# Financial Stability Board

# Regional Consultative Group for the Americas

# Working Group on Shadow Banking

# Third Report

*Notice*

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***A list of members of the RCG for the Americas can be found at [http://www.fsb.org/wp-content/uploads/rcgamericas.pdf](http://www.fsb.org/wp-content/uploads/rcgamericas.pdf)***

10 May 2017

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## 1. Introduction

"Shadow banking" (SB) can broadly be described as "credit intermediation involving entities and activities outside the regular banking system".[1] Although intermediating credit through non-bank or market-based channels has important advantages (specifically in terms of innovation, efficiency, diversification and competition), such channels may also become a source of systemic "bank-like" risk. Systemic risk may arise when SB intermediation activities are structured in such a way that they have bank-like risk characteristics (e.g., maturity and liquidity transformation, accompanied by leverage). This potential vulnerability may be magnified when the banking system has material exposures or connections to SB activities. A comprehensive monitoring of the size and structure of the SB system, and its connections with other areas of the financial system, is therefore crucial in order to measure and assess the underlying risks and, where needed, take measures to address them. Mitigating the build-up of systemic risk, strengthening overall financial stability oversight and ultimately transforming SB into "resilient market-based financing" are key financial reform priorities for the G20 and the Financial Stability Board (FSB).

This report presents the results of the third SB monitoring exercise in the Americas. This exercise was designed and conducted by the Working Group on Shadow Banking (WGSB) set up by the Regional Consultative Group of the Americas (RCGA) of the FSB, and uses data as of end-2015 (when available) for 17 jurisdictions which together account for approximately 97% of GDP in the region.[2]

The monitoring exercise of the WGSB is the result of the decision made by the RCGA during its 3rd meeting (held in Bermuda in December 2012) to follow on earlier work at a global level by the FSB. The main objective of the WGSB exercise is to achieve a better understanding of the scope and structure of SB in the Americas, and to identify specific characteristics of the SB sector in these jurisdictions. Since October 2011, when the FSB set out its initial recommendations to "strengthen oversight and regulation of SB", the FSB has carried out five annual SB monitoring exercises published in a series of Global Shadow Banking Monitoring Reports (GSBMRs).[3] The

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1 Some authorities or market participants prefer to use other terms such as "market-based financing" instead of "shadow banking". The use of the term "shadow banking" is not intended to cast a pejorative tone on this system of credit intermediation. However, the FSB is using the term "shadow banking" as this is the most commonly employed and, in particular, has been used in earlier G20 communications. See http://www.fsb.org/2015/11/global-shadow-banking-monitoring-report-2015/.

2 The jurisdictions included are: Argentina, Barbados, Bermuda, Bahamas, Brazil, British Virgin Islands (UK), Canada, Cayman Islands, Chile, Colombia, Costa Rica, Jamaica, Mexico, Panama, Peru, Uruguay and the United States.

3 See "Shadow Banking: Oversight and Regulation", available at: http://www.fsb.org/wp-content/uploads/r_111027a.pdf. For the Global Shadow Banking Monitoring Reports of 2012 to 2016, see: http://www.fsb.org/publications/?policy_area%5B%5D=14.

2016 GSBMR included data for 28 jurisdictions (including the Euro Area as a whole) which together account for approximately 80% of global GDP.

The focus of earlier monitoring exercises by the FSB has traditionally been a "macro-mapping" of the SB system based on national Flow of Funds and Sector Balance Sheet data. The exercises are based on the use of data templates that consider all bank and non-bank financial intermediation to ensure that data gathering and surveillance cover the areas where SB-related risks to the financial system might arise. The aggregate measure of all non-bank financial intermediation may be referred to as the Monitoring Universe of Non-bank Financial Intermediation (or "MUNFI"). However, the MUNFI captures activities and institutions that do not strictly meet all the characteristics of the SB definition laid out by the FSB. Not all activities included in the MUNFI feature bank-like risks or constitute a potential source of systemic risk for the financial system. Accordingly, the GSBMRs of 2013 and 2014 narrowed the scope of the monitoring by filtering out non-bank financial activities within prudentially consolidated banking groups and entities not directly involved in credit intermediation (e.g. equity investment funds). As a result, this "Narrow Measure" more accurately reflects the size and composition of the SB sector.[4]

Since its first regional SB monitoring exercise, published in 2014, the WGSB has strived to adapt the "macro-mapping" methodology of the FSB as follows: [5]

1. The WGSB modified the standard FSB data template to better reflect the specific characteristics of financial systems in the Americas; in particular, the role of public sector financial institutions was identified and investment funds were split into money market mutual funds, private investment funds and public investment funds.[6]

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4 *See, infra*, Section 3.5, "Narrowing Down," for a more detailed discussion of the Narrow Measure. The 2015 GSBMR introduced an activity-based approach to further narrow the focus of the exercise to those credit intermediation activities outside the regular banking system where systemic risk may occur. Specifically, the exercise classifies non-bank financial entities into five "economic functions" through which "non-bank credit intermediation may pose bank-like systemic risks to the financial system". These economic functions are outlined in "Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities", August 2013 (http://www.fsb.org/2013/08/r_130829c/). They are: (i) management of collective investment vehicles with features that make them susceptible to runs (e.g. fixed income funds, money market funds, credit hedge funds); (ii) loan provision that is dependent on short-term funding (e.g. finance companies); (iii) intermediation of market activities that is dependent on short-term funding or on secured funding of client assets (e.g. broker dealers) ; (iv) facilitation of credit creation (e.g. credit and mortgage insurers); and (v) securitisation-based credit intermediation and funding of financial entities (e.g. asset-backed commercial paper). The WGSB decided to follow this approach only on a trial basis for a set of volunteering countries. The results of this trial are not published in this report, but are expected to serve as the basis for future monitoring exercises.

5 See the *Report on Shadow Banking in the Americas (2014)*, available at: http://www.fsb.org/2014/08/r_140822b/.

6 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. Private funds, in contrast, are not public and have similar characteristics to hedge funds.

2. A second template was developed to capture offshore SB activities in international financial centers (IFCs) and their relationship with the onshore financial system. This template was motivated by the activities of several jurisdictions in the RCGA that provide significant offshore financial services as IFCs.[7] These activities represent an important gap in the FSB's GSBMRs because large volumes of bank and non-bank credit intermediation activities flow through IFCs. This template provides a starting point from which the GSBMR can include IFCs in the future.
3. The WGSB identified four types of SB entities in the region that may merit further attention because of the potential risk their activities pose to financial stability: open-ended investment funds that hold illiquid assets; large and highly leveraged broker-dealers; non-bank deposit-taking institutions; and finance companies.

The second SB report of the WGSB was published in October 2015.[8] Consistent with the recommendations from the first report, the WGSB expanded its membership to include other IFCs and modified the reporting templates based on the experience from the first exercise. Crucially, the WGSB also conducted questionnaires on non-bank deposit taking institutions and on broker-dealers (two of the four types of SB entities identified earlier to merit further attention).[9] A summary of findings and recommendations from the second report of the WGSB was published as an annex to the 2015 GSBMR. Among other findings, the second report highlighted the growth in the share of other financial intermediaries (OFIs) in total financial assets in the region.

Following from the recommendations outlined in the second report of the WGSB, this third report presents, together with the "macro-mapping" analysis, a Narrow Measure of SB consistent with the 2013 and 2014 GSBMRs.[10] To do this, the WGSB modified its previous templates to identify non-bank financial activities within consolidated banking groups to be excluded from the Narrow Measure and focused on SB entities that may entail bank-type risks. In addition, this exercise also followed the recommendations of the second report by including a questionnaire on investment funds designed by the WGSB.[11] This questionnaire seeks to gather information on the largest

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7 These IFCs include: Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, and Panama. Cayman Islands, Panama and Uruguay were WGSB members and completed the first IFC data template. After the first WGSB report, Uruguay decided not to participate in the second IFC monitoring exercise because its IFC activities were not significant.

8 See the *Report on Shadow Banking in the Americas (2015)*, available at: [http://www.fsb.org/2015/10/working-group-on-shadow-banking-second-report/](http://www.fsb.org/2015/10/working-group-on-shadow-banking-second-report/).

9 The WGSB held a two-day workshop in Panama in November 2014 to review the results of the monitoring exercise and the two questionnaires.

10 The 2015 and 2016 GSBMRs estimated the measure of SB using an "activity-based" approach based on economic functions. The WGSB decided to follow this approach only on a trial basis for a set of volunteering countries. The results of this trial are not published in this report, but are expected to serve as the basis for future monitoring exercises.

11 The motivation for the focus on investment funds is outlined in the first report of the WGSB.

subsector of OFIs in the region, also identified to merit further attention because of their potential risks to financial stability in the Americas.[12]

Several findings resulted from the monitoring exercise employing the MUNFI and Narrow Measures of non-bank financial intermediation activities. The most important include:

- The MUNFI, comprised of OFIs, insurance corporations and pension funds, reached just over USD 60 trillion (tn) in the Americas at end-2015.[13]
- The Narrow Measure of shadow banking, adopted for the first time by the WGSB this exercise and which excludes pension funds, insurance companies, equity funds and prudentially consolidated entities, is USD 17.5 tn, or 29% of MUNFI. These totals do not include offshore assets of international financial centers.[14]
- When measured in local currencies, all OFI subsectors grew, on average across participating jurisdictions, in 2015. Investment funds continue to be the largest driver of growth in OFIs since 2008.
- Offshore assets in IFCs in the Americas grew from USD 7.9 tn to USD 8.1 tn between 2013 and 2015. Of that USD 8.1 tn total, USD 1.4 tn represent assets of banks, USD 0.7 tn of insurance companies and pension funds, and USD 6.1 tn of other financial intermediaries (including investment funds and securitized vehicles).[15] The OFI sector in the Cayman Islands drove this growth, rising to USD 5.8 tn in 2015, from USD 5.1 tn in 2013.

The main results from the questionnaire on investment funds, reflecting responses from 12 jurisdictions[16], can be summarized as follows:

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[12] The WGSB held a two-day workshop in Colombia in October 2016 to review the results of this monitoring exercise.

[13] *See infra*, Sections 3.1, 3.2, and 3.3, for a more detailed discussion of the MUNFI.

[14] *See, infra*, Section 3.5, "Narrowing Down," for a more detailed discussion of the Narrow Measure.

[15] It should be noted that the narrowing down approach used for domestic assets of other financial intermediaries was not applied in the context of the data relating to international financial centers.

[16] Respondents were Argentina, Bermuda, Canada, Cayman Islands, Chile, Colombia, Costa Rica, Jamaica, Panama, Peru, Mexico and the United States. Note that some responding countries, as they have for other exercises, provided a limited subset of data on fund types in their jurisdictions, such that the results do not represent the total number and aggregate size of all funds in that jurisdiction. For example, the US response provided data only on bond mutual funds, bond ETFs, hybrid mutual funds, hybrid ETFs, and "special" mutual funds (alternative credit strategies mutual funds that may invest in less traditional fixed income products such as structured products (e.g., collateralized mortgage obligations)). The US response to the investment fund questionnaire does not cover other open-end funds, including equity mutual funds, equity ETFs, and money market funds. The US response also does not cover closed end funds, REITs, or hedge funds. The aggregate total net assets of the mutual funds and ETFs that are not covered by the US response is approximately USD 11.3 tn. See Appendix 3 for a copy of the questionnaire and Annex 4 for a detailed list of the scope of jurisdictions' responses.

- Canada, the Cayman Islands, and the United States reported the most investment fund assets among the 12 responding jurisdictions in the Americas. Responses to the funds questionnaire covered 21,000 funds as at end 2015 with total net assets (NAV) of approximately USD 11 tn. Of the USD 11 tn NAV reported, Canada, Cayman Islands and the United States account for 16%, 33%, and 48% respectively.

- The number of unregulated funds in the Americas was not reported except in Panama and Peru. As at the end of December 2014, there were 35 unregulated funds reported by Panama and 70 unregulated funds reported by Peru.

- Jurisdictions reported the total NAV for the top 10 funds, for each type of investment fund reported in that jurisdiction. The total NAV for the top 10 funds in each fund type for ten out of twelve participating jurisdictions was approximately USD 2.4 tn.[17]

- Most of the jurisdictions reported that liquid assets are defined by legislation or regulations, with the exception of Bermuda, the Cayman Islands, Panama and Jamaica. Approximately half of respondents reported that they collect information regarding their investment funds' liquid assets. Jurisdictions reported that, where collected, the amount of liquid assets held by funds varies widely among jurisdictions and fund types. [18] Six jurisdictions reported imposing limits on the amount of illiquid assets a fund can purchase. Four jurisdictions reported liquidity buffer requirements.

- The interconnectedness of investment funds to banks and other financial intermediaries was only reported by Argentina, Canada, Colombia, Costa Rica, Peru and Mexico. Aside from money market funds, which are most interconnected with banks, most funds across the reporting jurisdictions have less than 25% of assets connected to banks.

- There was no standard definition of leverage reported across respondent jurisdictions. The responses to the survey also revealed a wide degree of variation in leverage between jurisdictions and even within a particular type of fund; but this variation sometimes reflects the different definitions of leverage and ways of measuring leverage ratios. Most regulators reported collecting information on fund leverage. However, Bermuda, the Cayman Islands and Mexico do not impose leverage limits on any investment funds. The regulations in the Cayman Islands do not prohibit investment funds from short selling or using derivatives. Short selling is also permitted for bond funds in the United States, Growth and Income Funds in Costa Rica, and certain types of mutual funds in Canada.[19]

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[17] Argentina, Bermuda, Canada, Cayman Islands, Chile, Colombia, Costa Rica, Peru, Mexico and the United States.

[18] The investment funds questionnaire did not define "liquid assets," but left it to jurisdictions to respond in accordance with their own definition, which may correspond to jurisdictions' various legislative or regulatory definitions, or which may have been determined based on data availability. See Section 4.2 below for a more detailed discussion of liquidity.

[19] The questionnaire did not ask and respondents did not specify the type of securities being shorted.

Most fund types in Canada, Peru and the United States are allowed to employ derivative strategies. In Mexico funds require authorisation in order to trade derivatives.

- All the participating jurisdictions reported that regulators allow, but do not necessarily impose, some combination of redemption gates, suspensions of redemptions, redemption fees, side pockets or stress testing mechanisms to manage redemption pressures in stressed market conditions. Often funds require authorization from their regulator to use such tools.
- With the exception of those in Colombia, funds have no access to central bank liquidity. In Colombia funds are able to do repurchase operations with the central bank (so long as they have admissible collateral).

This report unfolds as follows. Section 2 describes the methodology employed for this report and the main differences from both past RCGA reports and the 2016 GSBMR, including the templates for both the MUNFI measure of non-bank financial intermediation and the new Narrow Measure. The results from the monitoring exercise using the MUNFI and Narrow Measures are presented in Section 3, whereas Section 4 examines the findings from the questionnaire on investment funds. Finally, a summary of key findings, recommendations and reflections as concluding comments are presented in Section 5.

## 2. Methodology

This section describes the methodology of both the "macro-mapping" and the "narrowing down" exercises carried out by the WGSB. Information is sourced from national flow of funds data, sectoral balance sheet data or regulatory reporting from financial intermediaries up to the end of 2015 (when available). To aggregate amounts across jurisdictions, national data is converted into US dollars (USD) using market exchange rates. Growth rates are presented in local currency to avoid impacts from currency fluctuations. Data are reported for 17 jurisdictions, including 6 IFCs.[20]

This year's monitoring exercise aims, for the first time, to follow the two-step approach carried out by the FSB in the GSBMRs of 2013 and 2014.[21] 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 financial institutions. The WGSB followed the FSB approach and associated OFIs in this step with the SB sector. Pension funds and insurers were included in the FSB's "MUNFI" measure of all non-bank

[20] One IFC (British Virgin Islands (UK)) reported data only for the offshore market, given that they do not have SB in the onshore market.

[21] The decision to use this approach follows from the recommendations outlined in the second SB report of the WGSB, published in October 2015. Regional Consultative Group for the Americas *Working Group on Shadow Banking Second Report* (October 2015) available at http://www.fsb.org/wp-content/uploads/Working-Group-on-Shadow-Banking-Second-Report.pdf.

financial intermediation in the 2016 global monitoring exercise. To improve consistency between the presentation of the results for the Americas and that of the global monitoring exercise, we include these entities in the MUNFI in this exercise for the RCGA. Therefore, results are not comparable to those of previous WGSB reports.

In the second step, the exercise seeks to "narrow down" the focus of monitoring to exclude measures of non-bank financial activities within consolidated banking groups and to focus on SB activities that may entail bank-type risks, using an entity based approach. [22] In both steps, data is collected and submitted by individual jurisdictions using a set of templates based on the FSB model, so as to improve comparability with FSB member jurisdictions.[23]

With regard to the first step of the process, there are four differences between the WGSB "macro-mapping" template and the corresponding FSB template used in the 2016 GSBMR. First, investment funds are split into money market funds, public funds and private funds.[24] This contrasts with the FSB template that divides investment funds into money market funds (MMFs), hedge funds and other funds categories. The WGSB believes that the private funds category reflects the characteristics of hedge funds, while capturing other funds with very similar characteristics that are not labeled as "hedge funds" in participating jurisdictions.[25] Second, the WGSB template seeks to gather information on the role of the public sector in financial markets in the Americas by including a specific column for development banks, and by asking jurisdictions to report the share of public sector ownership in commercial banks. Although these are not part of the SB system, the WGSB considers that having these data is useful for understanding the size and dynamics of the OFI sector in the region.[26] Third, the template explicitly asks for information on assets in non-bank credit card companies given their importance in several jurisdictions. Finally,

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22 As opposed to the above-mentioned "economic functions" approach.

23 The set of templates of the monitoring exercise is presented in Annex 3.

24 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. Private funds, in contrast, are not public and have similar characteristics to hedge funds.

25 See *Hedge Fund Oversight (2009)*, available at https://www.iosco.org/library/pubdocs/pdf/IOSCOPD293.pdf. IOSCO notes that there is no universal definition of a "hedge fund", although hedge funds are normally seen as sharing certain common characteristics. They exist largely to avoid the legal restrictions imposed on mutual funds in terms of investment strategies, disclosure/transparency and immediate access to funds. A hedge fund typically uses a range of alternative trading strategies unavailable to a mutual fund, including short sales, leverage, program trading, arbitrage, and the use of derivatives. A hedge fund normally requires high minimum investments, has restrictions on withdrawals, is targeted to a limited audience of sophisticated investors and charges much higher fees.

26 The category of public development banks is meant to include these institutions only in the case when they do not receive deposits, or when they do receive deposits but have a different regulatory and prudential treatment than private banks. If a development bank receives deposits and has the same treatment as private banks, they should be classified as banks.

the template does not explicitly include trust companies, as the FSB template does.[27] These assets are therefore classified depending on the activity of the trust company, whether an investment fund, structured finance vehicle or financial auxiliary.

This exercise's macro mapping template incorporated two changes with respect to previous WGSB templates. Firstly, the template includes for the first time Real Estate Investment Trusts (REITs) and its disaggregation into equity and mortgage REITs. Secondly, commodities funds are explicitly separated from the category of "other" investment funds and measured as a distinct "commodities funds" category.

In line with the second step of the outlined process, this year's exercise includes an additional template designed to collect the information required to narrow down the MUNFI to those non-bank financial entities with bank-type risks or potentially posing systemic risks to the financial system. Following the practice of the 2014 GSBMR, a Narrow measure of SB is constructed by filtering out (i) non-bank financial entities that can be classified as "equity-only" intermediation (such as equity investment funds or equity REITs); and (ii) non-bank financial entities prudentially consolidated (in all aspects) into a banking group. Given that self-securitisation is non-existent in the Americas, and that information on "equity-only" financial entities can be gleaned from the macro-mapping template, the "narrowing down" required only an additional template to gather information on OFIs prudentially consolidated into banking groups. It is important to emphasize that the working assumption of the exercise is that only fully consolidated financial entities (that is, entities that are consolidated *in all aspects* of prudential regulation into a banking group) or subsidiaries to which bank-equivalent prudential regulation applies on a solo basis, should be excluded from a Narrow Measure of SB.

It is important to emphasize that this Narrow Measure follows an "entity-based" approach, and is therefore different from the "activity-based" approach based on economic functions employed by the FSB in its 2016 GSBMR to further refine its assessment of global SB activities.[28]

Finally, the exercise includes, as in earlier reports by the WGSB, a template to be collected and submitted only by IFCs. Monitoring SB activities in IFCs merits special attention as they are significant and represent a material data gap in the global monitoring exercise. Six member jurisdictions of the WGSB have been identified under various methodologies as providing offshore financial services as IFCs.[29] For these jurisdictions, financial assets registered with domestic authorities are split into those held by local and offshore institutions. Offshore institutions are

[27] Countries could, however, report trust company assets as 'other' in the WGSB templates.

[28] The "activity-based" approach was carried out this year by the WGSB on a trial basis, whose results (not published in this report) are expected to serve as the basis for changes to future monitoring exercises.

[29] See, *Concept of Offshore Financial Centers: In Search of an Operational Definition*, IMF Working Paper, 2007, available at: https://www.imf.org/external/pubs/ft/wp/2007/wp0787.pdf.

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 Cayman Islands, which cannot take on deposits from residents.[30] The WGSB 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.

This year's IFC template incorporated two changes with respect to previous WGSB templates. First, insurance companies were subdivided in order to separately classify catastrophe bonds and special purpose insurers, and pure insurers or reinsurers. Second, the separate category of "commodity funds" was included following from the changes to the broad template.

## 3. Results for the "macro-mapping" exercise

This section summarizes the main findings for the WGSB's macro-mapping exercise based on both the standard template and the offshore IFC template.[31] Jurisdictions submitted annual data up to the end of 2015 based on sector balance sheet data using national financial accounts statistics (i.e., "Flow of Funds"), complemented with supervisory data and private sector data sources. Some jurisdictions that currently lack sector balance sheet statistics may have used other data sources which may be less consistent across participating jurisdictions. Even when sector balance sheet data are available, their granularity and definitions differ across jurisdictions, which may impact comparability across jurisdictions.

### 3.1. Structure of financial systems

On average across WGSB jurisdictions, banks dominate financial activities, holding about 45% of financial assets (Exhibit 3-1). This share has been declining steadily since 2008 due to increases in OFIs, insurance companies and pension funds, though the bank share rebounded slightly in 2015. The relative shares of various entities within the financial system have been stable since 2012.

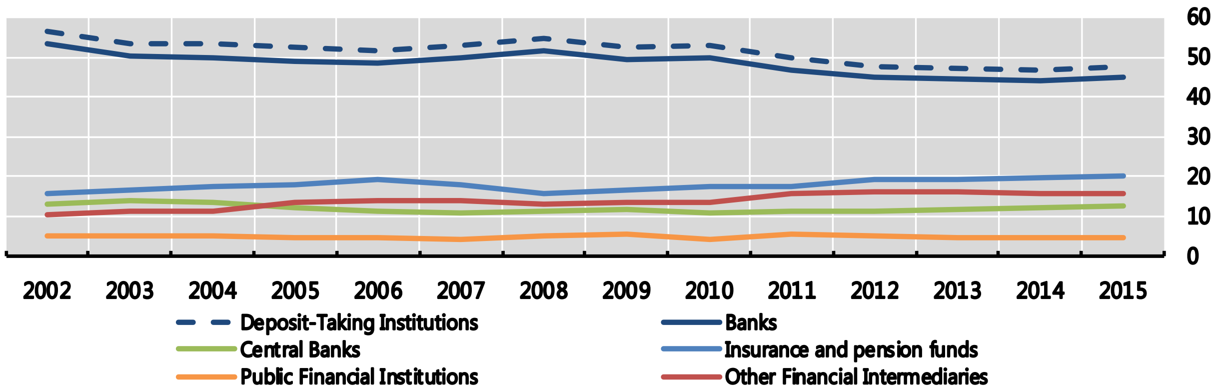
[30] In the Cayman Islands, the holder of a "B" licence shall not take deposits from any person resident in the Islands, other than another licensee, or an exempted or an ordinary non-resident company which is not carrying on business in the Islands.

[31] Unless stated otherwise, financial assets in these jurisdictions include only domestic assets. That is, offshore assets are not included. These offshore activities in IFCs are discussed in Section 3.6.

Distribution of total assets by entity

16 jurisdictions, in per cent

Exhibit 3-1




Notes: Domestic assets only.
Simple average across WGSB jurisdictions

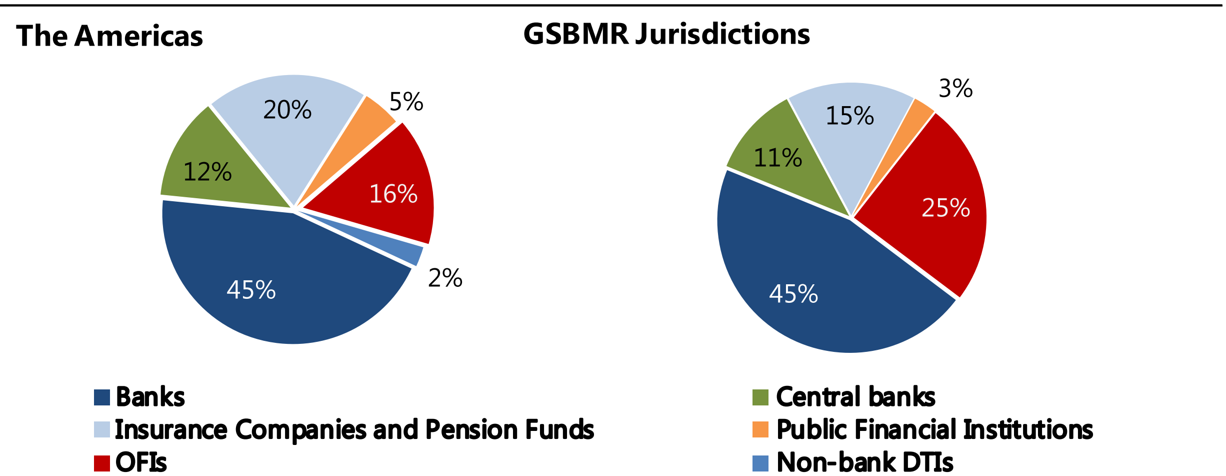
Sources: National flow of funds data; other national sources

Broadly speaking, the relative importance of the different entities in the financial sector of WGSB jurisdictions has not changed significantly from the last report and is similar to that of the average jurisdiction in the 2016 GSBMR (Exhibit 3-2). OFIs account for a smaller share of total assets in WGSB jurisdictions, while the asset shares of central banks, pension funds and insurance companies is higher on average for WGSB jurisdictions. Non-bank deposit-taking institutions (non-bank DTIs) are relatively small in both groups of jurisdictions.

Distribution of total assets by entity: Comparison with GSBMR

16 jurisdictions, at end-2015

Exhibit 3-2



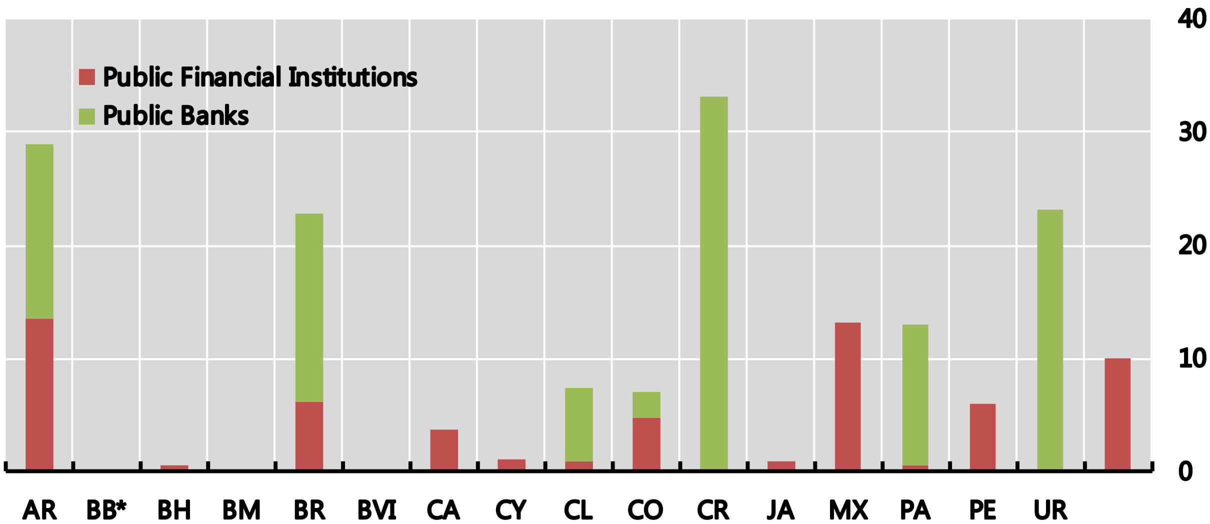

Notes: Domestic assets only.
Simple average across WGSB and GSBMR jurisdictions. GSBMR OFI percentage also includes financial auxiliaries, for presentation purposes.

Sources: National flow of funds data, other national sources; FSB Global Shadow Banking Monitoring Report 2016.

The WGSB measures the relative importance of direct public sector involvement in the financial sector in the Americas region so as to better understand the broad financial sector in which SB activities take place. Argentina, Brazil, Costa Rica, Panama and Uruguay stand out because of their high public sector ownership of commercial banks (Exhibit 3-3). Argentina, Mexico and the United States, meanwhile, have relatively large public financial institutions. In Mexico these are development banks, government agencies that manage workers' savings, mortgages, agricultural and consumer durable loans, and development public trusts that grant loans to targeted sectors such as agricultural, mining, and housing.[32] In the United States, these public financial institutions are the Government Sponsored Enterprises (GSEs) involved in providing housing finance.[33] Although not reported in the template, the public sector is highly involved in structured finance vehicles in Uruguay – both as the source of the underlying flows or as the agent structuring the vehicles.[34]

Public sector assets

As a percentage of financial assets, 17 jurisdictions, at end-2015 — Exhibit 3-3




*Data not available

Notes: AR=Argentina; BB=Barbados; BH= Bahamas; BM=Bermuda; BR=Brazil; BVI=British Virgin Islands; CA=Canada; CY=Cayman Islands; CL=Chile; CO=Colombia; CR=Costa Rica; JA=Jamaica; MX=Mexico; PA=Panama; PE=Peru; UR=Uruguay; US=United States

Sources: National flow of funds data; other national sources

[32] Two out of six development banks are deposit takers, for which deposits represent 48% and 35% of total assets, respectively.

[33] For example, the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac).

[34] For example, the *Agencia Nacional de la Vivienda*.

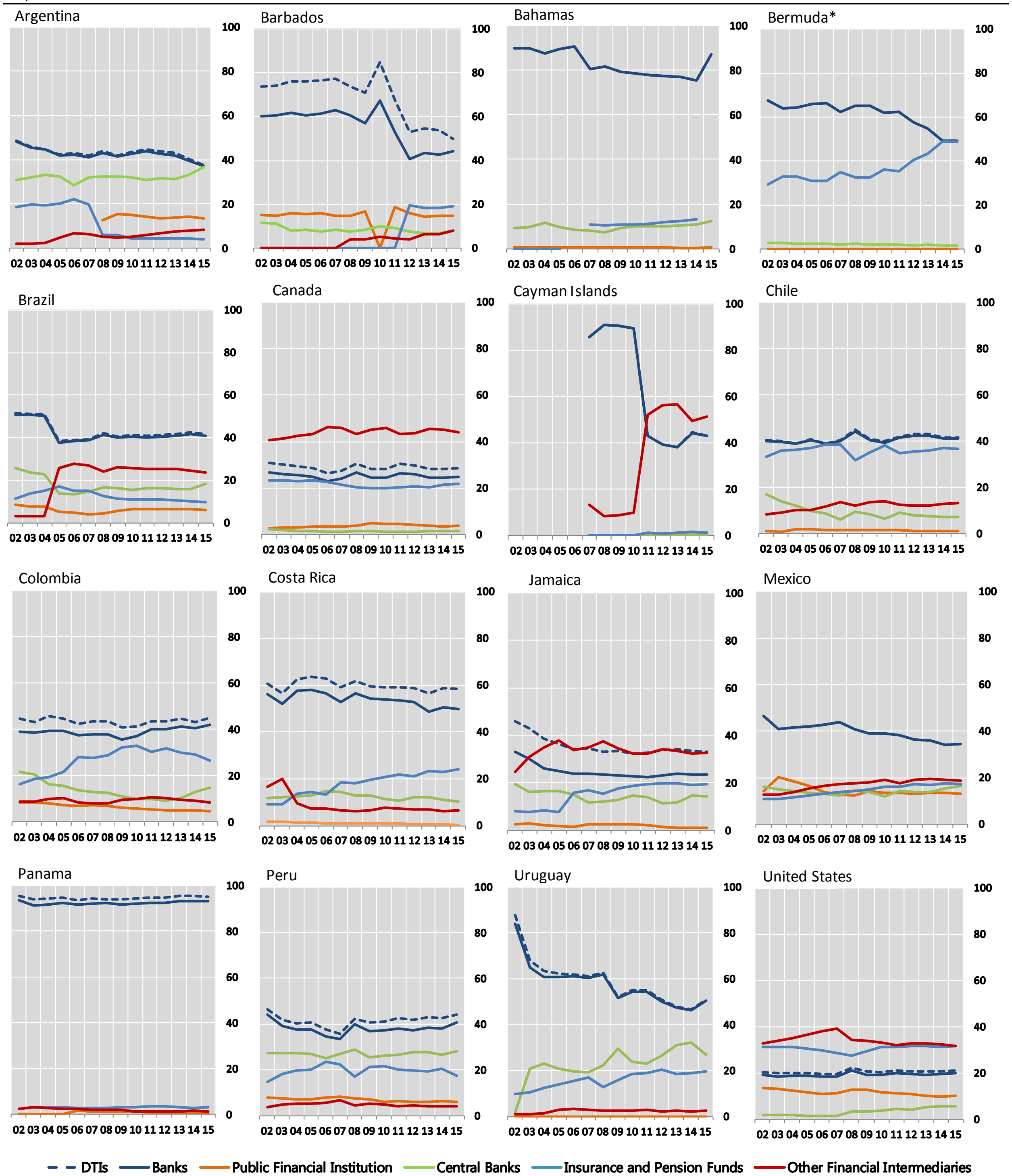
There is significant heterogeneity across individual WGSB jurisdictions in terms of the relative importance of different financial entities (Exhibit 3-4). Banks have the largest shares of assets in all jurisdictions, except Canada, the Cayman Islands, Jamaica and the United States. In Panama the share of the banking sector is highest, exceeding 90% of total assets. Note that in Barbados, Canada, Colombia, Costa Rica, Jamaica, Peru, and the United States non-bank DTIs are also relevant. In Chile, Colombia, Bermuda, and the United States, insurance companies and pension funds are relatively more important than in the average WGSB jurisdiction. Finally, the OFI sector varies from over 50% of total domestic assets in Cayman Islands to less than 3% of assets in Uruguay, Panama, Bahamas and Bermuda.[35]

[35] The OFI sector in the Cayman Islands increased to 52% of total assets in 2011 due to the change of a license for a large bank from the domestic sector to the offshore sector. This change reduced the domestic banks assets by approximately USD 230 billion (bn).

Share of total financial assets by jurisdiction

In per cent

Exhibit 3-4




* All Bermuda OFI activities have been classified under IFC because it is estimated that the domestic proportion is immaterial

Sources: National flow of funds data; other national sources

### 3.2. Pension Funds and Insurers

Pension funds and insurers were included in the FSB's MUNFI in the 2016 global monitoring exercise. To improve consistency between the presentation of the results for the Americas and that of the global monitoring exercise, we also include these entities in the MUNFI.

The relative size of insurance companies and pension funds has been stable over the past five years while their absolute size grew steadily. The combined asset for both sectors is USD 28.8 tn in 2015, and on average they account for about 21% of each jurisdiction's total financial assets. On average, insurance companies' assets grew at an exchange rate adjusted rate of 11.8% in 2015, and pension funds at 9.7%. Argentina had the highest growth rate in 2015 for pension funds (41%) and insurance companies (43%).[36]

The size of insurance companies and pension funds varied considerably across jurisdictions. The two sectors constituted 49% of total financial system assets in Bermuda, 37% in Chile and 32% in the US. Meanwhile, they constitute for 3% of Panama's total assets, and 1.4% of Cayman Islands' onshore assets. The simple average across WGSB jurisdictions is 21%.

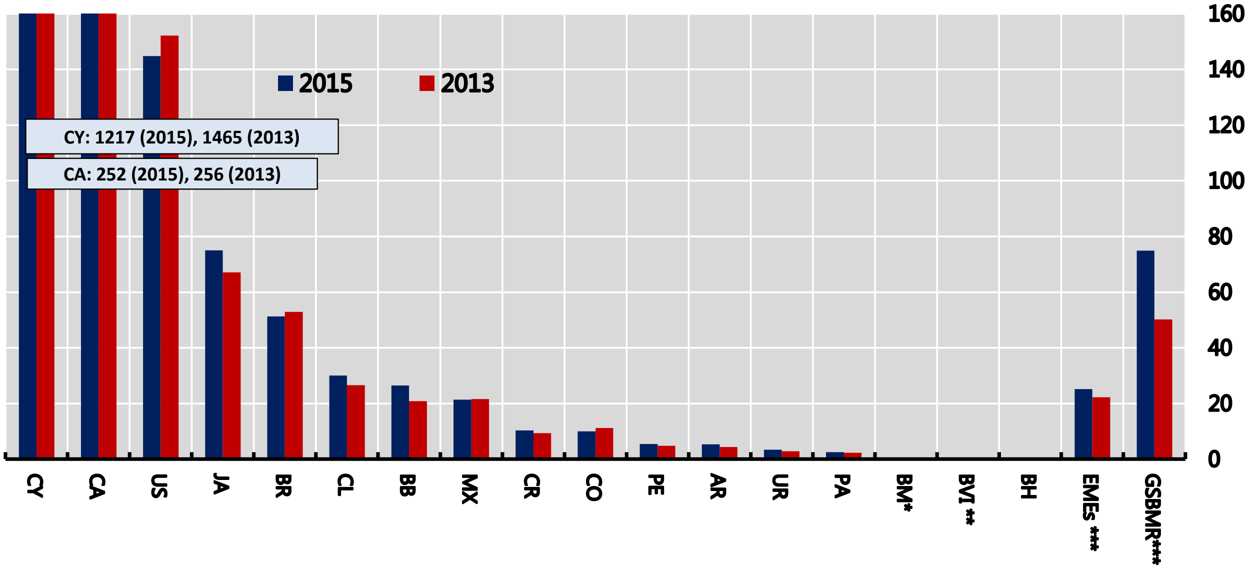
### 3.3. OFIs

The size of the OFI sector is heterogeneous across the WGSB jurisdictions when measured against GDP (Exhibit 3-5). In most jurisdictions, the ratio of OFI assets to GDP is below the FSB median (75%), with several jurisdictions also below the median for the subset of EMEs in the FSB's exercise (24%). This is consistent with the fact that most jurisdictions in the region are less financially developed. The median ratio of OFI assets to GDP in the Americas is 24%, about one-third of the median ratio in the jurisdictions in the 2016 GSBMR.

[36] This growth rate is in nominal terms and in domestic currency, in a high inflation context for Argentina. In November 2008, the pension fund system was changed and this implied the nationalization of the portfolios of pension funds.

Size of OFI sector

As a percentage of GDP, at end-2015 Exhibit 3-5




*All OFI activities have been classified under IFC because it is estimated that the domestic proportion is immaterial.

**At end-2015 data not available, using end-2013 data instead

*** Median. EMEs include AR, BR, CL and MX (RCGA); China, India, Indonesia, Russia, Saudi Arabia, South Africa and Turkey (Non-RCGA).

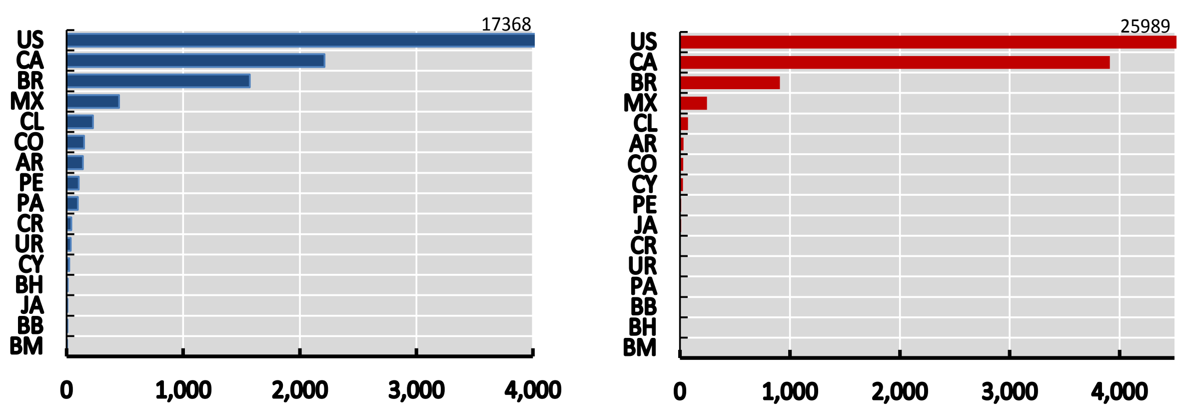
Sources: National sector balance sheet and other data; FSB Global Shadow Banking Monitoring Report 2016.

Not surprisingly, larger economies, such as the United States, Canada, Brazil and Mexico, have the largest OFI sectors (Exhibit 3-6, below). Chile has the fifth largest OFI sector measured by onshore assets, totaling USD 72 billion (bn).

Size of financial intermediaries

At end-2015 Exhibit 3-6

**Banks** **Other Financial Intermediaries (OFIs)** USD billion



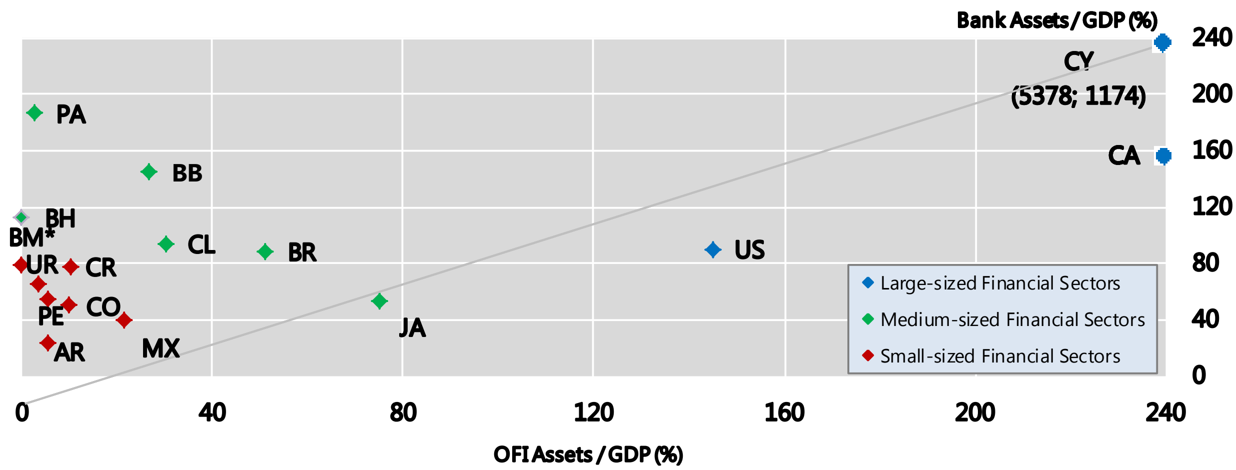

Notes: Domestic assets only

Sources: National flow of funds data; other national sources

Exhibit 3-7 suggests three groupings of WGSB jurisdictions. In the first group, which is characterized by relatively large financial sectors, Canada, the Cayman Islands and the United States have sizable OFI sectors.[37] In the second group (with medium-sized financial sectors) Jamaica has a larger OFI sector than Bahamas, Barbados, Brazil, Chile, and Panama. The remaining jurisdictions are in the third group with relatively small banking and OFI sectors.

Relative sizes of banking and OFI Sectors

As a percentage of assets over GDP, at end-2015 — Exhibit 3-7




* All OFI activities have been classified under IFC because it is estimated that the domestic proportion is immaterial
Sources: National flow of funds data; other national sources

The largest subsectors of OFIs in the region are investment funds - MMFs and other investment funds, which include public and private funds (Exhibit 3-8).[38] In this respect, the region is also similar to the FSB jurisdictions, although MMFs account for a relatively larger share of OFIs in the Americas (Exhibit 3-9). Investment funds make up more than 60% of the OFI sector in Barbados, Brazil, Cayman Islands, Chile, Colombia, Peru, and the United States. The importance of the investment funds OFI subsector in the Americas was one of the key motivations for undertaking a closer look at investment funds in this report; see section 4 below for more information.

The second-largest OFI subsector is finance companies. These are especially important in Panama and Uruguay. There is some heterogeneity in the composition of finance companies across

[37] The first group includes countries where bank and OFI financial assets sum to above 200 percent of GDP, the intermediate group those countries where the figure lies between 100 and 200 percent, and the lower group includes the rest.

[38] Although the WGSB template disaggregates investment funds into three types – money market, public and private - not all jurisdictions are able to make this division with the available data. Thus, for Exhibit 3-8, two categories of investment funds are used: MMFs and other investment funds.

jurisdictions. In Argentina, they include leasing and factoring companies and non-bank credit card issuers.[39] In Brazil, this category includes leasing companies, micro-finance institutions, real estate credit companies, and non-bank credit card issuers. Mexico includes non-bank financial institutions engaged in credit activities (*Sofomes*), leasing and factoring companies, warehousing companies, captive companies, and non-bank credit card issuers.[40] Chile also includes non-bank credit card issuers, leasing, factoring, and automobile lending companies. In Uruguay it only consists of credit card issuers. As mentioned in the last regional report, regulation of the sector is very heterogeneous: automobile lending companies, non-bank leasing and factoring companies in Chile and *Sofomes* ENR in Mexico have no prudential regulation. On the other hand, non-bank credit card issuers in Uruguay and Chile and several classes of finance companies in Mexico are prudentially regulated.[41]

Costa Rica and Uruguay have structured finance vehicles accounting for more than 30% of total OFIs. Broker-dealers are relevant in Jamaica. Some jurisdictions have other types of OFIs. Brazil and Colombia have prize-linked savings accounts.[42]

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[39] Even though separated data for non-bank credit card issuers is available, they are included in the finance companies category.

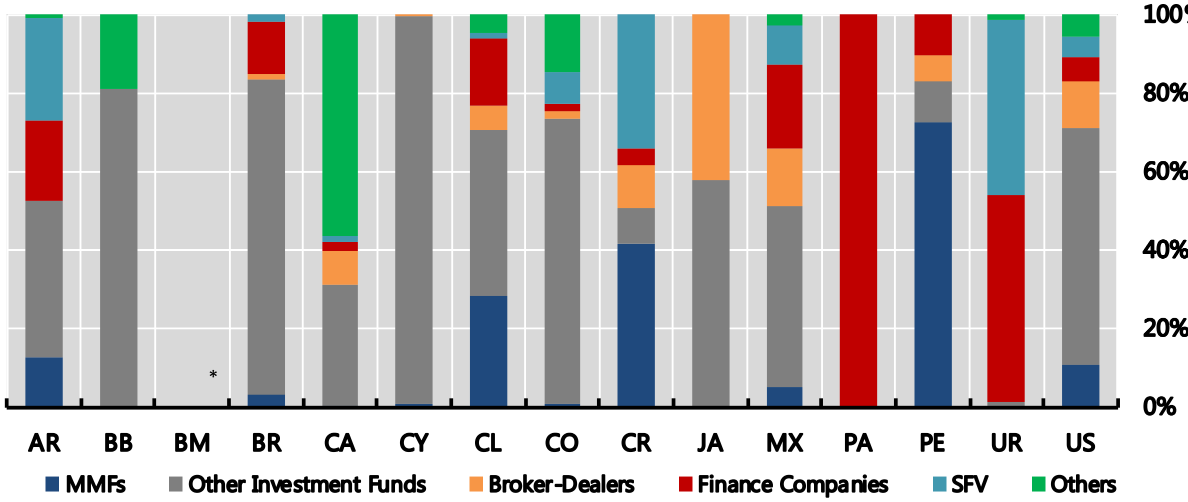
[40] *Sofomes* ENR are financial companies that do not require authorization by the financial authority in order to operate. They provide credit, financial leasing and factoring services.

[41] Further information on *Sofomes* is provided in the first report of the WGSB, http://www.financialstabilityboard.org/wp-content/uploads/r_140822b.pdf. *Sofomes* ER are the regulated subsector, whereas *Sofomes* ENR the non-regulated one and should not be confused. Neither one is allowed to take deposits from the public. Other entities included in Finance companies by Mexico are cooperatives, microfinance companies and credit unions. The first two types, are regulated and supervised entities when surpassing a minimum asset threshold, however, these have been classified in economic functions due to their regulation being different to that of banks (i.e. Basel III).

[42] In Colombia, prize-linked accounts correspond to a specific type of account managed by financial institutions, supervised by the Financial Superintendence but without access to Central Bank liquidity and not covered under any deposit insurance scheme.

Composition of OFI sector

In per cent, 15 jurisdictions, at end-2015 Exhibit 3-8

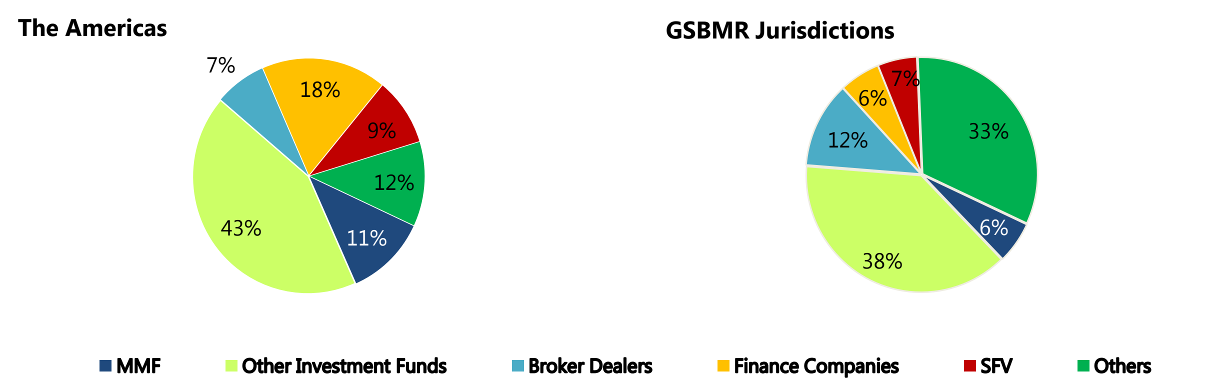



Notes: *All OFI activities have been classified under IFC because it is estimated that the domestic proportion is immaterial. Others: REITs, prize-linked saving accounts, US holding companies, and US funding corporations.

Sources: National flow of funds data; other national sources

Composition of OFIs: Comparison with GSBMR

15 jurisdictions, at end-2015 Exhibit 3-9



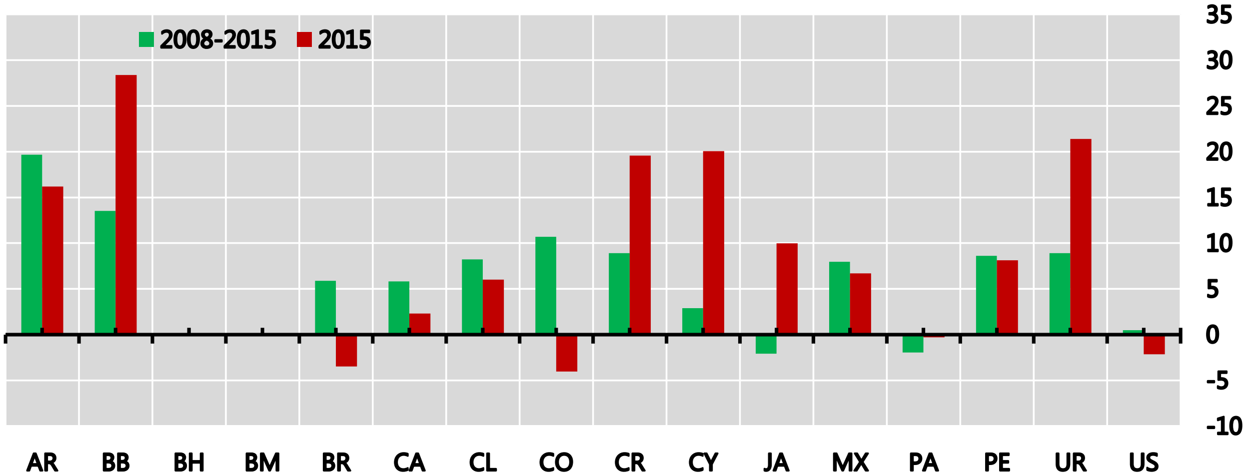

Notes: Simple average used for WGSB calculations, weighted average used for GSBMR calculations.

Sources: Sources: National flow of funds data, other national sources; FSB Global Shadow Banking Monitoring Report 2016

The OFI sector in several jurisdictions has exhibited positive growth since the global financial crisis (Exhibit 3-10). Some jurisdictions with the highest growth rates, such as Argentina, Colombia, Peru, and Costa Rica started from a relatively low base for their OFI sector (group 3 in Exhibit 3-7). These high growth rates are explained mainly by the increase of investment funds and structured finance vehicles. In Jamaica and Panama there is a marked contraction in OFI size after 2008 but OFI sectors in both countries have since recovered. Colombia and Brazil experienced declines in other investment funds in 2015, largely due to public funds. Note that these growth rates control for exchange rate changes and inflation but do not adjust for changes in the valuation of local assets – such as stocks held in investment funds.

Growth of OFI sector

In per cent (annualized),at end-2015 Exhibit 3-10




Notes: Controlling for exchange rate and inflation effects

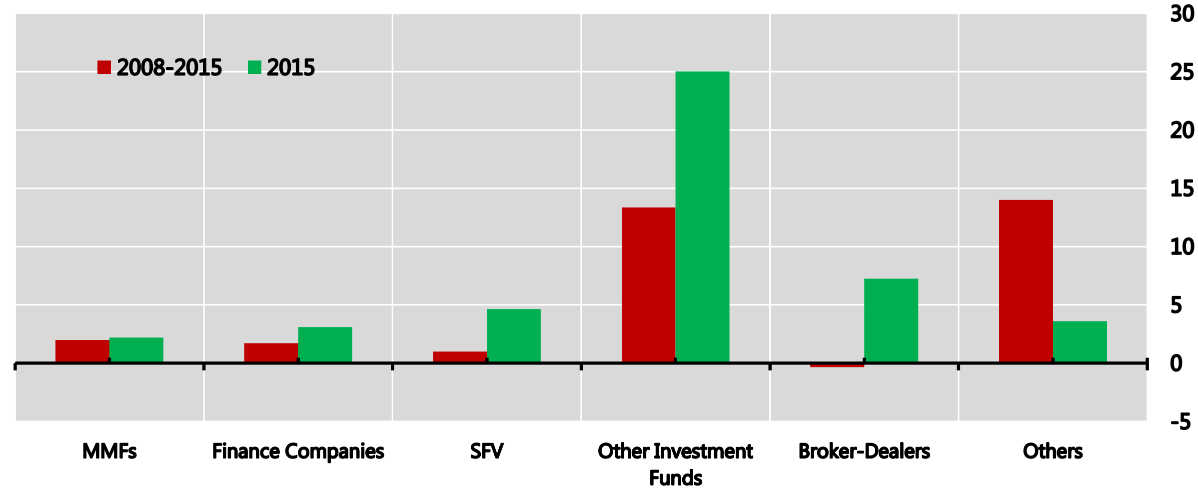
Sources: National flow of funds data; other national sources

A simple average of OFI subsector growth rates across WGSB jurisdictions shows that, on average, all OFI subsectors grew in 2015, with growth being highest for other investment funds.[43] Broker-dealer assets experienced the second-highest average growth rate in 2015, and have largely recovered from their post-crisis decline.

43 Measured in USD, all OFI subsectors but MMFs declined in 2015. However, this trend largely reflects developments in the US market (where the OFI sector is much larger in absolute terms compared to other countries in the Americas) and the US dollar (which appreciated against most currencies in the Americas).

Real growth of main sub-sectors of OFIs

In per cent (annualized)*, 14 jurisdictions, at end-2015 Exhibit 3-11




*Average across jurisdictions, accounting for exchange rate growth and inflation. Same jurisdictions as in 3-9, except BM.
Sources: National flow of funds data; other national sources

### 3.4. OFI connections with the banking system

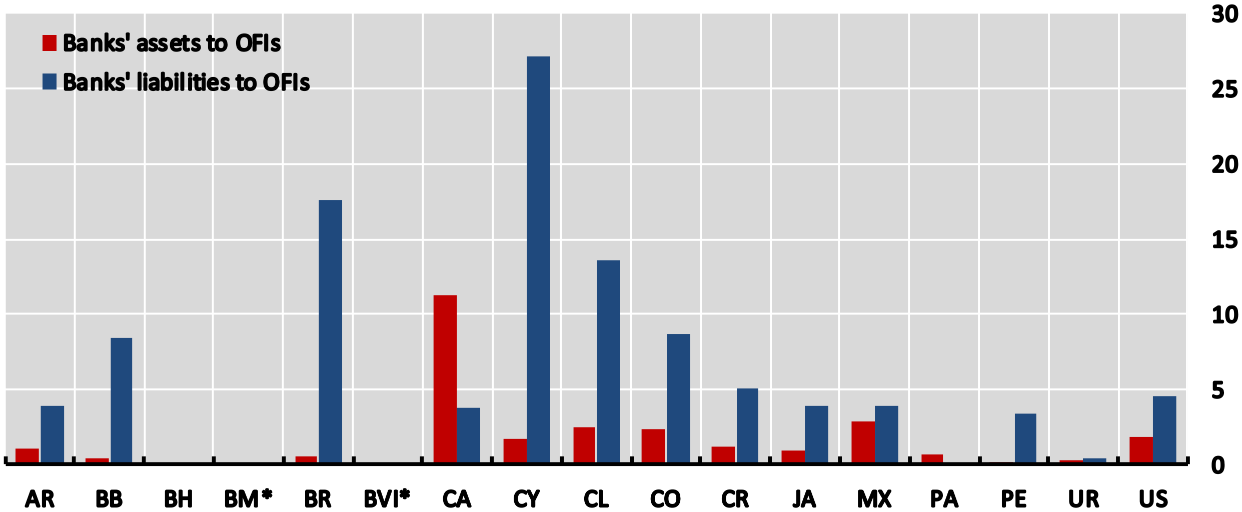
In several jurisdictions, links between OFIs and domestic banks are important. In Cayman Islands, Brazil, Chile, and Colombia, banks rely on OFIs for funding – usually through investment funds.[44] Balance sheet inter-connections between banks and the OFI sector in the remaining jurisdictions of the WGSB are very low (Exhibit 3-12). Note, however, that these measures can sometimes underestimate the links. The main limitation is that they do not always include off-balance sheet positions between OFIs and banks – like derivative positions.[45]

[44] In Brazil, fixed-income investment funds comprise the majority of the OFI sector, and their assets are mainly composed of federal government bonds (38.0%) and repurchase agreements with the banking system backed up by federal government bonds, accounting for an additional 25.5%. These repos represent a material share of banks' liabilities to OFIs, but their credit and liquidity risk are not significant because sovereign bonds are used as collateral.

[45] In the case of Colombia, exchange rate derivatives are included.

Banks' assets and liabilities to OFIs

In per cent, as a share of domestic banks' total assets, at end-2015 Exhibit 3-12




*At end-2015 data not available, using end-2013 data instead
Sources: National flow of funds data; other national sources

### 3.5. Narrowing Down

The assessment of SB using the "macro-mapping" approach is useful to "cast the net wide" and obtain a first pass at measuring the size, scope and structure of non-bank financial activities. Data from WGSB jurisdictions show the MUNFI measure of SB activities (which includes pension funds, insurers, and OFIs) was USD 60.1 tn at end-2015.

However, this measure (broad as it is) captures activities and institutions that do not strictly meet all the characteristics of the SB definition laid out by the FSB. Not all activities included in the MUNFI feature bank-like risks or constitute a potential source of systemic risk for the financial system.

As a consequence, the monitoring exercise follows a two-step approach (outlined in Section 2) with the objective of refining, or "narrowing down" the estimate of the size and scope of SB activities in the Americas. This "narrowing down" approach is modelled off the narrow measure of SB outlined by the FSB in the GSBMRs of 2013 and 2014. First, it removes assets of pension funds and insurers because the consensus has been that these entities do not usually involve significant SB risks. Secondly, it refines the OFI assets included. Specifically, the OFI refinement seeks to retain only those entities meeting all of the following three criteria:

1. Being a part of a credit intermediation chain.[46]
2. Not being *fully* (in all aspects of regulation) consolidated into a banking group for the purposes of prudential regulation.[47]
3. Exhibiting risks associated with SB including (but not limited to) maturity and liquidity transformation, and/or leverage.

Given these criteria and the granularity of data in the templates of this year' monitoring exercise, the calculation of the "narrowed down" measure of SB in the Americas excludes assets of OFIs prudentially consolidated into a banking group and of financial entities not directly involved in credit intermediation, including equity investment funds and equity REITs.[48]

### 3.5.1. OFIs prudentially consolidated into a banking group

Some financial entities are included in the broader MUNFI measure of SB despite the fact that they belong to a consolidated banking group for prudential regulation purposes. Assets of financial institutions belonging to a consolidated banking group are meant to be subject to capital and liquidity requirements according to the Basel III regulatory framework. Therefore, financial entities that fully belong to a consolidated banking group (that is, that belong to the group for all prudential purposes) should be excluded from a narrow measure of SB, as should those subsidiaries to which bank-equivalent prudential regulation applies on a solo basis.

Among WGSB members, seven jurisdictions reported assets of OFIs that were excluded because they were prudentially consolidated with banking parents or had bank-equivalent prudential regulation in place. The most common such OFIs were broker-dealers, where prudentially consolidated assets totalled USD 2.3tn. Most of that total was reported by the US (USD 2,030 bn) and Canada (USD 285 bn); for Canada, the vast majority of its broker-dealer assets are consolidated with a banking parent. Others reporting consolidated broker-dealer assets include

46 According to the FSB, a chain is defined as "having at least two links between the issuer and the end-holder. For instance, a corporate bond issued to investors is not considered part of a credit intermediation chain as it forms a direct bilateral link. A corporate bond that is owned through a mutual fund on the other hand is a form of credit intermediation and would be accounted for as part of the assets under management of the investment fund".

47 Financial institutions that are not fully consolidated are understood to potentially pose bank-type systemic risk to the financial system while still being outside bank-type financial intermediation. It was left to the discretion of each jurisdiction to decide whether any particular institution was fully or only partially consolidated into a banking group.

48 The FSB monitoring exercise also excludes assets related to self-securitisation, an activity which is non-existent in the Americas. It is important to emphasize that this Narrow Measure follows an "entity-based" approach, and is therefore different from the "activity-based" approach based on economic functions employed by the FSB in its 2016 GSBMR to further refine its assessment of global SB activities. The "activity-based" economic functions approach was carried out this year by the WGSB on a trial basis, whose results (not published in this report) are expected to serve as the basis for changes to future monitoring exercises.

Brazil (USD 8bn), Jamaica (USD 3.7bn), Chile (USD 3.3bn) and Costa Rica (USD 0.4 bn).[49] For structured finance vehicles, only Brazil reported consolidation with a banking parent of USD 2 bn. Four members reported prudential consolidation or bank-equivalent prudential regulation in place for finance companies: US (USD 433 bn), Brazil (USD 114 bn); Mexico (USD 17 bn); and Chile (USD 2 bn). Altogether, OFIs' reported prudential consolidation with banking parents totalled USD 2.9 tn.

### 3.5.2. OFIs that are not part of a credit intermediation chain

The FSB definition of SB emphasizes non-bank financial institutions and activities that are involved in a credit intermediation chain. It is important to recognize that some entities included in the MUNFI are not directly engaged in credit intermediation activities. For the case of the Americas, these include equity investment funds and equity REITs.

As illustrated in Exhibit 3-13 below, equity funds (both public and non-public) totalled USD 10.6 tn at end-2015 for WGSB jurisdictions.[50] The vast majority of these are in the US (USD 10.0 tn), with Canada (USD 428 bn) and Brazil (USD 86 bn) reporting large amounts also. Other WGSB members reported USD 46 bn in equity funds, though it should be noted that some jurisdictions were unable to differentiate equity from other funds; as a result, the 'equity funds' measure is likely an underestimate of the narrowing down, resulting in a conservative Narrow Measure.

For REITs, five WGSB jurisdictions were able to differentiate equity REITs from other REITs.[51] By excluding such entities, the Narrow Measure declined by a further USD 296 bn.

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[49] In Jamaica, approximately 85% of broker-dealers form part of deposit-taking institution group structures as at end-2015. The Government of Jamaica in 2013 commenced plans to reform the broker -dealer industry. This reform programme entails the phasing down of the "retail repo" business model as well as the restructuring of the prudential capital and liquidity regime to mitigate significant market, interest rate and liquidity risks associated with the business model.

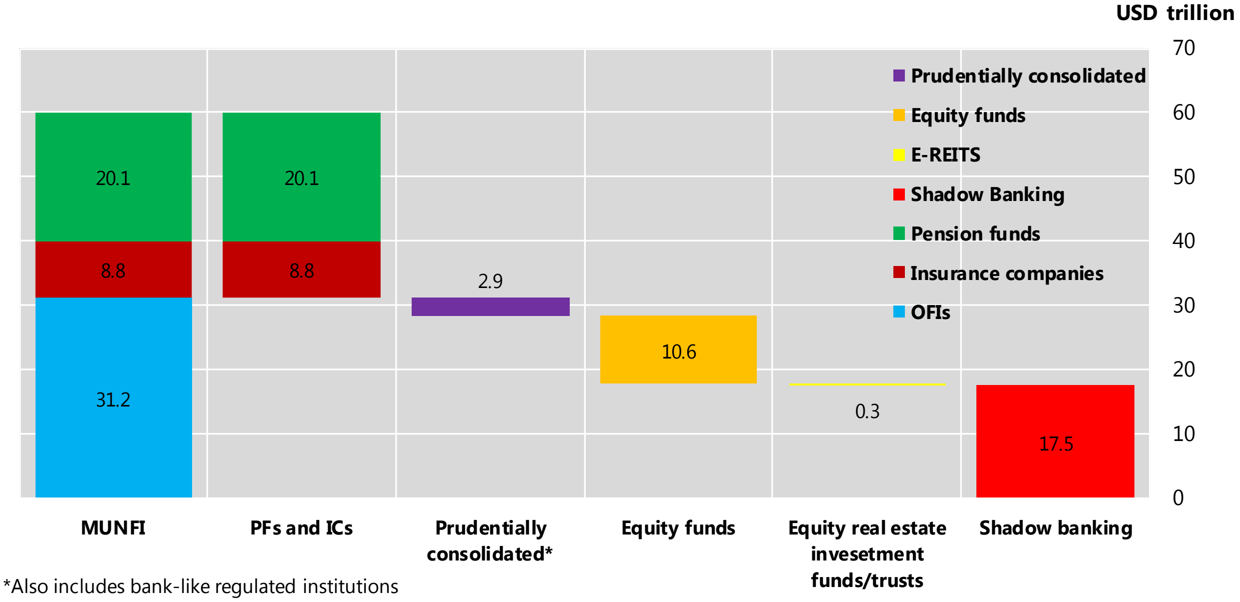
[50] Equity funds were reported separately from other funds by 9 WGSB jurisdictions.

[51] These are Brazil, Canada, Colombia, Mexico and the United States.

Narrowing down shadow banking

15 jurisdictions at end-2015

Exhibit 3-13




*Also includes bank-like regulated institutions

Sources: National flow of funds data; other national sources

As mentioned above, for 15 jurisdictions, the MUNFI at end-2015 reached USD 60.1 tn, up from USD 56.1 tn at end-2013 (Exhibit 3-13). The 2015 MUNFI amount was comprised of USD 20.1 tn in pension fund assets, USD 8.8 tn in insurance company assets, and USD 31.2 tn in OFI assets. By removing from this OFI total USD 2.9 tn in assets that were excluded because they were either prudentially consolidated at a banking parent or subject to bank-equivalent prudential regulation, and USD 10.9 tn in equity funds and equity REITs, the Narrow Measure of SB for the Americas totals USD 17.5 tn. This is a 71% reduction from the broader MUNFI. The Narrow Measure of USD 17.5 tn has declined since 2013 (USD 18.27 tn) and 2014 (USD 18.32 tn).

### 3.6. International financial centers

Several jurisdictions in the RCGA provide significant offshore financial services as IFCs. These activities represent an important gap in the FSB's global SB monitoring exercise because large volumes of bank and non-bank credit intermediation activities of other jurisdictions flow through IFCs. These 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.

Six jurisdictions in the WGSB are IFCs – Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, and Panama, − and they completed a separate IFC template to identify the nature of their international financial activities.

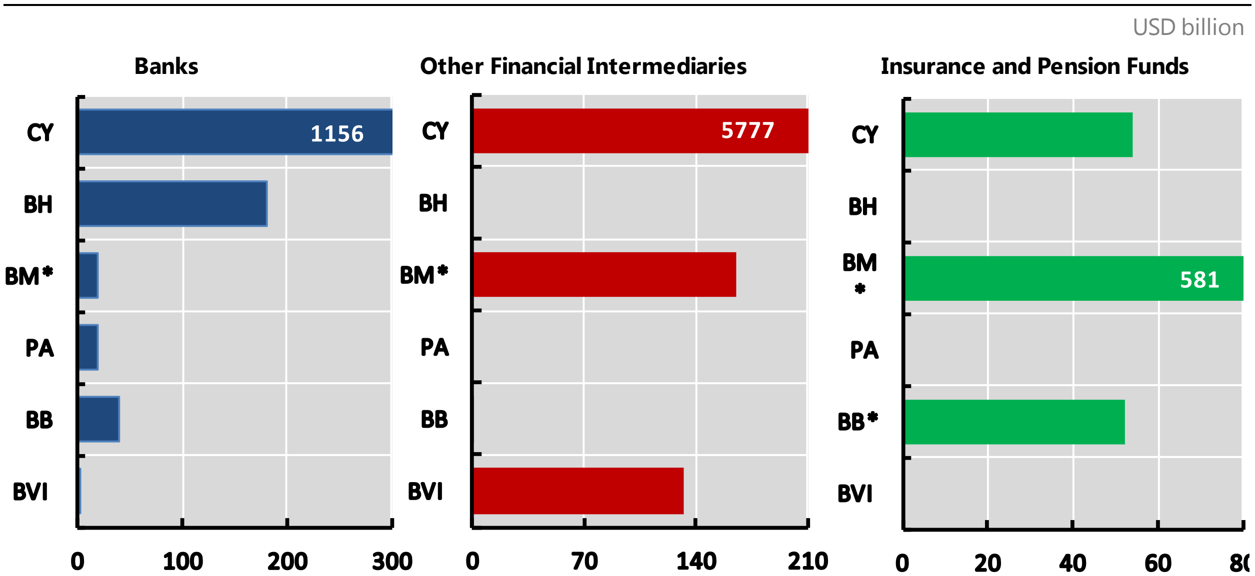
In the Cayman Islands, offshore assets are composed of special license banks (USD 1,156 bn), insurance companies (USD 54 bn), and OFIs, which include private funds (USD 5,685 bn), MMFs

(USD 3 bn) and Structured Finance Vehicles (USD 84 bn) (Exhibit 3-14). Bermuda has an important insurance sector (USD 581 bn), specializing in catastrophe reinsurance, and Barbados also has an important insurance sector (USD 52 bn). Meanwhile in British Virgin Islands, offshore assets are largely composed of OFIs (USD 132 bn), coupled with a smaller international banking sector of USD 0.7 bn.

In Panama and Bahamas, like the Cayman Islands, the reported offshore assets correspond to banks that operate with special licenses. The special bank licenses in Panama, Cayman Islands and the Bahamas 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, although in Panama prudential requirements and intensity of supervision is lower than for full license onshore banks. In Bermuda, banks serve both domestic and international clients (e.g. global reinsurance firms headquartered in Bermuda) without separating them.[52]

Size of financial intermediaries in the international financial centers

Offshore assets, 6 jurisdictions, at end-2015 — Exhibit 3-14




* At end-2014

Sources: National flow of funds data; other national sources

[52] 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.

## 4. Investment Funds Questionnaire

The first report of the WGSB, published in August 2014, recommended that future work on SB should pay particular attention to four areas that were identified as posing potential risks to financial stability in the region. Two of these areas were covered in the 2015 second report of the WGSB: non-bank deposit taking institutions and broker-dealers. The other two areas are open ended funds (particularly in the context of illiquid markets) and finance companies (including micro-credit). The motivation for the focus in these areas is outlined in the first report of the WGSB; for investment funds, that report noted the sizable direct connections between investment funds and banks for some countries, and also indirect connections such as the impact from large changes in portfolio decisions of funds on the valuation and liquidity of assets also held by banks.[53] To fulfil this mission, the WGSB undertook a review of investment funds in the Americas through an investment funds survey.

This survey complements information already collected through the onshore and offshore templates that WGSB members regularly complete. The onshore template shows, for example, that MMFs as a share of total onshore fund assets are particularly high in Peru, Costa Rica, and Chile. Public fixed income funds are especially prominent in Argentina, Brazil, Mexico and Uruguay, while non-public onshore funds play a relatively small role in the Americas (see Exhibit 4-1 for funds reported in onshore template).[54]

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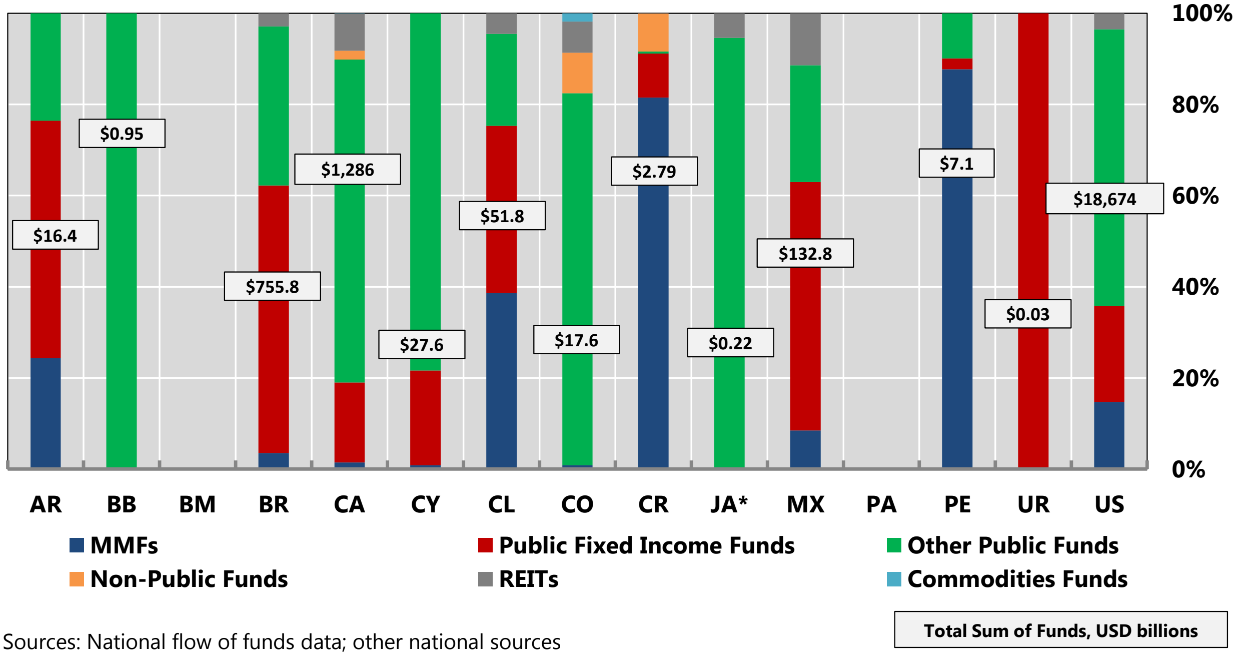
[53] The FSB published in January 2017 policy recommendations to address structural issues in asset management, which focus in particular on vulnerabilities from open-end funds that invest in illiquid assets and also leverage within funds. See *"Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities (2017)* here: http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf

[54] REITs are often organised as trusts or corporations.

Fund Assets by Type
In per cent, 15 jurisdictions, at end 2015 Exhibit 4-1




Sources: National flow of funds data; other national sources

### 4.1. Methodology and Structure of the Survey

The Investment Funds Survey had three sections. Section 1 asked jurisdictions to identify all types of funds in their jurisdiction, whether regulated or not. The other sections focused exclusively on regulated funds. Section 2 asked for quantitative and qualitative information on funds. Quantitative data included the number and size of funds, holdings of liquid assets, asset maturity, leverage, and interconnections with other parts of the financial system. Qualitative information covered the regulatory framework for the various funds, including requirements relating to liquidity or leverage, tools to manage redemptions in stressed environments, and access to central bank liquidity. Finally, a third section focused on disclosures required for each type of regulated fund, whether those disclosures are to the regulator, fund investors, or the public. The template for the Investment Funds Survey is in Annex 3 of this report.

Twelve countries within the Americas completed the investment funds questionnaire, namely, Argentina, Bermuda, Canada, Cayman Islands, Chile, Colombia, Costa Rica, Jamaica, Mexico, Panama, Peru and the United States.[55] In addition, some responding countries, as they have for other exercises, provided a limited subset of data on fund types in their jurisdictions, such that the

[55] Bahamas, Brazil, British Virgin Islands and Uruguay did not complete the investment funds questionnaire. Uruguay did not complete the investment funds questionnaire as there is no public offering of investment funds in Uruguay. Therefore, the data and key findings presented in this report do not include these countries.

results do not represent the total number and aggregate size of all funds in that jurisdiction. For example, the US response provided data only on bond mutual funds, bond exchange traded funds (ETFs), hybrid mutual funds, hybrid ETFs, and "special" mutual funds (alternative credit strategies mutual funds that may invest in more less traditional fixed income products such as structured products (e.g., collateralized mortgage obligations)).[56] The aggregate total net assets of the mutual funds and ETFs that are not covered by the US response is approximately USD 11.3 tn. See Appendix 3 for a copy of the questionnaire and Annex 4 for a detailed list of the scope of jurisdictions' responses. The data and key findings presented in this section are based on information received from these twelve countries in response to the questionnaire.

### 4.2. Overview of Investment Funds Survey Results

Participating jurisdictions reported approximately 21,000 funds with net assets of USD 11 tn in response to this questionnaire. Jurisdictions reporting the most fund assets (by NAV) among the twelve responding jurisdictions were the US (USD 5.1 tn), the Cayman Islands (USD 3.5 tn) and Canada (USD 1.7 tn), while Costa Rica (USD 3.4 bn), Jamaica (USD 1 tn) and Panama (USD 0.6 tn) reported the least.

Over twenty different types of investment funds were identified across the participating jurisdictions. The most common fund types reported include equity funds, fixed income funds, MMFs, ETFs, closed ended funds and general open ended funds. Some jurisdictions classify investment funds on the basis of the type of instrument or primary investment strategy (e.g. equities) while other jurisdictions classify funds on the basis of the intended purchaser (e.g. institutional or sophisticated investor funds).

In many cases, authorities are aware of unregulated funds in their jurisdiction but do not collect information on their number or size; accordingly that information was not available. The number of unregulated funds in the Americas at end-2014 was reported only in the cases of Panama (35 at end-2014) and Peru (70 at end-2014).

For the 10 jurisdictions that reported NAV for the 10-largest funds, for each type of fund in that jurisdiction, the aggregate NAV for the top 10 funds across each fund type and across the participating jurisdictions amounts to approximately USD 2.4 tn (447 funds). Of those 447 funds, 184 were open-ended funds each with over USD 500 million in net assets, totaling USD 2.3 tn in

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[56] The US response to the investment fund questionnaire does not cover other open-end funds, including equity mutual funds, equity ETFs, and money market funds. The US response also does not cover closed end funds, REITs, or hedge funds. The US response is based on data from the CRSP Mutual Fund Database.

aggregate NAV.[57] The concentration of assets under management for the largest funds differs across jurisdictions and fund type.

The funds markets are quite concentrated in many of the responding jurisdictions. In certain cases, the share of assets from the 10 largest funds within a specific type is high due to small fund markets. Several jurisdictions have fewer than 10 funds within a fund type, including Panama (closed investment funds, MMFs, REITs), Costa Rica (equity, income, mega-fund, mortgage, real estate development), Colombia (ETF, MMF), and Bermuda (administered fund).

In contrast, some of the largest markets are less concentrated. For example, Canadian top 10 funds' AUM/ total AUM ratios are generally less than 0.5. Other fund types with low top 10 AUM/total AUM ratios include Cayman Islands master and registered funds, and US investment bond mutual funds. However, these fund types include over 1,000 funds.

**Maturity transformation in funds**

Maturity transformation is a risk associated with investment funds. Funds that hold long term assets and have short term liabilities may be vulnerable to fund holder redemption. With the exception of Argentina, Cayman Islands, Jamaica and Panama, for which data was not available, the other jurisdictions reported USD 1.4 tn in short term assets for reported open-ended funds. Long term assets for reported open-ended funds amounted to USD 4.8 tn, excluding Argentina, Jamaica and Panama as numbers were not available for these countries.[58]

Regulatory limits on asset maturity mostly are only present for money market funds. Some regulations require assets to have a maturity of no more than 90 days, others are no more than 365 days or longer.[59] Generally there are no maturity restrictions for other fund types. On the liability side, the reported data is scarce. Only two jurisdictions gave breakdowns for long and short term liabilities. As a result, it is difficult to examine the degree of maturity transformation in the funds.

Regulators could consider whether it would be beneficial to collect information on funds' portfolio maturity. Lack of information regarding investment funds in certain jurisdictions makes it challenging to assess the degree of maturity transformation in investment funds, which in turn makes it difficult to assess their level of risk. Regulators could consider whether it would be beneficial to collect this information.

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[57] The US response to the WGSB investment funds survey did not include information on hedge funds. In December 2015, IOSCO's Hedge Fund Survey identified 1486 hedge funds with net assets over USD 500 million across eight major jurisdictions, including the USA, totaling USD 2.6 tn in net assets under management.

[58] These figures represent only reported open-ended funds (units of which are redeemable at the option of the investor). These figures do not include assets of open-ended fund types that were not reported or of closed-ended funds. See Appendices 3 and 4 for a detailed explanation of the scope of the questionnaire and responses.

[59] For US MMFs, individual assets can have a maturity of up to 397 days, but there are limits on the portfolio's weighted average maturity so the fund could not have assets all of which had a maturity of 397 days.

**Liquidity Mismatch between fund assets and redemption terms**

The WGSB and FSB have highlighted the potential for runs on investment funds that are open-ended where they are invested in illiquid assets. Colombia experienced such an episode after the taper tantrum.

Canada, Chile, Colombia, Costa Rica, Peru, Mexico and the United States all have regulatory definitions for liquid assets. Definitions of these types of liquid assets include cash and overnight balances, equity, government bonds, assets that can be liquidated in 7-8 days, and securities with less than 90 days to maturity. Though the Cayman Islands do not have a regulatory definition for liquid assets, cash and CDs are used as a proxy.

The level of reported liquid asset holdings differs across jurisdictions and fund types. [60] Based on the questionnaire responses, in Canada, hedge funds hold 3% of invested assets in liquid assets, while all other fund types hold between 40% and 97% of their AUM in liquid assets. Mexico reported that most funds hold between 33% and 71% of liquid assets, with the exception of ETFs and equity funds. Mexico's response indicated that its debt funds hold over 33% in liquid assets, and equity funds hold 15% in liquid assets. Chile reported that all types of investment funds in Chile that are not directed at qualified investors must hold at least 50% of their investments in liquid securities while Peru reported that all assets of open ended funds in Peru must be tradeable.

In certain other jurisdictions, the amount of liquid asset holdings was reported at less than 10%. All eight fund types in Costa Rica, including equity and MMFs, were reported to hold less than 10% in liquid assets. The survey response showed that Colombia's ETF and private equity funds hold less than 1% in liquid assets.

Responses showed that fixed income and debt funds hold on average between 33% and 71% in liquid assets in Argentina, Canada, Costa Rica and Mexico, while MMFs' liquidity ranges from 7.4% in Costa Rica to 96% in Canada.

Regulators could consider whether it would be beneficial to collect information on funds' portfolio liquidity. Lack of information regarding investment funds in certain jurisdictions makes it challenging to assess the degree of liquidity mismatch in investment funds, which in turn makes it difficult to assess their level of risk. Regulators could consider whether it would be beneficial to collect this information.

The table below describes certain limits on investments in illiquid assets found in the Americas. Some of the rules apply to publicly offered mutual funds and have a numerical limit on illiquid

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[60] The investment funds questionnaire did not define "liquid assets," but left it to jurisdictions to respond in accordance with their own definition, which may correspond to jurisdictions' various legislative or regulatory definitions, or which may have been determined based on data availability. For example, the US response used cash and cash equivalents.

assets. Other rules prohibit any investment in specific asset types. There are no limits on investments in illiquid assets in the remaining jurisdictions that reported this type of information.

***Limits on Investments in Illiquid Assets***

| Jurisdiction | Limits on investments in illiquid assets |
|---|---|
| Canada | A publicly offered mutual fund may not purchase an illiquid asset if, immediately after purchase, more than 10% of its net asset value would be invested in illiquid assets. Closed-end funds, hedge funds and pooled funds do not have this restriction. |
| Chile | Mutual funds that are not directed at qualified investors in no case may invest more than 50% of its assets in securities that do not have the depth and liquidity requirements defined under Rules in Chile. |
| Jamaica | No more than 15% of the collective investment scheme may be invested in illiquid assets. |
| Panama | Outside of money market investment funds, no other funds in Panama are required to have limits on investments in illiquid assets. |
| Peru | All assets should be tradeable in a stock market except for deposits and forwards. |
| Mexico | Funds cannot invest directly in illiquid assets such as loans or real estate property. However, funds are allowed to invest only in recognized tradeable securities, such as those issued in public offering, bank deposits, foreign government securities and market derivatives. |
| US | Open-end funds (other than MMFs) may invest not more than 15% of their net assets in illiquid assets.[61] MMFs may invest no more than 5% of their total assets in illiquid securities.[62] |

***Liquidity Buffers required by Regulators***

Regulatory liquidity buffers are uncommon in the region. Four of the reporting jurisdictions mentioned they have liquidity buffer requirements (Argentina, Colombia, Mexico and Panama). Only MMFs and other open-ended funds are subject to liquidity buffer regulations. Furthermore, the level of liquidity buffer is not always specified in regulations. The following table describes certain examples of liquidity buffers that regulators require funds to have in the Americas.

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[61] On October 13, 2016, the SEC adopted new rules and rule amendments relating to liquidity risk management, among other things, *Investment Company Liquidity Risk Management Programs*, Investment Company Act Release No. 32315 (October 13, 2016), available at: https://www.sec.gov/rules/final/2016/33-10233.pdf. Most funds will be required to comply with the liquidity risk management program requirements on Dec. 1, 2018, while fund complexes with less than a USD 1 bn in net assets will be required to do so on June 1, 2019. MMFs are subject to the liquidity requirements of 2a-7 under the Investment Company Act of 1940 (hereinafter "Company Act") and are not subject to the new rules and rule amendments relating to liquidity risk management.

[62] *See* 17 CFR 270.2a-7(d)(4).

| Jurisdiction | Requirements for Liquidity Buffers |
|---|---|
| Colombia | Both money market funds and general (other open-ended) funds are required to have liquidity buffers. Money market funds must have a minimum of 5% of the market value of the fund in cash, 10% in liquid assets and 25% in '30 day' liquid assets. They must have a minimum amount of liquid assets, enough to cover the highest one day redemption experienced but cannot be lower than 10% of the fund. |
| Panama | Outside of money market investment funds, liquidity buffers are not required. However, asset managers must have enough capital to face short term obligations. |
| Mexico | Funds have to hold a minimum percentage of liquid assets according to the objective, investment horizon and redemptions policy of the funds and shall be indicated in the prospectus. Though liquidity buffers are required, regulation does not mandate on how to determine the level by a fund. |
| US | All MMFs now have the ability to impose a liquidity fee of up to 2%, or temporarily suspend redemptions ("gate") for up to 10 business days in a 90-day period, if the MMF's weekly liquid assets fall below 30% of its total assets and the MMF's board determines that imposing a fee or gate is in the fund's best interests. In addition, non-government MMFs are required to impose a liquidity fee of 1% on all redemptions if the fund's weekly liquid assets fall below 10% of its total assets, unless the MMF's board determines that imposing such a fee would not be in the best interests of the fund.[63]<br>See also above for U.S.'s response for illiquid assets. |

**Access to Central Bank Liquidity**

With the exception of funds in Colombia (see Box 1), funds in the Americas have no access to central bank liquidity. In Colombia funds are able to do repo operations with the central bank (so long as they have admissible collateral).

63 *See* 17 CFR 270.2a-7(c)(2).

**The access of Investment Funds to Central Bank's Liquidity: the Colombian case Box 1**

In Colombia, the scheme to deal with the systemic liquidity issues of investment funds has two components. On the one hand, open-ended funds have access to quasi-lender of last resort (LOLR) facilities at the Central Bank (CB). On the other hand, these funds are subject to a set of ex-ante liquidity regulations that aim to mitigate individual liquidity risk and to confront the moral hazard problems raised by CB funding facilities (despite the penalty rate carried by the latter).

According to the Colombian law, the CB can only be a LOLR for credit financial institutions (banks, financial corporations, commercial finance companies, and financial cooperatives); therefore, investment funds cannot access the standard LOLR facility from the CB. However, to preserve the normal functioning of the payments system in local currency (which is one of the functions ascribed by law to the Colombian CB), the CB gives access to its intraday liquidity facility to most financial intermediaries: credit financial institutions, pension funds, trust companies, broker dealers and investment management companies. The latter three are the only authorized to manage investment funds. Under this liquidity mechanism, intermediaries do repo operations with the CB in which they temporarily exchange a government bond for cash. The operation has to be reversed on the same day at a cost of 0.01%; otherwise the transaction is automatically converted into an overnight repo with an interest rate equal to the reference rate of the CB plus 200 basis points. The high cost of the overnight operation seeks to make the latter an option of last resort, after exhausting other alternatives in the market. Regarding investment funds themselves, their managers (trust companies, broker dealers and investment management companies) can obtain CB liquidity for the funds, with repos on the assets of the funds, only if stated in the investment policy of the fund and for a maximum of 30% of the portfolio. The latter restriction is stated by a government decree.

Even though investment funds have access to CB liquidity if they have admissible collateral (government bonds), in practice most of their investments are term deposits at commercial banks. Therefore, a set of ex-ante regulations has been enacted to mitigate the risk of runs faced by open-ended funds and the threat they can pose to the financial system if they trigger massive fire sales. Nowadays, investment funds must follow some of the measures suggested by IOSCO: First, all collective investment schemes that have the characteristics of a money market fund (MMF) or which are presented to investors as having similar investment objectives would have to comply with the same requirements; second, MMF must have a minimum of 5% of the market value of the fund in cash and 25% in liquid assets (government bonds are considered a liquid asset); finally, all open ended funds without fixed period of redemption (which includes MMF) must have a minimum amount of liquid assets sufficient to cover the highest one day redemption ever experienced (and it cannot be lower than 10% of the value of the fund).

**Tools to Manage Redemption Pressures**

In all the responding jurisdictions in the Americas, responses indicated that regulators allow (for most fund types) various combinations of redemption gates, suspensions of redemptions, redemption fees, side pockets and stress testing mechanisms to manage redemption pressures in stressed market conditions. In Mexico, the National Banking and Securities Commission (CNBV) does not directly impose suspensions of redemptions. Instead funds are required to include in their prospectus the conditions under which the fund may suspend redemptions. In stressed market conditions, CNBV may also authorize the funds to modify their redemptions policy without prior notification to the investors. Funds in the Cayman Islands usually inform the regulator in cases where redemptions have been suspended with a rationale for the suspensions. In Colombia, the board of directors of the managing institution is allowed to authorize suspension of redemptions depending on what the fund's regulation determines. The suspension must be reported immediately to the financial supervisor and has to be justified both technically and economically.

***Asset Concentration Limits***

Asset concentration limits is another tool that can help funds minimize redemption pressures. Compared to other liquidity tools, asset concentration limits are more common within the region. Many of the limits target the percentage of NAV invested in one issuer. The numerical limit on assets from a single issue varies from 10% to 40%. The table below describes certain asset concentration limits that are required in the Americas:

| Jurisdiction | Asset Concentration limits |
|---|---|
| Argentina | Many limits apply. For example: funds can hold up to 20% of its assets in securities of a financial institution regulated by the central bank; funds can allocate no more than 20% of its portfolio in assets of the related economic group; the fund cannot hold more than 10% of total liabilities of any issuer; funds should not invest more than 30% of its assets into a single sovereign debt security. Other limits also apply. |
| Canada | A publicly offered mutual fund may not purchase the security of an issuer if, immediately after the purchase, more than 10% of its NAV would be invested in securities of any issuer. |
| Colombia | Stocks and commodities are not allowed for money market funds in Colombia. |
| Jamaica | There are investment restrictions for collective investment schemes. For example, no more than 10% of the scheme's net assets shall consist of securities from one issuer, except in the case of securities that are (i) issued or guaranteed by the Government of Jamaica ("GOJ") and the Bank of Jamaica ("BOJ") and (ii) issued by the BOJ and government where those securities have received an investment grade credit rating. |
| Mexico | Excluding exchange traded funds, concentration limits are as follows: |

| | |
|---|---|
| | - Investments in assets issued by a particular issuer or financial entity that represent more than 15% of the fund's net assets cannot exceed 60% of such assets jointly.<br><br>- Each fund may invest up to 20% of a specific security issuance or series and all the investments of all the funds managed by the same operator may not exceed 40% of such securities. |
| Panama | The majority of funds in Panama have asset concentration limits. For some of these funds, 40% of assets in a single issuer cannot be exceeded. |
| Peru | Open-ended funds in Peru must not have more than 15% of the amount issued for stocks or debt instruments for any issuer. Also, these funds must not have:<br><br>- More than 15% of its assets invested in instruments from one issuer; and<br><br>- More than 30% of its assets invested in companies from the same economic group. |
| US | Registered investment companies are subject to limitations on asset concentration. For example, nearly all funds are subject, at a minimum, to section 851 of the Internal Revenue Code, which specifies diversification requirements for all "regulated investment companies" to obtain flow-through treatment for the fund's income, so that only shareholders, and not the fund, are subject to taxation. Under section 851 of the Internal Revenue Code, a fund may not invest more than 25% of its assets in securities of one issuer (other than government securities or other funds' securities) and is subject to diversification requirements with respect to 50% of the fund's assets. Funds are also either "diversified" or "non-diversified" under section 5(b) of the Investment Company Act. A diversified fund may (with respect to at least 75% of the fund's total assets) invest no more than 5% of the fund's total assets in any one issuer, and no more than 10% of the outstanding voting securities of the issuer. A non-diversified fund may exceed these limitations, subject to the diversification requirements of Section 851 of the Internal Revenue Code. MMFs and certain other funds are subject to other limits. |

**Market Conduct Rules**

Most of the jurisdictions that responded to the questionnaire reported that market conduct rules are in place. The following items present various types of market-conduct rules that are established in these jurisdictions (but not limited to the following):

i) Transparency of information should be included in the prospectus, financial reports and fund brochures;
ii) Reasonable and adequate basis for investment decisions should be displayed;
iii) There should be no discrimination against investors; and

**iv)** The fund's interest must be placed before the interest of asset managers or other relevant persons.

**Fund Investors**

Within WGSB members, with the exception of Colombia and Mexico, the total number of domestic investors and foreign investors in funds was not reported. Mexico's numbers were measured based on the number of contracts that were established per fund. In Colombia, only an aggregate number is available as it is not possible to differentiate between domestic and foreign investors.

Given this lack of information, it may be difficult for regulators to map potential paths of contagion in stressed situations, including the number and concentration of counterparties potentially affected, as well as the geographical spread of the contagion.

In addition, the lack of information may make it difficult to assess the impact of flow reversals on investment funds (for example, if macroeconomic conditions in a given country led to investors from that country pulling out of certain asset classes).

**Managing Institutions**

Jurisdictions responding to the questionnaire reported that institutions that are allowed to manage investment funds should be registered investment managers, investment fund management companies, licensed securities dealers, asset managers, brokerage houses, banks, investment fund's operators authorized by the supervisor and entities that are licensed with Regulators. Six jurisdictions reported laws that allow managers to provide financial support to managed funds, four jurisdictions reported a prohibition on such support while in one jurisdiction reported that support is allowed in limited circumstances.

**Disclosures**

<u>Disclosures to the Regulator</u>

Investment funds typically make certain disclosures to regulators and to their investors, and sometimes even to the general public. The responses to the questionnaire show that the extent of disclosures, as well as the frequency of such disclosures, vary widely by jurisdiction and by type of fund. Most jurisdictions responding to the questionnaire reported that they require funds to inform the regulator about their leverage ratio, except in the case of Canadian hedge funds, funds in the Cayman Islands, funds in Mexico and closed end funds based in Peru. In the Cayman Islands, the regulator calculates each fund's leverage ratio based on other financial information provided by the fund. In those jurisdictions that reported requiring disclosure of leverage, the frequency of disclosure ranges from daily to annually if the leverage changes. Similarly, most regulators reported that they require funds to report to the regulator on their use of derivatives and geographical breakdown of investments. These types of disclosures can help the regulator assess the risk posed by each fund and to detect trends in the risk indicators.

More than half of the regulators responding to the questionnaire reported that they require funds to provide information on liquid assets, either on a daily, quarterly or monthly basis. Information on liquid assets could alert the regulator to those funds that have a high mismatch between assets and redemption terms, signalling higher risk.

Some jurisdictions require certain fund types to report the name of their largest counterparties to regulators. Other disclosures made to regulators include daily reporting of repo transactions, securities lending and securities traded in Mexico, while funds in Costa Rica must report on a fortnightly basis their investor concentration, risk adjusted return and cash positions.

Reported qualitative disclosures often made to regulators and investors in most jurisdictions include a fund's:

- investment policy and strategy;
- policy on use of leverage and derivatives;
- liquidity risk management policy;
- investment restrictions;
- redemption frequency; and
- policy on imposition of redemption gates or suspension of trading.

Disclosures to the Investor

Responses indicate that market discipline premised upon disclosure to investors is relied upon to control risk in certain fund types in some responding jurisdictions. Canadian hedge funds for example are not required to disclose anything to the regulator but must provide extensive disclosures to their investors. For such types of funds, leverage, liquidity ratios and use of derivatives could be useful metrics for investors to assess the risk of investing in a fund. More than half of the responding jurisdictions require funds to report leverage ratios to investors. Chilean Funds, funds in Mexico, Close-Ended Funds in Peru and Colombian ETF and PE Funds do not report leverage ratios to investors. Funds in Bermuda, Canada, Mexico and Peru must report their use of derivatives to their investors. In addition, approximately half of the jurisdictions surveyed require funds to report to their investors on domestic and foreign fund assets.

Responses to the questionnaire indicate that information on fund liquidity and large exposures is not widely required to be provided to investors in responding jurisdictions. Of the fund types identified across respondent jurisdictions, more than half do not have to report liquid assets to investors. The other funds generally report this information on a monthly to semi-annual basis.

Questionnaire responses also show that the area where most of the funds did not make a disclosure was in regards to naming of counterparties. Only certain funds in Colombia, Exchange Traded

Funds in Mexico and Closed Ended funds in Peru are required to report that information. In the case of Colombia, these funds must report their 10 largest exposures.

Disclosures to the General Public

The nature and frequency of disclosure to the general public reported by responding jurisdictions vary by the types of funds in each jurisdiction but there are some commonalities that can be highlighted. Funds in Bermuda, Hedge Funds in Canada and Funds in the Cayman Islands are not required to provide any disclosures to the general public.

Responding jurisdictions reported that certain types of funds are required to publicly report on almost all metrics, including mutual funds in Canada, certain types of funds in Colombia, ETFs in Mexico and open ended funds in Peru.

The remaining jurisdictions reported that they require some metrics to be disclosed publically. Most often, these metrics include total assets, leverage and the use of derivatives. Only six out of the seventeen fund types represented by the responses are required to disclose their total liquid assets and the geographical breakdown of investments. The majority of reported fund types are not required to publicly disclose the names of their counterparties. Colombian General, REITs and MMF Funds, Costa Rican Funds and ETF Mexican Funds however are required to release such data to the general public.

**Interconnectedness**

The questionnaire surveyed the interconnectedness between investment funds and banks, and between investment funds and other financial institutions. The ratio of investment fund assets to banks and investment fund assets to other types of institutions is used to assess interconnectedness. The level of interconnectedness between investment funds and banks was reported by Argentina, Canada, Colombia, Costa Rica, Peru and Mexico.

Among the responding jurisdictions, in terms of assets to banks, predictably, money market funds are most interconnected, with ratios ranging from 27.8% in Colombia, 85.8% in Argentina and 67.2% in Costa Rica. The general type of fund in Colombia, which employs primarily a fixed income strategy, has 50% of assets exposed to banks and the government debt funds and short term debt funds in Mexico have exposures of 56.1% and 42.7%, respectively. All other types of funds in reporting jurisdictions have less than 25% of their assets interconnected to banks.

Only Argentina, Canada, Colombia and Peru reported investment funds' exposures to other financial institutions. With the exception of Peru, which reported exposures of 1025% for open ended funds, and Colombia's real estate investment trusts, which reported exposures of 58%, the exposures of most other types of funds in the other responding jurisdictions is less than 15%, indicating a low level of interconnectedness between investment funds and other financial institutions.

### Geographical Exposure

With some exceptions, survey responses indicated that funds in most jurisdictions, except the Cayman Islands, hold predominantly domestic assets. In Argentina, public funds must hold at least 75% of their investments in Argentina or in Mercosur member countries. Most open-ended funds in Canada, Chile, Colombia, Costa Rica and Mexico hold more than two-thirds of their assets domestically.

Notable exceptions include hedge funds in Canada, which hold a total of 2% of domestic assets, Chilean funds targeted to institutional investors at 37%, equity Chilean funds, at 37%, and Chilean Mixed equity funds at 28%. High holdings of domestic assets, especially in less diversified economies, can amplify the interconnectedness between funds and the local economy and increases the risks of concentration of investments by different funds.

Conversely, investment funds in the Cayman Islands hold almost exclusively foreign assets.

### Leverage metrics

Leveraged funds can be a cause of concern due to their behavior during adverse asset price movements and interconnectedness with the rest of the financial system. When asset prices decline, funds may be forced to deleverage, thus contributing to further decreases in asset prices. Leveraged funds' distress can also be transmitted to their trading and funding counterparties, causing further stress in the financial system.

The questionnaire responses revealed a wide degree in leverage variation across funds and jurisdictions and broad variations of leverage ratios within fund types. Most responding regulators reported collecting information on fund leverage, though some jurisdictions do not collect such information.

Among the responding jurisdictions, funds in the Cayman Islands had the highest leverage ratios, where the median for funds ranged from 28% to 142%.

The leverage in pooled funds in Canada ranges from 0% to 1097%, with a median of 100%. Publicly offered mutual funds in Canada are generally not permitted to employ leverage.

Most funds in Colombia have a maximum leverage ratio of 100%. Apart from the real estate funds, all other funds in Costa Rica have less than 1% in leverage. In Peru, the leverage ratio ranges from 0 to 1.44 for closed ended funds and 0.015 to 40.24 in open ended funds. Finally, in the United

States, mean leverage ratios for the five reported fund types range from 1.39% in bond funds and hybrid ETFs to 10.76% in the "special" mutual funds category.[64]

However, comparing leverage ratios across funds and jurisdictions can be misleading because leverage is measured in many ways across the Americas. For example, for purposes of responding to the questionnaire, the measure used for reported funds in the U.S. was (total assets-total net assets)/total net assets. The methodology in the Cayman Islands calculates gross notional exposure/net asset value. Colombia uses a ratio between leveraged operations and capital.

Types of leverage include regulatory, balance sheet, synthetic and market-led. Each type is described below.

Regulatory leverage is a restriction on debt or borrowing imposed by a regulator.

Balance sheet leverage refers to the borrowing of money from other market participants.

Synthetic leverage is leverage acquired through the use of financial instruments, such as options, futures, forwards, swaps and other types of derivatives.

Market-led leverage (often called embedded leverage) refers to a position where the amount of market exposure per unit of committed capital is leveraged against financial institutions that face regulatory capital constraints.

The 2015 International Organization of Securities Commissions (IOSCO) Hedge Funds Survey found gross leverage ratios, calculated as GNE/NAV, between 1.8 and 17.84[65]. The FSB, in its 2017 policy recommendations on asset management, recommended that IOSCO should develop consistent measures of leverage in funds, and jurisdictions should collect data on leverage in funds. Once operationalized, these recommendations will provide for a clearer picture of leverage in funds across the Americas; nearly all WGSB jurisdictions are represented at IOSCO. A standard method for calculating leverage would assist comparisons between funds domiciled in different jurisdictions.

**Leverage Restrictions and Calculation**

Reported leverage restrictions, limits and calculations differ among the responding jurisdictions in the Americas. The Table below provides a breakdown of the various reported leverage restrictions, limits and leverage ratios that are used in some countries of the Americas.

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64 The fund types reported by the US are bond mutual funds, bond ETFs, hybrid mutual funds, hybrid ETFs, and "special" mutual funds, which are alternative credit strategies mutual funds that may invest in less traditional fixed income products such as structured products (e.g., collateralized mortgage obligations).

65 For hedge funds with over USD 500 million net assets in the United Kingdom, Australia, France, Japan, Singapore and Hong Kong.

No regulatory leverage limits were reported by the following jurisdictions: Bermuda, the Cayman Islands and Mexico.

| Jurisdiction | Leverage Restrictions |
|---|---|
| Bermuda | Regulatory limits/restrictions are not imposed but limits are determined by the fund and its operators. |
| Canada | Publicly offered mutual funds in Canada (open-ended balanced funds, open-ended equity funds, open-ended fixed income, open-ended money market funds, open-ended fund of funds and ETFs) are generally not permitted to employ leverage but the remaining funds have leverage limits. |
| | |
| **Jurisdiction** | **Leverage Limits Imposed** |
| Argentina<br>Chile<br>Colombia<br>Costa Rica<br>Jamaica<br>Panama<br>US | **<u>Regulatory:</u>**<br>Argentina: 100% of NAV but only for hedging.<br><br>Chile: Mutual funds that are not directed at qualified investors may not incur debts by more than 20% of fund assets.<br><br>Colombia: 100% of the fund equity.<br><br>Costa Rica: 60% for real estate development funds and real estate investment funds. 10% for the remaining funds in Costa Rica.<br><br>Jamaica: 10% of the aggregate market value of the scheme's assets for a period not exceeding twelve months.<br><br>Panama: Regulatory limits of 30% of fund assets are imposed for all funds in Panama with the exception of REITS funds, which have no limits and the venture capital fund, which has a limit of 100%.<br><br>Peru: Open ended funds in Peru have regulatory leverage limits but a percentage figure was not provided.<br><br>United States: The Company Act limits indebtedness leverage for open-end funds (other than ETFs and MMFs) by requiring an asset |

| | |
|---|---|
| | coverage ratio of 300% (and these funds may only borrow from banks).[66] SEC staff guidance interprets the 300% asset coverage requirement to limit an open-end fund engaged in securities lending to lending no more than 1/3 of its total assets.[67] |
| Canada<br>Costa Rica<br>Peru | **Market-led:**<br>Canada: The market practice for a closed-ended fund in Canada is to limit leverage to 33% of the fund's net asset value.<br><br>Costa Rica: Equity fund: 0.28%; Growth fund: 0.19%; Income fund: 0.63%; Mega-fund: 0.54%; Money market fund: 0.08%; Mortgage fund: 0.61%; Real estate development fund: 33.50%; and Real estate investment fund: 12.94%.<br><br>Peru: There are limits in Peru. Closed-ended fund - Rules for investment funds do not restrict the leverage limits that the funds can establish for themselves. Open-ended funds - Rules for mutual funds have not restricted the use of other kinds of limits for the funds. |
| Peru | **Balance sheet:**<br>Peru: Leverage limits are required for both open-ended and closed-ended funds. However, for open-ended funds, the leverage limit is 10% of the NAV and the asset manager must assume the cost of taking leverage. |
| Panama<br>Peru | **Synthetic:**<br>Panama: Leverage limits are imposed for all funds in Panama with the exception of REITS funds but percentage figures were not provided. |

[66] *See* Section 18 of the Company Act.

[67] *See* US Securities and Exchange Commission (SEC) and staff authority at: https://www.sec.gov/divisions/investment/seniorsecurities-bibliography.htm. SEC releases and staff guidance permit funds to take on additional indebtedness leverage through derivatives and other transactions (e.g., reverse repurchase agreements, and short sales) provided that the fund sets aside liquid assets equal to the fund's actual or potential indebtedness, which varies by instrument and transaction.

| | |
|---|---|
| | Peru: Leverage limits are required for both open-ended and closed-ended funds. However, for open-ended funds, rules for mutual funds have not restricted the use of other kinds of limits for the funds. |
| | |
| **Jurisdiction** | **Leverage Ratio Calculations** |
| Canada | For ‘Pooled funds’: GNE/NAV (Gross notional exposure – gross exposure across all asset types divided by NAV). |
| Cayman Islands | GNE/NAV. |
| Colombia | Ratios are between capital and assets. |
| Costa Rica | The leverage is calculated as the ratio of total liabilities, excluding amounts received from investors to invest or pay sums of investors and the total assets of the investment fund. |
| Peru | Mark to market. |
| Mexico | Existing regulation does not provide specific rules on leverage and funds are not authorized to take leverage from repo operations. However, the leverage calculation methodology for ETFs is required to be stated in the prospectus. |
| United States | TA-TNA/TNA |

**Use of Derivatives and Short Selling**

The regulations in the Cayman Islands do not prohibit investment funds from short selling or using derivatives. Short selling is also permitted for bond funds in the United States, Growth and Income Funds in Costa Rica, and certain types of mutual funds in Canada. Most funds in Canada, Peru, and the United States are allowed to employ derivative strategies. In Mexico, funds require CNBV's authorization to trade derivative instruments.[68]

**Cross-border Cooperation**

In all jurisdictions with the exception of Colombia, cross-border cooperation mechanisms are in place to facilitate the exchange of information between supervisory bodies. Most of these

[68] Authorized funds can trade derivatives subject to some restrictions (i.e., they can only trade with local banks and brokers and eligibility restrictions also apply to the underlying). As of today, fund managers do not use derivatives as part of a leverage or speculation investment strategy. In addition, regulation does not prohibit funds to perform short selling (i.e. only through a stock exchange and by using a broker dealer).

jurisdictions have Memoranda of Understanding (MoUs) with other jurisdictions and have also signed the Multilateral Memorandum of Understanding (MMUs) with IOSCO.

## 5. Key findings and recommendations

The third WGSB shadow banking monitoring exercise continues to provide useful data on non-banking credit intermediation activities in the region. The exercise complements the FSB global shadow banking monitoring exercise by incorporating participation of non-FSB members. IFCs participation, in particular, addresses an important data gap. The WGSB continues to take steps to align the RCGA monitoring exercise with the FSB global exercise. A broader MUNFI and Narrow Measure of shadow banking has been introduced in this report. Overall, the regional shadow banking sector exhibits similar characteristics to that reported in the last report.

**Recommendation #1: WGSB should continue to conduct the shadow banking exercise on an annual basis following the timeline of the global FSB shadow banking monitoring exercise.**

Future exercises should continue to refine the measurement of shadow banking activities, following the approach used in the global FSB shadow banking monitoring exercise. WGSB could incorporate risk metrics data into the exercise to examine the degree of maturity and liquidity transformation conducted through, leverage risks posed by the shadow banking activities.

**Recommendation #2: Future exercise should examine finance companies (including micro-credit) in order to identify the potential risks they pose to financial stability in the region.**

The 2014 Report on shadow banking in the Americas identified four areas that may pose risks to financial stability in the region. Discussion of these four issues would be helpful for policy making within the region and globally. Other three areas were covered in the 2015 report (large and leveraged broker-dealers, non-bank deposit-taking institutions) and 2016 report (open-ended funds in the context of illiquid markets).

**Recommendation #3: Future exercises should incorporate the economic functions approach following the work of the FSB global shadow bank monitoring exercise.**

Following the WGSB trial exercise in applying the economic functions approach in monitoring shadow banking activities, the WGSB should continue future exercises using the economic functions approach. This would ensure better consistency with the FSB global exercise.

**Recommendation #4: Regulators could consider whether it would be beneficial to collect information on funds' portfolio maturity and liquidity.**

Lack of information regarding investment funds in certain jurisdictions makes it challenging to assess the degree of maturity transformation and liquidity mismatch in investment funds, which in turn makes it difficult to assess their level of risk. Regulators could consider whether it would be beneficial to collect this information. In addition, IOSCO's planned development of consistent measures of leverage in funds will assist comparisons between funds domiciled in different jurisdictions.

## Annex 1: WGSB Membership List

# FSB Regional Consultative Group for the Americas
# Working Group on the Shadow Banking
# List of Members

| | |
|---|---|
| **Co-chairs** | **Justine Plenkiewicz**<br>Head, Policy and Development Division<br>Cayman Islands Monetary Authority |
| | **Pamela Andrea Cardozo Ortiz**<br>Chief Officer of the Monetary and International Investments Division<br>Banco de la República |
| | **Stephen Murchison**<br>Adviser to the Governor<br>Bank of Canada |
| **Argentina** | **Horacio A. Aguirre**<br>Acting Senior Manager, International Relations and Agreements<br>Banco Central de la República Argentina |
| | **Frederico Traverso**<br>Banco Central de la República Argentina |
| **Bahamas** | **Alwyn Jordan**<br>Senior Economist, Research Department<br>Central Bank of The Bahamas |
| **Barbados** | **Sadie P.O. Dixon**<br>Legal Counsel<br>Central Bank of Barbados |
| **Bermuda** | **Marcelo Ramella**<br>Deputy Director, Policy, Legal Services & Enforcement Department<br>Bermuda Monetary Authority |
| | **Leo Mucheriwa**<br>Assistant Director Research |

| | |
|---|---|
| | Bermuda Monetary Authority |
| **Brazil** | **Frederico Souza**<br>Head of Division, Financial System Monitoring Department<br>Banco Central do Brasil |
| | **Irineu Hiroshi Yokoo**<br>Coordinator, Financial System Monitoring<br>Banco Central do Brasil |
| **British Virgin Islands** | **Kenneth Baker**<br>Deputy Managing Director, Regulation, Banking and Fiduciary Services Division<br>Financial Services Commission |
| **Canada** | **Michael Januska**<br>Principal Economist, Financial Stability Department<br>Bank of Canada |
| **Cayman Islands** | **Alvis Bonita Anglin (Bonnie)**<br>Chief Statistician, Policy and Development Division<br>Cayman Islands Monetary Authority |
| **Chile** | **Claudio Raddatz**<br>Director of Financial Policy Division<br>Banco Central de Chile |
| | **Alfredo Fuentes**<br>Senior Economist, Statistics Division<br>Banco Central de Chile |
| | **Nicolás Alvarez**<br>Head, Capital Markets Group<br>Banco Central de Chile |
| **Costa Rica** | **Josué Cortés Segura**<br>Banco Central de Costa Rica |
| | **Genaro Segura Calderón**<br>Technical Services<br>Superintendencia General de Entidades Financieras (SUGEF) |

| | |
|---|---|
| **Jamaica** | **Brian Langrin**<br>Head, Financial Stability Department<br>Bank of Jamaica |
| **Mexico** | **Ana Mier y Terán**<br>Financial Specialist, Financial Stability Division<br>Banco de México |
| | **José Loyola Trujillo**<br>Director General for International Affairs<br>Mexican National Banking and Securities Commission |
| **Panama** | **Nahila Melgar**<br>Director of Risk<br>Superintendency of Banks |
| **Peru** | **Marylin Choy**<br>Central Manager, Operation and Technical Affairs<br>Central Reserve Bank of Peru |
| | **Carlos A. Ballón Avalos**<br>Gerente de Operaciones Monetarias y Estabilidad Financiera<br>Central Reserve Bank of Peru |
| **Uruguay** | **Jose Antonio Licandro**<br>Head, Financial Regulation Superintendence of Financial Services<br>Central Bank of Uruguay |
| | **Juan Pablo Bazerque**<br>Central Bank of Uruguay |
| **United States** | **Benjamin Dennis**<br>Office of International Banking and Securities<br>US Treasury |

# Annex 2: Template for the data collection exercise

Please fill in the template with figures in USD millions, converted at the exchange rate at the end of the period (and insert exchange rate used in column 35)

(USD mil)

| | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | *of which:* | | | *of which:* | | | *of which:* | | | | | | | | |
| **STOCK of financial assets** as of end-year | **Assets of A Banks to Domestic Economy** | **Liailities of A Banks to Domestic Economy** | **Financial Institutions** *=(col2+col3+col13+col14+col15+col19+col39)* | **Central Bank/Monetary Authority** | **Deposit-Taking Institutions** *=(col4+col7+col10)* | **Banks - "A" Domestic (Note 8)** | *Assets to OFIs* | *Liabilities to OFIs* | **Credit Union (Note 1)** | *Assets to OFIs* | *Liabilities to OFIs* | **Building Society** | *Assets to OFIs* | *Liabilities to OFIs* | **Insurance Companies "A" Domestic (Note 2, 3)** | **Pension Funds (Note 2,3)** | **Public Financial Institutions** *=(col16+col17+col18)* | **Government Development Banks "CIDB"(Note 10)** | **Govt. Public Service Pension Board (Notes 1 and 4)** | **Others** | **Other Financial Intermediaries (OFIs)** *=sum of col20 to col 38* |
| 2002 | | | | | | | | | | | | | | | | | | | | | |
| 2003 | | | | | | | | | | | | | | | | | | | | | |
| 2004 | | | | | | | | | | | | | | | | | | | | | |
| 2005 | | | | | | | | | | | | | | | | | | | | | |
| 2006 | | | | | | | | | | | | | | | | | | | | | |
| 2007 | | | | | | | | | | | | | | | | | | | | | |
| 2008 | | | | | | | | | | | | | | | | | | | | | |
| 2009 | | | | | | | | | | | | | | | | | | | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | |
| 2011 | | | | | | | | | | | | | | | | | | | | | |
| 2012 | | | | | | | | | | | | | | | | | | | | | |
| 2013 | | | | | | | | | | | | | | | | | | | | | |
| 2014 | | | | | | | | | | | | | | | | | | | | | |
| 2015 | | | | | | | | | | | | | | | | | | | | | |

| | Col 20 | Col 21 | Col 22 | Col 23 | Col 24 | Col 25 | Col 26 | 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 | Col 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *of which...* | | | | *of which...* | | | | *of which...* | | | | | | | |
| **STOCK of financial assets** as of end-year | **Money Market Funds (MMFs) - of which constant NAV or equivalent (Note 5)** | **Other Money Market Funds (MMFs) (Note 5)** | **Finance Companies (Note 11)** | **Structured Finance Vehicles** | **Public Funds - Licenced Funds(Note 13)** | *Other Investment Funds - equity funds (Note 6)* | *Other Investment Funds - fixed income funds (Note 6)* | *Other Investment Funds - other funds (Note 6)* | **Non-Public Funds** | *Other Investment - Funds equity funds /* | *Fixed income/Bonds /Derivatives* | *Other Funds/Other Financial Assets* | **Real Estate Investment Trusts (REITs) and Funds** | *equity REITs and Funds (Note 12)* | *mortgage REITs and Funds (Note 12)* | ***Commodities Funds*** | **Broker-dealers** | **Non Bank Credit Card issuers (Note 1)** | **Others** | **Financial Auxiliaries (Note 7)** | Exchange rate at end of the period |
| 2002 | | | | | | | | | | | | | | | | | | | | | |
| 2003 | | | | | | | | | | | | | | | | | | | | | |
| 2004 | | | | | | | | | | | | | | | | | | | | | |
| 2005 | | | | | | | | | | | | | | | | | | | | | |
| 2006 | | | | | | | | | | | | | | | | | | | | | |
| 2007 | | | | | | | | | | | | | | | | | | | | | |
| 2008 | | | | | | | | | | | | | | | | | | | | | |
| 2009 | | | | | | | | | | | | | | | | | | | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | |
| 2011 | | | | | | | | | | | | | | | | | | | | | |
| 2012 | | | | | | | | | | | | | | | | | | | | | |
| 2013 | | | | | | | | | | | | | | | | | | | | | |
| 2014 | | | | | | | | | | | | | | | | | | | | | |
| 2015 | | | | | | | | | | | | | | | | | | | | | |

***: 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-2015 data is not available, please provide data until end-2014.

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

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

Note 1: For Credit Unions & Govt Pension Plan.

Note 2: If data for Insurance Companies and Pension Funds can not be separated, please fill the aggreaged number in the insurance companies' cells and explain that in the Note cell.

Note 3: If data for Insurance Companies, Pension Funds and Public Financial Institutions are included in Other Financial Intermediaries, please clarify that in the Note cell.

Note 4: If data for government-owned deposit-taking institutions are included in the Public Financial Institutions, please separate that out in XX cells or clarify as such in the Note cell.

Note 5: If data for MMFs can not be separated between CNAV and Others, please fill the aggregated number in the CNAV MMF cells and explain that in the Note cell.

Note 6: If data for Other Investment Funds can not be separated between Equity Funds, Fixed Income Funds and Other Funds, please fill in the aggregate number in the Other Funds' cells and explain that in the Note cell.

Note 7: Included in financial auxiliaries are 115 Retricted and Unrestriced Mutual Fund Administrators ($XX million) and XX Security Managers/Advisors/Arrangers and Market Makers ($XX million).
Trust companies own assets should be included here. The trusts should be included where they belong, for example: funds, structured finance vehicles, etc.

Note 8: Add percentage of public ownership of total financial assets.

Note 9: Funds that have no restrictions on the type of investor, minimum subscription amount or sales method (i.e. not restricted to private placements).

Note 10: If development banks have the same regulations as banks they should be included under banks, otherwise here.

Note 11: Finance and microfinance companies should be included here.

Note 12: An equity REIT only invests in and owns physical properties and whose revenues therefore come principally from its properties' rents (they are responsible for the equity or value of their real estate assets). Mortgage REITs 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.

Note 13: Funds that have no restrictions on the type of investor, minimum subscription amount or sales method (i.e. not restricted to private placements).

## Supplementary template related to OFIs prudentially consolidated into a banking group

**To be filled in if a significant part of an OFI sub-sector is prudentially consolidated into a banking group, USD million. Please use the table below to report any additional information, if needed.**

**(USD mil)**

| | *Col 1* | *Col 2* | *Col 3* | *Col 4* | *Col 5* | *Col 6* | *Col 7* | *Col 8* | *Col 9* | *Col 10* | *Col 11* | *Col 12* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STOCK of financial assets** as of end-year | Finance companies =MAIN TEMPLATE col22 | of which prudentially consolidated into banking group | Structured Finance Vehicles =MAIN TEMPLATE col23 | of which prudentially consolidated into banking group | Broker-dealers =MAIN TEMPLATE col36 | of which prudentially consolidated into banking group | *XX (Note 1)* | of which prudentially consolidated into banking group | *XX (Note 1)* | of which prudentially consolidated into banking group | *XX (Note 1)* | of which prudentially consolidated into banking group |
| 2002 | 0 | | 0 | | 0 | | | | | | | |
| 2003 | 0 | | 0 | | 0 | | | | | | | |
| 2004 | 0 | | 0 | | 0 | | | | | | | |
| 2005 | 0 | | 0 | | 0 | | | | | | | |
| 2006 | 0 | | 0 | | 0 | | | | | | | |
| 2007 | 0 | | 0 | | 0 | | | | | | | |
| 2008 | 0 | | 0 | | 0 | | | | | | | |
| 2009 | 0 | | 0 | | 0 | | | | | | | |
| 2010 | 0 | | 0 | | 0 | | | | | | | |
| 2011 | 0 | | 0 | | 0 | | | | | | | |
| 2012 | 0 | | 0 | | 0 | | | | | | | |
| 2013 | 0 | | 0 | | 0 | | | | | | | |
| 2014 | 0 | | 0 | | 0 | | | | | | | |
| 2015 | 0 | | 0 | | 0 | | | | | | | |
| Source (Description, confidentiality, URL) (Note 2) | #REF! | | #REF! | | #REF! | | | | | | | |
| Note (Detailed definition etc.) | #REF! | | #REF! | | #REF! | | | | | | | |

| | *Col 13* | *Col 14* | *Col 15* | *Col 16* | *Col 17* | *Col 18* | *Col 19* | *Col 20* | *Col 21* | *Col 22* | *Col 23* | *Col 24* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Interconnectedness data** | | | | | | | | | | | |
| **STOCK of financial assets** as of end-year | Banks' assets to OFIs =MAIN TEMPLATE col5 | of which prudentially consolidated into banking group | Banks' liabilities to OFIs =MAIN TEMPLATE col6 | of which prudentially consolidated into banking group | XXs' assets to OFIs =MAIN TEMPLATE col8 | of which prudentially consolidated into banking group | XXs' liabilities to OFIs =MAIN TEMPLATE col9 | of which prudentially consolidated into banking group | Others' assets to OFIs =MAIN TEMPLATE col11 | of which prudentially consolidated into banking group | Others' liabilities to OFIs =MAIN TEMPLATE col12 | of which prudentially consolidated into banking group |
| 2002 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2003 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2004 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2005 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2006 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2007 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2008 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2009 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2010 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2011 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2012 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2013 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2014 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 2015 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Source (Description, confidentiality, URL) (Note 2) | #REF! | | #REF! | | #REF! | | #REF! | | #REF! | | #REF! | |
| Note (Detailed definition etc.) | #REF! | | #REF! | | #REF! | | #REF! | | #REF! | | #REF! | |

| | *Col 25* | *Col 26* | *Col 27* | *Col 28* | *Col 29* | *Col 30* | *Col 31* | *Col 32* |
|---|---|---|---|---|---|---|---|---|
| **STOCK of financial assets** as of end-year | | of which prudentially consolidated into banking group | | of which prudentially consolidated into banking group | | of which prudentially consolidated into banking group | | of which prudentially consolidated into banking group |
| 2002 | | | | | | | | |
| 2003 | | | | | | | | |
| 2004 | | | | | | | | |
| 2005 | | | | | | | | |
| 2006 | | | | | | | | |
| 2007 | | | | | | | | |
| 2008 | | | | | | | | |
| 2009 | | | | | | | | |
| 2010 | | | | | | | | |
| 2011 | | | | | | | | |
| 2012 | | | | | | | | |
| 2013 | | | | | | | | |
| 2014 | | | | | | | | |
| 2015 | | | | | | | | |
| Source (Description, confidentiality, URL) (Note 2) | | | | | | | | |
| Note (Detailed definition etc.) | | | | | | | | |

**Proxies/Estimates are acceptable if hard data is not available.**

**Notes:**

(1) Please use this column to add any other OFI sub-sector for which a significant part is prudentially consolidated into a banking group.

(2) Please indicate the sources used to fill in this template (e.g. supervisory data, market data, other…).

# Template for International (Offshore) Financial Sector Entities 1

| | 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... | | | | | |
| **STOCK of financial assets** as of end-year | Assets to Banks (Note 2) | Liabilities to Banks (Note 2) | Financial Institutions =(col4+col5+col8) | Banks (Note 3) | Insurance Companies | Pure Reinsurers | Cat Bonds + Special Purpose Insurers | Other Financial Intermediaries (OFI's) | Money Market Mutual Funds | Public Funds | equity funds | fixed income/bond funds | other funds | Commodity Funds | Non Public/Investment Funds | equity funds | fixed income/bond funds | other funds | Commodity Funds | 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 | | | | | | |
| 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-2015 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:**
**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 3: Questionnaire on Investment Funds

# QUESTIONNAIRE ON INVESTMENT FUNDS

The largest sub-sector of OFIs in the region is investment funds. Open-ended funds that hold illiquid assets merit attention because of the potential risk their activities pose to financial stability. The WGSB's 2nd report, published October 30, 2015, recommended that: "Future work on shadow banking in the RCGA should pay particular attention to two areas that were identified as posing potential risks to financial stability in the region: open ended funds (in particular in the context of illiquid markets), and finance companies (including micro-credit)."

As agreed by WGSB members in November, the WGSB is undertaking a review of investment funds in the Americas. This survey has been developed for that purpose.

**Name of Jurisdiction:**

**1. Description of Fund Category**

**Provide a brief description of each fund type required to be regulated in your jurisdiction.**

Please include all open ended and closed ended funds. Examples include (but are not limited to): constant NAV money market funds, variable NAV MMFs, public equity, public fixed income, public mixed funds, private equity, private fixed income, private mixed funds (if your jurisdiction distinguishes public from private funds), exchange-traded funds, real estate investment trusts (mortgage REITs and equity REITs).

| Provide a brief description of each fund type NOT requiring regulation in your jurisdiction along with the total NAV of such funds or number of funds, if available (please include open ended and closed ended funds). | AUM | # of Funds |
|---|---|---|

## QUESTIONNAIRE ON INVESTMENT FUNDS

| Fund Type or Name: | |
|---|---|

### Instructions

Complete 1 separate form for each type of regulated investment fund domiciled in your jurisdiction.
Also complete the disclosures form for each type of fund.
Monetary values should be specified in USD millions.
Data should be given for the end of 2014 or the last available data in 2014
(If the latter, the date should be given by the respondent).
Exchange rate should correspond to the date of the data.

| 2. Fund Metrics | Answer | Comments and/or Observations |
|---|---|---|
| **Total number of funds of this type in jurisdiction** | | |
| **Total assets** | | |
| **Net assets** | | |
| **Net Assets for each of top 10 funds** (if net assets for each fund cannot be provided, please provide data in the aggregate for the top 10 funds) | (insert additional lines as required) | |
| **Assets Under Management (AUM) of each of 10 largest fund families** | (insert additional lines as required) | |
| **Liquid assets (total and average for largest 10 funds)** | | |
| *Total:* | | |
| *Average for Largest Funds:* | | |
| Please describe the assets included as liquid: | | |
| **Short term assets (maturity shorter than one year) Total and average for largest 10 funds.** | | |
| *Total:* | | |
| *Average for largest funds:* | | |
| **Long term assets (maturity longer than one year) Total and average for largest 10 funds.** | | |
| *Total:* | | |
| *Average for Largest Funds* | | |
| **Assets to Banks (Total for type of fund)** | | |
| **Liabilities to Banks (Total for type of fund)** | | |
| **Assets to Other Financial Intermediaries (Total for type of fund)** | | |
| **Liabilities to Other Financial Intermediaries (Total for type of fund)** | | |
| **Short term liabilities (maturity shorter than one year) (TOTAL for type of fund)** | | |
| **Long term liabilities (maturity longer than one year) (TOTAL for type of fund)** | | |
| **Mean, Median and Range of Leverage Across Fund Type** | | |
| Mean | | |
| Median | | |
| Range | | |
| **Leverage Calculation Methodology** | | |
| **Domestic investors (#)** | | |
| **Foreign investors (#)** | | |
| **Domestic fund assets (Total for this type of fund)** | | |
| **Foreign fund assets** | | |
| **Top 3 investment strategies (Describe)** | | |
| | 1) | |
| | 2) | |
| | 3) | |
| **Top 3 issuers of instruments in AUM portfolio** | | |
| (indicate the share of issuer in AUM and its type-Public/Private, Bank/OFI/Non-Financial | | |
| | 1) | |
| | 2) | |
| | 3) | |

| | Yes / No | Comments and/or Observations |
|---|---|---|
| **Approach to hedging (if any)** | | |
| Use of short selling | | |
| Derivatives | | |

| 3. Regulation | Answer | Comments |
|---|---|---|
| **Managing Institutions** | | |
| Which type of institutions are allowed to manage investment funds? | | |
| Are managing institutions allowed to provide financial support to managed funds? | | |
| If yes, please specify how and if there is a limit to the support that can be provided. | | |

| | | |
|---|---|---|
| **Regulator** | | |
| Are the institutions that manage investments funds regulated (Y/N)? | | |
| By which regulator? | | |
| | | |
| **Leverage Limits (for the fund)** | | |
| Please choose from the list below the accepted method(s) of leverage calculation in your jurisdiction and indicate the leverage limit imposed by the regulator | | |
| Regulatory | | |
| Market-led | | |
| Balance sheet | | |
| Synthetic leverage | | |
| | | |
| Are there regulatory consequences for exceeding limits (Y/N)? | | |
| If yes, please provide details. | | |
| | | |
| **Liquidity requirements (for the fund)** | **If Yes, specify limit** | |
| Are there limits on investments in illiquid assets? | | |
| Are liquidity buffers required by regulator? | | |
| Are there asset concentration limits? | | |
| | | |
| **Exposures to or funding from banks and other Financial Institutions (for the fund)** | **If yes, specify** | |
| Are there requirements on exposures to or funding from banks and other FIS? | | |
| | | |
| **Fund investors** | **If yes, specify** | |
| Are there restrictions on fund investors? | | |
| | | |
| **Maturity of portfolio assets (for the fund)** | **If yes, specify** | |
| Are there restrictions on maturity of portfolio assets? | | |
| | | |
| **Can regulator impose the following to manage redemption pressures in stressed market conditions:** | | |
| Redemption gates | | |
| Suspensions of redemptions | | |
| Redemption fees | | |
| Side pockets | | |
| Stress testing | | |
| | | |
| **Frequency of Redemptions** | | |
| Specify frequency (Daily, monthly, quarterly) etc. | | |
| | | |
| **Market Conduct Rules** | | |
| Market conduct rules are in place? | | |
| If yes, please describe | | |
| | | |
| **Cross-border cooperation mechanisms** | | |
| Cross-border cooperation mechanisms are in place? | | |
| If yes, please describe. | | |
| | | |
| **IOSCO Core Principles** (indicate rating or self-assessment) | | |
| Compliance with IOSCO Core Principles 24,25, 26, 27, and 28 | | |
| | | |
| **Access to Central Bank Liquidity** | | |
| Are funds allowed to access Central Bank liquidity? | | |
| Are funds allowed to use lender of last resort facilities? | | |
| if yes to either, please indicate the share of eligible collateral to AUM | | |
| | | |
| **Other Limits** | | |
| Is there a limit to AUM? | | |
| If yes, please describe the limit: | | |

# Questionnaire on Investment Funds: Disclosures

| Fund Type or Name: | |
|---|---|

| Instructions | Complete 1 separate form per type of investment fund regulated in your jurisdiction (as indicated in the cover page). In the boxes below, indicate whether the named disclosures are required to be made to the Regulator, to Investors or to the General Public and the Minimum Frequency of each Disclosure (e.g. Daily, Weekly, Monthly, Quarterly, Annually or specify another interval) |
|---|---|

| Item | Disclosures made to | | | | | | Comments |
|---|---|---|---|---|---|---|---|
| | Regulator | | Investors | | General Public | | |
| | Y/N | Frequency | Y/N | Frequency | Y/N | Frequency | |
| **Part I - Quantitative Disclosures** | | | | | | | |
| Net Asset Value | | | | | | | |
| Total Assets | | | | | | | |
| Leverage | | | | | | | |
| Asset Composition/Asset Classes | | | | | | | |
| Liquid and Illiquid Assets | | | | | | | |
| Amount of Subscriptions | | | | | | | |
| Amount of Redemptions | | | | | | | |
| Amount of Dividends Paid | | | | | | | |
| Minimum initial investment | | | | | | | |
| Historical Performance | | | | | | | |
| Use of Derivatives | | | | | | | |
| $ Invested by Foreign Investors | | | | | | | |
| $ Invested by Domestic investors | | | | | | | |
| Geographical Breakdown of Investments | | | | | | | |
| Financial statements | | | | | | | |
| Fees and remuneration paid to directors and service providers | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| **Part II - Qualitative Disclosures** | | | | | | | **Comments** |
| Investment Strategy | | | | | | | |
| investment Policy | | | | | | | |
| Fund Structure | | | | | | | |
| Policy on Use of leverage | | | | | | | |
| Policy on Use of Derivatives | | | | | | | |
| Liquidity Risk Management Policy | | | | | | | |
| NAV Calculation Policy and Procedure | | | | | | | |
| Redemption Policy/Frequency | | | | | | | |
| Policy on imposition of redemption gates or suspension of trading | | | | | | | |
| Names of Largest Counterparties | | | | | | | |
| Description of Risks | | | | | | | |
| Name of directors and service providers | | | | | | | |
| Investment restrictions/limitations | | | | | | | |
| Description of Fees to be Borne by Investors | | | | | | | |
| Description of conflicts of interest | | | | | | | |
| Public statements when there has been a major breach by a fund | | | | | | | |
| If listed, the stock exchange of the fund | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |
| Other (specify): | | | | | | | |

## Annex 4: Description and Types of Funds Reported by Each Jurisdiction

| Country | Types of Funds |
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| **Bermuda** | **Institutional fund:** Open only to qualified participants. Participants are required to invest a minimum amount of USD 100,000 in the fund. The fund should have an officer, trustee or representative resident on Bermuda. |
| | **Administered fund:** Listed on a stock exchange recognized by the Authority. This fund requires participants to invest a minimum amount of USD 50,000 in the fund. |
| | **Specified jurisdiction fund:** (1) If the jurisdiction and the law of that jurisdiction in which the fund operates are recognised; and (2) If the fund satisfies the requirements related to that class of fund and that jurisdiction. |
| | **Standard fund:** A fund which does not fall within any other class and the custodian is licensed by the Authority (except where the administrator of a fund is carrying on fund administration business in Bermuda). |
| **Canada** | **Types of mutual funds:** Exchange-traded funds (ETFs), balanced funds, equity funds, fixed income funds, money market funds and fund of funds. (See notes). |
| | **Note 1:** All investment funds in Canada are either mutual funds or non-redeemable investment funds (referred to as "closed-end funds"). Mutual funds are investment funds that permit redemptions of their securities more frequently than annually whereas closed-end funds permit redemptions annually or less frequently.<br>**Note 2:** Except for certain requirements applicable to money market funds, all mutual funds are subject to identical regulation.<br>**Note 3:** Hedge funds are investment funds that are not publicly offered. They may only be sold in reliance on an exemption from the prospectus requirements of securities law, which generally means that they are only marketed and sold to accredited investors. While they are generally structured as mutual funds, they may also be closed-end funds. |
| **Cayman Islands** | **Administered fund:** An administered fund must have a CIMA-licensed mutual fund administrator providing its principal office. |
| | **Licensed fund:** A licensed fund must have either a registered office in the Islands or, if a unit trust, a trust company licensed under the Banks and Trust Companies Law as its trustee. (See: http://www.cimoney.com.ky/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=2236) |
| | **Master fund:** A company, partnership or unit trust that:<br>The equity interest must be listed on a stock exchange approved by CIMA or a minimum initial investment of USD 100,000;<br>Holds investments and conducts trading activities for the principal purpose of implementing the overall investment strategy of the regulated feeder fund; and<br>Has one or more regulated feeder funds either directly or through an intermediary entity established to invest in the master fund. |
| | **Registered fund:** A registered fund must either have a minimum aggregate equity interest of USD 100,000 purchasable by a prospective investor; or |

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| | The equity interests must be listed on a stock exchange approved by CIMA. |
| **Chile** | **Type 1** fund (debt): These funds invest in short, medium and long term debt securities but in average the maturity has to be less or equal to 90 days. |
| | **Type 2** funds (debt): These funds invest in short, medium and long term debt securities, but in average the maturity has to be less or equal to 360 days (open ended). |
| | **Type 3** fund (debt): These funds invest in short, medium and long term debt securities but in average the maturity has to be equal or higher to 365 days. |
| | **Type 4** funds (mixed): These funds invest in short, medium and long term debt and also in equity securities. |
| | **Type 5** funds (equity): These funds invest in short, medium and long term debt securities but at least 90% of the fund must be invested in equity securities. |
| | **Type 6** funds (flexible): There is no specific limit. Instruments and limits are defined in the internal regime of the fund. |
| | **Type 7** funds (structured): The goal of this type of fund is to get a pre-set rate of return after a specific period of time. |
| | **Type 8** funds (Institutional Investors): Funds intended for qualified investors. Instruments and limits are defined in the internal regime of the fund. |
| | **Closed ended funds:** intended for qualified investors. Invest in several asset classes, including bonds, equity, real estate, deposits, mortgages, with different maturities and liquidity (closed ended). |
| **Colombia** | **Money market funds** are open-end funds that are allowed to invest in any security denominated in Colombian pesos. These securities must be registered with the RNVE (Registro Nacional de Valores y Emisores) and considered with a minimum investment grade. This type of fund cannot exceed the 365 days term. |
| | **Exchange-traded fund (ETF):** It is a type of collective investment fund that tracks an index, a commodity, bonds, or a basket of assets like an index fund. This type of fund is not considered either open-end or closed-end fund. |
| | **Real estate investment trusts (REITs)**: REITs are closed-end funds whose 75% of assets must be invested in real estate, mortgage-backed securities, real estate ventures, securities or shares whose gross income is derived from real estate. |
| | **General funds:** Under this category all those funds (open-end and closed-end funds) that were excluded in the previous classifications (money market, private equity, ETF, REITs) are included here. |
| **Costa Rica** | Equity fund, growth fund, income fund, mega-fund, money market fund, mortgage fund, real estate development fund and real estate investment fund. (Definitions were not provided). |
| **Jamaica** | Unless exempted, all collective investment schemes in Jamaica are required to comply with the Securities Act and the Collective Investment Schemes Regulations. |
| **Panama** | **1. Open investment funds** are those that offer their investors the right to periodically request redemption of their shares of participation, partially or completely. |
| | **2. Closed investment funds** are those that do not offer their investors the right to request the redemption of their shares of participation before the liquidation of the fund, or that only allows redemption by extraordinary circumstances. |

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| | **3. Money market investment funds:** These funds invest 80% of its assets in the money market (short term). |
| | **4. Investment funds futures and derivatives** invest 80% in futures and derivatives. |
| | **5. Venture capital funds:** Funds that directly or indirectly invests 80% of its assets in equities issued by companies that are not registered in a securities regulator or listed on a stock exchange in Panama or a foreign jurisdiction. |
| | **6. Real estate investment funds:** Funds that directly or indirectly invest their assets in real estate, securities representing real estate or business real estate development and management in Panama. |
| **Peru** | **Closed ended fund (investment funds placed by public offering):** An investment fund is an independent autonomous equity made up by the contributions of individuals and legal persons to be invested in instruments, financial operations and others under management by an investment fund management company, on account of and at risk to fund shareholders. |
| | **Open ended funds (Securities investment mutual funds):** Mutual funds' investments in securities are an independent asset created from contributions by natural persons or legal entities to be invested in financial products and operations. |
| **Mexico** | **1. Fixed income investment funds** are regulated funds that invest only in debt securities, other debt funds shares, derivatives (with previous authorisation) and reverse repos. |
| | **2. Equity investment funds** are regulated funds that invest in equity and debt securities, other equity and debt funds shares, derivatives (with previous authorisation) and reverse repos. |
| | **3. Domestic exchange-traded funds** are collective investment schemes (not funds) that track a specific portfolio of securities or index. They are authorized by the Comisión Nacional Bancaria y de Valores (CNBV). They are set up as a trust (not as an investment fund or corporation). |
| | **4. Real Estate Investment Trusts** and other Real Estate Trusts are regulated as long as they place their units by way of public offering, registering them in the National Security Repository. They are not open-ended funds and do not have any obligation to redeem investors. Regulated REITs and other RE trusts are subject to a leverage limit and a minimum debt service coverage ratio in order to contain excessive risk taking that could result harmful to investors. |
| | **5. Private Equity Trusts:** Trusts whose securities trade publicly (Capital Development Certificates, CCDs) are investment trusts that invest mainly in long-term or infrastructure projects with a fixed horizon for the project, after which the trust extinguishes. |
| **United States** | **1. Investment Funds – Bond MF:** A fund that invests primarily in bonds and other debt instruments. |
| | **2. Investment Funds – Bond ETFs:** A bond fund, typically a mutual fund or unit investment trust, whose shares are traded intraday on stock exchanges at market-determined prices. |
| | **3. Investment Funds – Hybrid MF:** Hybrid funds, also called asset allocation funds or balanced funds that invest in a mix of stocks and bonds. |

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| | **4. Investment Funds – Hybrid ETF:** A hybrid bond fund, typically a mutual fund or unit investment trust, whose shares are traded intraday on stock exchanges at market-determined prices. |
| | **5. Investment Funds – Special MF:** Alternative credit strategies mutual funds which may invest in less traditional fixed income products such as structured products (e.g., collateralized mortgage obligations). |