21 June 2019

Mr. Randal Quarles
Chair
Financial Stability Board
Bank for International Settlements
CH-4002 Basel
Switzerland
By email: fsb@fsb.org

Re: Response to the FSB's consultation on evaluation of too-big-to-fail reforms for banks

Dear Chairman:

The Global Financial Markets Association (GFMA) appreciate the opportunity to comment on the Financial Stability Board's (FSB) consultation on the effects of the too-big-to-fail (TBTF) reforms for banks. We welcome the FSB's evaluation of the effects of the G20 reforms to address "too-big-to-fail" (TBTF). In this response, we outline the key achievements in addressing TBTF, what are the areas that warrant further analysis and what other questions should be asked in order to complete the evaluation.

By way of background, the GFMA has been actively involved with the development of the post-crisis reform package by providing feedback on almost all consultations by the FSB and the Basel Committee on Banking Supervision (BCBS), either independently or jointly with other industry associations.

We have also contributed several studies to the coherence and calibration initiative. These include an in-depth analysis[1] on the impacts and interactions of the regulatory reform package which we commissioned from Oliver Wyman. In addition, we produced an analysis of the post-crisis reforms and their impacts on the evolution of the repo and broader SFT markets jointly with the ICMA[2] and an ex post study of the impact of regulation on banks' capital market activities[3].

GFMA strongly supports the objectives of the reforms to reduce systemic and moral hazard risk resulting from institutions which are deemed too big to fail. Achieving these goals is essential to improve and maintain financial stability necessary for a well-functioning global financial system. Together with enhanced cross-border cooperation these elements help ensure a global financial system which promotes and underpins sustainable growth.

There has been very significant progress in implementing these reforms in the key jurisdictions. Both going and gone concern loss absorbing capacity has increased by multiples, resulting in much lower probabilities of failure and losses given default. TLAC is a key factor in ensuring that any GSIB can be resolved effectively without taxpayers bearing losses. The significant build-up of this can be observed

[1] http://www.oliverwyman.com/our-expertise/insights/2016/aug/post-crisis-basel-reforms.html
[2] https://www.gfma.org/correspondence/the-gfma-and-icma-repo-market-study-post-crisis-reforms-and-the-evolution-of-the-repo-and-broader-sft-markets/
[3] https://www.pwc.se/sv/pdf-reports/global-financial-markets-liquidity-study.pdf

in many key G20 jurisdictions. In addition to this, the ECB have opined on the reduced likelihood of failure and substantive increase in loss-absorbing capacity[4]. The GFMA believes that the methods used by the ECB in their analysis to assess the probability of default as well as bank and systemwide loss absorbing capacities are extremely helpful in analysing how effectively the issue of TBTF has been dealt with.

As well as the progress made in increasing the loss absorption capacity in the form of TLAC, very substantial progress has been made in implementing the Key Attributes and putting in place effective cross-border resolution plans for GSIBs, as noted by the FSB's progress reports on resolution[5].

As such, while the key focus of this consultation is focussed on the implementation of the Key Attributes and systemically important institution buffers, it is impossible to fully ignore the significant changes to the risk weight and leverage denominators in the wider post-crisis reform package, which ultimately drive the TLAC and GSIB add-on requirements. The changes made to the calibration of the risk and leverage-based exposure measures provide much higher buffers within the going concern framework, in addition to the TLAC requirements. The revisions to Basel III standards therefore play a significant role in the calculation of probability of and loss given failure. While our response mainly focuses on the elements contained within the terms of reference, it is difficult to isolate those from the wider set of reforms, particularly when assessing the spill-over effects.

With regards to moral hazards and implicit subsidies, there have been several studies that estimate the value of implicit subsidies leading to moral hazard using a range of different approaches. GAO's[6] 2014 report on the US market concluded that the implicit subsidy had been eliminated. Similarly, the PwC report[7] commissioned by AFME shows that already in 2014 a significant reduction in implicit subsidies was observable in the EU and that there was no evidence of GSIBs having a funding benefit over non-GSIBs at the time. We provide further feedback on the methodologies and studies in our answers to the FSB's questions below.

While there is a lot of evidence on the progress made in making largest banks less likely to fail and resolvable at failure, there are significant spill-over effects that need to be well understood. In some areas, financial activity has shifted from the regulated to the non-regulated financial sector[8] with technology and innovation playing an ever-increasing role in intermediation. In some low risk and low margin areas (including primary dealerships and clearing memberships), the high capital requirements have resulted in the number of active participants in the market shrinking as the economics no longer support the target ROEs of some participants, while the regulations have also acted as a barrier to entry for new participants due to size of the required investment while return expectations remain low. .

In our view, a cost benefit analysis should form a key part of this evaluation and it should weigh the cost of fragmentation to the GSIBs, market efficiency and potentially increased costs to end-users that result from regulatory restrictions. It should also assess the safety and soundness risks arising from

[4] Carmassi, J., Corrias, R. and Parisi, L. (2019), "Is taxpayers' money better protected now? An assessment of banking regulatory reforms ten years after the global financial crisis", Macroprudential Bulletin, Issue 7, ECB, March 2019 - https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu201903_01~c307e09dd7.en.html

[5] https://www.fsb.org/2018/11/fsb-2018-resolution-report-keeping-the-pressure-up/

[6] GAO https://www.gao.gov/assets/670/665162.pdf

[7] PwC report on Implicit Guarantees, 2014 - https://www.pwc.com/gx/en/banking-capital-markets/pdf/pwc-supplementary-report1-implicit-guarantees.pdf

[8] See for example CGFS report 60, p. 80 https://www.bis.org/publ/cgfs60.pdf

more activity outside the regulated sector, with less data and supervisory oversight. Regulators and industry have learned finding the balance between frictionless markets and financial stability is a dynamic equation. Fragmented markets are brittle and fragile markets are detrimental to financial stability in that they trap pools of capital and liquidity preventing it (for political as well as regulatory reasons) from moving to where it is most needed when it is most needed. There is a price to pay for establishing necessary safety and soundness, but the policy objective should also include to reach an optimal state of as little friction in the system as possible.

We very much look forward to continuing this productive dialogue and are committed to supporting the FSB throughout its evaluation process. Below we provide our initial high-level thoughts and feedback and welcome the opportunity to provide more detailed views as the FSB's evaluation work progresses.

Sincerely,

Kenneth E. Bentsen, Jr.

CEO

Global Financial Markets Association

1. To what extent are TBTF reforms achieving their objectives as described in the terms of reference? Are they reducing the systemic and moral hazard risks associated with SIBs? Are they enhancing the ability of authorities to resolve systemic banks in an orderly manner and without exposing taxpayers to loss, while maintaining continuity of their economic functions? What evidence can be cited in support of your assessment?

The dilemma of TBTF and the associated moral hazard was very topical after the financial crisis, during which significant amounts of public financial support was given to financial institutions at a risk of failure to prevent damage to functioning of the wider economy. While the evidence of whether it was systemically important banks or the banking sector more broadly that received support varies across jurisdictions, we concur that the moral hazard element relates to uncompetitive advantages for larger banks over their smaller competitors due to the potential implicit subsidy that may lead to faster balance sheet growth and even in higher risk appetite.

In this context, it is worth noting that national level crisis management mechanisms were an important factor regarding the number and size of bail-outs during the crisis. According to the ECB[9], most EU Member States did not have adequate crisis management mechanisms for the resolution of banks, even relatively small banks were deemed too systemic to fail. Consequently, the region dealt with only a few liquidations of small banks whereas in the US banking sector hundreds of small and medium sized banks were liquidated, resulting in much higher overall capital injections in the concerned EU Member States than in the US relative to the associated banking losses. In addition, it is worth stressing that in Europe not all G-SIBs suffered losses and that government support often targeted non-G-SIBs[10].

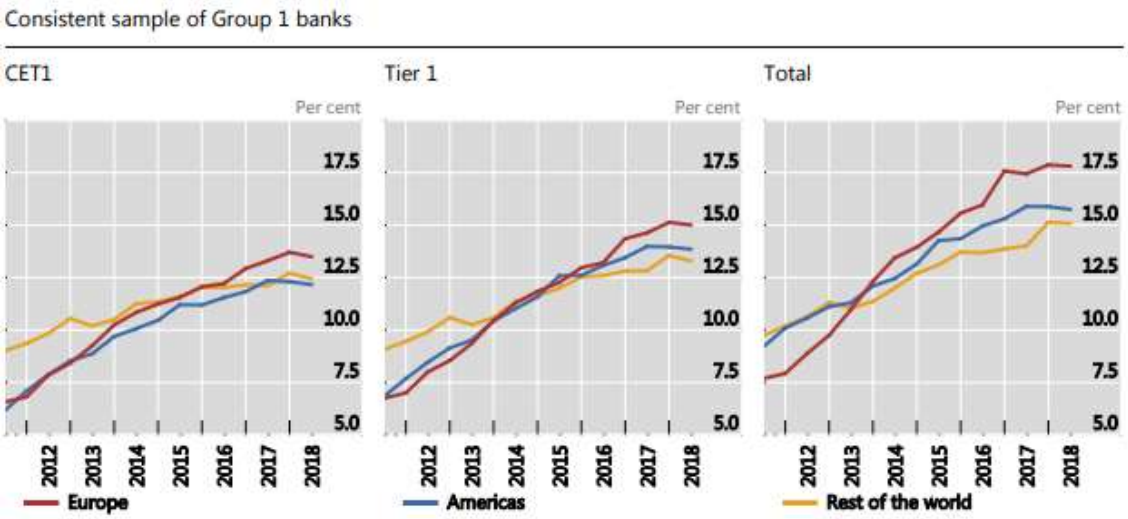
There has been very significant progress in addressing these issues through implementation of the FSB-led reforms including enhancing the capital and liquidity framework and putting in place effective national and cross-border resolution regimes. This has very substantially reduced the probability of failure and ensured that the authorities have the tools and resources in place to resolve a failing bank without taxpayers bearing losses. We therefore believe that the TBTF reforms are achieving their objective and enhancing the ability of authorities to resolve systemic banks in an orderly manner and without exposing taxpayers to loss, while maintaining continuity of their economic functions.

Evidence of this can be seen through the implementation of the reforms, increased levels of capital and TLAC resources, and qualitative evidence on the progress in putting in place effective resolution plans. While most GSIB banks already comply with the 2022 minimum TLAC requirements (see annex 2), the full impact of some of the reforms may not yet have been evident due to, for example, implementation of the final Basel III standards, the phasing in of TLAC requirements, ongoing implementation of internal TLAC and removing remaining impediments to resolvability. However, we highlight below some evidence and areas which should be evaluated as part of the FSB's assessment.

We have seen very significant increases in both the level and quality of capital held by banks as well as a material reduction in leverage (see tables 1, 2 and 3 below). Taken together with significant increases in banks' short and long-term liquidity this has significantly reduced the average probability of default for large banks. It is also observable from table 2 that the increases in capital levels in Europe

and Americas has levelled off as the reforms have been implemented and banks have already raised the required capital. While in the rest of the world region, the capital levels are still increasing, it is more to due with the considerable GDP growth and economic expansion, whereas GDP growth in the advanced economies has been more limited (see table 4).

Table 1: Fully phased-in initial Basel III CET1, Tier1 and total capital ratios[1], by region



[1] Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

Source: Basel Committee on Banking Supervision. See Table C.6 for underlying data and sample size.

Table 2: Level of capital after full phasing in of Basel III standards (Consistent sample of Group 1 banks, exchange rates as of 30 June 2018, in billions of euros)

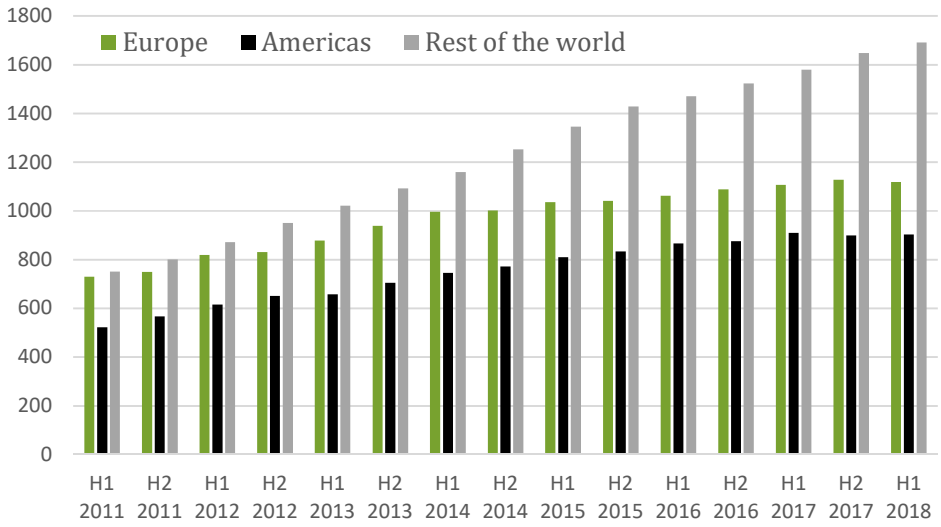
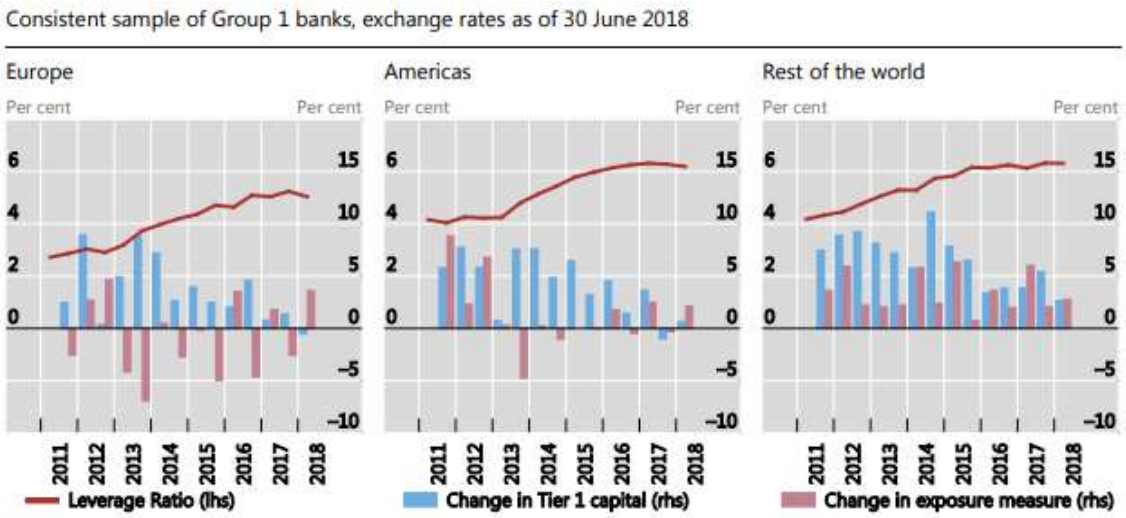


Table 3: Fully phased-in Basel III Tier 1 leverage ratios and component changes,[1] by region

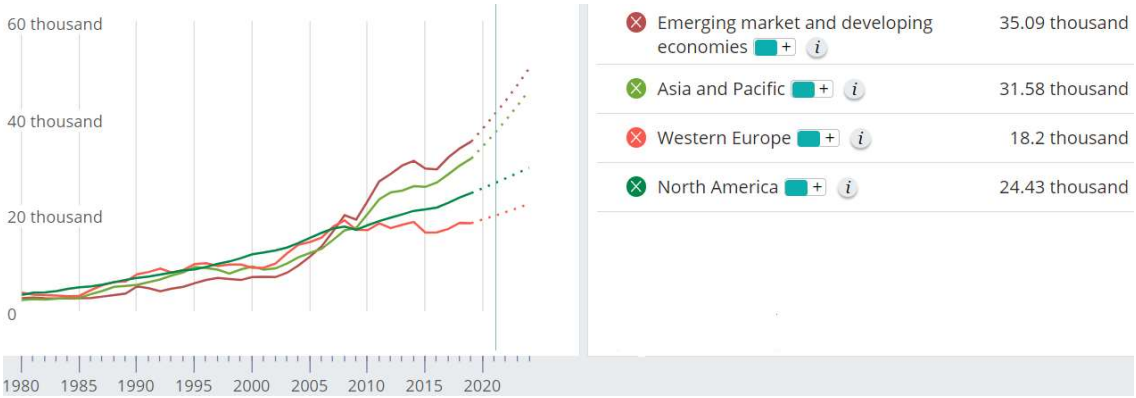


[1] Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Source: Basel Committee on Banking Supervision. See Table C.15 for underlying data and sample size.

Source: BCBS[11]

Table 4: Regional GDP growth (in USD billions)



Source: IMF

As can be seen from table three, the increased leverage ratios amongst BCBS Group 1 banks have been achieved mainly through increased capital, apart from Europe where asset reductions have played a much bigger role in achieving the targeted LR levels compared to other regions. We provide further detail on how this has impacted the business models of banks and their ability to fulfil their economic functions in answer to the questions below.

Separately, the introduction of Total Loss Absorbing Capacity (TLAC) requirements and broader resolution frameworks have materially enhanced the ability of authorities to resolve systemic banks in an orderly manner, whilst minimising the risk of exposing taxpayers to losses. Whilst only the initial 2019 TLAC requirements apply at present we can already observe[12] in the U.S. alone over $900 billion,

[11] https://www.bis.org/bcbs/publ/d461.pdf

[12] Sources: Bloomberg, company fixed income presentations and Credit Suisse analysis

and the total TLAC (ex China) is at $1.5 trillion today. Levels in Europe can also be observed at being approximately 30% RWA for Swiss GSIBs, and approximately 25% RWAs for UK GSIBs and others in the EU – well above the 2022 TLAC levels set out by the FSB (and being met by a broader population of banks within the EU).

Some authorities have declared that resolution plans are credible for large banks in their jurisdiction, and that they now have the powers and ability to resolve failing banks[13]. Nevertheless, work is still underway to enhance resolvability even further. This includes, for example, within the UK where proposed requirements surrounding the public disclosure of resolvability assessments have been consulted on[14]. Within the EU too, the enhanced framework spans a broader population of banks than the FSB TLAC Standard, and with higher loss-absorbing capacity requirements in the form of MREL[15] which has recently been. The build-up of TLAC to meet the final 2022 requirements, and MREL is very much underway and for many banks has already been met ahead of schedule.

In terms of concrete actions, substantial progress has been made to implement the FSB key attributes and address TBTF. The tools to resolve failing financial institutions without taxpayer support across key jurisdictions are now present. The components that are in place include:

- Dedicated resolution authorities established with responsibility and powers over banks and investment firms;
- Recovery planning to assist banks to recover from stressed situations;
- Powers to require the removal of impediments to resolvability;
- Stays of termination rights and enforcement of security interests;
- Powers to impose a moratorium on payment and delivery obligations;
- Contractual recognition of bail-in for liabilities governed by non-home jurisdiction laws;
- Resolution planning for a resolution of banking groups;
- Powers to take early intervention action prior to resolution;
- Requirements for groups to hold a minimum level of loss absorbing capacity;
- A framework of resolution tools to enable the resolution authorities to conduct an orderly resolution without recourse to taxpayers and minimising any systemic impact;
- Recognition of stay powers, including within derivative contracts under the ISDA 2015 Universal Stay Protocol;
- Supervisory frameworks have improved, and supervisory colleges have been established for almost all G-SIBs;
- The effectiveness of colleges has improved in terms of information-sharing, coordinated risk assessment and crisis preparedness. Yet challenges remain, including those related to legal constraints on information-sharing, supervisory resource constraints and expectation gaps between home and host supervisors
- Harmonised approach to depositor preference and deposit insurance;

[13] FRB – Agencies announce joint determination for living wills, December 19, 2017 – https://www.federalreserve.gov/newsevents/pressreleases/bcreg20171219a.htm
FRB – Agencies complete resolution plan evaluation of 16 domestic firms, March 24, 2017 – https://www.federalreserve.gov/newsevents/pressreleases/bcreg20170324a.htm
[14] Bank of England, Consultations on resolvability assessment framework, 18 December 2018 - https://www.bankofengland.co.uk/news/2018/december/boe-pra-consultations-on-resolvability-assessment-framework
[15] Minimum Requirements for own funds and Eligible Liabilities (MREL)

- Ex ante funded resolution funds and DGS; and
- Provisions to enable the recognition and enforcement of third country resolution proceedings.

While Mark Carney declared in June 2018 that "*With enhanced resolution powers and planning, the Bank of England now has the ability to resolve failing banks*."[16] shows how far authorities and the industry has come over the past decade. The FSB's Key Principles on Bank Resolution are prominent in the resolution regimes that have been implemented, and industry has been leading the charge in areas that require broader market participant action. This has been evidenced by the FSB itself as recently as November of last year in the FSB's 2018 Resolution Report[17], which states "*Almost all G-SIB home and key host jurisdictions have in place comprehensive bank resolution regimes that align with the Key Attributes*" , and "*All advanced economy G-SIBs have adhered to the ISDA 2015 Universal Stay Protocol*". By implementing the Key Principles in resolution regimes and reflecting them in standard market documentation, resolution has become a credible answer to the problem of TBTF. The cost of a failing systemic institution can now be internalised through the bail-in mechanism, fire-sale unwinds of derivative contracts as seen previously are now avoidable, and plans are in place at the level of institutions to ensure the capabilities are there to operationalise a resolution. The recent test-case of the framework in Europe (the case of Banco Popular) showed that the tools are there to declare and implement a resolution, and that they can be properly utilised to avoid tax-payer bail-outs, as stated by Elke König, Chair of the SRB, "*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*[18]*".*

The conclusions that can therefore be ascertained through the FSB's evaluation on the effects of the post-crisis reforms, targeted at resolving the issue of too-big-to-fail banks, may therefore showcase the significant progress that has been made in addressing the headline issue. However, we are fully aware that some jurisdictions are still in the process of finalising or amending resolution frameworks, and work continues to improve on the frameworks that have already been put in place. As a result of this, the observed effects of the implemented TBTF reforms may fail to truly identify the broader impacts and consequences. The review of the reforms is nevertheless crucial at this stage to allow any issues that are coming to the fore to be identified, whilst time remains to address any concerning affects before the new requirements are fully implemented.

There is much to give confidence to supervisors and resolution authorities that make them able to make such assertions on the ability to resolve failing banks. The ECB have recently stated that, following their own analytical work, the average probability of default of euro area banks has fallen to 1.1% in 2017, from 3.5% in 2007. In addition to this the loss-absorbing capacity available has increased from 7.2% of total assets in 2007 to 16.9% of total assets or 55% of total assets in 2017 depending on the assumed scope of any bail-in that may follow a firm's failure[19]. The GFMA believes that such methods to assess the probability of default, bank and systemwide loss absorbing capacities are extremely helpful in analysing how effectively the issue of TBTF has been dealt with.

[16] Mark Carney – Mansion House Speech: New Economy, New Finance, New Bank, 21 June 2018 - https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/new-economy-new-finance-new-bank-speech-by-mark-carney

[17] FSB 2018 Resolution Report: "Keeping the pressure up", 15 November 2018 - https://www.fsb.org/wp-content/uploads/P151118-1.pdf

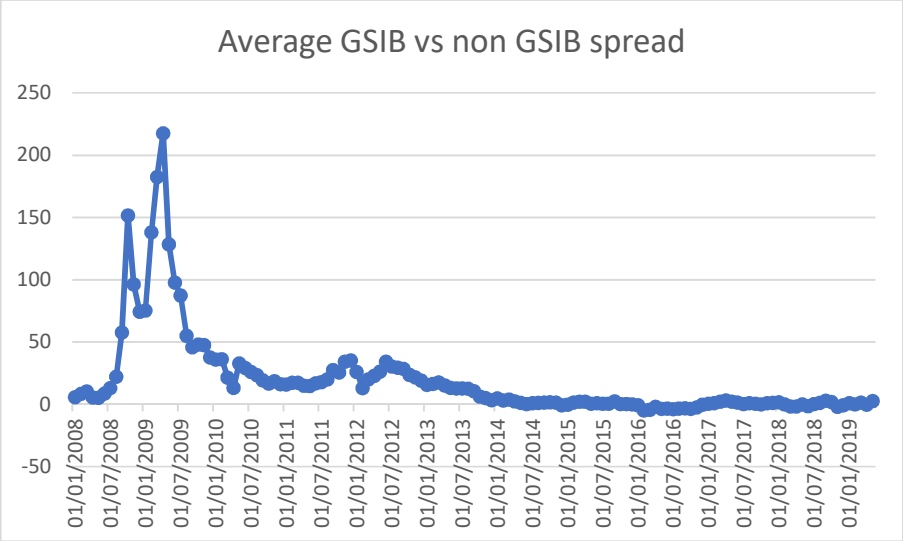
[18] SRB, Speech: Hearing at the ECON committee of the European Parliament - SRB Chair, Elke König, 2 April 2019, https://srb.europa.eu/en/node/744

[19] Carmassi, J., Corrias, R. and Parisi, L. (2019), "Is taxpayers' money better protected now? An assessment of banking regulatory reforms ten years after the global financial crisis", Macroprudential Bulletin, Issue 7, ECB, March 2019 - https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu201903_01~c307e09dd7.en.html

With regards to analysing the implicit subsidies, there have been several studies[20] that estimate the value of implicit subsidies leading to moral hazard using a range of different approaches. The majority of these studies has focused on the US market, but several studies have also assessed the levels of implicit subsidy in Europe. The PwC report[21] commissioned by AFME provides a useful summary of the approaches and methods used and shows that there are different complications and the outcomes differ between econometric and credit ratings-based methods most commonly used to assess implicit subsidies for TBTF banks. It furthermore assesses the implicit subsidies in the EU market based on a specific method deriving from many of the previous studies used across the regions. The report shows that already in 2014 a significant reduction in implicit subsidies was observable over a period of time and that there was no evidence of GSIBs having a funding benefit over non-GSIBs at the time. The report also concludes that the key driver of the decline in implicit subsidies was the regulatory reform agenda.

One determinant on the level of implicit subsidy are the credit default swap (CDS) spreads of organisations that benefit from explicit or implicit subsidies compared to those that do not. Our analysis shows that large banks benefited from significantly lower CDS costs compared to other banks in our sample (see sample firm details in annex 1) during and right after the crisis but the spread has since disappeared (see table 5 below). Also, comparing bank CDS spreads to the equivalent in the insurance sector, it is clear that insuring for bank default is more expensive (see table 6).

Table 5: GSIB vs non GSIB bank CDS spread

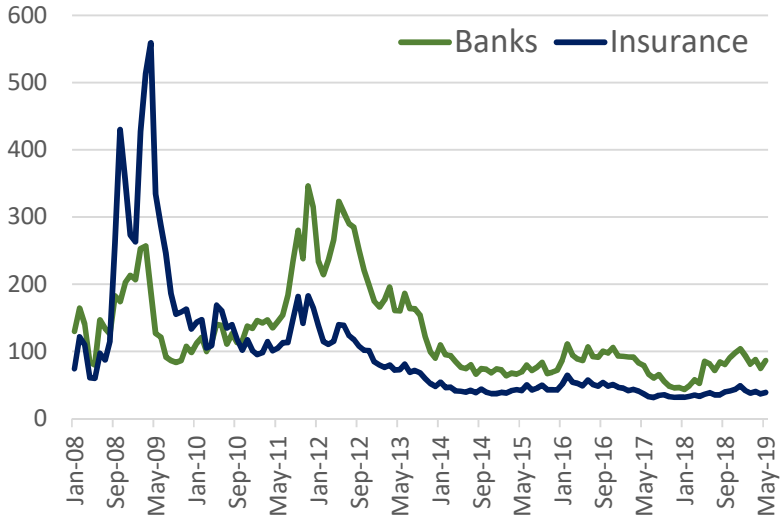


Source: Autonomous data and GFMA analysis

[20] For example GAO (https://www.gao.gov/assets/670/665162.pdf), Oliver Wyman (https://www.oliverwyman.com/our-expertise/insights/2014/apr/do-bond-spreads-show-evidence-of-tbtf-effects.html) and IMF Global Financial Stability Report 2014: Chapter 3.

[21] PwC supplementary report on implicit subsidies, 2014 - https://www.pwc.com/gx/en/banking-capital-markets/pdf/pwc-supplementary-report1-implicit-guarantees.pdf

Table 6: Bank vs insurance sector CDS spreads



Source: Autonomous data and GFMA analysis

To conclude, we believe that in an efficient market the cost of capital and funding should reflect the bank specific risk profiles, return expectations and the fact that investors should bear the full cost of failures. The regulatory framework built in the aftermath of the crisis has led to significant reduction or near elimination of meaningful implicit subsidy through increased going and gone concern capital, liquidity and resolution frameworks. Whether we can claim based on econometric evidence that the implicit subsidy is fully extinguished, an assessment will that continues through an economic cycle during which the reforms have been fully implemented, interest rates have normalised, QE has been unwound and market volumes have picked up is required. However, in the broader systemwide context, we recommend that the FSB takes stock of improvements in national and regional resolution mechanisms, how the probabilities of default have changed over time and what are the institutional level and systemwide levels of loss absorbing capacity to deal with large bank failures.

2. Which types of TBTF policies (e.g. higher loss absorbency, more intensive supervision, resolution and resolvability, other) have had an impact on SIBs and how? What evidence can be cited in support of your assessment?

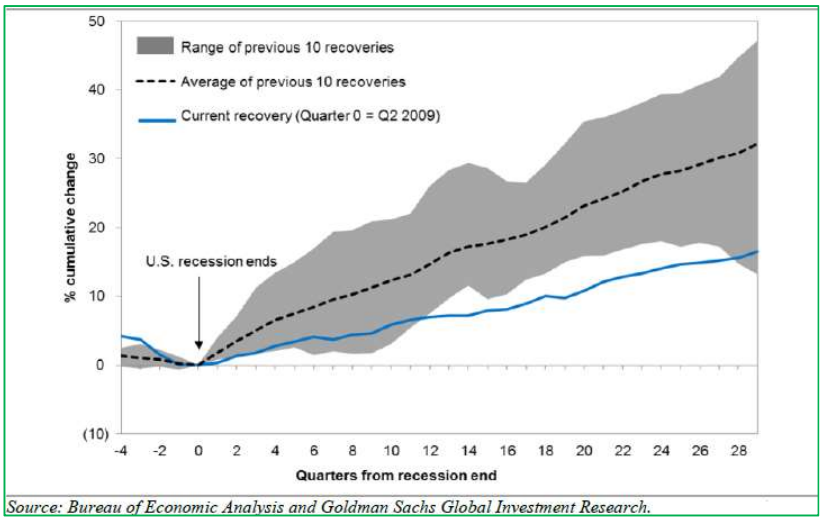
As Mark Carney in his role as the Governor of bank of England noted to the UK Treasury Select Committee in 2016: "Bank capital is not costless to society. If capital requirements are increased, some of those costs will be passed on to households and businesses in the real economy".

The case for the post-crisis regulatory reform was made by comparing the costs of new regulations against the benefits of avoiding another financial crisis. The evidence collected by the FSB[22] suggests that the benefit of avoiding future financial crisis is worth 1.8% of GDP per annum, compared with an estimated loss of output from a financial crisis of 63% of pre-crisis GDP per annum. There are many other studies that have assessed the cost of financial crises and have come to different conclusions, depending on the assumptions on longer term GDP trajectory and assumptions made on whether

[22] http://www.financialstabilityboard.org/publications/r_100818a.pdf

financial crises have temporary and permanent effects. We also note that regulation can also be a drag on the economy after the recession, if it results in too much capital and bank balance sheet allocated to regulatory compliance. For example, the current recovery in the US is the slowest of the past 10 recoveries (see table 7 below). The head of the U.S. Commodity Futures Trading Commission, speaking at ISDA's annual conference 9th May, 2017 said that not enough has been done to ensure that regulations imposed after the financial crisis of 2008 "*have made the financial system as effective as possible in supporting economic growth*." He further iterated that "*It is critical that international bodies make it their top priority to take up this challenge of looking across reforms to see if we have this balance right. We risk causing irreparable harm to the global markets if we do not do this*."
The UK macroprudential authority is targeted at achieving a balance between financial stability and growth, as noted by Mark Carney in a 2017 speech[23] that: 'This does not mean we are pursuing the stability of the graveyard.'

Table 7: Post recession recoveries in the US



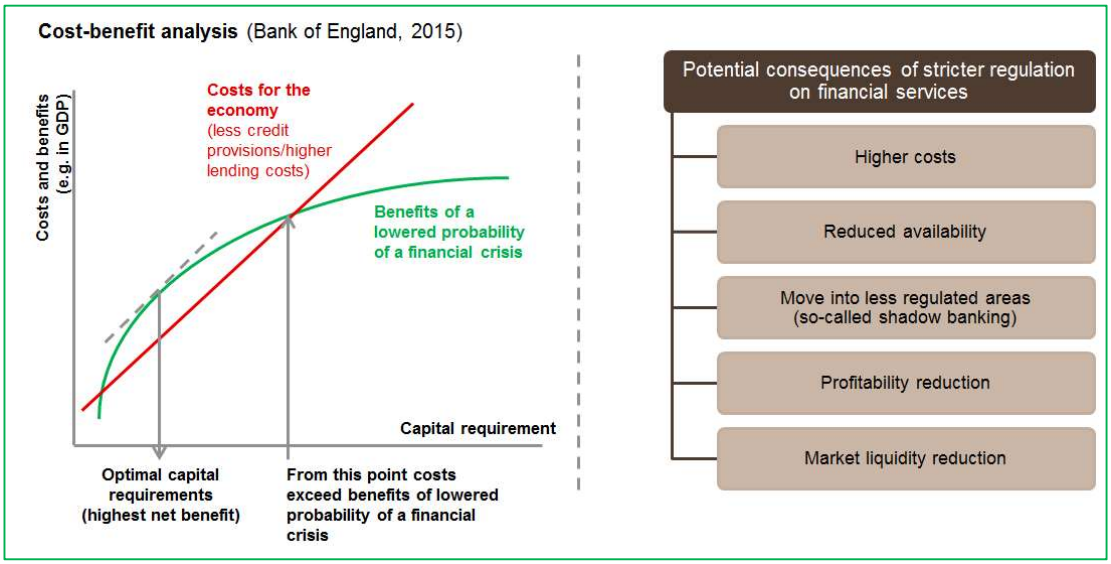
Source: Bureau of Economic Analysis and Goldman Sachs Global Investment Research.

A helpful review of cost-benefit analyses was produced by the Bank of England[24]. Table 8 from the Bank of England study provides useful background on how to look at the costs to the economy against systemic safety benefits.

[23] https://www.bankofengland.co.uk/-/media/boe/files/speech/2017/the-high-road-to-a-responsible-open-financial-system

[24] http://www.bankofengland.co.uk/financialstability/Documents/fpc/fspapers/fs_paper35.pdf

Table 7: Bank of England's cost and benefit analysis



In our view, this benchmarking and determining what the capital and liquidity positions of banks would look like absent the reform package, are some of the key considerations when evaluating the efficiency of the reform package. Over the years, many studies have tried to put a price tag on the regulation imposed by the initial Basel III package. However, based on a review in the Oliver Wyman study[25] on regulatory coherence in 2016, the framework has changed drastically since most of the studies on costs were completed and there have been very few efforts recently trying to capture all the rule changes and their impact on both traditional lending, market-based financing and end-users. We also note that while there is value in analysing the different aspects of reform costs (social vs private), we would caution that when banks are acting in purely agent businesses, the dividing line between private and social costs is not clear-cut, and significant additional private costs will inevitably be externalised to clients to some extent.

In terms of impacts on GSIBs, all TBTF policies have had an impact on them. However, the resilience of SIBs has been demonstrated through their performance in the face of significant and wide-ranging stress testing as well as the ability of market participants to withstand some significant individual periods of extreme volatility. Layering of regulations, whether directly through additional requirements for GSIBs or the generic minimum standards may have a significant impact on particular business lines that are mainly the preserve of GSIB banks. Such business lines include for example primary dealerships, SFT intermediation, market-making and cross-border financing.

TBTF policies and layering of regulation have however contributed to a reduction in bank profitability and changes to banks' business models away from more capital-intensive activities. As demonstrated in a report commissioned by PwC[26] into the impact of post crisis regulation on banks capital markets activities, capital and leverage requirements are the most significant drivers of regulatory costs accounting for almost 90% of total identified regulatory costs. N.B. It was noted that the NSFR had still to be implemented which is expected to have a significant impact on capital market activities.

[25] http://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2016/aug/post-crisis-basel-reforms.pdf

[26] https://www.pwc.se/sv/pdf-reports/global-financial-markets-liquidity-study.pdf

Furthermore, regulation was assessed as having driven a 14% reduction in pre-tax capital market returns from 2010-2016 before banks' mitigating actions.

While some of these impacts were undoubtedly intended and to be expected, there remains a question over whether the calibration of the reforms has been excessive in some areas and resulted in undesired effects on the broader economy. While regulatory changes is only one cause, many banks' returns remain below their cost of capital, signifying, amongst other things a concern over the long-term future of these firms and their ability to raise further capital to support their economic activities.

The industry's key concern however is the level at which the assessment is done. If supervisors continue to hold GSIBs to a higher standard in the private supervisory context than the standards developed internationally, it is impossible to assess the sole impact of the international standards. For example, US GSIBs are largely bound by supervisory capital planning rather than rule-based Basel III capital requirements. This is problematic because: (1) banks' ability to comment or challenge supervisory findings is limited; (2) it is difficult to "cite evidence" as requested by the FSB because the information is confidential; and (3) it is difficult to compare across banks, industries, jurisdictions, or even regulators because the information is confidential.

It is also important in this context to review the methods used in assessing the impacts of the TBTF reforms. While the majority of impact assessments thus far have focused on aggregate impacts, an accurate analysis of financial reforms requires an understanding of how GSIBs make internal resource and pricing decisions that ultimately result in cost and availability of individual services or business lines. It is evident in some product and service areas (such as primary dealership, access to central clearing and repo) that regulatory burden and cost of compliance is acting as an entry barrier and withdrawals by several banks from lines of business have not resulted in new players picking up the slack but rather those markets have become more concentrated, contrary to the intention of the regulation. Therefore, while assessing the efficiency of the post-crisis reforms in mitigating TBTF, the FSB should also look at how cumulative impacts of regulation have impacted business lines that are mainly the domain of large international banks and whether there are undesired side-effects where regulation could be streamlined while maintaining safety and soundness.

3. Is there any evidence that the effects of these reforms differ by type of bank (e.g. global vs domestic SIBs)? If so, what might explain these differences?

The key differentiating factor between global and domestic SIBs is the GSIBs reach across markets and investor bases. They facilitate cross regional investment, capital raising, trade finance and transactional banking, which makes these banks subject to greater geographical diversification, but also additional regulatory and economic risks compared to DSIBs. While DSIBs' footprint is restricted and resolution may be contained under one resolution authority, GSIB resolution requires co-operation between resolution authorities across jurisdictions.

In particular, the realization that "banks are global in life but national in death" resulted in regulation, supervisory policies and strategic choices by global and large regional banks to downscale cross-border flows and ring-fence regional or national operations. Reflecting this and the multitude of other changes made across the industry post-financial crisis, common themes have emerged in the way that banks have responded:

1. The recovery and resolution process and group resolvability assessments have driven structural changes, which are improving resolvability and lowering systemic risk;
2. Banks have made strategic business changes, focusing on servicing key end-user clients and by withdrawing from certain regions and businesses;
3. Banks have taken significant steps to strengthen, de-risk and deleverage their balance sheets through capital raising and asset reduction initiatives;
4. The creation of non-core divisions and the run-off of non-core assets have been a key driver in balance sheet strengthening, with the aim of reducing assets, exiting non-core businesses and providing greater direction and customer focus to banks' remaining activities;
5. Supporting this balance sheet strengthening has been a move towards de-risking, both at a market level (e.g. OTC derivative reform) and at a bank level (e.g. cost reduction and enhanced risk management).

There are specific regulatory initiatives (such as highlighted by the GFMA[27]) that present challenges for global banks' ability to funnel funding and intermediate across markets. These substantial challenges impact the ability of bank dealers to facilitate liquidity and the redistribution of risk in times of volatility, potentially introducing new and unforeseen risks to our markets and economy.

In our view, a cost benefit analysis should form a key part of this evaluation and it should weigh the cost of fragmentation to the GSIBs, market efficiency, safety and soundness and potentially increased costs to end-users that result from regulatory restrictions. Regulators and industry have learned finding the balance between frictionless markets and financial stability is a dynamic equation. As banks became better capitalised and less risky, institutional arrangements are put in place for managing bank failures, and as markets overall became less risky as a function of post crisis changes to market structures including central clearing of derivatives, then the hurdle against which to assess the benefits from more regulation and incremental fragmentation becomes higher.

Recognizing there is a trade-off, the FSB should have a mandate and responsibility to evaluate the costs of resulting market fragmentation due to proposed policies and regulations. Fragmented markets are brittle and fragile markets are detrimental to financial stability in that they trap pools of capital and liquidity preventing it (for political as well as regulatory reasons) from moving to where it is most needed when it is most needed. There is a price to pay for establishing necessary safety and soundness, but the policy objective should also include to reach an optimal state of as little friction in system as possible.

Nevertheless, there is some evidence that reforms have impacted certain types of business activity more heavily than others. As identified in the PwC report referred to above the changes in capital charges led to significant falls in rates, credit, commodities and equities assets. These changes can be ascribed to the significant increases in capital required against these activities. Further changes by both product and business model may become evident once the final Basel III measures of December 2017 and changes to market risk requirements have been fully implemented as both will have significant impacts on the capital cost of providing certain products and services. This is partly due to the removal of the ability to utilise internal models to the same extent as previously to calculate capital requirements and the introduction of an output floor which will place a limit on the maximum possible reduction in RWAs.

Whilst it may be too early to prescribe impacts on different firm types with regard to the new resolution requirements, it is clear that the framework agreed upon at the FSB level targeted G-SIBs specifically. This has nevertheless been implemented in jurisdictions alongside other similar

[27] GFMA Principles for Achieving Consistent Regulatory Regimes and Supervisory Practices, 2018 - https://www.gfma.org/wp-content/uploads/0/83/197/231/64665979-572d-4887-9edf-5ebebbe6dd27.pdf

requirements, extending the provisions for increased loss-absorbing capacity to other SIBs, as well as to firms that are not designated as systemic. One example of this is the application of MREL requirements within the EU, whereby the Bank Recovery and Resolution Directive (BRRD) allows both GSIBs, DSIBs, and even banks not designated as either to be required to meet significantly higher requirements. The precise impact of these provisions will not yet be fully observable, as MREL levels are still being built up, and the required levels still subject to change.

4. What have been the broader effects of these reforms on financial system resilience and structure, the functioning of financial markets, global financial integration, or the cost and availability of financing? What evidence can be cited in support of your assessment?

One key theme that has arisen as the post-crisis reforms have begun to be implemented is that of market fragmentation. This is a topic that the FSB is aware of having recently completed its report on the subject[28]. Within the FSB report the potential for heightened local capital and liquidity requirements and ringfencing policies to have caused this is acknowledged. This was also foreseen within the TLAC Standard which identified the possible risk that such fragmentation could occur should host authorities not have sufficient confidence in the level of loss absorbing capacity at a local level, and this point is made by the FSB in the recent report. In a working paper[29] by the Bank of England, the researchers found a negative and significant effect of changes to banks' capital requirements on cross-border lending. Their analysis shows that a 100 basis point increase in the requirement is associated with a reduction in the growth rate of cross-border credit of 5.5 percentage points. This reflects the fact that banks tend to favour their most important country relationships, so that the negative cross-border credit supply response in 'core' countries is significantly less than in others. Banks tend to cut back cross-border credit, including to their own foreign affiliates rather than to customers in their home market.

In terms of cross-border flows, the BIS data[30] in table 9 shows that cross border credit to banks and non-banks turned negative after the crisis and continues to be subdued. Similarly, there has been a significantly lower expansionary trend in issuance of international debt securities compared to the long-term trend prior the crisis.

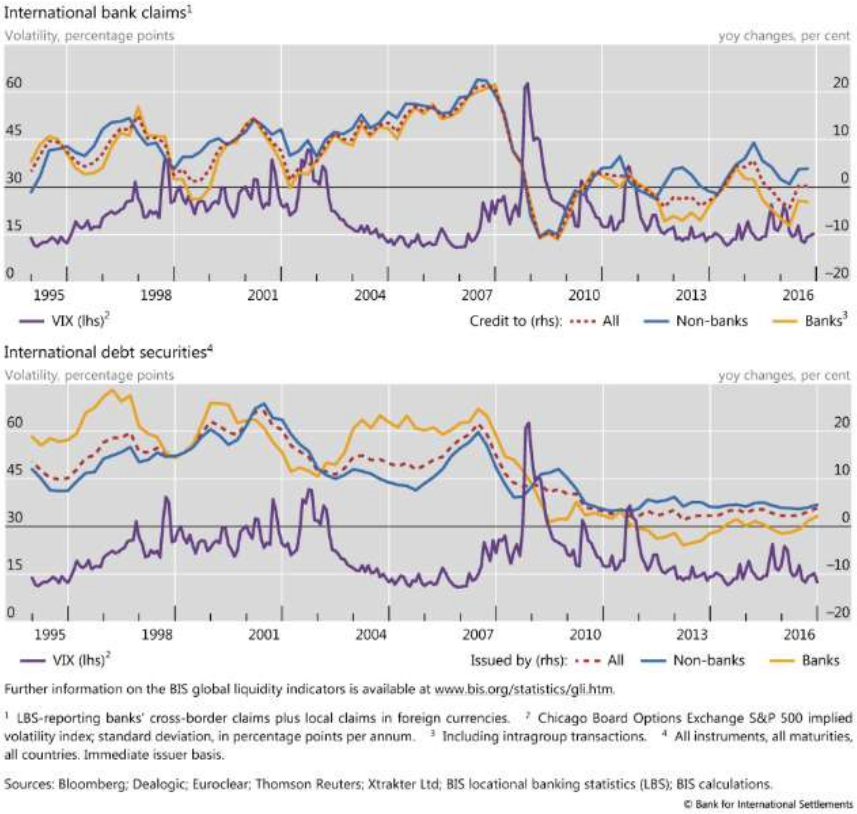
It this context, The FSB should also look at the GSIB methodology to ensure that the definition of cross jurisdictional activity is consistent and rational, and truly reflects cross-border activity. For example, the FSB should consider revising the definition to ensure that local claims are not captured in the cross jurisdictional indicator. GFMA and its members believe that a transaction between parties incorporated in a single jurisdiction, which stays in that jurisdiction, should not be captured in the cross-jurisdictional indicator. Similarly, when a local subsidiary uses local deposits to lend to local borrowers, in local currency, such business should not be captured in the cross-jurisdictional indicator.

[28] FSB Report on Market Fragmentation, 4 June 2019 - https://www.fsb.org/2019/06/fsb-report-on-market-fragmentation-2/

[29] The Bank of England: The international transmission of bank capital requirements: evidence from the UK 2014 - https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2014/the-international-transmission-of-bank-capital-requirements-evidence-from-the-uk

[30] BIS Report: Highlights of global financial flows, 6 March 2017 - https://www.bis.org/publ/qtrpdf/r_qt1703b.htm

Table 9: International bank credit, international debt securities and volatility



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/gli.htm.

[1] LBS-reporting banks' cross-border claims plus local claims in foreign currencies. [2] Chicago Board Options Exchange S&P 500 implied volatility index; standard deviation, in percentage points per annum. [3] Including intragroup transactions. [4] All instruments, all maturities, all countries. Immediate issuer basis.

Sources: Bloomberg; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS locational banking statistics (LBS); BIS calculations.

© Bank for International Settlements

Some jurisdictions have implemented requirements for locally pre-positioned resources and set levels of required internal TLAC for third country G-SIBs operating locally at the highest possible levels. Whilst the impact of these actions may only just be beginning to be observed, their long-term impacts on not only the banks and broader financial sector, but also the level of trust and cooperation between authorities, may yet to be felt. It is important that the FSB consider the medium- and long-term impacts of such requirements, and whether these may prove to incentivise counter-productive behaviours that undermine the significant gains made in improving financial resilience and stability.

Examples include the calibration of internal TLAC requirements at (or in some cases even above) the 90% level envisaged in the TLAC Standard. The 90% level is the top-end of the agreed range of 75-90% of a firms TLAC requirement were it to be locally headquartered. By setting such large amounts of pre-positioned internal TLAC within material subsidiaries around the globe, a G-SIB may find it has less flexibility in handling a stress event in a given entity. This has been explored more fully in papers including that of Wilson Ervin[31] which demonstrates that the adoption of ring-fencing policies reduces the benefit and amount of flexible resources available, leaving all jurisdictions worse off, and increasing the risk of failure. FSB analysis investigating potential impacts of reducing this range on overall financial stability would be welcomed as a part of this evaluation.

[31] Wilson Ervin, The risky business of ring-fencing, Working Paper, 12 December 2017, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3085649

A very informative piece of work that accompanied the original FSB's TLAC Term Sheet publication was the analysis 'Assessing the economic costs and benefits of TLAC implementation'[32]. As part of the FSB's evaluation into the impacts of the TBTF reforms it would be very helpful if this was revisited. Comparing the actual outcomes of the past four years with those that were estimated, as well as updating key elements of the past analysis, would helpfully set out the current state-of-play and unveil key finding with regards to TLAC's impact.

This could include comparing the estimated shortfalls and total absolute requirements for TLAC (and TLAC-like instruments) following the conclusion of work to finalise Basel 3.5 (Table 2 of the original analysis sought to compare the total shortfall based on the Basel 3 framework at the time). As part of this analysis consideration should be given to any 'gold-plating' of requirements that has been taken forward under the TBTF banner, i.e. broader and higher requirements in jurisdictions, including for example MREL within the EU.

The previous analysis on the distribution of annual funding cost increases should also be updated, both as part of this evaluation but also at an appropriate time in the future when all fully loaded requirements will have been met (2022 for TLAC, 2024 at the latest for MREL in the EU). At present, whilst a significant amount of TLAC and MREL has been issued, shortfalls may still remain. The current requirements are calibrated at the initial phase-in level under TLAC, and MREL requirements are likely to be reviewed under the incoming CRR2 and BRRD2 frameworks within the EU, leading to different end-state requirements.

We believe that further analysis should also be conducted to compare the difference in increased funding costs between firms that have had to separate investment and retail banking operations, and those that have not. This should include DSIBs as this has been a policy undertaken at national level and has been taken forward in the spirit of ending TBTF; impacting various different bank types across geographies. Comparing the funding cost differences between entities within a ringfenced banking group (where possible) may also help to reveal whether the different risk profiles of institutions is being reflected within their individual funding costs. This could be a useful indicator in understanding whether and how there has been a change in investor approach to pricing issuances from banks (and related CDS spreads), and whether an impact has been made in the removal of any implicit subsidy for tax-payer support.

Another important element to the analysis will be the total amount of issuances of TLAC (and MREL) that has been made compared to the previous estimates. Overlaying the actual issuances over expected issuances within the analysis would help develop a fuller picture of whether firms have reacted as expected, or whether other factors have influenced their ability or willingness to issue. The subsequent impact of this issuance profile and any associated cost increase on lending rates should also be considered, as it was in the analysis undertaken 4 years ago. It would be good practice to consider how these have compared with the reality, and could indicate whether further increases in lending rates should be expected considering any existing TLAC or MREL shortfalls, or whether there is a plateauing effect, and that lending rates have absorbed what they can to cover these costs. Where more TLAC or MREL is expected, the potential further impact on lending rates (or business line offerings by banks) may be opined upon.

It would be somewhat of a disservice to exclude the most crucial element of the original analysis in this evaluation – the estimated benefits of TLAC. Updating this analysis considering the current levels

[32] FSB, BIS, 'Assessing the economic costs and benefits of TLAC implementation', November 2015 - https://www.fsb.org/wp-content/uploads/Assessing-the-economic-costs-and-benefits-of-TLAC-implementation.pdf

of TLAC (both external and pre-positioned internal TLAC) should help to provide an understanding on whether the reforms are delivering the benefits that were expected. This should also include an updating of the analysis investigating the potential macroeconomic cost of TLAC, particularly on economy-wide funding costs and GDP. We would request that this analysis is updated and that DSIBs are included within this analysis and not just GSIBs. This would improve the accuracy of the analysis by capturing a greater market share (the median model suggested previously that GSIBs captured 40% of the market share – this would greatly increase if DSIBs were included). By comparing the updated analysis on costs and benefits a reflection on previous estimates can be made.

It is in our view crucial to also include the potential effect of the heightened internal TLAC requirements on group resolvability. The probability of failure, which was opined upon in the 2015 piece, should be updated to consider the different possible impacts of various calibrations of pre-positioned internal TLAC. This would be to understand the extent to which the different calibrations under the TLAC Term Sheet (or beyond) reduces or increases the amount of freely available loss absorbing capacity to support the wider group.

One other area which requires attention is the overlap of different rules, such as liquidity and capital, and especially the interlinkage of going concern and gone concern reforms. The various reforms have often proceeded in parallel, despite the importance of one for another. While a lot of the researchers have looked to calibrate the size of going concern capital without taking any account of the extra safety (or lower LGD) implied by TLAC, the Bank of England study[33] points out that the greater the confidence that failing banks can be resolved without wider damage to the economy or needing to be bailed out with taxpayer funds, the less going concern capital is needed to insure against the costs of bank failure.

The Oliver Wyman report[34] commissioned by the GFMA explores the coherence and calibration of the post-crisis reforms and their impacts on end-users through the lending and capital markets channels. The report provides useful insights into the previous estimates of regulatory impacts on banks, the transition mechanisms, costs to end-users and banks' strategic decision-making processes. It looks into areas where there are regulatory overlaps and inconsistencies, and for example points out that:

- Holding additional HQLA often pushes up capital and TLAC requirements, despite the fact that it is risk reducing. In the same vein, to comply with TLAC/MREL banks have had to issue more than what liquidity requirements would require; and

- Initial margin requirements for customers can push up bank leverage, with implications for capital and TLAC, despite the purpose of risk reduction in the derivative arena.

Elsewhere, the GFMA notes that GSIB subsidiaries need to hold significant (and expensive) internal TLAC to protect their subsidiaries, but local competitors often do not (or sometimes to a lesser extent), despite a stated desire for a level playing field [e.g. the current "tailoring reforms recently proposed by the FRB].

[33] Bank of England: The Framework for Capital Requirements for UK Banks, 2015 - https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2015/supplement-december-2015

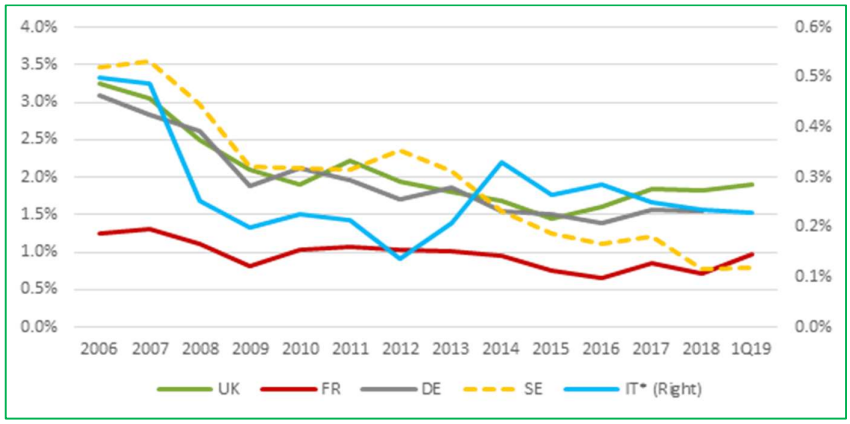
[34] https://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2016/aug/post-crisis-basel-reforms.pdf

Furthermore, PwC[35] report from 2014 on bank responses to regulatory reforms identifies the drivers of strategic reviews of business lines and regional footprint reviews. We recommend that the FSB considers these inputs and runs an assessment of the regulatory reforms based on the latest data, taking into account the changes in funding cost, reduced capacity and availability of services and whether other service providers have emerged and efficiently replaced the withdrawn services.

In particular, we recommend that the FSB assesses the impacts on the below specific business lines and products:

- **Repo market capacity:** there is an increasing amount of evidence suggesting that the repo markets do not function as efficiently as they should and are subject to much higher volatility than in the past. As reported by the Study Group established by the Committee on the Global Financial System, underneath the relative stability in headline measures of activity and pricing, there are signs of banks being less willing to undertake repo market intermediation, compared to the period before the crisis. Similarly, the GFMA and ICMA paper[36] on SFT markets concluded that regulatory reform has had a material impact on the repo markets and that they are operating near capacity. Stresses in the repo markets have often led to significant pricing impacts, with broader economic consequences for example for the economic funding capacity and the new risk-free rates.
- **Liquidity of government bond markets:** AFME's Quarterly Government Bond data reports show there has been a trend of decreasing liquidity in recent years (Table 10 below). Several banks have quit their primary dealer roles in European markets since 2011. There is a general view in the market that regulation and more specifically capital rules under Basel III have contributed to this erosion and have put pressure on market making activities. Table 11 below shows the reduction in the number of primary dealers since 2011 by EU issuer country.

Table 10: Turnover ratio of government bond instruments: selected EU MS



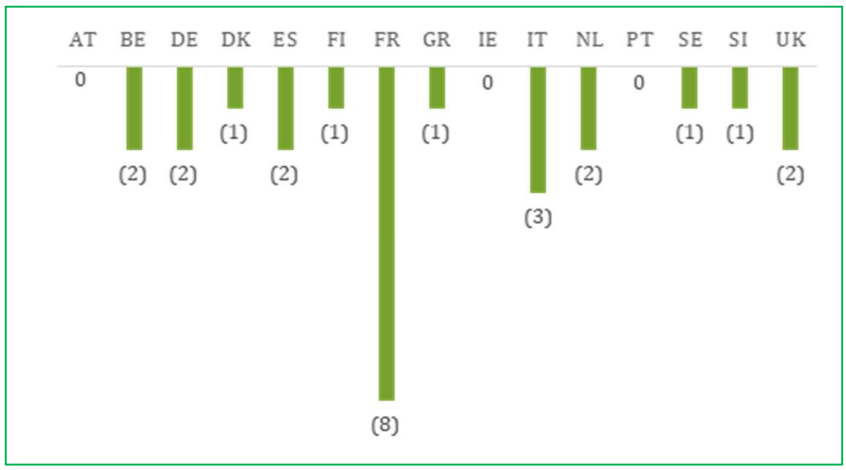
*Italy includes only electronic trading

Source: AFME

[35] https://www.afme.eu/en/reports/publications/pwc-study-impact-of-bank-structural-reform---supplementary-report-2---inventory-of-bank-responses/

[36] https://www.gfma.org/correspondence/the-gfma-and-icma-repo-market-study-post-crisis-reforms-and-the-evolution-of-the-repo-and-broader-sft-markets/

Table 11: Changes in number of primary dealers since 2011



Source: AFME

- **Securitisations:** in the context of the proposals set out in the second consultative document "Revisions to the Basel securitisation framework" published on 21 December 2013 (BCBS 269), the industry and other trade associations expressed their concerns that the proposals would not meet the stated objective of comparability, resulting instead in capital requirements that were neither comparable among calculation methods nor proportionate to risks. It was recommended that additional work should be undertaken to refine the calibration of the proposed framework and more specifically to improve the consistency of results between the internal ratings-based approach (IRBA), the external ratings-based approach (ERBA) and the standardised approach (SA). This should include gathering additional, more granular data and undertaking further analysis beyond what was provided in the QIS. In particular, we recommended conducting analysis of data grouped by the market-defined asset classes of the underlying exposures (rather than according to the regulatory exposure categories). Further details are available on request from GFMA.
- **CDS market:** At its high-water mark in June 2011, the total notional amount outstanding on single-name CDSs based on corporate and sovereign borrowers was $15.4 trillion[37]. By June 2015, notional outstanding had collapsed to $6 trillion – i.e., a contraction of 61 percent over four years. Several possible reasons may explain the recent decline in single-name CDS activity. One possibility is that the current environment of relatively low interest rates and default rates has reduced the demand for hedging and synthetic bond investments (a.k.a. taking a position on the credit risk of a borrower) using CDSs. Another often cited potential explanation for the post-2011 contraction in the single-name CDS market is the panoply of changes to the global financial regulatory framework, such as margin and capital requirements on cleared and noncleared swaps and the ban in the E.U. on short selling using sovereign CDSs. These regulatory changes have already reportedly

[37] Single-name Credit Default Swaps: A Review of the Empirical Academic Literature (http://www2.isda.org/attachment/ODcwMw==/Single-Name%20CDS%20Literature%20Review%20-%20Culp,%20van%20der%20Merwe%20&%20Staerkle%20-%20ISDA.pdf)

raised costs and decreased demand for single-name CDSs (or for hedging entity-specific credit risk altogether) even though many regulatory initiatives have still not been implemented in final form.

- **Corporate bonds:** recent feedback from industry and the regulatory community suggests there is evidence of a deterioration of liquidity conditions in bond markets. We believe a decline in market making capacity in dealer banks is a source of material potential risk in fixed income markets. Regulators should consider areas where further research is needed. We emphasize the importance of analysing data on unexecuted orders, as well as continuing to develop an understanding on optimal liquidity levels across markets.
- **Emerging markets** (Lack of CCPs, non-rated/high-yield debt issuance and trading, FX market liquidity, commodities). It is expected that data and evidence issues are likely to be particularly acute in assessing the spill-overs from the financial reform agenda on emerging markets. Many of the emerging economies depend on global cross-border banks for access to foreign investment and for services to local corporations exporting overseas. For any review process in this area, the FSB would need to understand the incentives created by the GSIB and other reforms that impact the service offerings of global banks.
- **Trade finance:** it tends to be low margin business for banks, reflecting the fact that it is low risk, short tenor and often secured on the goods being shipped, and yet the regulatory treatment is more in line with higher risk, unsecured lending (as evidenced by the ICC which has built up a comprehensive database of loss history through its Trade Register). Any increase in the regulatory capital requirements for such exposures arising from the finalisation of Basel III is likely to have a further detrimental impact on its availability and pricing for corporate and SME customers.

5. Have there been any material unintended consequences from the implementation of these reforms to date? What evidence is available to substantiate this?

As noted by the FSB[38], Regulatory restrictions to banking structures in order to provide greater *ex ante* transparency and certainty to the market and authorities in a resolution scenario can have implications for the mobility of cross-border capital flows. Some fragmentation might however be an *intended* consequence of reforms that have the objective to reduce interconnectedness between intermediaries, including across borders. The materiality of its effects for global financial stability will only became apparent as these reforms are fully implemented.

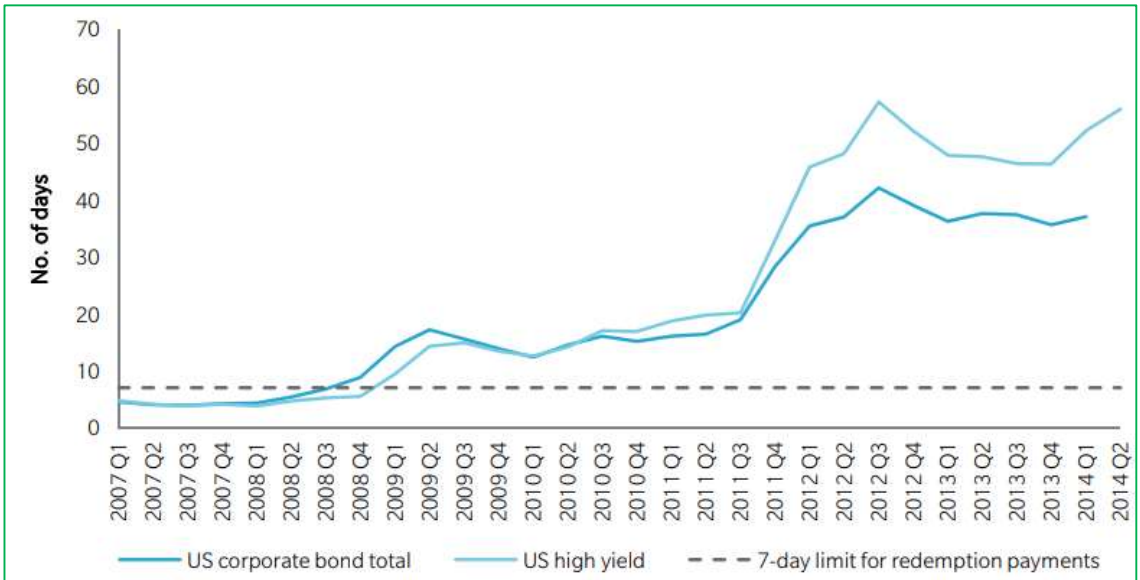
The determination of whether or not there have been material unintended consequences is made difficult by the absence of ex ante granular expected outcomes in establishing the TBTF framework beyond the broad objectives of lowering the probability and impact of failure and reducing moral hazard. Furthermore, significant elements of the Basel III package, including elements that will have a significant impact on larger banks remain to be implemented. Nevertheless, there is evidence that the calibration of the rules has led to changes in the provision of certain services and activities.

[38] https://www.fsb.org/wp-content/uploads/r_141027.pdf

The pressures on banks' capital markets businesses and market liquidity over the medium-term appear downward. While it is not necessarily the case for all market areas, evidence has pointed to a measurable reduction in financial market liquidity in some segments. There are, for example, signs of increased liquidity bifurcation and fragility, particularly in fixed income and repo markets. Here market activity has been concentrating in the most liquid instruments and deteriorating in less liquid assets.

Evidence (see table 12 below) has suggested that large trades have become more difficult to execute without affecting prices, with market participants breaking up larger trades. There have been measurable reductions in banks' trading capacity: bank's holdings of trading assets and dealer inventories of corporate bonds have decreased significantly. This has been accompanied by a decline in turnover ratios in corporate bond markets, where trading volumes have failed to keep pace with the increase in issuance.

Table 12: Number of days for full liquidation of US credit mutual fund and ETFs[39]



Note: The number of days to liquidate is the ratio of assets of mutual funds and ETFs (exchange-traded funds) per daily dealer inventories. Because there are no data for US high-yield bond dealer inventories before April 2013, the high yield line assumes a constant ratio of this amount to total corporate bonds before this date

Source: EPFR Global; Federal Reserve; and IMF calculations (from IMF (2014))

The role of principal risk takers will continue to serve a unique and important role in financial markets although regulatory changes have continued to increase the cost and disincentivise this activity. The importance of market makers will continue even if it can be assumed that markets could adjust to limited dealer liquidity, and that new entrants and trading technology bring together borrowers and lenders. End-users have raised concerns in particular about whether liquidity from other market sources will fully compensate for the loss of dealers' market-making capacity, and whether such adjustment could have substantial costs for issuers and investors and for growth more widely.

[39] https://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2016/aug/post-crisis-basel-reforms.pdf

6. Are there other issues relating to the effects of TBTF reforms that are not covered in the questions above and on which you would like to provide your views? Please substantiate your comments with evidence.

As we have highlighted above, one of the key factors that played an important role in the scale of bank bail-outs during the crisis was the lack of effective resolution mechanism and/or experience. We believe that reviewing, analysing and evaluating supervisory best practices would add rigour to the assessment.

Similarly, significant divergences in resolution strategies, lack of trust between parties in cross-border resolution scenarios can result in poor outcomes, no matter how well the banks themselves are prepared. The FSB should emphasize more the importance of national and cross-jurisdictional resolution mechanisms and plans to ensure that the authorities are prepared and able to use the tools made available. In addition, there are still some issues to be addressed in some jurisdictions, such as the provision of liquidity in resolution in EU and establishing standards/processes for acquiring a bank in resolution.

Ring-fencing of liquidity and capital around the globe would increase systemic risk globally. If liquidity and capital are trapped in local jurisdictions, banking organizations that operate globally would lose their flexibility to deploy resources where they are most needed in times of stress. For this reason, one commenter has compared national regulators' incentives to ring-fence liquidity and capital to a prisoner's dilemma:

> *"At first, 'ring-fencing' seems to work, and improve the safety of the local subsidiary. There is a major advantage for a single 'ring-fencer' if other jurisdictions do not match that decision. The first 'ring-fencer' benefits from both a) local capital and b) the ability to tap a large central reserve … However, trapping capital for one subsidiary cuts down the resources for others – and their risks begin to increase. If other jurisdictions adopt countervailing 'ring-fencing' policies to address this issue, then the benefit of a pooled 'central reserve' is lost. Eventually, all jurisdictions become worse off …*
>
> *[I]f retaliation is pervasive – the outcome for a 'ring-fencing' host country will end up worse than when it started. Its local bank entities will become riskier, potentially dramatically so. This is analogous to a 'prisoner's dilemma', an economic paradox where each participant seeks to achieve a local benefit, but ends up worse off when others also pursue their own incentives.[40]"*

Therefore, we believe that an assessment of how local ring-fencing of capital and liquidity impacts the group level solvency and resolvability of international groups would be very valuable.

It is critical that the FSB ensures that its efforts promote global consistency in regulation as well as resolution. As an example, supervisory stress-testing can create incentives that can be counterproductive for efficient recovery or resolution of a cross-border bank. The FSB, given its global

---

[40] Wilson Ervin, Understanding 'Ring-Fencing' and How it Could Make Banking Riskier, Brookings Center on Regulation and Markets (Feb. 7, 2018), *available at* https://www.brookings.edu/research/understanding-ring-fencing-and-how-it-could-make-banking-riskier/

policy objectives, should work to ensure that regional TBTF programmes do not develop priorities that put national interests above resolvability of banks or draw conclusions that might significantly fragment the global financial system. Therefore, the FSB should also measure the cost of regulatory fragmentation to meet its objective of increasing the resilience of the global financial system, while preserving its open and integrated structure.

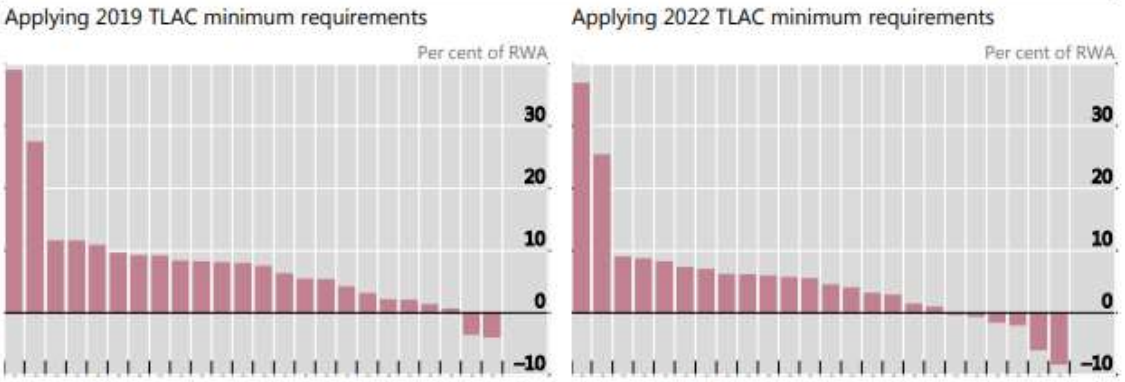
Annex 1: Sample firm details used for CDS analysis

Acom Co Ltd
Allianz SE
Allstate Corp/The
American Express Co
American International Group
Banco Bilbao Vizcaya Argenta
Banco Santander SA
Bank of America Corp
Barclays Bank PLC
BNP Paribas SA
Capital One Bank USA NA
Capital One Financial Corp
Chubb Ltd
Citigroup Inc
Commerzbank AG
Credit Suisse Group AG
Daiwa Securities Group Inc
Deutsche Bank AG
ERP Operating LP
General Electric Capital Cor
Goldman Sachs Group Inc/The
Hannover Rueck SE
Hartford Financial Services
International Lease Finance
Intesa Sanpaolo SpA
JPMorgan Chase & Co
Lincoln National Corp
Loews Corp
Marsh & McLennan Cos Inc
MetLife Inc
Mitsubishi Estate Co Ltd
Mitsui Fudosan Co Ltd
Mitsui Sumitomo Insurance Co
Mizuho Bank Ltd
Morgan Stanley
Muenchener Rueckversicherung
MUFG Bank Ltd
NatWest Markets PLC
Nomura Holdings Inc
Nomura Securities Co Ltd
Prudential Financial Inc
Simon Property Group LP
SMBC Consumer Finance Co Ltd
Societe Generale SA
Sompo Japan Insurance Inc
Sumitomo Mitsui Banking Corp
Sumitomo Realty & Developmen
Tokio Marine & Nichido Fire
UBS AG
UniCredit SpA
Wells Fargo & Co

Annex 2: Distribution of individual GSIB's incremental TLAC surplus and shortfall across banks

Distribution of individual G-SIB's incremental TLAC surplus and shortfall across banks[1]

Fully phased-in initial Basel III standards, pure TLAC implementation[2]

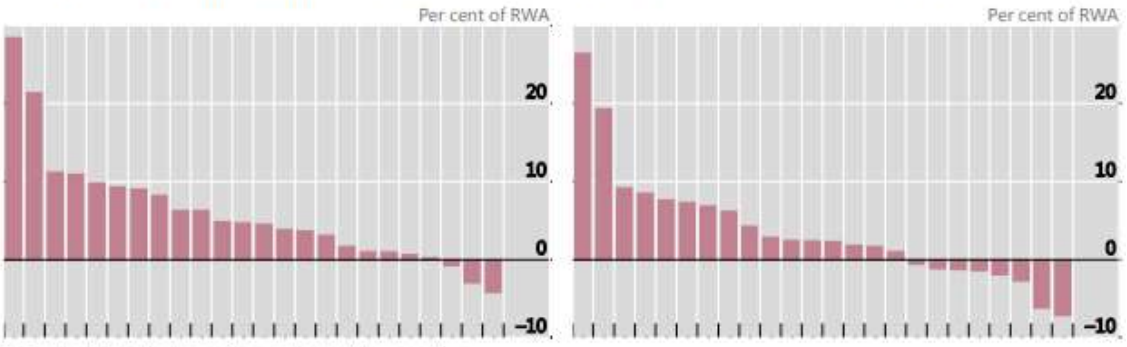


[1] Surplus is indicated as positive and shortfall as negative. [2] ie following the FSB TLAC Term Sheet rather than national implementation.

Source: Basel Committee on Banking Supervision.

Distribution of individual G-SIB's incremental TLAC surplus and shortfall across banks[1]

Fully phased-in final Basel III standards



[1] Surplus is indicated as positive and shortfall as negative.

Source: Basel Committee on Banking Supervision.

Source: BCBS https://www.bis.org/bcbs/publ/d461.pdf