

COMMITTEE ON CAPITAL MARKETS REGULATION

September 21, 2016

Secretariat of the Financial Stability Board
c/o Bank for International Settlements
CH-4002
Basel, Switzerland

VIA ELECTRONIC MAIL: fsb@fsb.org

Re: Consultative Document: Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities (the “**Consultative Document**”)

Dear Sir or Madam:

The Committee on Capital Markets Regulation (the “**Committee**”) is grateful for the opportunity to comment on the Financial Stability Board’s (“**FSB**”) Consultative Document that proposes policy recommendations to address potential risks to financial stability from asset management activities.¹

Founded in 2006, the Committee is dedicated to enhancing the competitiveness of U.S. capital markets and ensuring the stability of the U.S. financial system. Our membership includes thirty-four leaders drawn from the finance, investment, business, law, accounting, and academic communities. The Committee is chaired jointly by R. Glenn Hubbard (Dean, Columbia Business School) and John L. Thornton (Chairman, The Brookings Institution) and directed by Hal S. Scott (Nomura Professor and Director of the Program on International Financial Systems, Harvard Law School). The Committee is an independent and nonpartisan 501(c)(3) research organization, financed by contributions from individuals, foundations, and corporations.

The FSB’s policy recommendations are designed to equip regulators and asset managers with the information and tools necessary to identify and mitigate risks associated with four potential structural vulnerabilities of asset management activities: (1) a mismatch in the liquidity of fund investments and redemption terms; (2) funds’ use of leverage; (3) operational challenges arising from the transfer of investment mandates or client accounts; and (4) securities lending activities by funds and asset managers.²

¹ Financial Stability Board, *Consultative Document: Proposed Policy Responses to Address Structural Vulnerabilities from Asset Management Activities* (June 22, 2016) (hereinafter, the “Consultative Document”), <http://www.fsb.org/wp-content/uploads/FSB-Asset-Management-Consultative-Document.pdf>.

² See Financial Stability Board, *FSB Publishes Proposed Policy Responses to Address Structural Vulnerabilities from Asset Management Activities* (June 22, 2016), <http://www.fsb.org/wp-content/uploads/FSB-Asset-Management-Consultative-Document-press-release.pdf>.

The Committee commends the FSB for its attention to the potential structural vulnerabilities from asset management activities and its efforts to enhance the corresponding regulatory framework at a global level. However, we have certain concerns with the Consultative Document and policy recommendations set forth therein.

First, the Consultative Document provides limited empirical support for the policy recommendations. Second, we have concerns with the Consultative Document's focus on "operational risk and challenges in transferring investment mandates or client accounts." While we agree that it is important to manage operational risk and to facilitate account transitions, we are aware of a number of existing tools that address these issues. Before directing authorities to further bolster related regulatory requirements, we would ask the FSB to carefully consider the adequacy of existing regulatory and operational frameworks.

Third, we are concerned that the FSB's recommendations to enhance the liquidity tools available to mutual fund boards and regulators could encourage local authorities to expand and enhance the use of fund redemption restrictions such as liquidity fees and redemption gates. Such restrictions can have the unintended consequence of *exacerbating* rather than mitigating financial instability.

Fourth, we are concerned that the Consultative Document inadequately addresses the risks associated with certain globally significant asset owners that manage their own assets. This oversight is especially notable because at their September 2015 plenary meeting the FSB highlighted the potential vulnerabilities of certain asset owners, specifically sovereign wealth funds ("SWFs") and pension funds, as a fifth issue for further analysis along with the four vulnerabilities that the Consultative Document *does* address.³ Yet instead of providing recommendations that relate to these asset owners, there is only a cursory discussion of the potential risks of SWFs and pension funds in a three-page annex to the document. The FSB states that it has deferred work on the fifth issue until it revisits the scope of non-bank non-insurer global systematically important financial institutions.⁴

We believe that it is important for the FSB to consider the potential risks associated with these asset owners in connection with its analysis of the vulnerabilities of asset management activities. This analysis should focus on the potential vulnerabilities that they may share with asset managers as well as their distinct risks. In particular, the management of SWFs, forex reserves and public pension funds require a distinct analysis because public actors are subject to different incentives than are the private actors on which the Consultative Document focuses.

³ See Financial Stability Board, *Meeting of the Financial Stability Board in London on 25 September* (Sept. 25, 2015), <http://www.fsb.org/wp-content/uploads/September-Plenary-press-release.pdf>.

⁴ Consultative Document at 2.

Concerns with the Consultative Document

The Committee has written extensively on the unique considerations that apply to asset managers in developing policy to promote financial stability.⁵ It is important to emphasize at the outset that the Committee believes that asset managers do not pose the same risks as other financial institutions, because asset managers do not own the assets that they manage. Instead, asset managers act as agents that manage funds on behalf of their clients, who actually own the assets. This means that asset managers do not typically assume balance sheet risk in managing client assets.⁶ As agents, asset managers' decision-making is also subject to meaningful legal constraints: they are bound by fiduciary duties to their clients and their permissible investment strategies are established in contractual agreements with their clients.⁷ These structural and legal risk controls limit the threat to financial stability posed by an asset manager in distress.

Empirical Data

While we support the FSB's efforts to mitigate potential sources of stress to the global financial system, we generally believe that strong regulatory policy is founded on rigorous empirical research. The assertions in the Consultative Document that are in tension with existing data or appear to be based on primarily theoretical assumptions therefore concerns us.

For example, recommendation 9 states that "where relevant, authorities should give consideration to system-wide stress testing that could potentially capture effects of collective selling by funds and other institutional investors on the resilience of financial markets and the financial system more generally."⁸ The effectiveness and accuracy of such stress tests would be heavily dependent on the availability of such "system-wide" data. As discussed in greater detail below, there is limited transparency surrounding the holdings of several significant global investors. Without access to consistent data across the financial system, the efficacy of the proposed system-wide stress tests would be quite limited.

⁵ See Letter from Comm. on Capital Mkts. Reg. to Secretariat of the Fin. Stability Board (May 29, 2015); Comm. on Capital Mkts. Reg., *Nothing but the Facts: FSB-IOSCO Proposal for SIFI Designation* (Mar. 24, 2015), http://capmktreg.org/wp-content/uploads/2015/03/2015-03-24_Nothing_But_the_Facts_FSB_asset_managers.pdf; Comm. on Capital Mkts. Reg., *Why SIFI Designation Is Not The Answer To Possible Herding Behavior By Asset Managers* (May 17, 2014), <http://capmktreg.org/press/why-sifi-designation-is-not-the-answer-to-possible-herding-behavior-by-asset-managers/>; Letter from Comm. on Capital Mkts. Reg. to Secretariat of the Fin. Stability Board (April 7, 2014).

⁶ Letter from Comm. on Capital Mkts. Reg. to Secretariat of the Fin. Stability Board (May 29, 2015); Consultative Document at 8.

⁷ Consultative Document at 7; BlackRock, *Who Owns the Assets? Developing a Better Understanding of the Flow of Assets and the Implications for Financial Regulation*, ViewPoint (May 2014), <http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-who-owns-the-assets-may-2014.pdf>.

⁸ Consultative Document at 20.

In several instances, the Consultative Document explains risks in only hypothetical terms. For example, the Consultative Document asserts that “another potential vulnerability that may have systemic implications is the risk associated with agent lender indemnifications especially if done on a larger scale.”⁹ A purely theoretical explanation of how such risks could evolve follows. The only reference to related data is the recognition that “although very few asset managers seem to be currently involved in providing such indemnifications, the scale of exposures can be as large as that of some global systemically important banks.”¹⁰ This vague estimation of the incidence of such indemnifications does not demonstrate that indemnifications could be a real source of risk.

In other cases, the FSB expressly recognizes that there is a lack of empirical or historical data underlying its assertions. For example, the Consultative Document broadly acknowledges that “there is little historical evidence of systemic risks arising from investment funds.”¹¹ Similarly, the discussion of liquidity mismatch of open-ended funds notes that “historical evidence suggests that non-money-market open-ended funds have not created global financial stability concerns in recent periods of stress and heightened volatility.”¹² Regardless, the Consultative Document states that recent shifts in these funds’ investment allocations “suggest that risks may have increased in recent years.”¹³

We are sympathetic to the difficulties in obtaining data that directly support specific policies designed to prevent financial instability. However, we believe that empirical research is a vital component of effective and appropriately tailored policymaking. We would therefore ask that the FSB provide further detail regarding the existing empirical data that relates to the highlighted structural vulnerabilities and associated policy recommendations. Where data that is specifically on point is unavailable, the FSB should make this clear and provide a detailed explanation of the propriety of its recommendation despite the lack of data. Similarly, the FSB should expressly note the existence of any empirical data that would undermine the rationale of its recommendations.

Operational Risk and Account Transitions

The Consultative Document identifies “operational risk in transferring mandates or client accounts” as one of the four major structural vulnerabilities of asset managers. Accordingly, the FSB recommends that regulatory authorities should require that asset managers that are large, complex, and/or provide critical services have “comprehensive and robust risk management frameworks and practices, especially with regards to business continuity plans and transition plans, to enable orderly transfer of their clients’ accounts and investment mandates in stressed conditions.”¹⁴

We agree that measures to manage operational risk and facilitate account transitions are important, especially during periods of stress. However, we are also aware of a number

⁹ *Id.* at 33.

¹⁰ *Id.*

¹¹ *Id.* at 8.

¹² *Id.* at 10.

¹³ *Id.*

¹⁴ *Id.* at 31.

of existing regulatory tools and industry practices that already ensure this result. Before instructing local authorities to impose additional regulations, we would ask the FSB to take a closer look at the adequacy of existing practices and regulations.

Historical incidents of asset managers encountering severe operational disruptions have never resulted in global financial instability.¹⁵ Importantly, custodians hold the assets of asset managers' clients so that they do not commingle with the asset managers' own assets.¹⁶ This separation of accounts helps to protect client assets even in the extreme and unlikely scenario of an asset manager's failure.

Asset managers typically supplement this structural protection with extensive business continuity and transition planning. Client accounts are regularly transferred among asset managers in the ordinary course of business and such transfers have continued through periods of market stress without creating systemic risk.¹⁷ For example, \$4 trillion in global merger and acquisition volume occurred in the asset management sector in 2009.¹⁸ Although this was an exceptionally turbulent time in the markets for such extensive reorganizational changes among asset managers, these restructurings did not give rise to financial stability concerns.¹⁹

In addition, authorities in FSB member jurisdictions have already made considerable progress in developing and implementing reforms to mitigate operational risks. In the United States for example, a robust regulatory infrastructure is provided by the Investment Company Act and Investment Advisers Act along with regulations promulgated by regulatory authorities.²⁰

The Consultative Document also identifies a number of related "regulatory tools and market practices," such as "capital requirements for asset managers to cover operational risk," "regulatory requirements for asset managers to have business continuity plans," "supervisory tools to assess, monitor, and act on operational risks of asset managers," "use of transition managers," and "firms' internal risk management tools."²¹ While the Consultative Document acknowledges certain of the "existing mitigants," it justifies its recommendation by observing that "there seem to be substantial differences across jurisdictions in the availability of such tools and practices."²² In light of our own knowledge of such "existing mitigants" and the FSB's uncertainty about the extent of their variability among jurisdictions, we would recommend additional research on the adequacy of existing risk controls and regulations prior to proceeding with further recommendations.

¹⁵ Letter from Vanguard to Secretariat of the Fin. Stability Board, at 23 (Mar. 25, 2015), https://pressroom.vanguard.com/nonindexed/Vanguard_FSOC_Letter_3.25.2015.pdf.

¹⁶ See, e.g., Letter from BlackRock to Secretariat of the Fin. Stability Board, at 9-10 (Mar. 25, 2015).

¹⁷ See, e.g., *id.* at 9-11; Vanguard, *supra* note 15, at 22-24.

¹⁸ Vanguard, *supra* note 15, at 24.

¹⁹ See *id.*

²⁰ BlackRock, *supra* note 16, at 9; see also Vanguard, *supra* note 15, at 22.

²¹ Consultative Document at 29-30.

²² *Id.* at 29.

Redemption Restrictions

The Consultative Document identifies “liquidity mismatch between fund investment assets and redemption terms” as a potential vulnerability of asset managers and offers a series of related recommendations. We are concerned that Recommendations 4 and 5 could encourage local authorities to enhance and expand fund redemption restrictions in their jurisdictions. We are especially concerned that Recommendation 8 could result in local regulators *mandating* the use of redemption restrictions or the conditions thereof.

As the Committee has noted in the past,²³ fund redemption restrictions such as liquidity fees and redemption gates can have the unintended consequence of *exacerbating* rather than mitigating financial instability. Indeed, the threat of such restrictions being implemented during a crisis could cause investors to accelerate their withdrawals in an attempt to redeem their shares before fees or gates are activated. This escalation of withdrawals could then amplify instability and fuel contagion throughout the financial system. This possibility has also been recognized by U.S. SEC Commissioner Kara Stein.²⁴

Data also suggests that funds that are subject to redemption restrictions are less attractive to investors.²⁵ Mandatory redemption restrictions could thus have a chilling effect on investment in the funds of FSB member jurisdictions. We believe that the FSB should take a closer look at the potential impact of its recommendations that would promote the use of fund redemption restrictions. This assessment should confront the potential *risks* that these measures create in their own right. The FSB should then consider whether Recommendations 4, 5, and 8 remain appropriate in light of these risks.

Role of Asset Owners

The Consultative Document focuses almost exclusively on the risks of third-party asset managers.²⁶ But importantly, asset *owners*, such as pension funds and SWFs, often manage their own investments without the use of an outside asset manager.²⁷ For example, a 2014 McKinsey study shows that asset managers only manage a quarter of total financial assets.²⁸ A similar 2014 survey by PWC shows that third party asset managers only manage

²³ See, e.g., Letter from Comm. on Capital Mkts. Reg. to Secretariat of the U.S. Secs. & Exch. Comm’n (Sept. 17, 2013), <http://capmksreg.org/wp-content/uploads/2013/09/CCMR-comment-letter-on-SEC-MMF.pdf>.

²⁴ Statement of Commissioner Kara M. Stein, U.S. Securities & Exchange Commission (July 23, 2014), <https://www.sec.gov/News/PublicStmt/Detail/PublicStmt/1370542553868>.

²⁵ See, e.g., Editorial: *The Money Fund Mistake*, Wall St. J. (Aug. 15, 2016), <http://www.wsj.com/articles/the-money-fund-mistake-1471304637>.

²⁶ As detailed above, the FSB briefly addresses the risks of SWFs and pension funds in Annex 2 to Consultative Document, but has chosen not to provide a more extensive analysis of their risks and related recommendations at this time.

²⁷ Consultative Document at 7.

²⁸ McKinsey & Company, *After a Stellar Year, Time for Europe to be Bolder? Global Asset Management in 2013*, at 3 (June 2014), <https://www.mckinsey.de/files/global-asset-management-2014-white-paper.pdf>.

about one-third of the total financial assets of pension funds, SWFs and certain other asset owners.²⁹

Unlike third party asset managers, asset owners that manage their own assets have complete control over how those assets should be allocated.³⁰ Therefore, the decisions of asset owners, just like those of asset managers, can have implications for financial stability. Indeed, the mass liquidation of assets or collective investment into similar asset classes can be triggered by the actions of asset owners.

It is important to highlight the numerous reforms enacted since the financial crisis that already address the risks associated with both asset managers and owners of assets. To provide just a few examples, regulations now call for heightened capital for counterparty exposures, central clearing for standardized over-the-counter (“OTC”) derivatives, margin for OTC derivatives that are not cleared and increased transparency for OTC derivatives.³¹ While we agree that regulators should continue to examine the risks posed by the investing community, this examination must take into consideration the significant progress that has already been made. For each of the four identified structural vulnerabilities, the Consultative Document provides an “overview of existing mitigants to address vulnerabilities,” in which it touches on certain of the applicable reforms. However, in our view the Consultative Document could explore the substance of these reforms and appropriately value their benefits in more detail.

In addition, we believe that when considering the risks posed by asset managers, it is important that the FSB consider asset managers in the context of an overall assessment of the role of asset owners. That analysis should consider the vulnerabilities that these asset owners may share with asset managers. For example, it is important to understand the extent to which these asset owners also use leverage or participate in securities lending activities. If asset owners engage in such activities, then the FSB’s focus on the activities of third party asset managers without considering the activities of asset owners such as SWFs, central bank foreign exchange reserves and pension funds could fail to meaningfully reduce systemic risk.

A recent report released by the FSB, Bank of International Settlements and International Monetary Fund, “Elements of Effective Macroprudential Policies: Lessons from International Experience”³² (the “**Joint Document**”), mentions a sectoral approach with regards to capital controls.³³ The Joint Document could be interpreted to suggest that

²⁹ PWC, *Asset Management 2020: A Brave New World*, <https://www.pwc.com/gx/en/asset-management/publications/pdfs/pwc-asset-management-2020-a-brave-new-world-final.pdf>.

³⁰ BlackRock, *supra* note 7.

³¹ *See, e.g.*, 7 U.S.C. § 2(h)(8) (swap clearing requirement); 17 C.F.R. §§ 45, 49 (swap data reporting requirement); Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants, 81 Fed. Reg. 636 (Jan. 6, 2016) (to be codified at 17 C.F.R. §§ 23, 140); *see also* Jerome H. Powell, *OTC Market Infrastructure Reform: Opportunities and Challenges* (Nov. 21, 2013), <https://www.federalreserve.gov/newsevents/speech/powell20131121a.htm>.

³² IMF-FSB-BIS “Elements of Effective Macroprudential Policies: Lessons from International Experience,” (August 31, 2016), available at: <http://www.imf.org/external/np/g20/pdf/2016/083116.pdf>

³³ *Id.* at 11.

regulators consider applying capital controls in a selective manner. For example, this could include mutual funds invested in emerging markets. Although it is possible that capital controls can mitigate the risk of “hot” money flowing into and out of emerging markets, their selective application to a specific subset of market participants would not address this risk. Such capital controls would be unfair and ineffective. In order for capital controls to be effective they must be applied equally to all market participants.

As a separate matter, it is also important to evaluate the distinct risks that SWFs, forex reserves and pension funds may pose, because they are important investors in the global financial system that are not well understood. It is difficult for the public to assess these risks because disclosures about SWF and forex reserve asset holdings are limited. These asset owners also require a distinct analysis because public actors are subject to different incentives than are the private actors on which the Consultative Document focuses. Below, we present informative data on the significance of SWFs, central bank forex reserves, and certain public pension funds. We then consider how each of these asset owners could pose systemic risk to the global financial system.

Sovereign Wealth Funds

SWFs are owned, created and managed by governments and have traditionally been formed using a government’s proceeds from mineral wealth; today, they are commonly created using other funding sources as well, such as the transfer of excess foreign reserves.³⁴ All SWFs invest in *foreign* financial assets, although their specific investment strategies vary.³⁵ Importantly, SWFs can provide benefits to both their own countries and to the international markets. For example, they can promote domestic macroeconomic stability and economic growth.³⁶ This is facilitated by their professional management and ability to generate higher returns than other public expenditures. Their use of long-term investment strategies can also have a stabilizing effect on international markets during periods of distress.³⁷

There has been consistent growth in the global assets under management (“AUM”) of SWFs since 2008, which stand at approximately \$7.3 trillion as of June 2016.³⁸ Figure 1 shows that more than \$3 trillion in assets held by SWFs are by governments that export hydrocarbon.

³⁴ International Working Group of Sovereign Wealth Funds, *Sovereign Wealth Funds: Generally Accepted Principles and Practices*, “Santiago Principles” 3, 27 (Oct. 2008), <http://www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf> (hereinafter, “Santiago Principles”).

³⁵ *Id.*

³⁶ *See id.* at 3.

³⁷ *See id.*

³⁸ Sovereign Wealth Fund Institute, *Media Release: Corporate Bonds 2016: Sovereign Wealth Fund Briefing* (Sept. 2016).

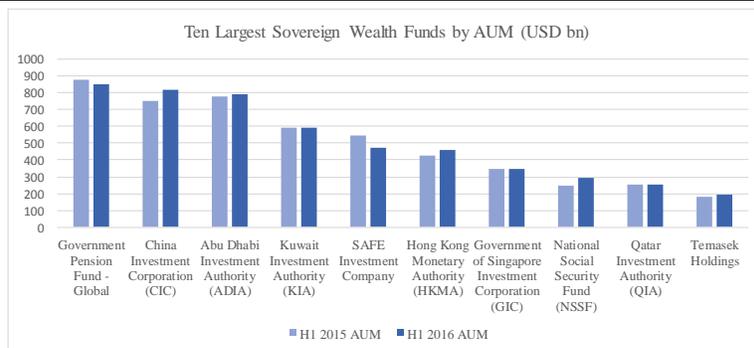
Figure 1: Global Sovereign Wealth Fund AUM (USD tn)³⁹



Figure 2 shows the AUM attributable to the top 10 SWFs in the first half of 2015 and the first half of 2016. We find that the top 10 SWFs control approximately 78% of total SWF AUM as of the first half of 2016.

Figure 2: Top Ten Sovereign Wealth Funds AUM (USD bn)⁴⁰

Fund	Country	Membership	H1 2015 AUM	H1 2016 AUM
Government Pension Fund - Global	Norway	IWG	873	847.6
China Investment Corporation (CIC)	China	FSB, IWG	746.7	813.762
Abu Dhabi Investment Authority (ADIA)	UAE	IWG	773	792
Kuwait Investment Authority (KIA)	Kuwait	IWG	592	592
SAFE Investment Company	China	FSB	541.9	474
Hong Kong Monetary Authority (HKMA)	Hong Kong	FSB	427.7	456.591
Government of Singapore Investment Corporation (GIC)	Singapore	FSB, IWG	344	344
National Social Security Fund (NSSF)	China	FSB	247.866	294.85
Qatar Investment Authority (QIA)	Qatar	IWG	256	256
Temasek Holdings	Singapore	FSB, IWG	180	193.6



³⁹ *The 2016 Preqin Sovereign Wealth Fund Review*, Preqin Ltd. 5 (2016) (*hereinafter*, Preqin Report).

⁴⁰ *Sovereign Wealth Fund Rankings*, Sovereign Wealth Fund Institute (June 2016),

<http://www.swfinstitute.org/sovereign-wealth-fund-rankings/>.

SWFs and Financial Stability

A key reason for SWFs' significance to *global* financial stability is that they invest heavily in foreign assets. Indeed, all SWFs invest at least partly in foreign financial assets—by definition, a fund that invests only in domestic assets is not a SWF.⁴¹ And while certain SWFs have shifted to incorporate some domestic investments into their traditionally foreign-focused portfolios, their aggregate holdings remain heavily skewed towards foreign assets.⁴² For example, approximately 94% of aggregate SWF direct investments in 2015 were foreign as opposed to domestic investments.⁴³

As stated earlier, SWFs can provide important benefits to both domestic and international economies and at times have a stabilizing effect on the markets. For example, their ability to generate high returns can promote economic growth and stability in their countries.⁴⁴ Indeed, the international markets can also be bolstered by the success of SWFs in countries with globally significant economies (e.g., China). SWFs can also offer stabilizing features to domestic and international markets. As explained in the Santiago Principles,⁴⁵ “their ability in many circumstances to take a long-term view in their investments and ride out business cycles brings important diversity to the global financial markets, which can be extremely beneficial, particularly during periods of financial turmoil or macroeconomic stress.”⁴⁶

However, there are also ways in which SWFs could contribute to systemic risk. The academic literature identifies two major sources of risk, both of which are driven by SWFs' status as asset owners and their corresponding control over asset allocation decisions.

First, SWFs may make correlated investment decisions and follow each other into or out of an investment or asset class, “resulting in excessive capital movement and price and rate changes for the security concerned.”⁴⁷ For example, a recent study shows a growing investment preference among SWFs for so-called “safe” assets, particularly real estate.⁴⁸ In 2015, for instance, the study found that 57% of SWF investment value in 2015

⁴¹ See, e.g., Santiago Principles at 27.

⁴² See Gelb, Tordo & Halland, *Sovereign Wealth Funds and Domestic in Resource-Rich Countries: Love Me, or Love Me Not?*, Poverty Reduction and Economic Management (PREM) Network (Jan. 2014), <http://siteresources.worldbank.org/EXTPREMNET/Resources/EP133.pdf>.

⁴³ Bocconi Report at 24, 31.

⁴⁴ See Santiago Principles at 3.

⁴⁵ As explained in Annex 2 to the Consultative Document, “The International Monetary Fund (IMF) engaged with the SWFs in 2008 to encourage the development of agreed-upon principles for addressing the types of vulnerabilities described above. Subsequently, a group of SWFs (the International Working Group of Sovereign Wealth Funds (IWG)) created 24 voluntary principles known as the ‘Santiago Principles’ which aimed to achieve transparent, sound governance practices so that SWFs would contribute to long-term investing and the stability of markets in which they invest.”

⁴⁶ Santiago Principles at 3.

⁴⁷ Deutsche Bank Research, *Sovereign Wealth Funds – State Investments on the Rise* 11 (2007), http://www.dbresearch.de/PROD/DBR_INTERNET_DE-PROD/PROD0000000000215270.pdf.

⁴⁸ See Bernardo Bortolotti (Ed.), Bocconi University, *The Sky Did Not Fall: Sovereign Wealth Fund Annual Report 2015*, at 20, 23 (*hereinafter*, Bocconi Report), <http://www.ifswf.org/sites/default/files/Publications/Bocconi%20SIL%202016%20Report.pdf>; Bernardo

went into “safe” assets, as opposed to just over 20% of SWF investments as recently as 2011.⁴⁹ Though there has not been a comprehensive quantitative study of correlated investment decisions by SWFs, a 2013 IMF working paper notes that at least some evidence shows that SWFs often engage in “trend chasing”, meaning they pursue assets when the asset prices have moved higher.⁵⁰

Second, the academic literature raises the possibility that during a crisis, SWFs could liquidate assets in order to generate cash to intervene in the domestic economy. If successful, their investment in domestic markets could help to prevent or control a crisis at home. However, doing so could also further depress prices of the liquidated assets and thereby exacerbate a crisis abroad. For instance, there is some evidence that during the 2007-2009 financial crisis, certain SWFs switched their investment horizon from long-term to short-term and SWF assets were liquidated to help support countries’ domestic economies.⁵¹

It is also possible that multiple SWFs could have to liquidate assets at the same time, because the majority of SWFs rely on hydrocarbon assets such as oil and gas for their funding.⁵² SWFs’ dependence on oil revenues is especially meaningful today because the price of oil has recently dropped, causing certain SWFs to sell off assets. Indeed, experts have estimated the oil price that represents a “fiscal breakeven point” for certain oil-dependent economies: when oil prices drop below this point, a country’s government must make fiscal adjustments to satisfy its budgetary demands.⁵³ For example, Saudi Arabia’s estimated breakeven point is \$103/barrel, Russia’s is \$80/barrel, and the United Arab Emirates’ is \$75/barrel; in contrast, market prices have remained at or below roughly \$50/barrel throughout 2016.⁵⁴ Given current and projected oil prices, it is likely that SWFs will need to further sell assets in order to support government deficits and weakening economies.⁵⁵

Bortolotti, SIL, Bocconi University, *The Sky Did Not Fall: Highlights of the SWF Annual Report 2015*, at 9, 10 (June 30, 2016) (*hereinafter*, Bocconi Highlights),

http://www.unibocconi.eu/wps/wcm/connect/090c3934-7ad6-435c-bdc0-2dfc1fd1a614/Bortolotti_SILReport2015.pdf?MOD=AJPERES.

⁴⁹ Bocconi Report at 19. Safe assets including real estates, hotels and tourism facilities, infrastructure, and utilities. *Id.*

⁵⁰ Michael G. Papaioannou, et al., *Procyclical Behavior of Institutional Investors During the Recent Financial Crisis: Cause, Impacts, and Challenges*, IMF Working Paper WP/13/193, at 14 (2013), <https://www.imf.org/external/pubs/ft/wp/2013/wp13193.pdf>.

⁵¹ See Francis In, et al., *Do Sovereign Wealth Funds Stabilize Stock Markets?* 7,

<http://www.apjfs.org/conference/2013/cafmFile/3-3.pdf>; Papaioannou et al., *supra* note 50, at 14.

⁵² See *supra* Figure 1.

⁵³ Richard Teitelbaum, *The Triple Threat Facing Sovereign Wealth Funds*, Institutional Investor (Sept. 9, 2015), <http://www.institutionalinvestor.com/article/3486842/research-and-rankings/the-triple-threat-facing-sovereign-wealth-funds.html#.V8RoUpgrLIU> (citing Institute of International Finance estimates).

⁵⁴ *Id.*; WTI Crude Oil Spot Price, YCharts (Sept. 12, 2016), https://ycharts.com/indicators/crude_oil_spot_price.

⁵⁵ See, e.g., Stefania Bianchi, *Sovereign Wealth Funds May Sell \$404 Billion of Equities*, Bloomberg (Feb. 22, 2016), <http://www.bloomberg.com/news/articles/2016-02-22/sovereign-wealth-funds-seen-selling-404-billion-of-equities>; Tom Arnold, *Study: Middle East Sovereign Funds Sell Assets as Low Oil Bites*, Reuters (June 13, 2016), <http://www.reuters.com/article/mideast-funds-sovereign-idUSL8N19533G>; Henny Sender,

Finally, it is difficult to assess the potential impact of SWFs because of limited public transparency regarding their investments. Indeed, only 1 of the 10 largest SWFs fully discloses their holdings.⁵⁶ We believe that the FSB should study the risks associated with SWFs and corresponding policy alternatives in greater detail.

Foreign Exchange Reserves

Although both SWFs and foreign exchange reserves are managed by government entities and hold foreign assets, they have different intended purposes: foreign exchange reserves are assets in foreign currencies held by central banks to influence the value of a country's currency and back a country's liabilities, and SWFs are generally held to earn a return on investment.

In order to control the value of their currency, a central bank can buy or sell foreign exchange reserve assets. For example, when a central bank intends to decrease the value of an appreciating domestic currency, it will typically purchase foreign assets and expand its foreign exchange reserve holdings. On the other hand, when a central bank intends to prop up the value of a depreciating currency, its central bank is likely to sell off foreign assets. As explained by the Bank of England's Garreth Rule, "[f]oreign exchange reserves are a prerequisite for a central bank being able to intervene to offset depreciation in the domestic currency. The central bank will intervene by selling foreign assets in exchange for domestic currency denominated assets. This has the joint impact of increasing the supply of foreign assets and reducing the supply of domestic assets, which should offset depreciation pressure."⁵⁷

Although there is limited transparency regarding the assets held by foreign exchange reserves, the IMF collects anonymous data regarding the aggregate value of global foreign exchange reserves. As shown below in Figure 3, the total value of foreign exchange reserves is estimated to be approximately \$11 trillion as of Q1 2016. Figure 3 also depicts the extraordinary growth in the aggregate global value of foreign exchange reserves in the last two decades: the global total of foreign exchange reserves grew every year from 1995 (\$1.39 trillion) to 2013 (\$11.68 trillion) and has plateaued at around \$11 trillion since then.

Circumstances Have Changed in the Gulf, Bringing Ripple Effects, Fin. Times (Mar. 22, 2016), <http://www.ft.com/cms/s/0/ecf838cc-ef61-11e5-aff5-19b4e253664a.html#axzz4KjP8PyzV>. Recent data showing SWF withdrawals from asset managers may suggest that SWFs are already being tapped to support floundering local economies. For example, the FT reports that Q1 2016 was the seventh consecutive quarter in which SWFs had net outflows from asset managers, following on the withdrawal of a record \$46.5 billion from asset managers in 2015. Attracta Mooney, *Sovereign Funds Continue to Pull Billions from Asset Managers*, Fin. Times (June 12, 2016), <http://www.ft.com/cms/s/0/2cc5b58e-3953-11e6-a780-b48ed7b6126f.html#axzz4KjP8PyzV>.

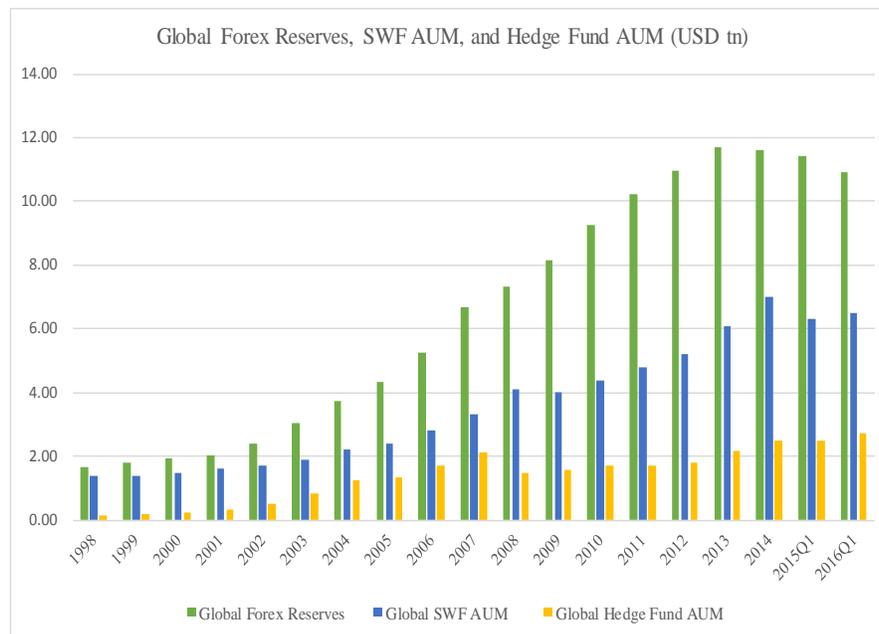
⁵⁶ Preqin Report.

⁵⁷ Garreth Rule, Bank of England, *Centre for Central Banking Studies Handbook – No. 32: Understanding the Central Bank Balance Sheet* 15 (2015), <http://www.bankofengland.co.uk/education/Documents/ccbs/handbooks/pdf/ccbshb32.pdf>.

To put the size of foreign exchange reserves into context, Figure 3 compares the total global AUM attributable to SWFs and hedge funds with foreign exchange reserves. It shows that SWFs and hedge funds each constitute significant percentages of the global value of foreign exchange reserves, at 60% and 25% of their size, respectively. The sheer size of the staggering \$11 trillion total in foreign exchange reserves suggests that asset sales by foreign exchange reserves could impact the global financial system.

Figure 3: Global Forex Reserves, SWF AUM, and Hedge Fund AUM (USD tn)⁵⁸

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015Q1	2016Q1
Global Forex Reserves	1.64	1.78	1.94	2.05	2.41	3.02	3.75	4.32	5.25	6.70	7.35	8.16	9.26	10.20	10.95	11.68	11.59	11.44	10.94
Global SWF AUM	1.40	1.40	1.50	1.60	1.70	1.90	2.20	2.40	2.80	3.30	4.10	4.00	4.40	4.80	5.20	6.10	7.00	6.31	6.51
Global Hedge Fund AUM	0.14	0.19	0.24	0.32	0.51	0.83	1.23	1.36	1.71	2.14	1.46	1.55	1.69	1.71	1.80	2.16	2.51	2.49	2.74



Foreign Exchange Reserves and Financial Stability

As explained above, the large-scale purchase and sale of foreign exchange reserve assets is a key mechanism by which central banks influence the value of their currencies. Importantly, the management of reserves during a crisis can reduce the severity of a domestic crisis by helping stabilize the value of their currency. Unfortunately, the management of foreign exchange reserves can also *exacerbate* a crisis in foreign markets.

⁵⁸ International Monetary Fund, *Currency Composition of Official Foreign Exchange Reserves (COFER)*, <http://data.imf.org>; World Economic Forum, *Alternative Investments 2020 - The Future of Alternative Investments* 12 (Oct. 2015), http://www3.weforum.org/docs/WEF_Alternative_Investments_2020_Future.pdf; Preqin Report; *Hedge Fund Industry - Assets Under Management*, BarclayHedge, http://www.barclayhedge.com/research/indices/ghs/mum/HF_Money_Under_Management.html.

In particular, reserve managers may choose to sell assets or withdraw deposits from foreign banks in an attempt to shift this liquidity into their domestic economies or as part of a flight to higher quality investments. For example, between December 2007 and March 2009, central bank reserve managers withdrew over \$500 billion of deposits and other investments from the banking sector, including \$170 billion out of bank deposits in a span of only two months following the collapse of Lehman Brothers.⁵⁹ These withdrawals could contribute to bank runs.

Central bank reserve managers at Asian central banks are also believed to have withdrawn funds from U.S. dollar money market funds after Lehman's failure,⁶⁰ and the Central Bank of the Russian Federation sold all of its holdings in securities of Fannie Mae, Freddie Mac and the Federal Home Loan Banks between the end of 2007 and January 2009.⁶¹ An IMF working paper noted that the withdrawal of investments in bank deposits and agency securities by managers of foreign reserves put further pressure on the banking sector during the crisis when other sources of funding dried up.⁶² While these withdrawals were unavoidable in some instances because reserves were needed to support domestic economies or currencies, the evidence suggests that in most countries the central banks were shifting reserve investments in a flight to quality, not to intervene in currency markets.⁶³

Due to limited transparency surrounding foreign exchange reserves, there are only theories as to why foreign exchange reserves may liquidate assets in a flight to quality during a crisis. According to one theory, central banks rely on a risk control framework that does not allow investments in debt securities with credit ratings below a certain level.⁶⁴ Therefore, central banks may have withdrawn funds from deposit accounts or sold assets in response to credit rating changes during the crisis.⁶⁵ In a 2013 survey of reserve managers, 80% of respondents answered that 80% of asset reallocation decision are triggered by ratings downgrades.⁶⁶

As explained by an IMF staff paper, foreign exchange reserves can also impact global financial stability because actions taken by central bank reserve managers may be seen as a signal about the soundness of a counterparty or issuer. An expansion in a central bank's holdings of certain foreign assets could therefore promote investment by other market participants in related assets. However, the significant *sale* of a certain asset by a

⁵⁹ Papaioannou, et al., *supra* note 50, at 15; Jukka Pihlman & Han van der Hoorn, *Procyclicality in Central Bank Reserve Management: Evidence from the Crisis*, IMF Working Paper WP/10/150, at 12 (2010), <https://www.imf.org/external/pubs/ft/wp/2010/wp10150.pdf>.

⁶⁰ Robert N. McCauley & Jean-Francois Rigaudy, *Managing Foreign Exchange Reserves in the Crisis and After*, BIS Paper No. 58, at 31, <http://www.bis.org/publ/bppdf/bispap58b.pdf>.

⁶¹ *Id.* at 33.

⁶² Pihlman & van der Hoorn, *supra* note 59, at 3.

⁶³ *Id.* at 3, 10.

⁶⁴ *Id.* at 17.

⁶⁵ *Id.*

⁶⁶ Aideen Marahan & Christian Mulder, *Survey of Reserve Managers: Lessons from the Crisis*, IMF Working Paper WP/13/99, at 4 (2013).

central bank could be interpreted as negative signal about that asset's issuer or counterparty, potentially causing the mass liquidation of related assets or a run on an institution.⁶⁷ Central bank reserve managers are aware of this problem, as half of surveyed reserve managers stated that in making investment decisions they considered the potential signaling effects that their actions had on the markets in which they invest.⁶⁸

A further concern is that actions by reserve managers crowding into one class of assets could itself impact the asset class that they are crowding into. This is similar to situations in which other asset owners make correlated investment decisions, which can similarly distort asset prices. For example, an IMF staff working paper found that there is a renewed focus by reserve managers on safe-haven assets. The paper notes that safe-haven assets are scarce and that an effort by reserve managers to invest in such assets could drive down yields, which can have unintended consequences.⁶⁹ For example, low interest rates could encourage investors to seek higher returns in riskier asset classes, potentially leading to asset bubbles or otherwise increasing financial system risk.

Due to the very large size of countries' foreign exchange reserves, it is possible that significant adjustments in just one country's foreign exchange reserve holdings could impact the global financial system. As the country with both the greatest AUM in SWFs and largest foreign exchange reserves (highlighted in Figure 4), China is an example of a country that could impact the global financial system with its reserve management. And in fact, there is evidence that China's forex reserves have recently decreased in size, from \$4 trillion in June 2014 to \$3.23 trillion in January 2016, with slightly more recent data suggesting that they are back up to roughly \$3.5 trillion.⁷⁰ Although the composition of China's foreign exchange reserves is confidential, it is believed that approximately 60% are held in U.S. dollar denominated assets.⁷¹ There is also evidence that, similar to SWFs, the size of foreign exchange reserves in countries that rely on oil revenues have recently decreased. As with SWFs, it is possible that countries are tapping into these reserves to fund other government expenditures. For example, as of early 2016, Saudi Arabia's foreign exchange reserves had dropped to \$635 billion, representing a drop of over \$100 billion since mid-2015.⁷²

We encourage the FSB to consider the potential impact of foreign exchange reserves to global financial stability and related policy implications.

⁶⁷ Pihlman & van der Hoorn, *supra* note 59, at 21.

⁶⁸ Marahan & Mulder, *supra* note 66, at 6.

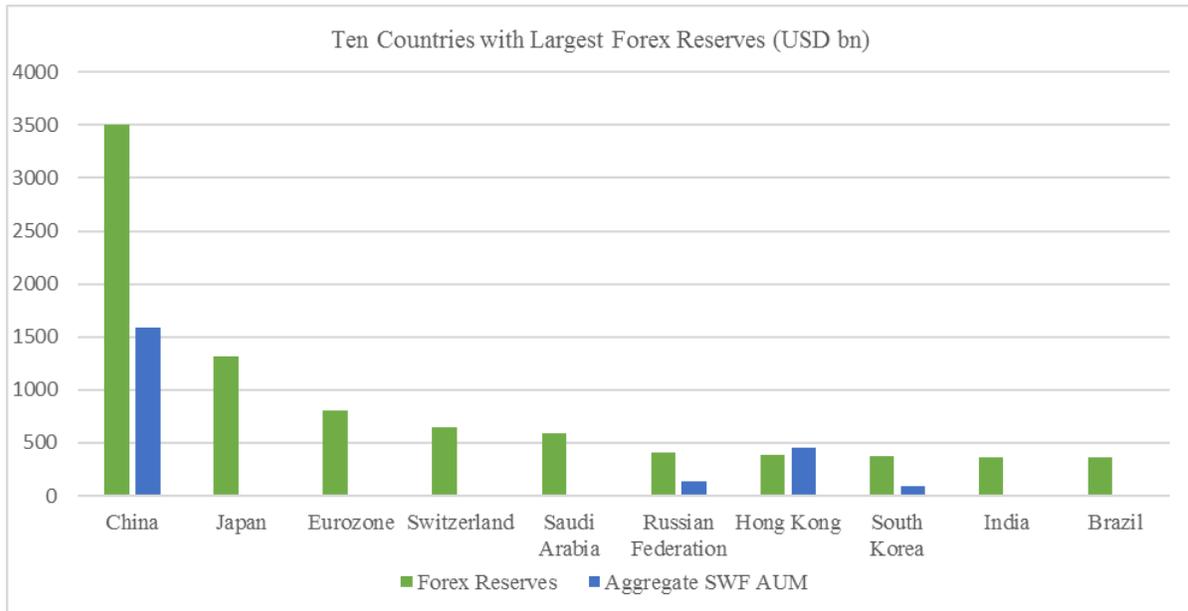
⁶⁹ *Id.* at 10.

⁷⁰ Christopher Neely, *Chinese Foreign Exchange Reserves and the U.S. Economy*, Federal Reserve Bank of St. Louis (May 6, 2016), <https://research.stlouisfed.org/publications/economic-synopses/2016-05-06/chinese-foreign-exchange-reserves-and-the-u-s-economy.pdf>.

⁷¹ *Id.*

⁷² Javier Blas, *Shrinking Sovereign Wealth Funds are Ducking Davos*, Bloomberg (Jan. 19, 2016), <http://www.bloomberg.com/news/articles/2016-01-19/the-incredible-shrinking-wealth-funds-that-are-ducking-davos>.

Figure 4: Ten Countries with Largest Forex Reserves (USD bn)⁷³



Pension Funds

Pension funds are another type of government asset owner that can impact global financial stability. As the Consultative Document notes in Annex 2, “pension funds generally have long-term investment horizons and make a positive contribution to financial stability. They also generally have relatively low levels of liquidity transformation and financial leverage. Nonetheless, pension funds can engage in activities that give rise to vulnerabilities, in the event that liquidity or asset reallocation pressures may arise.”⁷⁴

The two basic forms of pension funds are defined contribution plans (“**DCPs**”) and defined benefit plans (“**DBPs**”).⁷⁵ In DCPs, the formulas used to determine contributions to the fund by the employer and employee are predetermined, but the future benefits paid out to an employee are not fixed or guaranteed.⁷⁶ When an employee retires, he is entitled to the current value of the plan assets at that time, which will vary according to his contributions and investment earnings.⁷⁷ This structure ensures that a DCP will have adequate assets to fund its payout obligations to participants. DCPs are also rarely subject to withdrawals.⁷⁸ In our view, these characteristics significantly limit the possibility that DCPs could create systemic risk.

⁷³ Forex reserves data as of Q1 2016. SWF data as of H1 2016. International Monetary Fund, *supra* note 58; Preqin Report; Sovereign Wealth Fund Institute, <http://www.swfinstitute.org/>.

⁷⁴ Consultative Document at 40.

⁷⁵ *Id.* at 39.

⁷⁶ *See id.*

⁷⁷ *See id.*

⁷⁸ *See id.*

In DBPs, the formula that determines the actual payout to beneficiaries is established, and the employer bears the risk that it will not meet those obligations.⁷⁹ Because DBPs make fixed future payout commitments, we believe that DBPs, particularly public DBPs that are inadequately funded, are the subset of pension funds most likely to contribute to systemic risk.

The size of unfunded *public* DBP liabilities is extraordinary. In the United States alone, state and local government employee DBPs are estimated to have unfunded liabilities in the range of \$1 trillion to \$3 trillion.⁸⁰ Certain states stand out in this respect. In 2013 for example, Pew data shows that California had roughly \$170 billion in unfunded state public pension obligations and Illinois had approximately \$100 billion.⁸¹ Other states are noteworthy for the ratio of their outstanding obligations that remain unfunded: the 2013 Pew data indicates that Kentucky's pension obligations were only 44.2% funded and Connecticut's were just 48.4% funded.⁸² Puerto Rico, with \$70 billion in debt and almost \$43 billion in unfunded pension liabilities, is another example.⁸³ The public pension plans of this United States territory have \$2 billion in assets to support their \$45 billion in obligations, and are on track to fully deplete this \$2 billion by 2019.⁸⁴ Figure 5 shows the value of unfunded public pension liabilities and percent of obligations that are funded for the twenty states with the lowest percentage of their pension obligations funded.

⁷⁹ *Id.*

⁸⁰ Citi GPS, *The Coming Pensions Crisis: Recommendations for Keeping the Global Pensions System Afloat* 8 (Mar. 2016),

<https://ir.citi.com/A9PruMxsx32cucD9nPyz6VOD1aXLcqQ1bFnuNFZcDqWVvkkop5NYU6Q%3D%3D>.

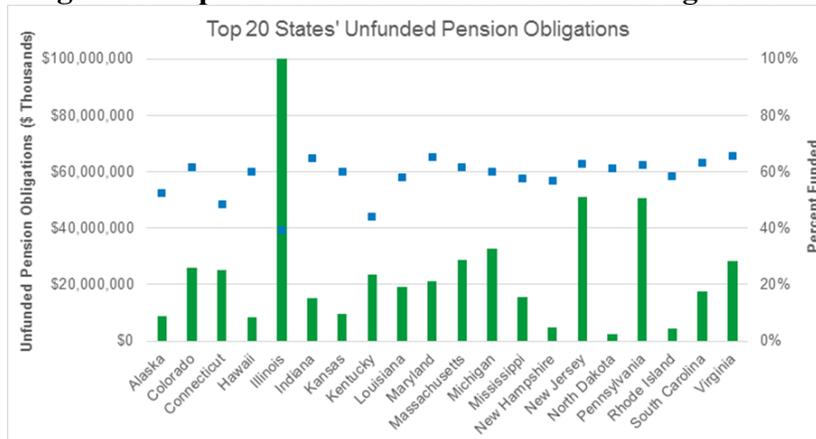
⁸¹ 2013 is the last year for which complete data is available. Pew Charitable Trusts, *The State Pensions Funding Gap: Challenges Persist* (2015), <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/07/the-state-pensions-funding-gap-challenges-persist>.

⁸² *Id.*

⁸³ Nick Timiraos, *Puerto Rico's Pensions: \$2 Billion in Assets, \$45 Billion in Liabilities*, Wall St. J. (Aug. 25, 2016), <http://www.wsj.com/articles/puerto-ricos-pensions-2-billion-in-assets-45-billion-in-liabilities-1472156434>.

⁸⁴ *Id.*

Figure 5: Top 20 States' Unfunded Pension Obligations ⁸⁵



The unfunded public pension obligations in the United States represents just a small fraction of such liabilities globally. According to one study, unfunded or underfunded public pension liabilities among just 20 OECD countries are estimated to equal \$78 trillion,⁸⁶ which is almost twice the reported national debt (\$44 trillion) of those countries.⁸⁷ Importantly, these contingent liabilities are not reflected on government balance sheets.⁸⁸ The same study estimates average public sector pension liabilities at major OECD economies to equal approximately 190% of GDP.⁸⁹ In European countries with especially robust pension systems, the ratio is greater--in France, Portugal, Italy, Spain, Germany, and the UK, the public pension liability to GDP ratio is estimated to be greater than 300%.⁹⁰

Unfunded public DBPs can have implications for global financial stability largely because of *counterparty risk*. Counterparty risk is the possibility that parties to a contractual arrangement, such as a multi-year swap contract, will default on their obligations. Public DBPs may pose counterparty risk because the employer that has committed to the fixed payouts is a *government*. Governments are very active contractual counterparties, and their contracts and commitments typically have a *global* reach. As a result, a government that is unable to meet its significant DBP liabilities would have to default on its contracts and this default could have an effect on global financial stability.

In the Consultative Document, the FSB does not provide recommendations that specifically pertain to unfunded public DBPs. We would encourage the FSB to take a closer look at these funds and to consider related policy recommendations.

* * * * *

⁸⁵ Data from Pew Charitable Trusts, *supra* note 81.

⁸⁶ Citi GPS at 3, 5, 10, 26.

⁸⁷ *Id.*

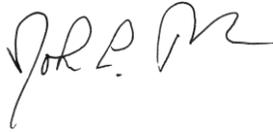
⁸⁸ *Id.* at 21.

⁸⁹ Citi GPS at 26, 63.

⁹⁰ *Id.*

Thank you very much for your consideration of our views. Should you have any questions or concerns, please do not hesitate to contact the Committee's Director, Prof. Hal S. Scott (hscott@law.harvard.edu) or Executive Director of Research, John Gulliver (jgulliver@capmksreg.org) at your convenience.

Respectfully submitted,



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