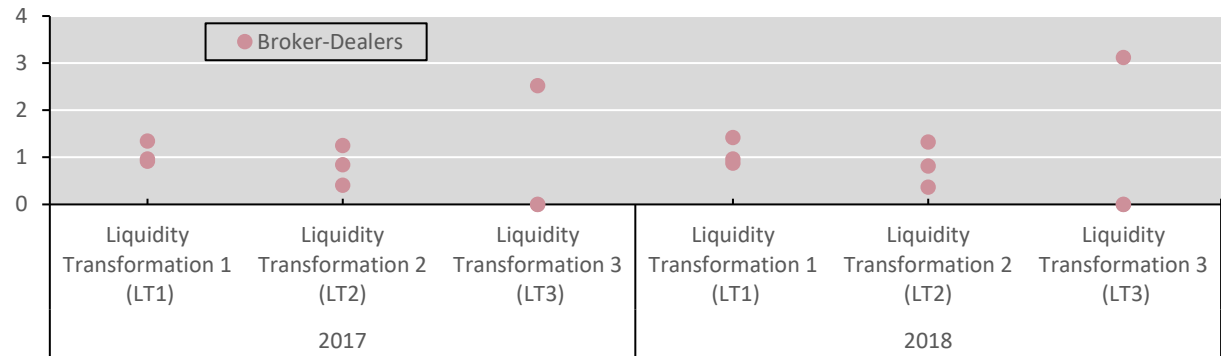



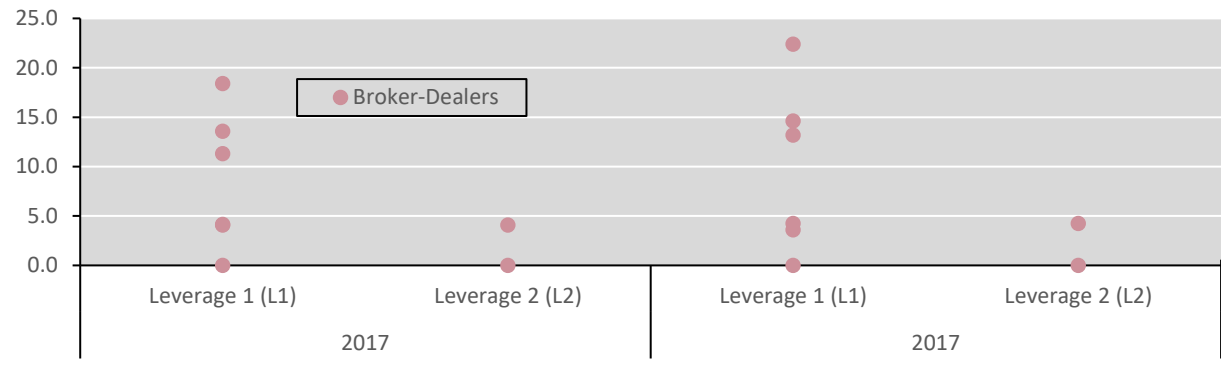



## Economic Function 3

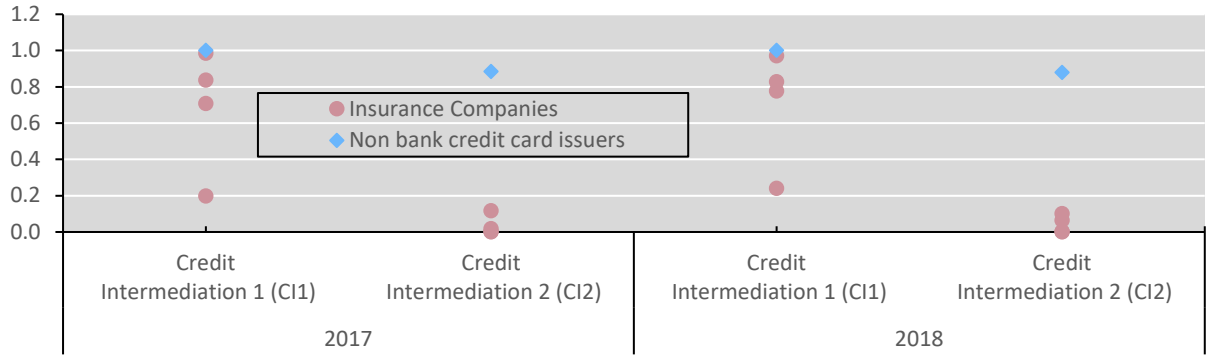


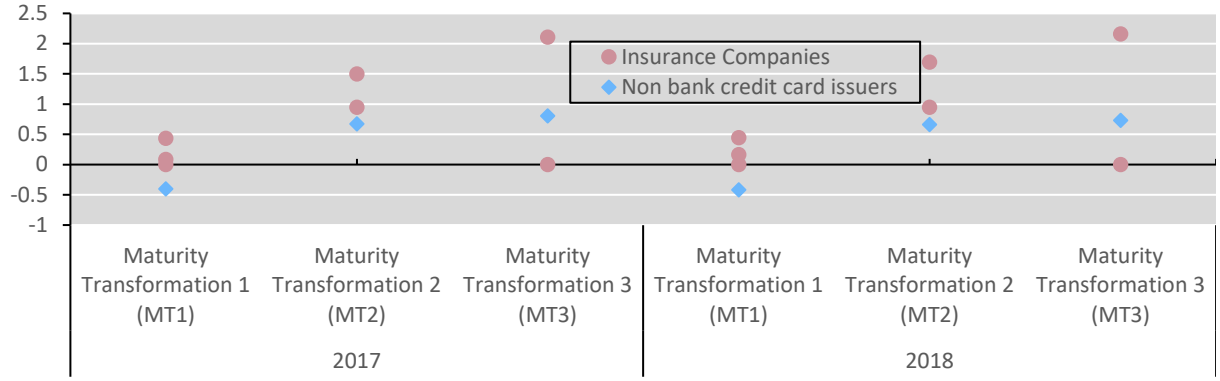



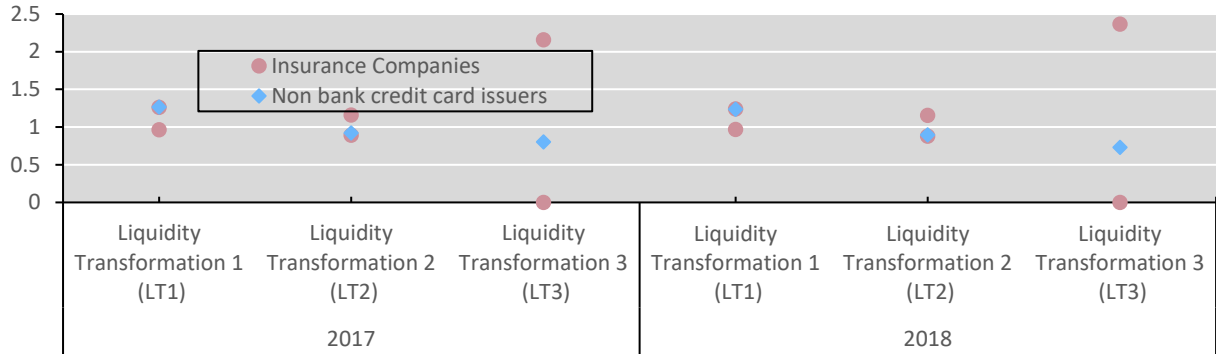



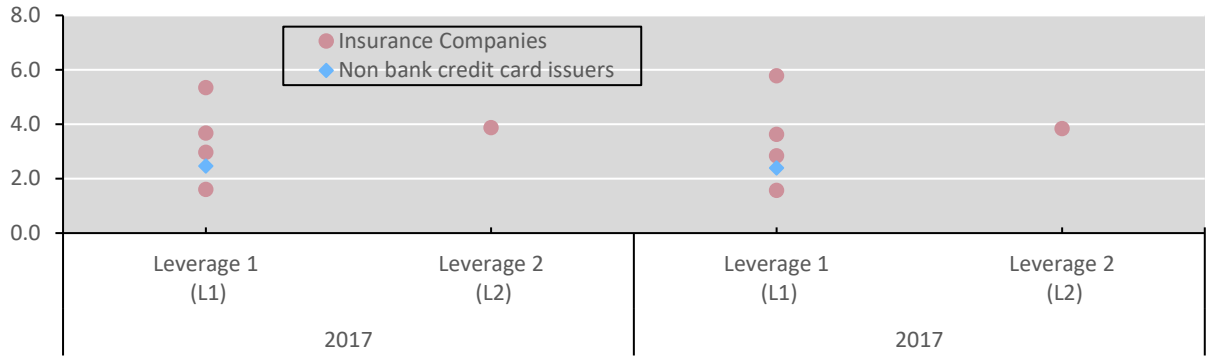



## Economic Function 4

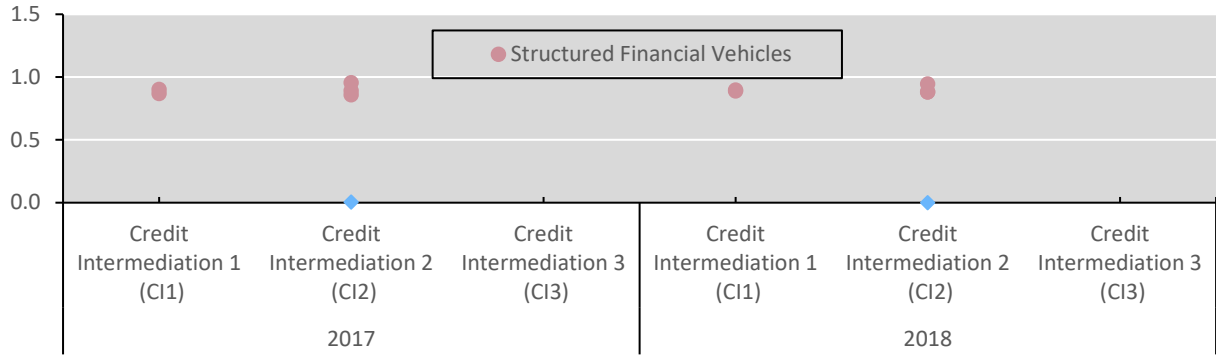


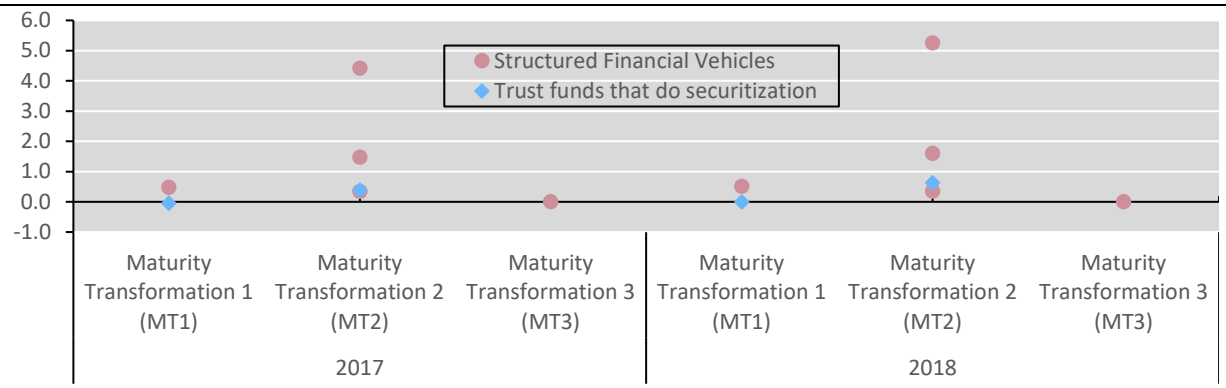



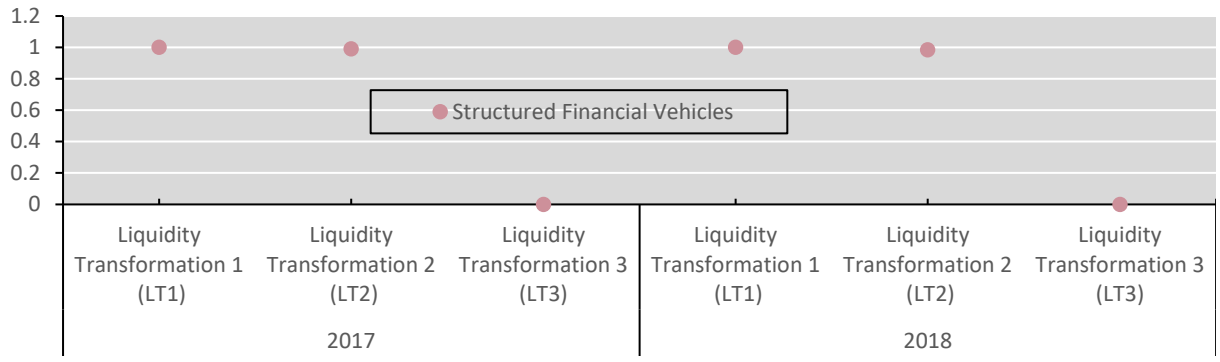



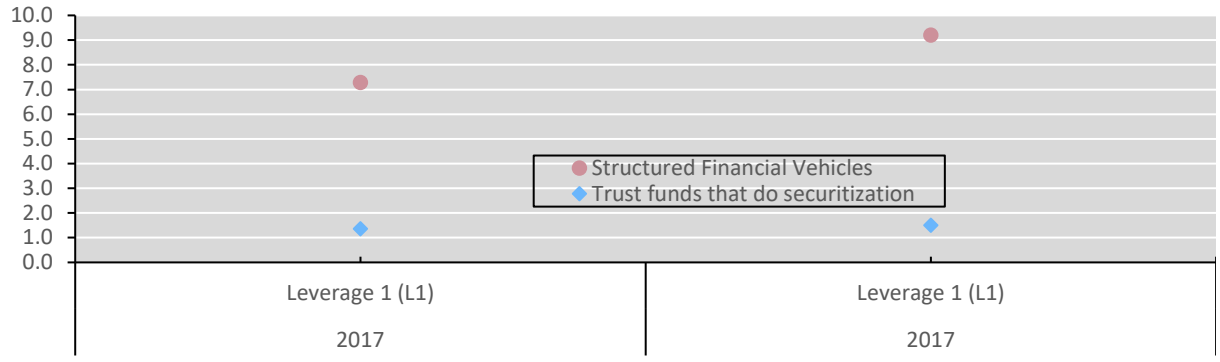



## Economic Function 5

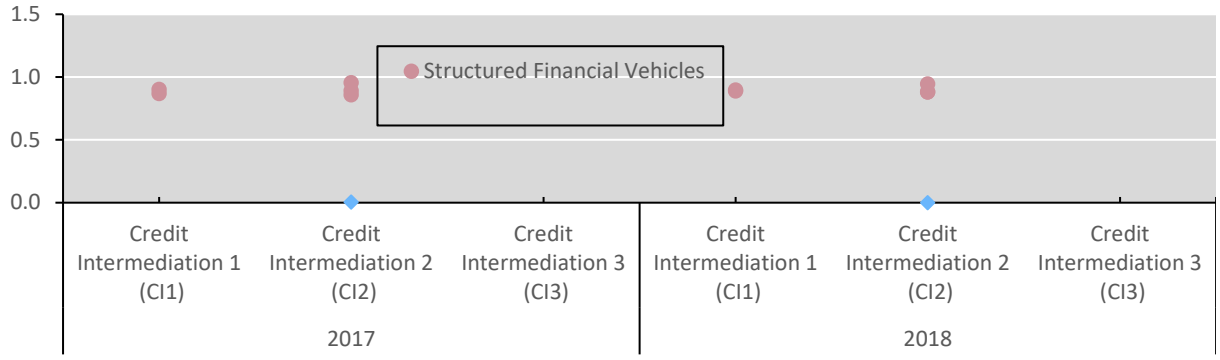


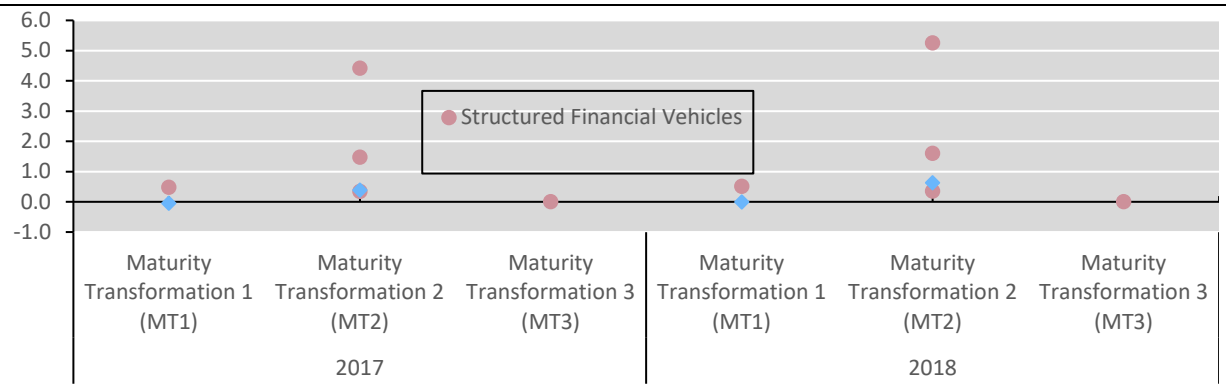



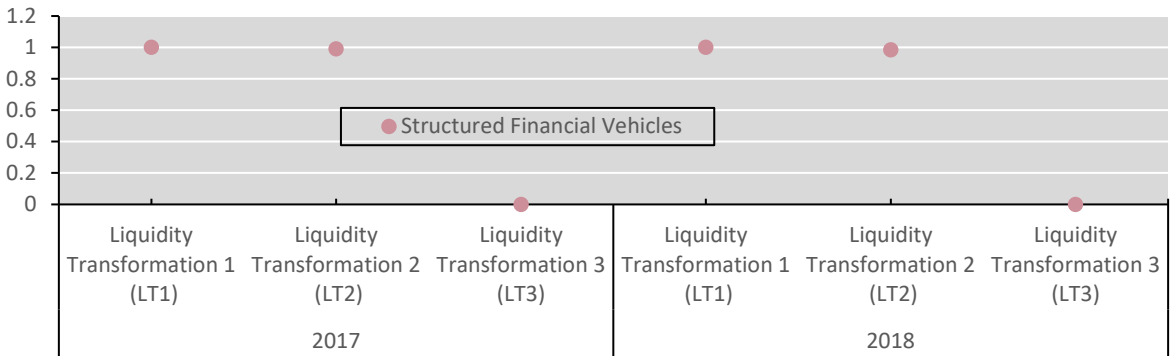



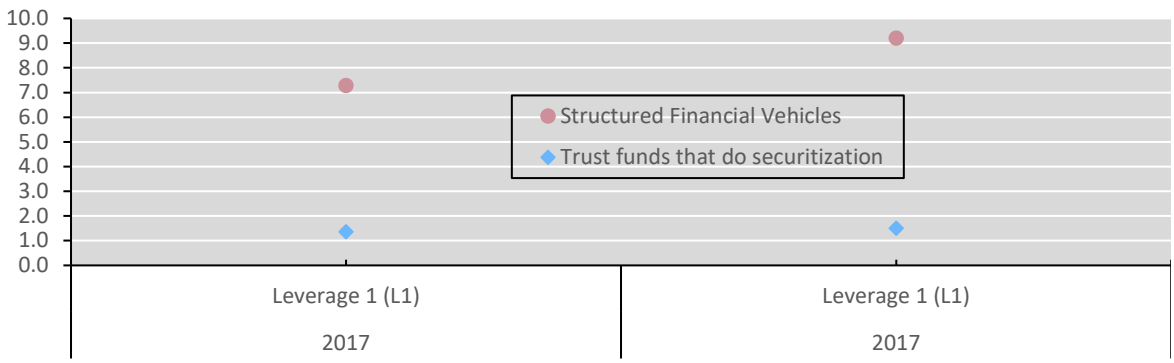



## Economic Function 5



# Annex III: Main templates for data collection exercise

**Regional Consultative Group Americas**

**Please fill in the template with figures in USD millions, converted at the exchange rate at the end of the period (Col 39)**

| STOCK of financial assets as of end-year | Col 1 | Col 2 | Col 3 | Col 4 | Col 5 | Col 6 | Col 7 | Col 8 | Col 9 | Col 10 | Col 11 | Col 12 | Col 13 | Col 14 | Col 15 | Col 16 | Col 17 | Col 18 | Col 19 | Col 20 | Col 21 | Col 22 | Col 23 | Col 24 | Col 25 | Col 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Financial Institutions (Note 2) | Central Bank | Deposit-Taking Institutions (DTC) Note 3 | of which: Banks | of which: Other | Public Financial Institutions (Note 4) | of which: Development Bank | of which: Others | Insurance Corporations (Note 5) | Pension Funds (Note 5) | of which: defined benefits | of which: defined contributions | Other Financial Intermediaries (OFIs) (Note 6) | Money Market Funds (MMF) (Note 7) | of which: constant NAV (Note 7) | of which: variable NAV (Note 7) | Public Investment Funds (Notes 9,10) | of which: equity Funds (Note 9,10) | of which: fixed income Funds (Note 9,10) | of which: commodity Funds (Note 9,10) | of which: other Funds (Note 9,10) | Non-Public Investment Funds (Notes 8,10) | of which: equity Funds (Note 8,10) | of which: fixed income Funds (Notes 8,10) | of which: commodity Funds (Notes 8,10) | of which: other funds (Notes 8,10) |
| 2002 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2003 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2004 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2005 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2006 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2007 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2009 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Data completeness* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Consistency check* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Note** (detailed definition etc.) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Source** (description, confidentiality, URL) | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | Col 27 | Col 28 | Col 29 | Col 30 | Col 31 | Col 32 | Col 33 | Col 34 | Col 35 | Col 36 | Col 37 | Col 38 | Col 39 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Real Estate Investment Trusts | of which: equity REITs and RE | of which: mortgage | Trust Companies | Finance and Microfin | Broker-Dealers | Structured Finance Vehicles | (Central Counterparties (CCP)) | Credit Unions | Non-Bank Credit Card Issuers | Others (Note 12) | Financial Auxiliaries | Exchange Rate at end of Period |
| | | | | | | | | | | | | | |

**Notes**

←: Members may complement the Flow of Funds / National Financial Accounts data with data/information from other sources, while avoiding any double-counting with existing Flow of Funds categories. If data are unavailable, please keep the relevant cell(s) blank. If end-2018 data are not available, please provide the most recent available data point in 2018 and indicate the reference date in the Note cell.

(1) Please report financial assets on an unconsolidated basis at market value (i.e. there is no consolidation between entities of the same sector or sub-sector or within a group). If financial assets are not available, please report total assets and explain that in the relevant Note cell. If unconsolidated figures are not available, please report consolidated figures and explain that in the relevant Note cell. If data at nominal value are available, please indicate that in the Note cell.

(2) The Financial Corporations column is equal to sum of columns 2, 3, 6, 9, 10, 13 and 37.

(3) Deposit-Taking Corporations include banks and other corporations that raise funds through deposits and other equivalent instruments.

(4) Please report all Public Financial Institutions under column 6, avoiding double counting with other categories.

(5) If data for Insurance Companies and Pension Funds can not be separated, please fill the aggregated number in the Insurance Companies' cells and explain that in the Note cell.

(6) Other Financial Intermediaries can be mapped to the SNA 2008 classification system as the sum of sectors S.123 (Money Market Funds) plus S.124 (Non-MMF Investment Funds) plus S.125 (Other Financial Intermediaries, except Insurance Corporations and Pension Funds) plus S.127 (Captive Financial Institutions).

(7) If data for MMFs can not be separated between CNAV and VNAV (or equivalent), please fill the aggregated number in the MMFs cells and explain that in the Note cell.

(8) Non-public funds have restrictions on type of investor, minimum subscription amount or sales method (e.g. restricted to private placement).

(9) If data for Other Investment Funds can not be separated between Equity Funds, Commodity Funds and Fixed Income Funds, please fill in the aggregate number in the Other Investment Funds cells and explain that in the Note cell.

(10) Please provide data for funds that are domiciled in your jurisdiction. For jurisdictions that are (also) home to fund managers managing funds domiciled offshore, please provide financial assets under management by fund managers registered/licenced in your jurisdiction but domiciled offshore at the end of the period in the Note cell. If possible, please also provide the name of the jurisdiction in which these funds are domiciled.

(11) Equity Real Estate Investment Trusts (REITs) and RE Funds only invest in and own physical properties and their revenues therefore come principally from their properties' rents. Mortgage REITs and RE Funds do not invest in physical real-estate but derive most of their income from investment and ownership of debt instruments, such as property mortgages or MBS that support real-estate investments.

(12) Please use these cells to report any unidentified category, as relevant.

(13) If your Flow of Funds / National Financial Accounts data distinguish Financial Auxiliaries, please describe what they are and provide examples in the Note cell. Please only report financial assets not reported in other specified categories.

(14) If available, please report these memo items directly from your Flow of Funds / National Financial Accounts data. Note, in many cases Flow of Funds may not be granular enough to fill in the main table and need to be complemented with data sources from outside Flow of Funds. In that case, there will be a residual between the sum of Financial Corporations (Col 1) and the total for Financial Corporations from Flow of Funds (S.12).

(15) Please indicate the sources used to fill in this template (e.g. supervisory data, market data). For published data, please indicate the compilation agency, publication name, table number, and series ID.

## Template for International (Offshore) Financial Sector Entities (Note 1)

(USD mil)

| STOCK of financial assets as of end-year | Col 1 | Col 2 | Col 3 | Col 4 | Col 5 | Col 6 | Col 7 | Col 8 | Col 9 | Col 10 | Col 11 | Col 12 | Col 13 | Col 14 | Col 15 | Col 16 | Col 17 | Col 18 | Col 19 | | Col 20 | Col 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | of which: | | | | | of which... | | | | | of which... | | | | | | |
| | Assets to Banks (Note 2) | Liabilities to Banks (Note 2) | **Financial Institutions** =(col4+col5+col8) | Banks (Note 3) | **Insurance Companies** | *Pure Insurers* | *Others* | **Other Financial Intermediaries (OFI's)** | Money Market Mutual Funds | Public Funds (Domestic Template) | equity funds | fixed income/bond funds | other funds | Commodity Funds | **Non Public/Offshore Investment Funds** | *Equity Funds* | *Fixed Income/Bond Funds* | *Other Funds* | *Commodity Funds* | *Real Estate Investment Trusts (REITs) and Funds* | Cat Bonds & Special Purpose Insurers | Structured Finance Vehicles | Others (Note 4) |
| 2002 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2003 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2004 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2005 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2006 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2007 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2008 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2009 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2010 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2011 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2012 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2013 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2014 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2015 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2016 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2017 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| 2018 | | | 0 | | 0 | | | 0 | | 0 | | | | | 0 | | | | | | | |
| Note (Detailed definition etc.) | | | | | | | | | | | | | | | | | | | | | | |

***: Members may complement the Flow of Funds / sector balance sheet data with other information. If data is unavailable, please fill in "N/A". If the data has value of zero write zero or keep it blank. If end-2018 data is not available, please provide the most recent available data point and indicate the reference date**

**Please indicate here whether you are reporting in the above financial assets (preferred) or total assets:** Please indicate financial assets or total assets

**Blue columns contain a formula; please do not modify**

Note 1: IFC entities are defined on the basis that they exclusively (or almost exclusively) conduct financial transactions with non-residents. Assets should be recorded in these columns.
Note 2: Assets and liabilities held by the offshore banks with respect to domestic banks.
Note 3: This category would include both subsidiaries and branches, and include mainly banks that have licenses that limit their activities with residents.
Note 4: These could include OFIs not already identified, such as finance companies.

## Annex IV: NBFIWG Membership List

### Regional Consultative Group for the Americas

#### Non-Bank Financial Intermediation Working Group Members

| | | |
|---|---|---|
| **Co-Chairs** | Fabrizio López-Gallo | Financial Stability General Director<br>Central Bank of Mexico |
| | Leo Mucheriwa | Assistant Director, Financial Stability<br>The Bermuda Monetary Authority |
| ARGENTINA | Manuel Duarte Inchausti | Deputy Manager<br>Macroprudential Risk Monitoring Department (Capital Markets Analysis) |
| BAHAMAS | Sharon Branch | Senior Economist<br>Central Bank of the Bahamas |
| BARBADOS | Sadie P.O. Dixon | Legal Counsel<br>Central Bank of Barbados |
| BERMUDA | Marcelo Ramella | Director of the Financial Stability Department<br>Bermuda Monetary Authority |
| BRAZIL | Frederico Souza | Head of Division, Financial Stability System Monitoring Department<br>Banco Central do Brasil |
| | Irineu Hiroshi Yokoo | Coordinator, Financial System Monitoring<br>Banco Central do Brasil |
| BRITISH VIRGIN ISLANDS | Kenneth B. Baker | Deputy Managing Director, Regulation, Banking, Insolvency, Fiduciary Services Division<br>British Virgin Islands Financial Services Commission |
| CANADA | Guillaume Bédard Pagé | Director, Financial Market Data Analytics<br>Bank of Canada |
| CAYMAN ISLANDS | Goerlich, Sebastian | Head of Division, Financial Stability & Statistics<br>Cayman Islands Monetary Authority |
| CHILE | Fernando Sepúlveda | Senior Economist, Financial Policy Division<br>Central Bank of Chile |
| COLOMBIA | Eduardo Yanquen Briñez | Analyst<br>Banco de la República, Colombia |
| COSTA RICA | Josué Cortés Segura | n.a. |

| | | |
|---|---|---|
| HONDURAS | Julieta Suazo Franco | Head of Financial Stability and Regulation Division, Financial Stability<br>Central Bank of Honduras |
| JAMAICA | Leo-Rey Gordon | Head of Financial Stability Department<br>Bank of Jamaica |
| MEXICO | Ana Mier y Terán | Manager<br>Non-bank Financial Intermediation Risk Analysis, Financial Stability<br>Central Bank of Mexico |
| | Vanessa Veintimilla Brando | Director General International Affairs<br>National Banking and Security Commission |
| PANAMA | Nahila Melgar | Director of Risk<br>Panama Superintendence of Banks |
| PERU | Carlos A. Ballón Ávalos | Manager, Monetary Operations and Financial Stability<br>Central Bank of Peru |
| UNITED STATES | Charles DeLuca | International Economist<br>U.S. Treasury Department |
| URUGUAY | José Antonio Licandro | Head of Financial Regulation<br>Superintendence of Financial Services<br>Central Bank of Uruguay |