

Andres Portilla
Managing Director
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July 5, 2019

Mr. Dietrich Domanski
Secretary General
Financial Stability Board
Bank for International Settlements
Centralbahnplatz 2
CH-4002 Basel
Switzerland



Re: Evaluation of too-big-to-fail reforms

Dear Mr. Domanski:

The Institute of International Finance (“IIF”) welcomes the opportunity to contribute to the work of the Financial Stability Board (“FSB”) on its evaluation of the effects of the too-big-to-fail (TBTF) reforms for banks, which have been agreed over the past decade.

The IIF welcomes the FSB’s efforts to evaluate the broad impacts of the post-crisis suite of regulatory reforms. Examining effects and potential unintended consequences is crucial to ensure that reforms contribute to optimal outcomes for society as a whole. And it enables authorities to evolve the regulatory framework to improve its effectiveness if evidence is found of material unintended consequences.

Given the short window for comment at this stage of the process, we have focused on providing high-level responses to the questions raised in the Call for Feedback¹ and at the same time formulated some specific suggestions for the scope and approach to take in the evaluation, which we think would strengthen the framework for this type of important analysis.

The TBTF reforms have been a considerable achievement of the coordinated post-crisis drive to tackle fundamental weaknesses in the global financial system. Substantial work has been done by the public and private sectors to implement the reforms, and there is now considerable evidence that TBTF reforms are achieving the objectives of reducing systemic and moral hazard risks associated with systemically important banks. The reforms have had a wide-reaching impact on the structure and functioning of the financial system; most of which was intended and beneficial, and some of which is unintended and negative. To give one example of a potentially unintended consequence, the reduction in liquidity in certain markets – such as repo and certain fixed income – is partly due to the impact of post-crisis regulation and could increase fragility during stress periods.

¹ <https://www.fsb.org/2019/05/fsb-launches-evaluation-of-too-big-to-fail-reforms-and-invites-feedback-from-stakeholders/>

In this regard, we urge the FSB to pay particular attention to the following specific issues during its TBTF evaluation:

- a) Market fragmentary trends around the implementation of the TBTF reform agenda;
- b) Assessing the interplay between individual TBTF measures, and between TBTF and other post-crisis reforms; and
- c) Analyzing the impact of TBTF reforms on risk migration to the non-bank financial sector, and the implications of risk migration for systemic bank regulation.

Please find further discussion of these points in the following pages.

The IIF appreciates the FSB's desire to engage with stakeholders from the beginning of the process. We are pleased to see in the Terms of Reference that there will be further opportunities for industry stakeholders to engage with the evaluation.² We remain committed to active participation in the evaluation during 2019 and 2020 and look forward to engaging further with you on this topic. We will share with the FSB any further IIF analysis on the issues covered by this evaluation as we produce it over the coming months. If you have any questions, please contact me (aportilla@iif.com).

Very truly yours,

A handwritten signature in black ink, appearing to read 'A. Portilla', with a large, stylized initial 'A' and 'P'.

Andrés Portilla
Managing Director, Regulatory Affairs
Institute of International Finance

² FSB 2019. *Evaluation of too-big-to-fail Reforms: Summary Terms of Reference* (May).

Summary of key points

The TBTF reforms have been a considerable achievement of the coordinated post-crisis drive to tackle fundamental weaknesses that had been exposed in the global financial system. Substantial work has been done by the public and private sectors to implement the reforms.

- Systemically Important Banks (SIBs) are now significantly better capitalized, have better funding positions and are less interconnected than during the global financial crisis.
- The necessary legal and financial conditions to successfully resolve a SIB are largely in place. SIBs are complying with regulatory requirements, at considerable expense, to ensure sufficient resources for effective resolution are in place.
- There is still room for greater cross-border cooperation in bank resolution planning, and for more clarity on liquidity procedures in resolution.

There is considerable evidence that TBTF reforms are achieving the objectives of reducing systemic and moral hazard risks associated with SIBs.

- Overall, SIBs are now less likely to fail, and we can expect less systemic impact if they do. There is evidence that the reforms are increasingly credible to regulators and markets. Implicit funding subsidies for SIBs appear to have been largely removed, credit rating agencies have removed expectations of government support for most SIBs and banks' TLAC debt is behaving as a 'normal' credit-bearing debt class.

The post-crisis reforms have had a wide-reaching impact on the structure and functioning of the financial system; most of which was intended and beneficial, and some of which is unintended and negative.

To give a few examples of unintended consequences:

- The reduction in the liquidity of certain markets – such as repo and select fixed income – is partly due to the impact of post-crisis regulation and could increase fragility during stress periods.
- Post-crisis lending growth by G-SIBs has been weaker than for non-G-SIBs and may have been rationed to important borrowers such as small and medium sized enterprises (SMEs).
- The opportunity cost of a substantial and costly reform agenda is a tendency to hamper innovation and evolution of SIB business models in other beneficial ways, such as investing in protection from emerging risks or in new technologies.
- There are other specific issues that require investigation; these are discussed in the next section. We encourage the FSB to identify any standards that ought to be revisited in light of identified unintended consequences, overlaps or inconsistencies.

We urge the FSB to pay particular attention to the following specific issues during its TBTF evaluation:

- **Market fragmentary trends around the implementation of the TBTF reform agenda.**
We welcome the recommendation in the FSB's market fragmentation report to consider in this evaluation whether any of the TBTF reforms have affected market fragmentation and therefore financial stability.³ The post-crisis policy framework was developed as a coordinated response

to the intrinsically cross-border TBTF issue. The framework was built on fundamentally collaborative principles, including harmonized standards across jurisdictions. However certain trends – especially geographical ring-fencing of capital and liquidity – can increase the difficulty of coordinated action and undermine confidence in the newly developed global resolution framework.

As well as evaluating the structure and resilience of firms, it is also important that the FSB evaluates regulators' preparedness and ability to use their new powers and mechanisms in a cross-border resolution situation. We encourage the FSB to make recommendations on ways to improve regulatory/supervisory cooperation and consistency if it assesses there to be deficiencies that are affecting financial stability.

- **Assessing the interplay between individual TBTF measures, and between TBTF and other post-crisis reforms.**

The post-crisis regulatory framework features multiple regulatory requirements which, when they interact, can generate excessive costs or conflicting incentives. For example: liquidity requirements, resolution and TLAC should be accounted for in the calibration of G-SIB buffers; the calibration of internal TLAC requirements in different jurisdictions can interact to affect the de facto group TLAC requirement.

- **Analyzing the impact of TBTF reforms on risk migration to the non-bank financial sector, and the implications of risk migration for systemic bank regulation.**

The growth of non-bank finance, which is subject to different regulation and oversight than the banking sector, has outpaced that of banking sector growth since the financial crisis. The costs to banks of the post-crisis bank regulatory framework have certainly contributed to a shifting regulatory perimeter. The FSB should re-assess the degree of systemic risk posed by SIBs in the post-crisis era, which has almost certainly fallen, and the implications of that for the G-SIB and D-SIB frameworks.

In addition, we encourage the FSB to do the following in its evaluation:

- Distinguish the impact of globally harmonized frameworks and standards from approaches taken during domestic implementation, for example stress-testing, ring-fencing and national calibrations of internal and external TLAC.
- Perform a forward-looking, holistic evaluation and account for all regulatory requirements, even if they are still being implemented or are relatively untested.
- When assessing the costs and benefits of the TBTF reforms, the analysis of the costs (as well as the benefits) of requirements should be tailored to SIBs. It should account for the relevant transmission mechanisms and regulations applying to them.
- In addition to top-down macroeconomic analysis, analysis of the impact on SIB business models, business lines and specific activities should be conducted.

³ FSB 2019. *FSB Report on Market Fragmentation* (June). Page 19.

Relating to Questions 1 to 3 in the FSB’s Call for Feedback:

The TBTF reforms have been a considerable achievement of the coordinated post-crisis drive to tackle fundamental weaknesses that had been exposed in the global financial system. Substantial work has been done by the public and private sectors to implement the reforms.

In 2009, the G20 launched a comprehensive program of financial reforms to fix the fault lines that led to the global financial crisis with the aim of building a more resilient financial system. That reform program had four core elements: making financial institutions more resilient; ending too-big-to-fail (TBTF); making derivatives markets safer; and enhancing resilience of non-bank financial intermediation.

The TBTF problem arises when the threatened failure of a systemically important institution such as a bank – given its size, interconnectedness, complexity, cross-border activity or lack of substitutability – puts pressure on public authorities to bail it out using public funds to avoid financial instability and economic damage. The G20 agreed to put in place the policy framework to reduce the risks and externalities associated with globally and domestically systemically important banks (G-SIBs and D-SIBs, respectively) operating in their jurisdictions.⁴

The policy framework has been developed since 2010, and implementation is far advanced in the major financial centers. The framework includes measures to: (1) reduce the probability of SIB failure; (2) reduce the impact in the event of a SIB stress or failure; and (3) reduce channels that amplify the impact of SIB stresses or failures. A key feature of the framework is the requirement for SIBs to face more stringent prudential and risk-management requirements and oversight in the going concern, and to be resolvable in the gone concern without causing excessive disruption to the real economy and financial markets, with minimal risk to public funds.

SIBs are now significantly better capitalized, have better funding positions and are less interconnected than during the global financial crisis. G-SIBs and D-SIBs have overhauled their balance sheets, changed their legal structures, updated their risk management, governance and remuneration approaches and, in some cases, changed their entire business models since the crisis. Overall, these institutions are much more resilient and less interconnected. Achieving this has involved: building much larger bases of high-quality capital; increasing resilience to short-term and long-term funding risks; issuing TLAC debt instruments that can be bailed-in to provide loss absorbency in a resolution; significantly increasing the amount of central clearing of derivatives and agreeing to a new ISDA Protocol to prevent disruptive derivative unwinds; and preparing credible recovery and resolution plans with their regulatory authorities. In aggregate, SIBs have generally taken steps to meet capital and liquidity standards ahead of official timelines and are on track to do the same with TLAC.⁵ This progress is well documented in monitoring reports from the BCBS and FSB and in other publications such as central bank and IMF Financial Stability Reports. Former FSB Chairman, Mark Carney, noted the progress made on increasing the resilience of large banks in his update letters to the G20 leaders, for example reporting that “*the*

⁴ FSB 2010. *Press Release: G20 Leaders endorse Financial Stability Board policy framework for addressing systemically important financial institutions* (November).

⁵ FSB 2018. *FSB 2018 Resolution Report: Keeping the Pressure Up* (November 15). Hereafter referred to as “FSB 2018 (November 15)”.

*largest banks are considerably stronger, more liquid and more focused. They are now subject to greater market discipline as a consequence of globally-agreed standards to end too-big-to-fail”.*⁶

CET1 capital at the largest internationally active banks globally was 84% higher at end-2017 than it was in 2011, representing a \$1.9 billion increase in CET1 resources.⁷ Results from national stress testing exercises show that SIBs are now capitalized to survive and, importantly, continue lending through a stress episode of greater severity than the global financial crisis. This is shown, for example, in the most recent results of the Bank of England annual stress test of major UK banks⁸ and U.S Federal Reserve CCAR results for the 18 largest and most complex U.S. bank holding companies.⁹

SIBs have changed their business mixes and, in some cases, their business models after the global financial crisis and subsequent regulatory reform program. As reported by several observers, including in IMF Global Financial Stability Reports¹⁰ and a 2018 BIS CGFS report,¹¹ many large banks have reduced their exposure to trading assets and more complex securities. The median share of trading assets in total assets for individual G-SIBs has declined from around 20% to 12% over 2009–16. G-SIBs’ share of more complex Level 2 and Level 3 assets have also fallen. And they have reduced the volume of OTC derivatives relative to assets.¹²

Banks continue to take measures to resolve legacy issues with their balance sheets and many are now focusing on their core business activities. Some G-SIBs have become more domestically focused in the process. Some banks, including some SIBs, are still struggling with weak profitability due to a combination of balance sheet, macroeconomic, policy and regulatory challenges that depress revenue and increase costs (including funding and compliance costs). As summarized in a recent IMF Working Paper, weak bank profitability can ultimately pose financial stability due to less organic capital generation and franchise value to absorb shocks.¹³

As a result of balance sheet, structural and risk management changes, many of the world’s SIBs are now less systemically important. There are now fewer banks allocated to the top three G-SIB buckets (which correspond to a schedule of systemic capital buffers) than when the allocation began in 2012, and no banks have moved into the “empty” top bucket of systemic importance over that period. The set of G-

⁶ Mark Carney 2017. *FSB Chair’s letter to G20 Leaders – building a safer, simpler and fairer financial system* (July 3). Also see *FSB Chair’s letter to G20 Leaders meeting in Buenos Aires* (November 27, 2018).

⁷ BIS 2018. *Basel III Monitoring Report* (October). Page 7. Converted to USD.

⁸ Bank of England 2018. *Financial Stability Report* (November). See Page 1: “Despite facing loss rates consistent with the global financial crisis, the major UK banks’ aggregate CET1 capital ratio after the stress would still be twice its level before the crisis. All participating banks remain above their risk-weighted CET1 capital and Tier 1 leverage hurdle rates and would be able to continue to meet credit demand from the real economy, even in this very severe stress.”

⁹ Results showed that all the banks could stay well above minimum requirements in a severe recession scenario that included \$410bn in total losses.

¹⁰ See for example October 2017 and October 2018 editions.

¹¹ BIS Committee on the Global Financial System 2018. *Structural Changes in Banking after The Crisis* (January). Hereafter referred to as “BIS CGFS 2018 (January)”.

¹² *ibid.* Page 19

¹³ Xu, Hu and Das 2019. *Bank Profitability and Financial Stability* (January). IMF Working Paper No. 19/5. Page 26.

SIBs has been less systemically important in absolute terms as shown by a contraction in the denominators for half of the twelve individual G-SIB indicators used in the BCBS scoring methodology.¹⁴

The necessary conditions to successfully resolve a SIB are largely being met. The Bank of England has summarized the conditions for credibly executing banks' resolution plans – i.e. delivering a successful resolution with minimal disruption and recourse to public funds – as the following (*paraphrasing*):¹⁵

- a) Authorities have appropriate powers to resolve failing banks.
- b) Firm resources and structure: banks are organized in such a way that they can be resolved effectively with minimal risk to public funds.
- c) Identifying and removing barriers to resolvability: among other things, taking steps to ensure operational continuity in resolution; cross-border recognition of stays on termination rights in financial contracts held by bank counterparties; access of banks in resolution to financial market infrastructures (FMIs); operationalization of the bail-in tool; and funding in resolution.
- d) Cross-border cooperation: authorities in different countries are prepared to coordinate with each other in planning for and resolving failing banks.

Almost all G-SIB home and key host jurisdictions have in place comprehensive bank resolution regimes that align with the FSB's *Key Attributes of Effective Resolution Regimes for Financial Institutions*.¹⁶ The GSIBs have issued a substantial amount of external TLAC in recent years – approximately \$1.5 trillion to date¹⁷ – across a wide range of different instruments and liabilities, which has been well absorbed by funding markets. Based on estimates and publicly available information, almost all G-SIBs will meet the 2019 external TLAC minimum requirement, while two-thirds of G-SIBs are estimated to already meet the 2022 external TLAC minimum requirement.¹⁸ Resolution strategies and operational resolution plans are now in place for all G-SIBs.¹⁹

SIBs are complying with the post-crisis regulatory requirements at considerable expense, making themselves and the financial system more resilient. If a SIB were to experience a severe stress now, all else equal, they will have more capital and liquidity than pre-2010, as well as a large and growing tank of bail-inable debt plus a recovery and resolution plan that bank staff and regulators are trained to execute.²⁰ To put the level of gone-concern resilience into perspective, the current level of gone-concern TLAC at U.S G-SIBs is nearly 10 times the size of the FDIC insurance fund balance and roughly 4 times the size of the

¹⁴ The denominators are sample totals of the reported activity across all G-SIBs in the global population, which are used to normalize indicator values and calculate a bank's G-SIB score. The denominators – sample total values – fell between 2012 and 2017 for the following six indicators: cross-jurisdictional liabilities; intra-financial system assets; intra-financial system liabilities; notional amount of OTC derivatives; level 3 assets; and trading & AFS securities.

¹⁵ Bank of England 2017. *Response to The Treasury Committee's Inquiry into Capital* (March). Page 6.

¹⁶ FSB 2014. *Key Attributes of Effective Resolution Regimes for Financial Institutions* (October 15).

¹⁷ Credit Suisse analysis. Data from Bloomberg, Bank of England, Bank fixed income reports. Figures reference TLAC for G-SIBs, based on holding company, statutorily subordinated and non-preferred senior categories only.

¹⁸ FSB 2018 (November 15). Page 4.

¹⁹ Ibid. Page IV.

²⁰ Resolution strategies and operational resolution plans are now in place for all G-SIBs. These are still being developed for D-SIBs in some jurisdictions.

TARP program outlays for all banks.²¹ Furthermore, by virtue of structural changes in the market – such as derivatives clearing and margining requirements, stays on termination rights in financial contracts if a counterparty enters resolution, limits on large exposures and cross-holdings – there would be fewer channels for spillover effects if a SIB were stressed or failed today.

There is still room, however, for greater cross-border cooperation between authorities in bank resolution planning. More still needs to be done to strengthen cooperation, information sharing and trust between authorities.²² For example, although all G-SIBs now have Crisis Management Groups (CMGs), the FSB reported that institution-specific cross-border cooperation agreements for sharing resolution-related information were still not in place for 5 G-SIBs as of November 2018.²³

In addition to information sharing, cross-border cooperation relates to several other important issues. For example, one area in which regulatory cooperation has not progressed enough is in the case of mutual recognition between jurisdictions of their respective resolution actions and powers. This lack of recognition has led to overly restrictive provisions regarding choice of governing law for TLAC issuance, impacting the ability of firms to diversify funding plans. Another important area that requires further harmonization and clarity from the authorities is access to temporary liquidity support during resolution including, for example, FX swap lines between central banks.²⁴ It is imperative to provide as much predictability as possible in advance of a resolution event to maximize orderliness in the resolution, accounting for and anticipating potential market reactions.

There is considerable evidence that TBTF reforms are achieving the objectives of reducing systemic and moral hazard risks associated with SIBs.

Overall, SIBs are now less likely to fail, and we can expect less systemic impact should they fail. A recent ECB study of euro-area banks estimates that the average probability of bank failure fell by more than two-thirds due to prudential strengthening between 2007 and 2017 (from 3.5% to 1.1%).²⁵ This estimate is consistent with the Bank of England’s probability of a large or medium-sized bank failure given current capital levels of UK banks.²⁶ And SIBs have developed detailed resolution plans backed by much greater loss-absorbing capacity. Thus, if they do fail, an orderly resolution is provided for using private funds.

²¹ Credit Suisse analysis. U.S gone-concern TLAC estimated from Bloomberg data at circa \$940bn. FDIC insurance fund at \$102bn, per FDIC Quarterly Banking Profile release for December 2018. TARP bank outlays estimated at \$246bn per April 2009 Congressional Budget Office Report.

²² In its 2019 *Thematic Peer Review on Bank Resolution Planning* (April), the FSB explicitly recommended taking steps to enhance cross-border cooperation and information sharing for resolution purposes, for example with non-CMG host jurisdictions to G-SIBs – see page 5. The recent FSB and IOSCO reports on Market Fragmentation and Cross-Border Cooperation also highlight areas for further strengthening of regulatory cooperation.

²³ FSB 2018 (November 15). Page 1.

²⁴ The FSB discusses this in its 2018 guidance on *Funding Strategy Elements of an Implementable Resolution Plan* (June 21).

²⁵ Carmassi, Corrias and Parisi (2019). *Is Taxpayers’ Money Better Protected Now?* (March). ECB Macroeconomic Bulletin: Issue 7.

²⁶ Bank of England 2017. *Response to The Treasury Committee’s Inquiry into Capital* (March). See Chart 1. Bank of England 2018 stress test results show aggregate CET1 ratio for SIBs of 14.5% at end-2017, which maps to an estimated average probability of crisis of between 1% and 2% based on the function in Chart 1.

Together this means that the probability of government intervention that requires recourse to public funds is far lower now, with total G-SIB resources well above the high watermark stress events of 2008-09.²⁷ The above-mentioned ECB study finds that the ability of the euro-area banking system to absorb losses while minimizing costs to taxpayers has increased between 3.5 times and 12 times over the last ten years, depending on the assumed amount of bail-inable liabilities that are bailed-in.

Members of the regulatory community have expressed satisfaction with progress towards resolution (see for example Bank of England;²⁸ U.S Agencies did not identify any deficiencies or shortcomings in U.S firms' 2017 resolution plans²⁹). Furthermore, the new EU system has been through a first mid-sized test case with Banco Popular in 2017 and achieved a successful result.³⁰

There is evidence that implicit funding subsidies for SIBs have fallen significantly and may have gone away. There are well-documented challenges to measuring implicit subsidies since they are not directly observable. Various methods can be used, each with its own strengths and weaknesses (see Noss & Sowerbutts (2012) for a comparative analysis of the approaches).³¹ But the results of different approaches are highly consistent. They show that implicit subsidies were high before the crisis, their value increased during the crisis and they are very low or negligible now.³² Other measures show that the cost of SIB funding is now sensitive to its riskiness. Large banks' debt often traded below industrial debt spreads pre-2008 but are now typically in line with them, or wider (see **Chart 1**). CDS spreads of junior bank debt, which could be subject to bail-in during a resolution, are now much wider than for senior debt. These developments suggest that the externalities generated by being perceived as TBTF are now being internalized by firms, resulting in better market discipline and ultimately a lower probability that banks experience stress or fail. To put this into context: an FSB international expert group estimated that, if there were to be a total withdrawal of assumed government support, the resulting improved market discipline could reduce the probability of a G-SIB failing by one-third.³³ Taken together, this is strong evidence to suggest that the TBTF reforms have achieved their objectives.

²⁷ For estimates of bank losses during the global financial crisis and the Japanese banking crisis in the 1990s, see FSB 2015 *Historical Losses and Recapitalisation Needs: Findings Report* (November 9).

²⁸ Bank of England 2017. *Response to The Treasury Committee's Inquiry into Capital* (March): "Much progress has been made, and the UK is on track to achieve effective resolution. The way a bank failure would be dealt with today is very different from the crisis." And Andrew Gracie 2016. *Ending too big to fail – getting the job done* (May): "Naysayers thought that bail-outs would always be necessary for larger banks, especially those operating cross-border. The work that has been done since has met this challenge."

²⁹ Board of Governors of the Federal Reserve System and FDIC 2019. *Press Release: Agencies complete evaluation of 2017 resolution plans for 14 large domestic bank and issue expectations for 2019 resolution plans* (March).

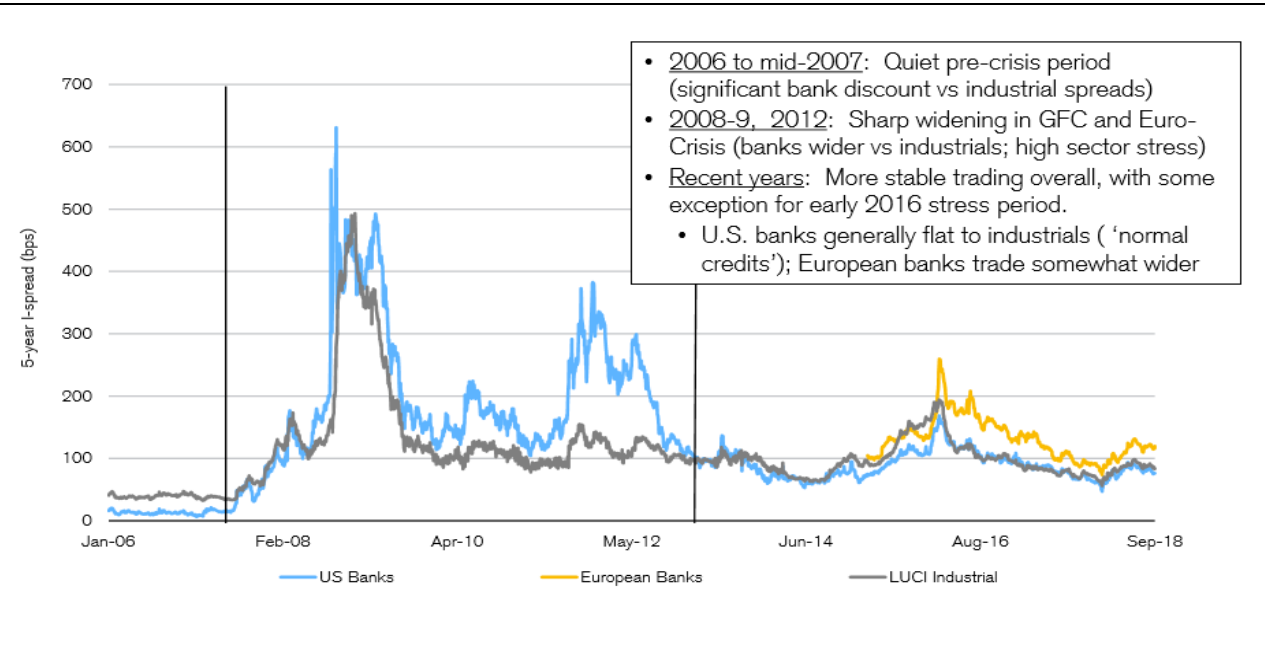
³⁰ Elke König, Chair of the Single Resolution Board, commented on April 2, 2019 in a speech at the ECON Committee of the European Parliament that: "We successfully dealt with our first Resolution case in Banco Popular – protecting the Spanish taxpayer and ensuring stability in the financial system, while ensuring that critical functions continued unhindered."

³¹ Noss and Sowerbutts 2012. *The Implicit Subsidy of Banks* (May). Bank of England Financial Stability Paper No. 15.

³² IMF 2018. *Global Financial Stability Report* (October); PWC 2014. *Bank Structural Reform Study: Supplementary Report 1* (November); Bank of England 2018. *Rethinking Financial Stability* (February).

³³ FSB 2015. *Assessing the Economic Costs and Benefits of TLAC Implementation* (November). Page 1.

Chart 1



Source: Credit Suisse Research & Analytics.

Chart notes: U.S Banks based on a simple average of 5-year “bail-in” spreads for BAC, C, GS, JPM, MS, and WFC. European Banks based on a simple average of 5-year “bail-in” spreads for ACAFP, BACR, BKIR, BNP, CS, DANBNK, HSBC, LLOYDS, NDASS, RBS, SANTAN, SANUK, SOCGEN, and UBS. The LUCI Index is a proprietary Credit Suisse credit index, based on liquid, USD investment grade offerings. The LUCI Industrial Index shown here is based on a 5-year bucket to ensure comparability.

We can attribute a lot of the reduction in implicit funding subsidies to regulatory reform. While credit rating agencies like S&P and Moody’s uplifted ratings for some banks during the crisis, they have now explicitly lowered their expectations of government support for some SIBs. Taking U.S banks as an example, a 2014 U.S. Government Accountability Office (GAO) report³⁴ documented that “*Moody’s and Fitch, two of the three largest credit rating agencies cited FDIC’s resolution process as a key factor in their decisions to reduce or eliminate “uplift”—an increase in the credit rating—they had assigned to the credit ratings of eight of the largest bank holding companies due to their assumptions of government support for these firms.*” The U.S. GAO report stated that credit rating agencies and large investors that produce internal credit ratings cited specific features of the U.S post-crisis regime, such as the Orderly Liquidation Authority, as a key factor influencing their views.

In order to assess how far the reforms have been meeting their objectives, it will be important for the FSB’s TBTF Evaluation Working Group to analyze a wide range of data including regulatory returns, market data and possibly survey data, for example by surveying the major Credit Ratings Agencies for their views on banks’ public support ratings. It will be informative to look at the differential impact of the reforms on different stakeholders, including bank shareholders, debtholders at different levels of subordination, depositors and end-users in different jurisdictions.

³⁴ United States Government Accountability Office 2014. *Large Bank Holding Companies: Expectations of Government Support* (July).

Relating to Questions 4 to 6 in the FSB’s Call for Feedback:

The post-crisis reforms have had a wide-reaching impact on the structure and functioning of the financial system; most of which was intended and beneficial, and some of which is unintended and negative.

The reforms were intended to have a significant impact on system-wide resilience, and there is ample evidence that they have done so. However, there have been some consequences of the scale of change which were probably not an intended part of the reforms. One example has been the reduction in liquidity in certain markets, such as repo and corporate bond markets, which has been partly attributed to post-crisis regulation including in two reports by the BIS Committee on the Global Financial System.³⁵ For example, due to leverage ratio requirements, some broker-dealers are less willing or able to use their balance sheet to act as a market maker. As well as reducing market efficiency and access for certain clients, lower liquidity could increase market fragility during stress periods. Another example is the impact that the implementation of the bail-in rules is having in some jurisdictions on banks’ ability to access retail funding. The restrictions on the eligibility of retail funding for TLAC/MREL purposes differ significantly across jurisdictions and, in some cases, can restrict the pool of funding sources and thereby increase the cost to issuing banks considerably.³⁶ In terms of lending, post-crisis lending patterns have varied regionally, but aggregate non-EME lending growth by G-SIBs has been weaker on average than for non-G-SIBs.³⁷ In the U.S. at least, there is also evidence that stress-testing and G-SIB capital surcharges have significantly reduced bank lending to SMEs and certain borrowers, for example because stress-testing raises the implicit risk weights for small business loans given assumptions about losses on such business in an economic downturn.³⁸

Notwithstanding the importance of the post-crisis reform program, it is important to take account of the opportunity cost associated with this sort of significant regulatory reform in terms of hampering the ability of SIBs to evolve their business models in other beneficial ways. All banks need to invest to keep pace with market developments, and protect themselves against emerging risks – including cyber, reputational and conduct. Analysis by Ernst & Young analysis in 2018 of the world’s largest 200 banks shows that while their aggregate costs have fallen by a little more than 10% since 2013, they are still more than 25% above their 2008 cost base.³⁹ The Ernst & Young study and other analyst reports⁴⁰ attribute banks’ rising post-crisis operational costs to three broad factors: (i) higher costs due to regulatory reform, including higher

³⁵ As noted by: BIS Committee on the Global Financial System 2016. *Fixed Income Market Liquidity* (January); BIS Committee on the Global Financial System 2017. *Repo market functioning* (April); BIS CGFS 2018 (January); and PWC 2015 *Global Financial Markets Liquidity Study* (August)

³⁶ The recent FSB report on the technical implementation of the TLAC standard discusses the cross-jurisdictional variation in approaches to the distribution of TLAC to retail investors. See FSB 2019. *Review of the Technical Implementation of the Total Loss Absorbing Capacity (TLAC) Standard* (July 2). Pages 22-23.

³⁷ BIS CGFS 2018 (January). Pages 51-52.

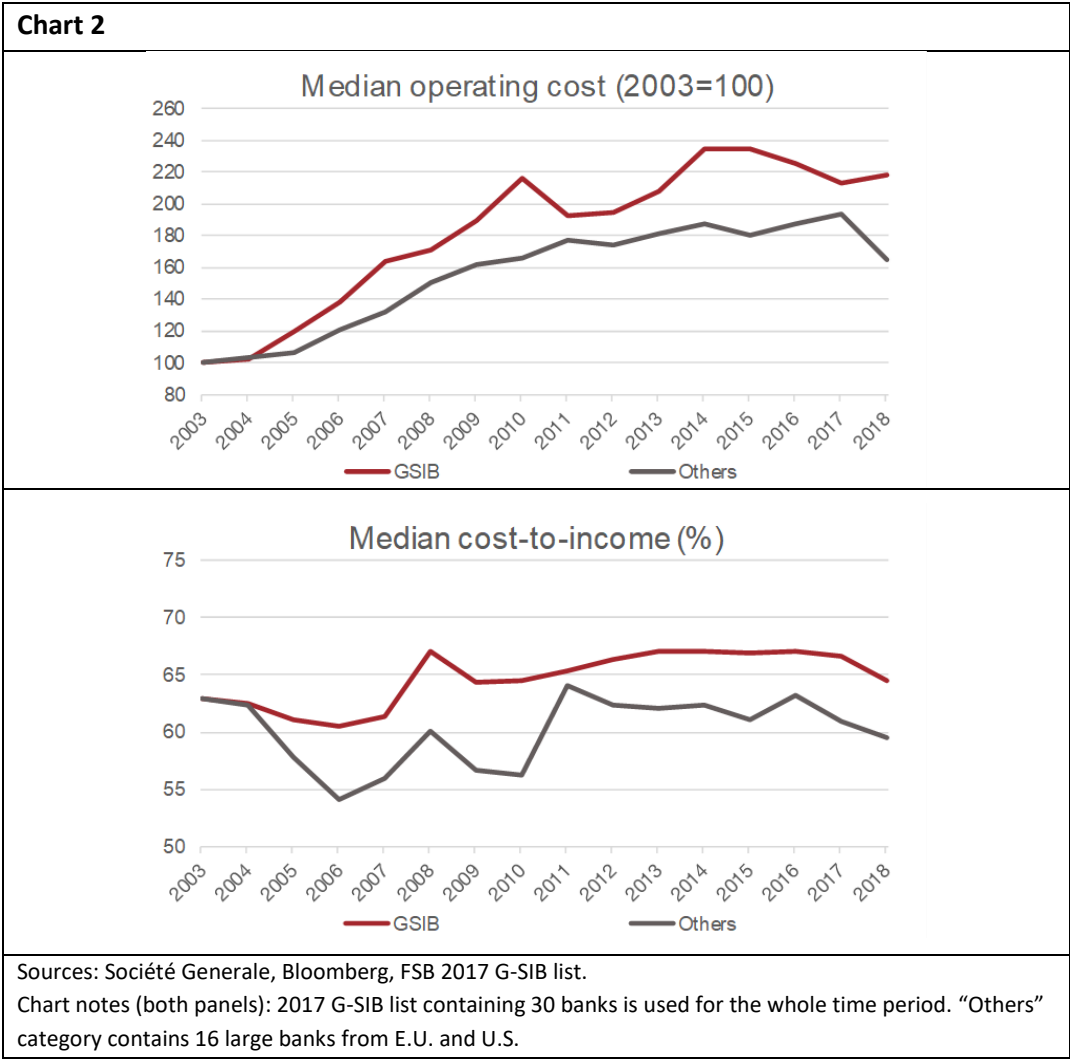
³⁸ For example, see Archarya, Berger & Roman 2018 *Lending Implications of U.S. Bank Stress Tests: Costs and Benefits* (April) and Chen, Hanson & Stein 2017 *The Decline of Big-Bank Lending to Small Business: Dynamic Impacts on Local Credit and Labor Markets* (September).

³⁹ Ernst & Young 2018. *Global Banking Outlook 2018: Pivoting Toward an Innovation-led Strategy*. Page 7.

⁴⁰ For example, Alf et al., Boston Consulting Group 2018. *Four Ways Banks Can Radically Reduce Costs* (June 7).

compliance costs; (ii) IT investment and the burden of maintaining legacy systems; and (iii) fines and litigation costs. In particular, the increased oversight of G-SIBs has led to higher operational and compliance costs, while large but non-systemically important banks have faced relatively lower costs. **Chart 2** shows that the median G-SIB has seen a marked increase in its nominal operating costs and its costs relative to income since the pre-crisis period, whereas the median large bank that is not a designated G-SIB had the same operating costs and cost-to-income in 2018 as in 2008/09.⁴¹

Some financial service activities, such as payments, have seen the emergence of new Fintech entrants who have benefited from decreasing costs of market entry due to advances in digital technologies. At the same time, incumbents - especially SIBs – have had to grapple with increasing costs and regulatory complexity, which may reduce their ability to innovate and compete.



⁴¹ There are EU and U.S banks in both the G-SIB and non-G-SIB samples, which suggests that macroeconomic differences are not the primary factor explaining the different trends.

Regarding unintended consequences and broader effects of the reforms, we urge the FSB to pay particular attention to the following specific issues during its TBTF evaluation:

1. Market fragmentary trends around the implementation of the TBTF reform agenda.

Necessary preconditions for the successful delivery of the TBTF reform objectives are coordination, mutual trust and preparedness between regulatory authorities across the globe. Market fragmentation due to regulatory divergence creates conditions for regulatory arbitrage, increased risk of failure due to resource misallocation risk, ineffective crisis management and inefficient duplication of requirements across countries, which generates deadweight costs.

We commend the recent FSB and IOSCO reports that analyzed the issue of Market Fragmentation and made recommendations to address it.⁴² And we are very encouraged by the commitment of the G20 Finance Ministers and Central Bank Governors to address unintended, negative effects of market fragmentation, including through regulatory and supervisory cooperation.⁴³ As discussed by the FSB and IOSCO, at present there are numerous examples of market fragmentation that are damaging to financial stability and/or efficiency in financial markets. Certain trends – especially geographical ring-fencing of capital and liquidity – can increase the difficulty of coordinated action and undermine confidence in the newly developed global resolution framework. Examples include:

- Moves to set internal TLAC requirements at the upper end of the 75%-90% range in the TLAC term sheet, and effectively beyond that range as well (discussed further below);
- The recently finalized Intermediate Parent Undertaking requirements in the E.U. that will impose more stringent requirements on large third-country banks operating in the E.U.;
- U.S Foreign Banking Organization (FBO) rules including recent proposals by the U.S Agencies to apply new requirements on the Intermediate Holding Companies (IHCs) of large non-U.S. banks based in part on branch statistics;
- The pre-positioning requirements of Resolution Liquidity Adequacy and Positioning (RLAP) and Resolution Liquidity Execution Need (RLEN) with which U.S. G-SIBs must comply, which require firms to assume severe local and cross-jurisdictional ring-fencing assumptions;
- Recent public discussion by the Federal Reserve about the possible application of standardized liquidity requirements to the U.S FBO branches and agencies;
- The fragmented OTC derivatives requirements that exist across borders that has resulted from differences in national implementation of the G20 international derivatives standards, including with respect to trading, reporting, margining and clearing, as well as with respect to different and inconsistent treatment of cross-border derivatives requirements; and
- The CCP recognition process, which must be harmonized globally to ensure that CCPs remain financially stable without being subject to duplicative or inconsistent requirements.

⁴² FSB 2019. *FSB Report on Market Fragmentation* (June); IOSCO (2019). *Market Fragmentation & Cross-border Regulation* (June).

⁴³ G20 Finance Ministers and Central Bank Governors 2019. *Communiqué* (June 8-9).

As indicated in the FSB's June report,⁴⁴ it is important to evaluate whether the TBTF reform objectives are being achieved or put at risk given how policies are being implemented and operationalized across jurisdictions.

We agree with the FSB and IOSCO that more needs to be done by the authorities to strengthen cooperation, information sharing and trust between them in a tangible and enduring way. For example, one area in which regulatory cooperation has not progressed enough is in the case of mutual recognition between jurisdictions of their respective resolution actions and powers. This lack of recognition has led to overly restrictive provisions regarding choice of governing law for TLAC issuance, impacting the ability of firms to diversify funding plans.

Another important area that requires further progress and clarity from the authorities is access to temporary liquidity support during resolution including, for example, FX swap lines between central banks.⁴⁵ Some jurisdictions, such as the UK, have expressed a constructive stance on this, while others have not yet stated positions. It is imperative to provide as much predictability as possible in advance of a resolution event to maximize orderliness in an actual resolution, accounting for and anticipating market reactions.

As well as evaluating the structure and resilience of firms, it is also important that the FSB evaluates regulators' preparedness and ability to use their new powers and mechanisms in a cross-border resolution situation. For example, this could be assessed through surveys with regulatory authorities or more practical exercises such as regulatory war-gaming involving CMGs. One idea could be for the FSB to perform a wide-ranging "hypothetical cross-border crisis exercise" in which a common stress scenario is posed to the CMGs of all the G-SIBs. The FSB could analyze how different authorities respond, common challenges faced and overall effectiveness of the CMG responses. The purpose would be to draw general lessons and potentially also identify any outliers (the latter need not to be disclosed, but the regulatory community could still learn lessons from it). Many firms already run such simulations on a large scale to test their own crisis management frameworks;⁴⁶ we would suggest involving key personnel from firms in some tests to help tease out issues with their help as expert practitioners.

Through the course of its evaluation, we hope that the FSB will identify any market fragmentation issues related to the TBTF reforms and their implementation, as well as how broader fragmentary trends in regulation are likely to impact delivery of the TBTF reform objectives. We encourage the FSB to propose actions to remedy any issues that are identified, for example potential recommendations on ways to improve regulatory and supervisory cooperation and consistency in line with the recent commitment by G20 Finance Ministers and Central Banks.

⁴⁴ FSB 2019. *Report on Market Fragmentation*. See page 19: "The FSB evaluation of the effects of TBTF reforms would consider, as part of its analysis of the broader effects of those reforms, whether any of these reforms have affected market fragmentation with observed consequences for financial stability."

⁴⁵ The FSB discussed this in its 2018 guidance on *Funding Strategy Elements of an Implementable Resolution Plan* (June 21) and commented that further progress was needed among authorities in their *Seventh Report on the Implementation of Resolution Reforms* (November 15, 2018. Page 6).

⁴⁶ Deloitte 2015. *Aiming at Resolvability: The Single Resolution Board* (December). Page 14.

2. Assessing the interplay between individual TBTF measures, and between TBTF and other post-crisis reforms.

The evaluation should investigate and draw conclusions about the interactions, potential overlaps and consistency of individual reforms. The post-crisis regulatory framework includes multiple regulatory and supervisory constraints. At the global level, these include risk-weighted and leverage ratio requirements, two liquidity standards, TLAC and resolvability requirements, large exposure limits and central clearing and margining requirements for derivatives. On top of this are additional, domestic requirements such as supervisory stress testing and macroprudential tools such as the countercyclical capital buffer. This is a marked change from the structure of the pre-crisis regulatory framework which, at the global level, rested primarily on a less sophisticated version of the risk-weighted capital ratio.

All these requirements are related to the structure of a bank's balance sheet and, therefore, there are several routes for them to interact in terms of their impact on bank business decisions and the banking system overall. While these interactions can be beneficial (e.g. using a mix of equity and TLAC debt to increase loss-absorbing capacity is a targeted and cost-effective solution), they can also generate excessive costs or conflicting incentives. While rules may be appropriate when assessed individually, their interaction may result in an undue regulatory burden on certain activities or on the system as a whole.

In some cases, a combination of requirements generates perverse or unintended incentives for banks. A notable example has been the interaction between leverage ratio requirements and incentives to centrally clear derivatives. The FSB recognized in its 2018 evaluation report⁴⁷ that the treatment of initial margin in the leverage ratio can be a disincentive for client clearing service providers to offer or expand client clearing. The BCBS has recently responded with a limited revision of the leverage ratio standard to give greater recognition for margin received from a client to offset the exposure amounts of client-cleared derivatives.⁴⁸ This is a good example of identifying and addressing an unintended consequence of interacting standards by revisiting one of the standards. In its TBTF evaluation, we encourage the FSB to identify any standards that ought to be revisited in light of any identified unintended consequences, overlaps or inconsistencies.

We would urge the FSB to use its evaluation to explore the interplay between standards and would suggest two specific areas for investigation.

a) Capital, including systemic buffers, and non-capital requirements

Greater acknowledgement should be given to the beneficial impact on resilience and financial stability of the various new bank regulatory requirements that are not related to going-concern capital. To the extent that elements of the post-crisis framework such as liquidity requirements, large exposure limits and derivatives clearing reduce the systemic risk posed by SIBs, this should be correspondingly reflected in the regulatory and supervisory framework.

⁴⁷ FSB 2018. *Incentives to centrally clear over-the-counter (OTC) derivatives: A post-implementation evaluation of the effects of the G20 financial regulatory reforms – final report* (November 19).

⁴⁸ BIS Basel Committee on Banking Supervision 2019. *Leverage ratio treatment of client cleared derivatives* (June).

For example, it may be appropriate to recalibrate systemic capital buffers to account for a reduction in the systemic risk posed by SIBs. The FSB’s Terms of Reference currently excludes the BCBS methodology (framework) for G-SIBs (D-SIBs).⁴⁹ However, we think it is important to consider them since they have been such a core part of the TBTF reforms. There are natural interlinkages between the methodology/framework and other aspects of the reforms such as measures to improve resolvability, which are better examined in a holistic review such as the FSB’s TBTF evaluation. Historically, many studies have been narrower in scope, and did not consider the overlap between these areas. However, in recent years, some studies have sought to measure the appropriate level of capital for major banks including interlinkages between going-concern capital, liquidity requirements, TLAC, recovery and resolution planning: see Bank of England (2015)⁵⁰, BIS (2016)⁵¹, U.S. Federal Reserve Board (2017)⁵². We encourage this approach going forward.

We believe that this sort of review by the FSB would complement the periodic review of the G-SIB methodology conducted by the BCBS every three years.⁵³ Our members consider there to be issues with the G-SIB methodology that diminish how useful it is as a risk measurement tool, as set out in our 2017 response to the BCBS consultative document.⁵⁴

b) Interaction between internal TLAC calibrations in different jurisdictions

The FSB should investigate the impact of the way internal TLAC requirements are being implemented on the fungibility of capital across borders in global banking groups and on the de facto calibration of TLAC requirements at the group level.

While some jurisdictions are calibrating or proposing to calibrate internal TLAC at the low end of the TLAC Term Sheet range (from 75% to 90%), at least two jurisdictions have issued a final rule uniformly calibrating internal TLAC at the high end of the range—i.e., 90%.⁵⁵ And – given other regulatory requirements for large and complex foreign banking organizations operating in the U.S. (such as the CCAR regime and the internal Long-term Debt constraint) – estimates show that the implicit

⁴⁹ FSB 2019. *Evaluation of too-big-to-fail Reforms: Summary Terms of Reference* (May). See page 2: “[The evaluation] however, not revisit the BCBS methodology and framework for assessing systemic importance of G-SIBs and D-SIBs respectively.”

⁵⁰ Brooke et al. 2015. *Measuring the Macroeconomic Costs and Benefits of Higher UK Bank Capital Requirements* (December). Bank of England Financial Stability Paper No. 35. Hereafter referred to as “Bank of England 2015 (December)”.

⁵¹ Fender and Lewrick 2016. *Adding It All Up: The Macroeconomic Impact of Basel III and Outstanding Reform Issues* (November). BIS Working Paper No. 591. Hereafter referred to as “BIS 2016 (November)”.

⁵² Firestone et al. 2017. *An Empirical Assessment of the Costs and Benefits of Bank Capital in The U.S.* (March). FRB Finance and Economics Discussion Series 2017-034.

⁵³ In its 2017 review of the G-SIB methodology, the BCBS explicitly excluded the impact of resolution from their review. See BIS 2017 *Global Systemically Important Banks – Revised Assessment Framework* (March). Footnote 6, Page 3.

⁵⁴ IIF 2017. *Comments on Basel Committee’s Consultative Document on Global Systemically Important Banks – Revised Assessment Framework* (June).

⁵⁵ U.S. Federal Reserve for US IHCs of non-U.S. G-SIBs, and the E.U. under CRR II for material subsidiaries of non-E.U. Globally Systemically Important Institutions.

requirements for TLAC for U.S. IHCs exceed 130% on average.⁵⁶ A default to the most stringent calibration increases the risk that, in an actual financial distress scenario, there will be insufficient resources left to the parent to allocate where needed (“misallocation risk”).

The calibration of internal TLAC requirements for material sub-groups affects the de facto calibration of TLAC at the group level. It is likely that the sum of the individual internal TLAC requirements of subsidiaries will be greater than the 100% TLAC requirement for the consolidated balance sheet of some parent companies.⁵⁷ This can occur if the subsidiaries have varying constraints and business models, for example if some are constrained by leverage, others by RWA, and others by stress test requirements. This shows that the interaction of internal TLAC requirements can result in effective TLAC requirements that far exceed FSB recommendations.

3. Analyzing the impact of TBTF reforms on risk migration to the non-bank financial sector, and the implications of risk migration for systemic bank regulation.

Another potential source of systemic risk has been increasing since the crisis in the form of non-bank finance, the growth of which has outpaced that of the banking sector.

The share of banks’ assets in the financial system has fallen since the crisis while the asset share of insurance companies, pension funds, investment funds and other financial intermediaries has grown.⁵⁸ There is cross-country variation, but FSB estimates suggest that the expansion in bank-like activities of non-bank financial entities has been striking over the past decade, with a narrow measure⁵⁹ of the size of global non-bank financial intermediation (NBFi) surpassing \$51.5 trillion (64% of GDP) in 2017 as compared to \$27.6 trillion (54% of GDP) in 2006.⁶⁰ And NBFi has been rising as a substitute to bank financing for corporates and households.⁶¹ Looking at it from a different perspective, the non-bank financial entity market share in residential mortgage origination nearly doubled between 2007 and 2015, from roughly 30% to 50% of the market.⁶²

The post-crisis bank regulatory framework has certainly contributed to this trend. On the whole, the bank regulatory framework and TBTF regulations in particular discourage bank balance sheet inflation, which has reduced banks capacity to make big-ticket loans to large corporates that have the capacity to tap bond markets instead.⁶³ Further, higher bank funding costs due to higher capital requirements also increase the cost of bank finance and make it a relatively less attractive financing source compared to capital markets or non-bank lenders like Fintech firms. For example, Buchak et al. estimate that around 60% of the growth

⁵⁶ Credit Suisse analysis. Based on FR Y-9C data to estimate Tier 1 resources for large and complex FBO institutions, and also to estimate minimum funding of long-term debt component, according at the ratios required by U.S. regulation.

⁵⁷ This point was raised previously in IIF and GFMA 2015. IIF-GFMA *Joint Comments on FSB Consultation on Adequacy of loss-absorbing capacity of global systemically important banks in resolution* (February).

⁵⁸ FSB 2018. *Implementation and Effects of the G20 Financial Regulatory Reforms* (November).

⁵⁹ Defined by the FSB as those parts of the non-bank financial sector that may pose bank-like financial stability risks.

⁶⁰ FSB 2019. *Global Monitoring Report on Non-Bank Financial Intermediation* (February).

⁶¹ IIF 2019. Report to Market Monitoring Group (March).

⁶² Buchak et al. 2018. *Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks* (September).

⁶³ For general considerations on capital regulation beyond TBTF, see for example: Irani et al. (2018). *The Rise of Shadow Banking: Evidence from Capital Regulation*. FRB Finance and Economics Discussion Series 2018-039.

in non-bank financial entity mortgage lending is driven by regulatory differences between traditional banks and Fintech lenders; only 30% is due to superior lending technology.⁶⁴

As acknowledged by the FSB, there are some global benefits of a growth in non-bank financing in terms of increased competition in the supply of finance, but there is also the potential for the sector to become a source of systemic risk, both through its interconnectedness with the banking system or if it becomes exposed to typical bank risks such as maturity/liquidity transformation and leverage creation.⁶⁵

In light of this, we encourage the FSB to evaluate how much banking regulatory reform or regulatory fragmentation has contributed to risk migration to other parts of the financial system. They should also use this information to re-assess the degree of systemic risk posed by SIBs in the post-crisis era, which has almost certainly fallen, and the implications of this for the G-SIB and D-SIB frameworks (as discussed above).

In addition, we encourage the FSB to do the following in its evaluation:

- Distinguish the impact of globally harmonized frameworks and standards from approaches taken during domestic implementation.

Given the FSB's stated objective of analyzing market fragmentation as part of the TBTF evaluation,⁶⁶ it will be valuable to assess and distinguish the impact of globally harmonized frameworks and standards from approaches taken during domestic implementation. Examples of the latter include stress-testing to inform capital requirements, ring-fencing and national calibrations of internal and external TLAC requirements (for example, the broader application of TLAC in the E.U. through MREL requirements).

Differences in national implementation or super-equivalence to global standards creates divergence between standards across countries, which is a source of market fragmentation and potentially uneconomically high prudential requirements.

- Perform a forward-looking, holistic evaluation and account for all relevant regulatory requirements, even if they are still being implemented or are relatively untested.

There are precedents in recent regulatory analyses for anticipating the impact of new and future requirements— see for example the FSB (2015) “Assessing the economic costs and benefits of TLAC implementation”, Bank of England (2015) “Measuring the macroeconomic costs and benefits of higher UK bank capital requirements” and BIS (2016) “Adding it all up: the macroeconomic impact of Basel III and outstanding reform issues”.⁶⁷ Where there are limitations to quantitative analysis, qualitatively

⁶⁴ Buchak et al. 2018. *Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks* (September).

⁶⁵ FSB 2019. *Global Monitoring Report on Non-Bank Financial Intermediation* (February).

⁶⁶ This was a Next Step in the FSB 2019 *Report on Market Fragmentation* (June 4). Page 19.

⁶⁷ FSB (2015) assessed the additional impact of TLAC assuming that other Basel III requirements were fully phased in; Bank of England 2015 (December) assessed the optimal level of UK banking system capital accounting for TLAC and resolution arrangements, liquidity requirements and UK structural reform; BIS 2016 (November) re-assessed the optimal level of bank capital and sought to take account of new Basel liquidity requirements and TLAC standards for G-SIBs.

accounting for the transmission mechanisms and expected directional impact of new policies is still important so that unintended consequences can be anticipated and oversteering can be avoided.

- When assessing the costs and benefits of the TBTF reforms, the analysis of the costs (as well as the benefits) of requirements should be tailored to SIBs. It should account for the relevant transmission mechanisms and regulations applying to them.

Any top-down economic analysis that the FSB conducts should be tailored to assess the macroeconomic benefits and costs of the TBTF reforms on SIBs, accounting for the regulations that apply specifically to them and the relevant transmission mechanisms. For example, while the traditional macroeconomic cost channel that relates changes in banks' private costs to social costs via changes in lending rates may apply well to many banking business models, it would neglect the important role of many SIBs in capital markets. Therefore, the impact of regulation on financial markets, and thereby financial stability and economic growth, would be omitted if only a traditional lending channel were included. Similarly, the macroeconomic analysis could account for the impact of a shift from bank to non-bank provision of financial services.

- In addition to top-down macroeconomic analysis, analysis of the impact by SIB business models, business lines and specific activities should be conducted.

It will be important to complement any macroeconomic cost-benefit analysis that is conducted with a more granular, "bottom-up" approach that explores the impact on individual business lines, specific activities and markets. SIB business models, including markets they operate in and services they offer, differ significantly. Therefore, analysis at the level of the population could mask true impacts.