30 September 2020

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

Re: **Evaluation of the Effects of Too-Big-to-Fail Reforms Consultation Paper**

Dear Chairman:

The Global Financial Markets Association (GFMA) welcomes the opportunity to comment on the Financial Stability Board's (FSB) Evaluation of the effects of too-big-to-fail (TBTF) reforms. We commend the FSB for its work in putting together a comprehensive and broad-ranging consultative paper. We agree with the paper's overall findings that the TBTF reforms have been largely successful, reducing both systemic risk and the need for direct government support to institutions during periods of stress. It is clear both from the paper's findings and the initial phase of the COVID-19 event that systemically important banks (SIBs), particularly global systemically important banks (GSIBs), are now significantly more resilient than they were prior to the last financial crisis. This may be attributable to, among other things, to significantly enhanced capital and liquidity requirements ; the issuance of bail-inable debt that comprises part of the Total Loss Absorbing Capacity (TLAC) requirements, which clarifies the parties that will absorb losses in a crisis; the development of credible recovery and resolution plans; significantly improved risk management systems and governance structures; and reduced organizational and business model complexity to support resolution strategies.

While we concur with the main direction of the paper, we believe that some achievements in addressing the problem of TBTF have been overlooked. There has been a manifold upgrading of the capital and liquidity resources required for large banks and a fundamental redesign of bank structure and statutory rules to address the issue of TBTF, supported by TLAC funding in the USD trillions. While it is challenging to conduct a comparative analysis of regulatory action that has advanced at different speeds in individual jurisdictions, we do think that the paper could have leveraged additional, publicly observable market data to support its conclusions. We also believe that supervisory assessments and supervisory data would have been helpful in informing the FSB's deliberations, although we understand that there are limitations on how much of that data the Working Group had access to.

In its final report, we ask the FSB to distinguish more consistently between jurisdictions and types of institutions (particularly between jurisdictions that are home to GSIBs compared to other jurisdictions). We also believe that the paper did not fully assess unintended impacts of the TBTF reforms, most notably on market liquidity, and makes conclusions regarding fragmentation and institutional complexity without a robust analysis. These sections of the draft paper should be strengthened before the report is completed, and a recommendation made to assess market liquidity and how the post crisis reforms have changed the provision of it as the next coherence and calibration exercise.

In this comment letter we provide further evidence and analysis, as well as specific recommendations for actions to be taken, in order to help inform the FSB's TBTF work programme. We also consider the recent COVID-related market stress in our analysis and offer related recommendations to provide timely feedback to help the FSB in its deliberations.

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 feedback and recommendations and welcome any opportunity to provide further detail on any of the issues raised in this comment letter. Thank you very much for considering our feedback.

Sincerely,

Kenneth E. Bentsen, Jr.
CEO
Global Financial Markets Association

Executive summary

- While the paper acknowledges the progress that has been made in addressing the TBTF issue (e.g., showing a statistically significant negative relationship between a country's resolution reform index (RRI) value and the measured TBTF premium[1]), it underemphasises the progress made in reducing the moral hazard posed by the largest financial institutions. For example, it does not include a wider range of data showing a significant reduction in the implicit subsidy or funding benefits, particularly to GSIBs. In addition, while the report emphasizes the importance of transparency, it should do more in this regard by breaking down successes and the gaps in the TBTF reform efforts by jurisdiction.

- In the COVID-19 context, we commend the regulators and central banks for their successful management of the crisis so far. We would also like to highlight that banks were a source of relative stability in this event. Indeed, they were often enlisted as tools to help address other problems caused by the crisis. Both of these developments evidence the considerable success of the post-Great Financial Crisis (GFC) reforms and should be reflected in the final FSB report.

- The recent market liquidity stresses associated with the outbreak of the COVID-19 pandemic reaffirm the need for the FSB to consider the reduction in financial market liquidity as a cost of the post-crisis reforms. In this response, we provide evidence on how the post-crisis regulations contributed to market illiquidity. Numerous *ad hoc* adjustments to the new regime had to be made across many financial centres to bolster sufficient wholesale market capacity and restore stability. We strongly recommend that the FSB's next coherence and calibration evaluation focuses on key impediments to regulated financial institutions' ability to make markets and provide risk warehousing capacity at times of stress (an additional cost that should be noted in this regard: when corporations cannot issue into the markets, they will draw on lines of credit at banks, thus concentrating risk on bank balance sheets). This work should be considered in conjunction with the already announced work on the potential systemic risks arising from a reliance on non-bank financial intermediation (NBFI) providing liquidity through the cycle.

- The paper's Executive Summary appears to dismiss the issue of internal bank ring-fencing and fragmentation, seemingly on the basis of theory, rather than evidence. The draft report does acknowledge that excessive[2] pre-positioning of internal TLAC could reduce financial stability by making the banking group less resilient and could impair efficient resource allocation within cross-border groups. We welcome those points, and also welcome the use of internal TLAC as a commitment device. However, several authorities are setting excessive requirements for the pre-positioning of not just internal TLAC but also capital and liquidity resources. These requirements are often imposed on non-material subsidiaries. This trend increases both fragmentation and costs, and threatens resilience and financial stability. We believe that the

[1] However, this result is unnecessarily vague about which countries lie where on the graph; overall the report would benefit from clarifying the jurisdictions where reforms have been substantively completed, and the areas where additional work is more urgently needed.

[2] We have typically observed internal TLAC requirements, or similar, being set at a constant level either at the top end of the FSB TLAC Term Sheet's 75-90% range, or in some jurisdictions above this. The FSB TLAC Term Sheet's proposed range has failed to be delivered upon in local implementation and, where the range is exceeded, raises concerns over the impact on the transferability of resources, and ultimately the resilience of banking groups.

FSB's conclusions in this respect are premature, and request that the FSB closely monitor the impact of pre-positioned capital, liquidity, and internal TLAC requirements and address the potential impact on financial stability in its broader work on fragmentation.

- Furthermore, we call to your attention the following areas where the analysis was either insufficiently comprehensive or lacked important data:

  1. Some elements of the GSIB reforms, such as the the GSIB buffers (both in the context of risk-based and leverage ratios) and their calibration, have been largely overlooked in the draft paper. We recommend that the FSB examine whether hard buffers are appropriately calibrated or even needed (instead of, for example, countercyclical add-ons that can be adjusted with the economic cycle). The calibration of the GSIB buffers has not been changed since the introduction of the TLAC requirements, resulting in going-concern capital add-ons that are to a degree duplicative with the broader loss absorbing capacity requirements. The evidence from the crisis shows that both leverage ratio and risk-based buffers acted as constraints and that the greatest capacity benefits were achieved through adjustments to the countercyclical buffers and targeted changes to the leverage ratio exposure measure.

  2. We do not agree with the draft report's concerns about growing complexity in group structures, which is measured by the increasing number of subsidiaries inside a group. First, the report does not adequately acknowledge that portion of this growth has occurred due to regulatory requirements. Increased subsidiarisation of branch networks, as well as establishment of intermediate holding companies (e.g., UK ring-fencing, US Intermediate Holding Company, and EU Intermediate Parent Undertaking rules) are very much at the core of the increased number of banking licensed legal entities. Second, despite the increase in the number of subsidiaries, "practical complexity" has been *reduced* by the creation of clean holding company and resolution group structures, as well as resolution planning to enhance resolvability. The improvements in resolution planning credibility in recent years would seem to be a much more useful indicator of "effective complexity" than a simple subsidiary count. We recommend that the FSB reviews the complexity section of the paper, focusing on resolvability and structural changes to facilitate it rather than the number of legal entities.

  3. The draft paper overlooks regulatory fragmentation as a cost of the post-crisis reforms. Whether this view was reached by defining the scope of assessment very narrowly or due to other reasons, the TBTF reforms as implemented have created significant barriers to flow of liquidity and capital across banking groups. This not only creates challenges in terms of group resiliency, but has also produced significant economic costs, impeding the flow of resources to many businesses and consumers that demand them the most. This inefficient capital allocation may well impede sustainable economic growth. Furthermore, we note that number of legal entities that is part of the paper's complexity analysis could instead be used for the FSB's regulatory fragmentation work. The number of legal entities that have been created to subsidiarise previous branch networks and are ring-fenced for capital and liquidity could provide useful insights into the fragmentation work.

- In addition to the aforementioned weaknesses in the draft report, we recommend that the FSB revisits bank profitability in terms of promoting financial stability before the final report

is issued. Operating profitable banks that can support growth and attract capital is fundamentally important for financial stability. Banks have operated for years in a challenging low interest rate and low market volatility environment (in some jurisdictions policy rates have been negative), resulting in years of depressed revenues in many cases[3]. The post-crisis regulatory reforms and the rate environment have fuelled the need to diversify income sources and adapt to new business models, and have also resulted in migration of business, partly to less regulated financial intermediaries. While banks would remain viable under many of the COVID-19 stress test scenarios, as evidenced by the central bank analyses, from a capital perspective their ability to lend and generate profits may be challenged given the reduction in benchmark rates to near zero (and in many cases could conceivably fall further below the cost of capital). This could also limit banks' ability to access the markets for more capital to strengthen their franchise, given that they are competing against a wide range of corporate issuers that offer greater profits. In turn, this would constrain the ability of banks to support the real economy as it recovers from the current crisis.

- Finally, we recommend that the FSB, together with other standard setting bodies, continues to assess the coherence and calibration of the post-crisis reform package at a business line level to ensure that financial stability objectives are achieved in a way that does not inadvertently create different financial stability costs or that undermines well-functioning markets.

[3] See for example Andrea Enria: Is less more? Profitability and consolidation in the European banking sector; available at: https://www.bankingsupervision.europa.eu/press/speeches/date/2019/html/ssm.sp190704~1f442782ac.en.pdf and Feedback on the input provided by the European Parliament as part of its "Resolution on Banking Union – Annual Report 2019"; Available at: https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm~bdc235956c.feedback_ar2019.pdf

1. Market liquidity – Recent evidence on market volatility, lack of large bank capacity to fully absorb the excess supply caused by a one directional market of only sellers, central bank responses and regulatory changes required to release private sector capacity

The FSB draft report focussed primarily on one element of financial services - credit provision. Unfortunately, this ignores other important services provided by banks, especially in the wholesale markets. Most prominently, the FSB should look into the reduction in financial market liquidity as a cost of post-crisis reforms, as large banks are fundamentally important in providing risk warehousing and intermediation capacity. While timing issues may have prevented the inclusion of data from the current COVID-19 crisis in this draft report, it is important that the FSB's next evaluation addresses some of the key lessons learned in respect to the severe market stresses observed in March and April that required such extensive central bank actions. The GFMA recommends that the FSB's next evaluation focuses on key regulatory impediments to private sector market capacity, in addition to the already announced work on potential systemic risks stemming from reliance on NBFIs providing liquidity through the cycle.

In this section, we discuss the recent market events and what action was taken to alleviate the capacity constraints that could have resulted in severe long-term financial instability. We also highlight some longer-term issues regarding market liquidity, which should be carefully considered as one of the potential outcomes of the post-crisis reforms.

What happened?

In March, the scale of the COVID-19 pandemic materialized, including significant immediate economic and financial consequences. The latter included multiple days of historic price volatility amidst withering of market depth and very high transaction costs (see table 1 below). Unlike the 2007-2008 financial crisis, which centered on credit markets, the most recent COVID-19 crisis disrupted risk-free assets[4], and their monetisation. The severity of the price moves put considerable strain on the markets that intermediate large transfers of risk and liquidity. The UST market, the world's largest and most liquid, began to experience significant liquidity stresses as investors shifted rapidly to hold cash, selling Treasury securities, while hedge funds also offloaded Treasuries and unwound related futures positions. Both the depth of the UST market and the bid-offer spread worsened by a factor of 10 during the crisis[5]. The change in 10-year UST interest rates, for example, was nearly six times larger than what was priced ex-ante into options markets[6]. This was the largest such volatility-adjusted move in the deepest and most liquid bond market in the world in the last 30 years, with yields on 10-year notes

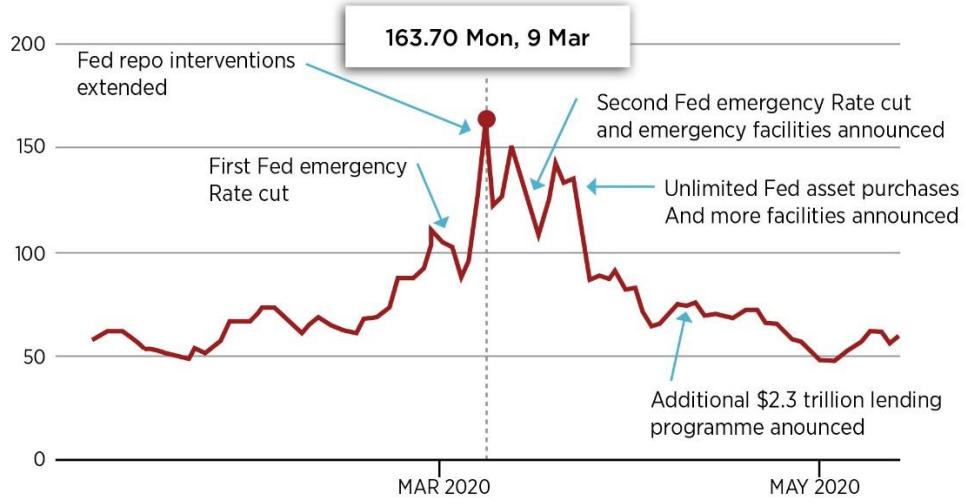
[4] https://www.ft.com/content/a8cb729e-6772-11ea-a3c9-1fe6fedcca75

[5] Darrell Duffie, "Still the World's Safe Haven? Redesigning the U.S. Treasury Market After the COVID-19 Crisis," Hutchins Center at Brookings Working Paper #62, May 2020. Available at: https://www.brookings.edu/wp-content/uploads/2020/05/WP62_Duffie_updated.pdf.

[6] The difference of expected price volatility in the option premium vs the realised volatility. Expected volatility is usually a strong indicator of the risks of an asset. Volatility can be measured in different ways, but most often it involves tracking the standard deviation of returns over some sample period and capturing the dispersion – or potential dispersion of returns – over time.

falling from 0.76 percent on March 6 to 0.31 percent on March 9, and yields on 30-year notes dropping from 1.28 percent to 0.7 percent over the same time period.

Table 1: Merrill Lynch Option Volatility Estimate (MOVE Index)



Source: Google

Broader markets, (see tables 2 and 3 below) were also affected, with lower market liquidity and higher trading costs. In the United States, stresses spilled over to the mortgage-backed securities space and then a wide variety of asset-backed securities (ABS), particularly high-yield corporates (CDX spreads were +171% on average at their peaks) and municipal securities (munis), before eventually leading to a freeze up in the commercial paper (CP) market. As SIFMA's July 2020 report on the COVID-19 related market turmoil noted, "essentially all risk assets in the fixed income space showed illiquidity and weak demand."[7] Across US equities, ETFs and options markets, the VIX volatility index peaked at 82.69 on March 16, which was +563% from the start of the year and remained elevated through the summer[8].

European market liquidity also deteriorated during this period. In the equity market, bid-ask spreads rose by circa 5 basis points between February and mid-March and have continued around two times above pre-COVID levels as of late June. According to the AMF, as of early May French top of book depth of CAC40 constituent shares remained at less than half of pre-COVID levels. In the corporate bond market, bid-ask spreads rose 60 bps in mid-March but continue about twice pre-COVID levels as of late June. Government bond bid-ask spreads also continue above pre-COVID levels, particularly for Italian and French sovereign bonds. It is also worth noting that Coco spreads have widened significantly across both the investment grade and high-yield securities, similar to the increase in credit spread for high-yield corporate debt. These increases in coco credit spreads are much wider than the spreads on other asset classes as can be seen in the table below, reflecting the specific risk characteristics associated with these securities.

[7] SIFMA Insights, "COVID-19 Related Market Turmoil Recap: Part II – Fixed Income & Structured Products," July 2020. Available at: https://www.sifma.org/wp-content/uploads/2020/07/SIFMA-Insights-Market-Turmoil_FI-FINAL-FOR-WEB.pdf.

[8] SIFMA Insights, "COVID-19 Related Market Turmoil Recap: Part I – Equities, ETFs, Listed Options & Capital Formation," July 2020. Available at: https://www.sifma.org/wp-content/uploads/2020/06/SIFMA-Insights-Market-Turmoil_Equities-FINAL-FOR-WEB.pdf.

In addition, long authorization processes for banks to be able to perform market making and buybacks of eligible liabilities - which in certain jurisdictions can be performed only after being authorized by the regulatory authorities – have played a role in the crisis. The long times (up to 4 months in EU) needed to obtain authorities' permission (this long approval process applies also to banks that are well above their TLAC and MREL requirements and will remain so even after performing the requested market transactions) have indeed prevented banks from promptly adapting their market making and buyback needs in order to provide liquidity to the market on their TLAC and MREL eligible liabilities.

Table 2: Credit spreads in some key markets. Q1 spread change indicates the initial shock and H1 change the persistence of the wider spread

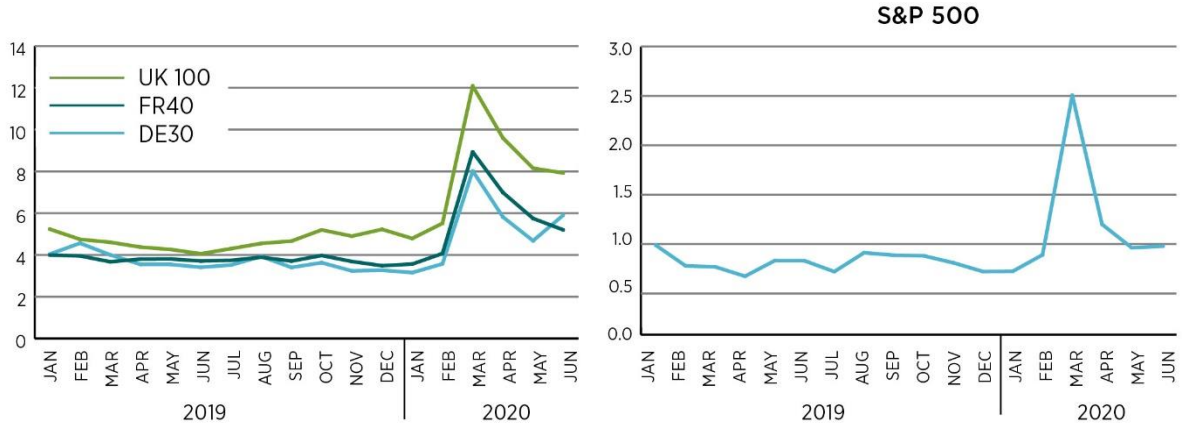
Spreads	30-Jun	31-Mar	1-Jan	Q1 bps Change	H1 bps Change
Corporate					
European AAA	70	136	53	**+84**	**+17**
European High Yield	512	866	308	**+558**	**+204**
US AAA	81	126	53	**+73**	**+28**
US High Yield	644	882	356	**+526**	**+288**
US IG Corporates	160	305	101	**+204**	**+59**
Sovereign					
5Y German CDS	8	14	5	**+9**	**+3**
5Y Italian CDS	100	104	57	**+47**	**+43**
5Y UK CDS	20	28	13	**+15**	**+7**
5Y US CDS	18	25	16	**+10**	**+2**
U.S. Municipal	48	31	20	**+11**	**+28**
Securitisation					
European CMBS Snr Euro FL	175	250	103	**+147**	**+72**
European Autos A Euro FL 4-5 Yr	180	275	76	**+199**	**+104**
UK Cards A GBP FL 7 Yr	250	350	150	**+200**	**+100**
ECB eligible Spanish Snr RMBS	91	135	48	**+87**	**+43**
Dutch RMBS Snr FL 5Yr	35	55	16	**+39**	**+19**
UK Prime RMBS AA Euro FL 5 Yr	170	260	115	**+145**	**+55**
UK Cards BBB GBP FL 7 Yr	350	500	190	**+310**	**+160**
Italian RMBS BBB FL 10 Yr	400	500	252	**+248**	**+148**
US CMBS AAA 5Y	144	268	152	**+116**	**-8**
US CMBS BBB 5Y	1937	2331	1915	**+416**	**+22**
European Banks					
T1 CoCo	552	674	316	**+357**	**+236**
HY CoCo	555	683	335	**+348**	**+220**

Indices	30-Jun	31-Mar	1-Jan	Q1 % Chg	H1 % Chg
STOXX 600	360.05	314.88	416.17	**-24.3%**	**-13.5%**
FTSE 100	6282	5672	7604	**-25.4%**	**-17.4%**
DAX	12727	9936	13386	**-25.8%**	**-4.9%**

CAC40	5084	4396	6042	**-27.2%**	**-15.8%**
FTSE MIB	20072	17051	23836	**-28.5%**	**-15.8%**
S&P 500	3130	2585	3258	**-20.7%**	**-3.9%**
VSTOXX	32	49	13	**283.5%**	**150.3%**
VIX	29	54	12	**329.4%**	**129.5%**

Source: AFME and SIFMA Research

Table 3: Bid/offer spreads for selected European and US indices



Source: AFME Research[9] and SIFMA Research[10]

Key drivers of the market illiquidity and central bank reactions

The three key reasons for the treasury market illiquidity were:

1) In March, as financial markets came to terms with the damaging effects of COVID-19, investors rushed out of Treasuries and into cash. In some cases, the sales were forced by losses on relative value or other leveraged positions or the need to settle short-term debts, and in other cases the sales were due to broader investment objectives (e.g. selling Treasuries and buying other financial assets at a price discount). The market proved unable to handle the surge in Treasury sales while the demand-side was subdued.
2) Increased reliance on algorithms and HFT for market liquidity: HFT activity (bank and non-bank) has grown at the expense of human activity to make up 80% or more of liquidity provision in the Treasury market. Because algorithmic trading strategies tend to focus on very short-term market making and hold no inventory overnight (thus minimising/avoiding regulatory capital requirements), they are profitable when prices are sufficiently stable to reliably profit from the bid/ask spread. Due to the high levels of intraday volatility and low trading volumes, HFTs liquidity provision collapsed during the COVID-19 liquidity bout (see table 4 below). This sudden liquidity withdrawal, accompanied with the sell-off, lead to greater liquidity tiering among fixed income instruments (for example on and off the run

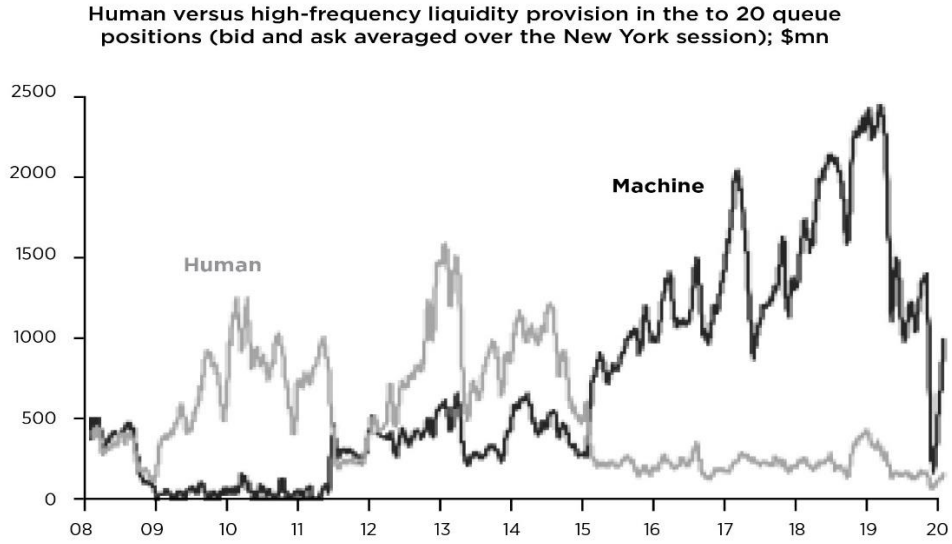
[9] Further information on products, venues and indices available at: https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME-%20Impact%20of%20COVID-19%20on%20European%20Capital%20Markets%20-%20Update%20-%20Final%20Draft_1-1-1.pdf

[10] *Average of SPDR S&P500 ETF & Vanguard S&P500 ETF (bps)*

treasuries) than during prior systemic events. IOSCO also noted in their report[11] regarding secondary markets in equities that the new technology-enabled investors do not work under the same obligations as traditional market makers to buy and sell with all traders, creating concerns they could retreat from the market in a time of stress.

3) Regulatory constraints: Liquidity demand from hedge funds, asset managers, smaller banks, central banks and corporates was much greater than what the private market and more specifically large wholesale banks could provide[12] to meet significant selling pressure and lack of buyers in the market. Regulatory constraints designed for more normal conditions emerged as a vulnerability when dealer banks had to ration scarce leverage and other resources remaining to best possible uses. The lack of elastic dealer balance sheets increased the pressure on central banks to intervene.

Table 4: Human vs. HFT trading activity 2008 – 2020 (US Treasury market: Top 20 queue positions (bid and ask averaged over the New York session; $million



Source: Courtesy J.P. Morgan Chase & Co., Copyright 2020, 8th July 2020

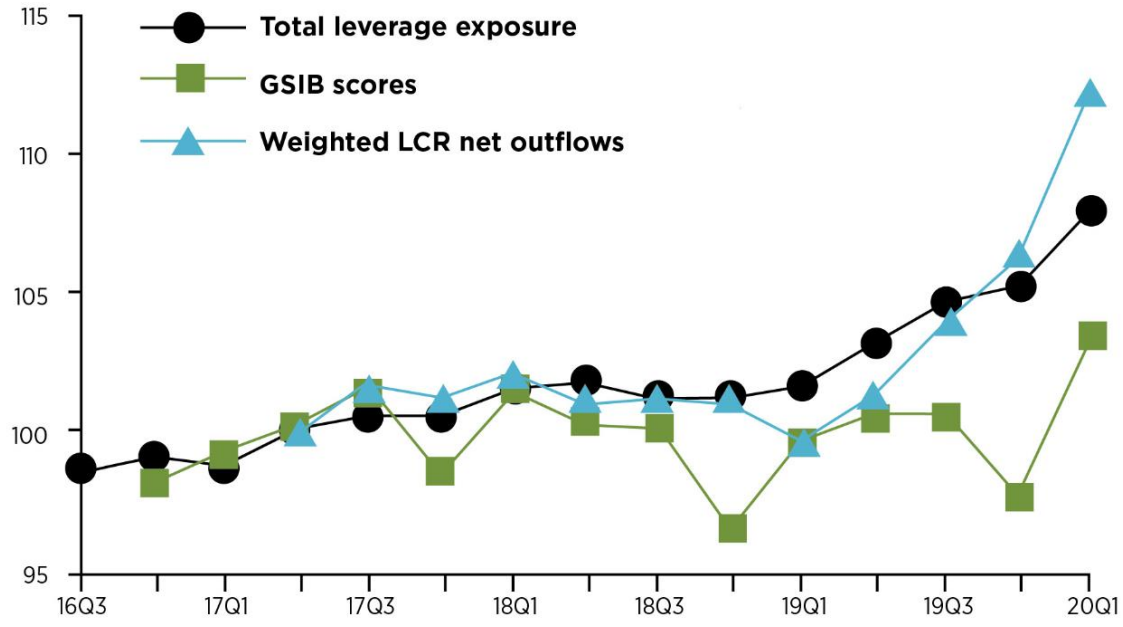
In terms of regulatory constraints, the interaction of different parts of the post-crisis reforms is at the heart of the dealer capacity dilemma. The pressures from liquidity requirements conflict with those from the leverage ratio and GSIB surcharge. The former requires banks to hold large stocks of high-quality liquid assets (HQLA) which could be easily converted into cash (i.e. sold or repo) in the event of significant cash outflows during stress periods. The latter two constrain the expansion of large bank balance sheets, forcing banks to make tough decisions on how to put their balance sheets to best use during shocks. They also increase capital costs due to knock on effects from other regulatory measures in the GSIB surcharge calculation, such as interconnectedness, cross-jurisdictional exposure, complexity and reliance on short-term wholesale funding. These GSIB thresholds are difficult to

[11] https://www.iosco.org/library/pubdocs/pdf/IOSCOPD660.pdf
[12] https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2020/august-2020.pdf?la=en&hash=2D820EFD16973AF9CB27F1C29507E0D55E03E1F5

manage in sudden stresses, and can create cliff-edge effects that discourage healthy firms from using their balance sheets productively at times of crisis.

During the March/April period, the number of sellers without end-user demand, coupled with the dealer capacity constraints due to post-crisis regulations created a bottleneck that could have resulted in severe financial instability without rapid central bank action to unclog the system and take the roles of buyers of last resort. Firstly, bank affiliated broker-dealers (often primary dealers) that are at the centre of market making in HQLA securities were hit by a surge in selling pressure that overwhelmed their balance sheets. While the increase in treasury activity does not cause a problem in terms of risk-weighted requirements, there were significant challenges in terms of leverage exposure and GSIB scores from market making, including collateral transformation and repo facilitation. The LR very quickly became the binding capital constraint for many dealer banks under the circumstances, capping banks' ability to make markets and warehouse risk. Secondly, the corporate dash for cash, converted credit facilities into non-operational wholesale deposits. This resulted in higher LCR outflows and thus a requirement to hold more HQLA (magnifying the LR pressure). These effects were particularly dramatic in March, when the pandemic emerged as an economic and financial stress event, leading to simultaneous pressure on the leverage, GSIB surcharges, and liquidity requirements (see table 5 below). A sharp increase in RWA was also an important constraint for many entities. Additionally, we note that had the Net Stable Funding Ratio been implemented in most jurisdictions, it could have further curtailed the repo market capacity to facilitate the "dash for cash".

Table 5: Total leverage exposures, GSIB score, and weighted LCR outflows among U.S. GSIBs; unitless, normalized to 100 as of 2Q17

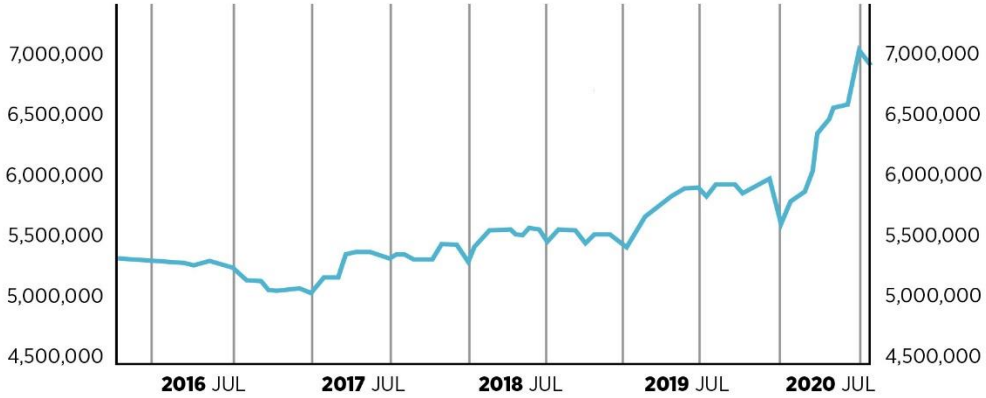


Source: Courtesy J.P. Morgan Chase & Co., Copyright 2020, 8th July 2020

In the Eurozone, ECB deposits increased from end of February €4.147 trillion to €4.947 trillion by the end of May (see table 6 below), as the markets rushed for cash and bank deposits ballooned. The

Leverage Ratios (LR) for the EU GSIBs decreased to 4.6% in 1Q20 from 4.9% in 4Q19, and the TLAC LR to 8%, down from 8.4%[13].

Table 6: Eurosystem deposit liabilities vis-a-vis euro area MFI in the euro area (€ millions)



Source: ECB banking data

The March/April shock of the COVID crisis provides evidence that the post-crisis regulatory framework has both strengthened confidence in the banking sector but exacerbated the challenges for market liquidity and capital markets. The early responses to the pandemic resulted in increased demands on liquidity, including FX reserve management and increases in HQLA held by banks. In addition, hedge fund deleveraging (especially treasury derivatives) and money market fund redemptions in the absence of real buyers in the market resulted in bank's being unable to absorb all of these assets onto their balance sheets. As recognised in the Bank of England Financial Stability Report[14], the lack of private sector "surge capacity" to intermediate in the markets, largely due to regulatory constraints forced central banks to undertake unprecedented market operations (see table 7 below on CB balance sheets), including for example:

- The Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, the Federal Reserve, and the Swiss National Bank announced a coordinated action to enhance the provision of liquidity via the standing U.S. dollar liquidity swap line arrangements. Secondly, limited swap lines were also re-established with CBs in Singapore, South Korea, Brazil, Sweden, Australia, New Zealand, Mexico, Norway, and Denmark.The USD swap lines between CBs have proved a key factor enabling provision of USD liquidity, against other high-quality collateral. Establishment of the additional credit lines helped in particular the Emerging Market economies. These swap lines were promptly activated at the onset of the crisis, initially used with significant amounts, and then became promptly unnecessary as trust had been restored. This is a perfect example of a well-functioning crisis management tool, acting as a backstop and easy to exit. The GFMA recommends that these swap lines should be maintained on a permanent basis as a tool that can be used to calm markets when imbalances in demand of currencies reappear.

- The Federal Reserve was forced to purchase $1 trillion in Treasury securities in three weeks to prevent a collapse in what the Financial Times appropriately described as the "biggest, deepest and most essential bond market on the planet." This unprecedented action came as

[13] https://www.afme.eu/reports/data/details/AFME-Prudential-Data-Report-Q1-2020
[14] P. 65 – 85, available at: https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2020/august-2020.pdf?la=en&hash=2D820EFD16973AF9CB27F1C29507E0D55E03E1F5

wild price swings were occurring in the US Treasury market, with investors unable to sell treasury positions at reasonable prices.

- Further Federal Reserve funding facilities such as Secondary Market Corporate Credit Facility (SMCCF), Term Asset Backed Loan Facility (TALF) and Commercial Paper Funding Facility (CPFF) were put in place to further reduce friction and capacity constraints in a variety of other bond markets.

- ECB initiated Pandemic Emergency Purchase Programme (PEPP): Purchases up to €750 billion of securities in all asset categories eligible under the existing asset purchase programme (APP). It also amended the TLTRO III on rates and terms, which is an additional longer-term refinancing operation to safeguard liquidity and money market conditions.

- Bank of England announced a new Term Funding Scheme with additional incentives for SMEs (TFSME), a COVID 19 Corporate Credit Financing Facility and Business Bounce Back Loan Scheme (BBLS).

- The Swiss National Bank announced the establishment of the SNB COVID-19 refinancing facility (CRF) on 25 March 2020. This facility allows banks to obtain liquidity from the SNB by assigning credit claims from corporate loans as collateral. In so doing, the SNB enables banks to expand their lending rapidly and on a large scale

- The HKMA issued liquidity measures in response to the Covid-19 outbreak to ensure continued smooth operation of the interbank market. These measures encompass three aspects, namely HKMA's Liquidity Facilities Framework, the Federal Reserve's Temporary FIMA Repo Facility, and supervisory expectation on the use of liquidity buffers.

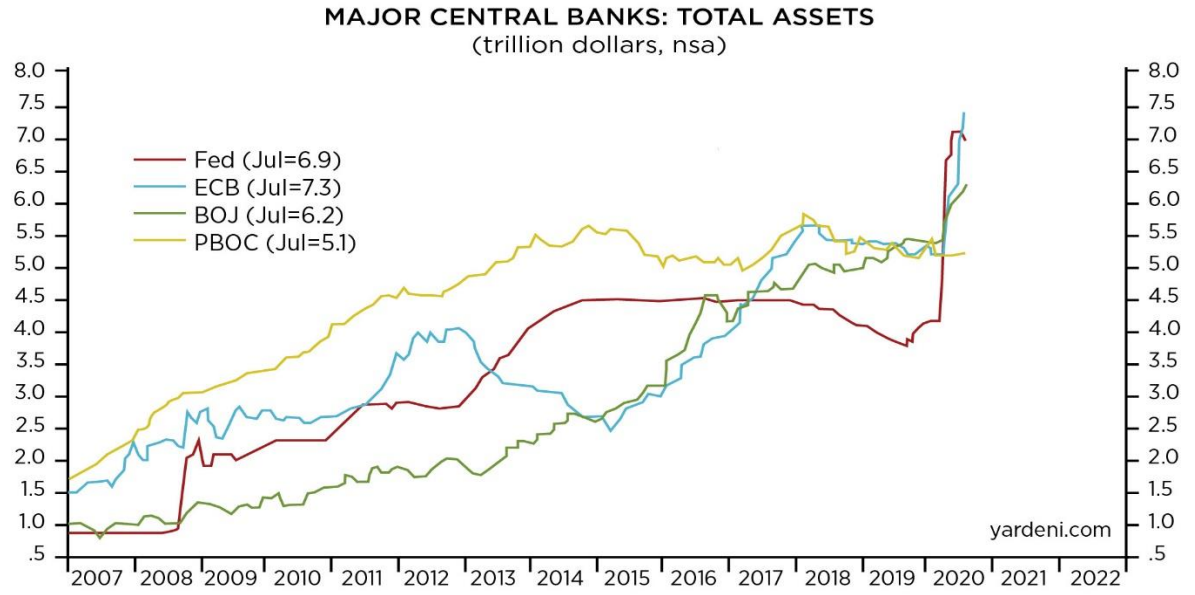
- The Financial Secretary announced that HKMC Insurance Limited (HKMCI) will introduce a special 100% Loan Guarantee under the SME Financing Guarantee Scheme (SFGS).

- The Monetary Authority of Singapore (MAS) announced that it will provide up to US$60 billion of funding to banks in Singapore through new MAS USD Facility. The MAS USD Facility will support more stable USD funding and lending conditions in Singapore and the region.

- the Bank of Japan has been providing ample yen and foreign currency funds without setting upper limits mainly through purchases of Japanese government bonds (JGBs) and the conduct of the U.S. dollar funds-supplying operations, and has been actively purchasing exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs).

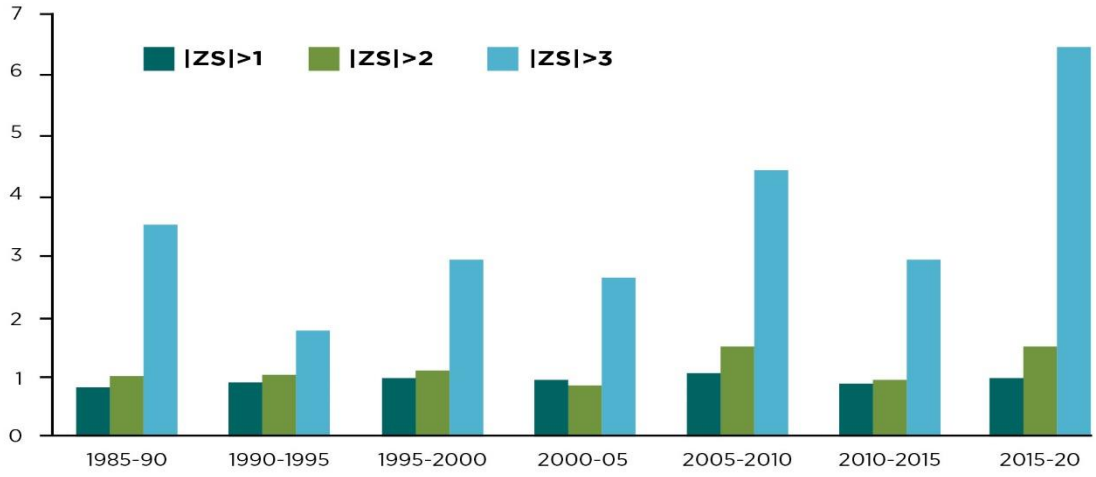
Table 7: Major central bank balance sheets[15]

[15] Source: Yardeni: https://www.yardeni.com/pub/peacockfedecbassets.pdf



Furthermore, in terms of overall market liquidity, the incidence of historic events has risen significantly in the last 5 years (i.e. the period where most of the post-crisis regulatory reforms have been implemented). Even when adjusting for the normal heteroskedacity of financial asset returns, the number of three sigma plus statistical tail events has become many times greater than what one would expect from a normal distribution, and the number of such events has nearly doubled since 2010 (Table 8).

Table 8: Ratio of actual to expected frequency of weekly changes in 10-year Treasury yields exceeding a given statistical threshold*; unitless



Source: Courtesy J.P. Morgan Chase & Co., Copyright 2020, 23rd April 2020

* Z-score is measured in terms of standard deviations from the mean. If a Z-score is 0, it indicates that the data point's score is identical to the mean score. A Z-score of 1.0 would indicate a value that is one standard deviation from the mean and so forth.

The second wave of action to address market illiquidity came in the form of regulatory policy action to address the key procyclical liquidity constraints evident in the post-crisis regulatory framework.

While releasing counter-cyclical capital buffers was fully aligned with the intent of the regulations and helped provide limited capacity, much broader adaptations were implemented in most financial centres, including:

- Regionally divergent changes to the Leverage Ratio framework. These included exempting central bank deposits, government bonds and government guaranteed "COVID loans" or exposures to temporary central bank or government financing vehicles, early adoption of unsettled trades standard under Basel III.
- Flexibility or temporarily not applying the market risk backtesting multipliers for model underperformance.
- Loan loss provisions under the new accounting standards.
- Deferral of implementing the final Basel III package.

The authorities that did change the calibration of the LR exposure measure stated market liquidity/financial intermediation capacity as a key concern and reason why such temporary changes were necessary in their jurisdictions in support of financial markets functioning. However, we note that while the central bank liquidity provision was very well coordinated across jurisdictions, the adjustments to regulatory requirements were not to the same degree. This may have caused further friction and fragmentation in the capacity provided by the regional measures. Any such friction could have been avoided, had the measures been better coordinated.

Key recommendations

Based on the evidence from the recent events and adaptations made to release capacity in the system, the GFMA recommends that the FSB's next evaluation focuses on the key regulatory impediments to private sector provided market capacity and the role and potential systemic risks stemming from reliance on less regulated entities providing liquidity through the cycle.

In addition, further analysis is needed to integrate non-banks and market intermediaries into the overall coherence and calibration framework. Regulatory authorities have spent the last decade addressing weaknesses in the banking sector, including banks' ability to provide leverage to non-bank financials, while other parts of the financial system have largely been left outside the reform programme. The diminishing role of banks in markets intermediation and the consequences of it is an area that the GFMA believes should be investigated further.

In the background section below, we explain the role of dealer banks in capital markets and why their role is essential for ensuring well-functioning and liquid markets.

Further considerations: Why dealer banks are necessary for the functioning of capital markets?

Market making represents the main trading business undertaken by banks. Through the provision of liquidity to meet investor demand, market making plays an important role in helping to manage risk across the financial system. Market makers help to bridge the varying requirements – including time preferences, investment mandates and risk appetites – of investors (retail and institutional) and users of capital (corporates and consumers) - which are often highly diverse.

There is a clear interdependence between the ability to underwrite securities effectively and access to secondary markets. We agree with the wider point made for example by the UK Parliamentary

Banking Committee[16] (2013) that banks have a natural advantage in acting as market-makers because of a variety of other relationships with their clients who want to make trades, and the fact that acting as a market-maker is often a natural follow-on activity for whichever banks underwrote the issuance.

Debt and equity issuers typically expect that the underwriting bank will provide ongoing secondary market liquidity in their new issues. Underwriting and secondary market-making services are thus naturally linked, and bank intermediation is generally needed to provide these services at scale (and manage the risks involved) to larger corporates and governments. The evidence, even in very large markets such as US treasuries, suggests that secondary market liquidity provided by non-bank entities (e.g. algorithmic platforms) provide considerable liquidity during good times, but much less during market stress periods, increasing volatility and cyclical pressures[17].

Market making comprises a broad set of activities supporting the provision of liquidity to market participants on a consistent and reliable basis throughout market cycles. A non-exhaustive list of characteristics could include, among others:

- Provision of liquidity. A market-maker will absorb an investor's need for immediate demand or supply an asset or financial instrument and charge a premium for the service provided.

- Clients can obtain quotes from several market-makers for a particular asset or transaction which helps them to achieve better cost efficiencies.

- Provision of trading services and execution strategy. Market-making service providers can help with execution strategy to ensure the customer achieves best prices for larger orders, limiting slippage.

- Provision of analysis and dissemination services. Market-making servicing units devote significant resources to providing market, trading, research, and execution analysis that is disseminated to customers to aid the execution of the customer's investing strategies.

- Intermediation in the form of market making helps to align the varying requirements of market participants, transferring risk to those better able to absorb it, helping businesses plan and cope with change and facilitating higher levels of economic activity. Market-makers contribute to allocating capital to the most efficient investments within the economy and providing mechanisms for saving, risk pooling and management.

- Market-makers also significantly reduce transactions costs in the economy – by for example minimising the costs for borrowers in relation to the number of investors that would otherwise have to be approached and to the variety of terms that they would demand.

- Should banks continue to withdraw from or reduce the extent of their market-making activities, this is likely to lead to a reduction in available liquidity for the relevant market. The adverse impact of a decline in liquidity tends to fall on less liquid instruments in particular, typically those related to smaller issuances by smaller businesses[18].

[16] https://www.parliament.uk/business/committees/committees-a-z/joint-select/professional-standards-in-the-banking-industry/news/changing-banking-for-good-report/
[17] https://www.brookings.edu/research/still-the-worlds-safe-haven/
[18] See for example: BIS Bulletin No 29: Bonds and syndicated loans during Covid-19 crisis: decoupled again? https://www.bis.org/publ/bisbull29.pdf

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2. Resolution and Internal TLAC

This section provides feedback relevant to FSB's questions 1, 2, 6, 7 and 8.

We welcome the recognition in the draft report of the very substantial progress that has been made in achieving the objectives of the TBTF reforms including the progress in the feasibility and credibility of resolution regimes, improved market discipline and the reduction of moral hazard. It is important that the final report recognises the very significant progress that has been made in achieving these fundamental objectives, with the tools and plans now in place to resolve cross-border banking groups in a credible and effective manner without taxpayers bearing losses. GFMA remains committed to the objectives of the TBTF reforms and supportive of further progress being made on implementation of the reforms.

Remaining obstacles to resolvability

We note the draft report's conclusion that there are some areas where further work is needed in some jurisdictions to enhance resolvability. We believe that the areas identified are well understood by firms and resolution authorities and further progress is already underway. Given the extent of the progress made to date, to the extent that the FSB believes that additional obstacles remain, we ask for clarity and milestones on how to address any such obstacles. This would help to avoid a continuum of regulatory projects and enable a full transition to BAU.

In some areas further implementation is required by resolution authorities, for example on firm-specific cooperation agreements, providing clarity on public sector backstops to provide liquidity to a bank in resolution, and statutory recognition of resolution actions.

We welcome the FSB's continued support for international consistency in support of effective cross-border resolution. We encourage the FSB to continue to support progress and set out our views in more detail below, specifically in the areas including:

- continued focus on further enhancing cross-border cooperation on resolution planning, resolvability assessments and recognition of resolution actions and resolution stays;
- supporting further progress in the area of ensuring continuity of access to Financial Markets Infrastructure (FMIs) through finalising the proposed questionnaire of FMIs
- continued encouragement for jurisdictions to put in place clear and consistent arrangements across jurisdictions for liquidity funding in resolution; and
- as discussed further below, a continued focus on implementation of the FSB Guiding Principles on internal TLAC and avoiding excessive requirements for pre-positioning of internal TLAC.

We agree with the conclusion that for the TBTF reforms to work as intended, market participants and public authorities need sufficient information, noting that it is necessary to find an appropriate balance. We support the report's recommendation to enhance disclosures of information relating to the operation of resolution frameworks. Resolution authorities in some FSB jurisdictions, for example in the UK and Switzerland, have produced helpful summaries of how, in general terms, they would

operate their resolution framework. In the US, individual firms provide extensive disclosure in their Title 1 plans. Additional information would aid the development of both investors', and the general public's, understanding of the resolution framework; further supporting the objectives of market discipline and the credibility of the reforms. Additional progress on enhancing resolvability would be supported by greater transparency by resolution authorities to banks themselves of the steps that would be taken if the group were placed into resolution.

Cross-border coordination

We agree that further work is needed to enhance supervisory coordination with focus on cross-border cooperation agreements and Memorandums of Understanding, including on internal TLAC allocation and procedures for the recapitalization of subsidiaries after a single-point-of-entry (SPE) bail-in.

While banks have mostly fulfilled the FSB recommended Key Attributes of Effective Resolution Regimes, we would welcome further work by authorities on this area, in particular:

- **International alignment on resolution standards including on playbooks:** Every crisis will be different including the causes leading to resolution, but we need internationally comparable standards. Agreed upon playbooks for the international cooperation between supervisory authorities in resolution may also be helpful and could include coordinated plans and simulations. Transparency on the preparations and playbooks would also go some way to informing firms of the possible actions that may take place, but also provide further clarity to the market of the credibility and feasibility of a resolution.

- **Post-resolution adjustments:** Clarity is needed on required post-bail-in recapitalisation needs and procedures by authorities for both going- and gone-concern requirements. Further guidelines which define internal TLAC recapitalisation levels and timelines would be welcome to help prevent cross-border fragmentation and provide clarity for host jurisdictions. As a principle we believe that the replenishment of local TLAC should be in alignment with replenishment of group TLAC, in accordance with the applicable resolution strategy and any post-resolution restructuring plans.

- **Additional metrics:** Additional focus by authorities on NSFR metrics should be considered in addition to TLAC recapitalisation requirements. Due to the bailing-in of TLAC (long-term liabilities), NSFR requirements are unlikely to be met post-bail-in and the Basel framework currently does not provide for an exemption allowing for a sufficient time to meet the requirements again.

- **Transparency on post-bail-in process:** We would welcome further transparency on authorities' frameworks following bail-in and stabilisation.

Operational continuity and access to FMIs

While much work has been done to support continuity of access to FMIs for banks in resolution, we support ongoing initiatives to further improve transparency and continuity of access to FMIs. The banking industry has committed significant effort to ensuring operational continuity across their Global FMI network, including detailed Recovery and Resolution Strategies, Liquidity Framework, FMI playbooks and FMI outreach programmes.

We welcome the latest FSB questionnaire for FMIs to facilitate the collection of certain core information on FMIs. The questionnaire supports efforts to enhance public disclosure by FMIs, share relevant resolution contact information, and drive further engagement between FMIs and resolution authorities on resolution strategies and approaches. This would enable firms to develop best practice playbooks for continuity of access to critical FMIs and achieve standardised termination procedures recognised across all jurisdictions.

In addition to ensuring synchronisation across the Global FMI providers, global cooperation amongst Regulatory Agencies and Regimes would further enhance a common unified strategy of FMI regulations.

Funding in resolution (FiR)

GFMA views ensuring suitable FiR mechanisms as a key operational aspect of implementing TBTF reforms and we would ask for concrete guidance from the FSB to improve clarity on Central Banks' role in this process. Whilst existing initiatives in some key jurisdictions are recognised (and very much welcomed), there remain gaps, including in particular within the Eurozone area. Key considerations include:

- A single-point-of-entry (SPE) resolution can only be successful if there is no breakup of a banking group from the bottom up due to uncoordinated measures. In resolution, liquidity is as needed in a timely fashion, in sufficient quantity and in the necessary currencies. Liquidity must be available to ensure that a resolution strategy can be fully delivered, and act as a backstop to bail-in such that it provides flexibility and comfort to lead resolution authorities.

- Further clarity is needed on Central Banks' commitment to facilitating resolution with Lender of Last Resort (LOLR) facilities. In order for Central Banks to provide this clarity they will in turn require clarity on the respective governments providing guarantees to support the extension of credit to banking groups in resolution, even where collateral is received. It should be made clear that this does not equate to solvency support and is strictly limited to emergency liquidity provision.

- More transparency on the existence and modalities of access to Emergency Liquidity Assistance (ELA) is therefore needed, such as provided by the Bank of England. This would also be in line with the FSB's guidance on Central Banks' mandate as a LOLR, which provides for facilities to be in place to provide ELA to requesting firms that are solvent and provide adequate collateral. To this end, binding Central Bank commitments to provide liquidity ("as much as needed") is key. Similarly, commitments should be made to the transferability of assets in resolution with no undue restrictions to assist in a given resolution.

- Finally, there is a need for internationally consistent frameworks. Frameworks need to be well-aligned to avoid inefficient allocation, ring-fencing and local hoarding of resources through heightened requirements.

Internal TLAC

We welcome the recognition in the draft report that excessive pre-positioning of internal TLAC could reduce financial stability by making the banking group less resilient. We also welcome the recognition that pre-positioning of internal TLAC reduces efficient allocation of capital and liquidity within cross-

border groups and increases funding costs. However, we remain concerned that this has not been given greater emphasis in the report. It is our strong view that the fragmentary practices of excessive prepositioning should be of greater concern for the FSB, which warrants further analysis.

We recognise and support the objective of internal TLAC to support the orderly resolution of a cross-border group and provide appropriate assurance to host resolution authorities. However, we remain concerned that a number of jurisdictions are either setting pre-positioning requirements of internal TLAC at the top end of the range set in the TLAC Term Sheet. In some cases, requirements may exceed this and/or impose requirements at non-material subsidiaries. In many cases, the "sum of the parts" of these requirements can exceed groupwide external TLAC, an outcome that is not only capital inefficient but also creates the potential for "misallocation risk"[19]. This misallocation risk is further worsened by a a potential "race for resources" as jurisdictions sets internal TLAC requirements at the top end of others, and potentially beyond the 75-90% range. As this develops (and extends to non-material subsidiaries) there will be less ability to call on resources at the resolution entity, further increasing fragmentation and threatening resilience and financial stability[20].

In the case of the COVID crisis, current conditions suggest a significant credit cycle, but one that does not exceed prior recent norms. However, if credit stress is at the high end of the likely scenarios, then prepositioning requirements will become a more significant internal constraint. Even for a firm that remains strong on a consolidated basis, internal ring-fencing could significantly worsen the trade-off between credit supply to the real economy and bank resilience. We urge the FSB to encourage "sharing" of buffer usage, not hoarding by local jurisdictions.

We urge the FSB to pay ongoing attention to potential negative consequences of excessive internal TLAC prepositioning in increasing fragmentation, recognizing that in many jurisdictions internal TLAC requirements are still in the process of implementation so we have not yet seen the full impact of pre-positioning requirements. Moreover, data on subsidiaries is largely non-public and therefore would be difficult to review. However, supervisors (especially in resolution colleges) should be able to evaluate these concerns and undertake some form of cost-benefit analysis once data is available. We disagree with the current conclusion in the draft FSB report that there is no evidence of fragmentation related to internal TLAC and encourage further investigations to take place.

We call on the FSB to continue to investigate and monitor the impact that pre-positioned internal TLAC has on bank resilience, funding costs and overall stability. We also strongly encourage the FSB to closely monitor adherence to the internal TLAC guidelines in the TLAC Term Sheet and Guiding Principles on Internal TLAC, in terms of both stated and effective requirements.[21] Oversight and discussions with member jurisdictions can help mitigate excessive pre-positioning.

[19] Misallocation risk refers to the risk that, due to required pre-positioning of resources in subsidiaries and/or in certain jurisdictions, there will be insufficient central or flexible resources to deploy to absorb losses in other parts of the group that may be experiencing financial stress.

[20] The draft report dismissed (p66) an industry article as based on an "unrealistic" counterfactual of fully mobile capital. In fact, the article included a substantial discussion of balanced preplacement and mobile capital options, and assessed the relative cost of various alternatives.

[21] In the US, Vice Chair Quarles has noted the interplay of more than [20] different regulations that now affect capital; these can drive effective requirements for internal TLAC well above the 90% FSB cap.

As discussed elsewhere, in addition to internal TLAC, groups continue to face local going concern capital and liquidity requirements both as a result of minimum regulatory requirements and supervisory stress testing. These requirements also exacerbate the trends toward ring-fencing and fragmentation discussed in this section.

3. Implicit subsidy – The market's perceptions of the credibility of reforms and FSB's resolvability assessment

This section reflects our views relating to FSB's questions 1, 3, 5, 8 and 9.

The paper does acknowledge that the TBTF funding advantage has been eliminated in some countries, which is consistent with a wide variety of studies on debt pricing that have been conducted in recent years showing a decline or elimination of a funding advantage for GSIBs (see Table 9 below for a summary of different studies, as well as methodological pros and cons of different approaches). However, the report anonymizes its findings across different jurisdictions and between types of systemically important institution (SIBs versus GSIBs), which makes it difficult to assess the success of TBTF reforms and identify countries where moral hazard risks still exist.

Table 9: Approaches to analysing implicit subsidies

Approach	Notable papers	Pros	Cons
Funding advantage models – bond spreads	GAO (2014), Oliver Wyman (2014) Acharya, Anginer, Warburton (2013), Balasubrammian, Cyree (2012), PwC (2013), Duffie et al (2020), BPI (2020)	Statistically robust outputs, data intensive and market driven, based on sound relationships, isolate impact of key drivers, widely used in the literature.	Model specification challenges, data quality and granularity, parameter selection and regression validity, limited proportion of overall funding, subject to market volatility and secondary spread squeezes resulting from QE.
Funding advantage models – deposit rates	Oliver Wyman (2014) Jacewitz, Pogach (2013) Araten and Turner (2012) Baker and McArthur (2009	Statistically robust outputs, market driven, based on sound relationships, isolate impact of key drivers, often used in the literature.	Model specification challenges, data quality and granularity, parameter selection and regression validity, deposit markets variation across countries (consumers, regulation). "Stickiness" of deposits and limited transfers of accounts between banks.
CDS Spreads analysis	IMF (2014), Oliver Wyman (2014), Tsesmelidakis and Merton (2012), Moody's (2012)	Often used by rating agencies, CDS spreads capture credit, priced by market and investors.	Subject to other risk factors (like liquidity premium), assessment shaped by assumptions and difficult to quantify.
Funding advantage models – credit ratings	IMF (2014) Haldane (2010) Udea & Di Mauro (2012), OECD (2012), Soussa (2000)	Rating uplift as direct estimate for the level of Government support, captures credit risk and provides a useful benchmark, widely used.	Subjective assessment shaped by rating agencies assumptions, imperfect link to actual debt cost, ratings are impacted with a lag.
Contingent claims approach, market acquisitions (event analysis)	Oxera (2011) Brewer and Jagtiani (2011) Gandhi and Lustig (2011)	Forward looking perspective, driven by market pricing information.	Extremely sensitive to underlying assumptions, option pricing framework implicitly assumes a subsidies exist.

Source: Adapted and updated by GFMA from PwC, 2014

Of particular note, the paper omits bond data for the United States, which is surprising (and expected to warrant commentary or justification), given that several major studies have used US bond data in recent years and concluded that the TBTF funding advantage no longer exists (e.g., the

GAO study in 2014[22]; Duffie et. al[23] 2020) and may have even reversed (e.g., Covas and Dionis 2020[24]). Indeed, the latter study demonstrates that even since the onset of the current COVID-19 related financial stress, the unsecured bond spreads of US GSIBs has widened relative to those of non-GSIBs. As such, even under conditions of stress, investors do not appear to be pricing in the possibility of government assistance being provided to the largest financial institutions in the United States.

We also note that the size of any potential TBTF premium is determined by the market's assessment of the state's willingness to support systemically important banks as well as the probability that the need for support will arise. This means that, all else equal, the TBTF premium will increase when the probability of default increases. Based on the recent COVID-19 shock and the widening of credit spreads for investment grade and high-yield CoCo securities issued by large European banks, this is not the case (see table 10 below).

Table 10: European bank contingent convertible bond credit spreads

Spreads	30-Jun	31-Mar	1-Jan	Q1 bps Change	H1 bps Change
European banks (outstanding totals)					
IG CoCo	552	674	316	**+357**	**+236**
HY CoCo	555	683	335	**+348**	**+220**

Source: AFME Research

In terms of the FSB's analysis, we are sceptical about approaches based on equity pricing, as bank equity prices are driven by return expectations (up and downside risk) rather than resolvability of institutions and/or any bankruptcy proceedings. Also, while CDS spreads can indeed provide useful information on expectations of individual firms' likelihood of default, the single name CDS market has become increasingly illiquid over the past few years and therefore prices move considerably due to demand rather than changes in riskiness of the underlying institution. The illiquidity of the single name CDS market already resulted in significant increases in the CVA capital charges in March/April, as CVA is partly based on a counterparty's credit default swap spreads. Banks were quickly consumed by a vortex of widening CDS prices amid a stampede for CVA hedges once the markets and estimations of credit worthiness of counterparties escalated[25].

Therefore, before the draft report is finalised, we recommend the FSB conduct further analysis on bond spreads, which is the most commonly observable and universal measure. While retail customer deposits tend to be "sticky" and not transfer between institutions due to small differences in interest rates, bonds reflect market dynamics and changes in risk profile more accurately and acutely. As highlighted in Table 9 above, bond spread analysis is also subject to market illiquidity and QE related market pricing distortions. However, given that there is a lot of evidence in the market regarding existing TLAC eligible debt, an analysis of how TLAC-eligible debt issued to meet these requirements

[22] July 2014, General Accounting Office, "Large Bank Holding Companies Expectation of Government Support," https://www.gao.gov/assets/670/665162.pdf

[23] Darrel Duffie, Antje Berndt, Yichao Zhu, "The Decline of Too Big to Fail," April 2020. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=349789.7

[24] Covas and Dionis. "Putting 'Too Big to Fail' to Rest: Evidence from Market Behaviour in the COVID-19 Pandemic." September 2020. https://bpi.com/putting-too-big-to-fail-to-rest-evidence-from-market-behavior-in-the-covid-19-pandemic/

[25] Risk Magazine: CVA desks arm themselves for the next crisis, 24 August, 2020

behaves compared to senior preferred instruments would be extremely helpful in addressing the question of implicit subsidy.

Separately, the GFMA and our members were also surprised and disagree with some of the comments made at the FSB's recent TBTF workshop, with some participants claiming that investors had not taken notice of improvements in resolvability. While equity analysts do not necessarily spend time assessing the effectiveness of the recovery and resolution framework (as equity holders would be wiped out), credit analysts and the credit rating agencies certainly follow the topic closely and update ratings and likelihood of instruments being bailed in.

The S&P for example, released an article[26] on their views on ending TBTF, noting that

> "*We have adapted our rating methodologies in parallel with the changed regulatory frameworks: introducing additional loss-absorbing capacity (ALAC) as an alternative form of gone-concern support in 2015, and creating resolution counterparty ratings (RCRs) in 2018 to recognize that updated legal frameworks would likely better protect some senior creditors than others in a resolution scenario. We were already cautious about the prospects that external solvency support would benefit holders of subordinated debt, but have reappraised. We now see such support as only benefiting nondeferrable subordinated debt and some legacy instruments in very few jurisdictions globally. The variability in the regulatory response has led to a pronounced variation in the support assumptions underlying our issuer credit ratings (ICRs) on systemic banks. […] As further jurisdictions build out their resolution regimes, we will continue to assess the rating implications and, where necessary, adjust them*".

Furthermore, 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[27]. Nevertheless, work is still underway to enhance resolvability even further, as discussed in our answer to question 7.

Resolvability assessment

In GFMA's view, there are substantial benefits to the economy for recognising the clear improvements in financial stability safeguards that have been made, including the significant financial reform agenda designed to decrease the likelihood of bank failure, regional improvements such as creation of the Single Supervisory Mechanism together with a Single Resolution Board in the EU and the implementation of recovery and resolution frameworks in all major jurisdictions.

The FSB's analysis does not make a clear distinction between jurisdictions that are homes to globally systemic institutions and can thus have a significant impact on broader global financial stability, compared to jurisdictions where the banking system is more domestically orientated. Based on the Resolution Reform Index (RRI), the developments made in key financial centres with GSIB banks (apart from China) are significant (see table 11 below), thanks to years of intensive work by the private sector and authorities. The FSB's report would benefit from making this important distinction, recognising the achievements in the developed economies with globally systemic institutions versus regions

[26] Ending too-big-to-fail: Different journeys, different destinations; Accessible at: https://www.capitaliq.com/CIQDotNet/CreditResearch/RenderArticle.aspx?articleId=2190969&SctArtId=469284&from=CM&nsl_code=LIME&sourceObjectId=10927642&sourceRevId=1&fee_ind=N&exp_date=20290403-15:37:38

[27] 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

where the work on resolvability has started later and/or there is less political/policy pressure to avoid public sector bail-outs of local banks. Many of the developments were already acknowledged in the FSB's earlier Peer Review Report[28].

Table 11: RRIs by GSIB jurisdictions

GSIB jurisdictions	Number of GSIBs (2019)	RRI in 2019
US	8	0.95
CA	2	0.91
CH	2	0.95
FR	4	0.94
DE	1	0.94
ES	1	0.90
IT	1	0.94
NL	1	0.90
Eurozone*	8	0.92
CN**	4	0.19
JP	3	0.78
GB	3	0.95
Other financial centres		
SG	0	0.62
HK	0	0.80
RoW	0	0.23

*Simple average across Member States home to GSIBs
** China has an extended timeline to comply with the bank recovery and resolution standards. Steady progress is being made to achieve the global standards.
Source: FSB and GFMA analysis

Complexity of Group Structures

We note the comments in the paper regarding continued complexity of group structures, particularly the growing number of legal subsidiaries. First, the paper does not acknowledge that much of this growth has occurred due to regulatory requirements. in addition to meeting clean holding company requirements, many GSIBs have also implemented intermediate holding companies to meet a variety of regulatory objectives, including resilience, recovery and resolution. Moreover, GSIBs have undertaken significant legal entity rationalization efforts to simplify how their lines of business and critical operations are funded and supported across their groups, and some time series actually show a significant reduction in the number of subsidiaries. However, elsewhere regulatory requirements related to operational continuity has driven the need for more discrete separation of business

[28] https://www.fsb.org/wp-content/uploads/P290419.pdf

activities, which may have led to the creation of additional legal entities. This highlights the inconsistency of the approaches taken in this regard to group complexity, and conflating this with the simple count of the number of legal entities that exist in a given banking group. Therefore, it is important to clarify in the final report that the number of subsidiaries itself is not evidence that the TBTF reforms have failed to achieve their objectives.

Moreover, it is important to point out that *c*ounting bank subsidiaries is a crude and ineffective measure of complexity. It weights a simple asset management vehicle identically to a large operational entity that requires capital, liquidity and independent governance. Counting subsidiaries ignores the measures undertaken to simplify operational interconnectedness, including the analysis of how these interconnections and dependencies can impact operational continuity in stress scenarios. Regulators have focused on and assessed these efforts as part of their review of resolution plans. Continued validation to their effectiveness can best be witnessed through the credibility determinations that have been granted[29]. The efforts serve to ensure that banks can be recovered or resolved, without being frustrated by organizational impediments such as those observed for example in the Lehman or Fortis failures). The increased credibility of these plans indicates that "practical complexity" has materially declined as a practical matter. As the report evidences, the strong progress made on these plans has been significant and therefore the complexity of resolving such groups should be noted as having declined.

As explained by Federal Reserve Chair Jay Powell[30]:

> From the outset, my earlier experience had led me to be skeptical about the possibility of resolving one of the largest financial companies without destabilizing the financial system. Today's global financial institutions are of staggering size and complexity. I believed that an attempt to resolve one of these firms--a firm with multiple business lines carried out through countless legal entities, across many jurisdictions and different legal systems--could easily spin out of control... However, I came around to the view that it is possible to resolve a large, global financial institution. What changed my mind was the FDIC's innovative "single-point-of-entry" approach, which was just coming into focus in 2011. This approach is a classic simplifier, making theoretically possible something that seemed impossibly complex.

[29] We note that the draft report (p116) cites an analysis by Hamandi et al who "concluded there was insufficient information for market participants to assess…resolution". However, this study addressed earlier plans (2014-5), which predates the advent of resolution plans in the US that responded to various regulatory concerns and were regarded as credible by the agencies.

[30] https://www.federalreserve.gov/newsevents/speech/powell20130304a.htm.

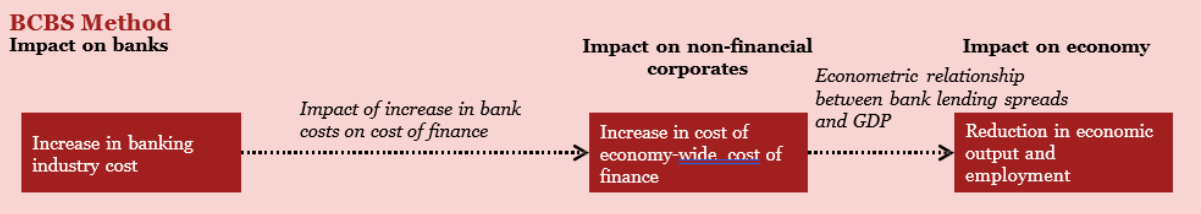
4. Cost of reforms and bank profitability

This section covers areas that are relevant mainly to FSB's questions 3, 10 and 11, but also relevant to questions 2, 5, 8 and 9.

The FSB identifies that SIBs increased their risk-based capital ratios and leverage ratios relative to other banks, grew more slowly and reduced the share of derivatives in total assets. The study found that G-SIBs had a greater reduction in their probability of default and share of non-performing loans compared with other banks, and reduced profitability.

The BCBS methodology used by the FSB in deeming whether benefits outweigh the costs of reforms (summarised in figure 1) captures the impact of banks passing through all of the costs of reforms to users of banking services, resulting in higher cost of finance for end-users.

Figure 1: BCBS Method



Source: PwC: Impact of Bank Structural Reform in Europe

This method is typically used by government and regulators in assessing the cost of financial reforms. It ensures that costs on the banking system are transmitted into the economy but avoids specifying in detail how these costs are transmitted through the economy. In reality, the costs of reform will be born through different markets, such as FX, equities, derivatives and fixed income. The BCBS methodology captures all the costs but incorporates them into the economic framework as a change to the cost of debt finance. This approach does not specify the amount of costs absorbed by the financial sector, the different behavioural responses of banks (shrink vs re-price), the different impacts on the cost of equity finance and debt finance and the differences between the costs to investors, companies and individuals.

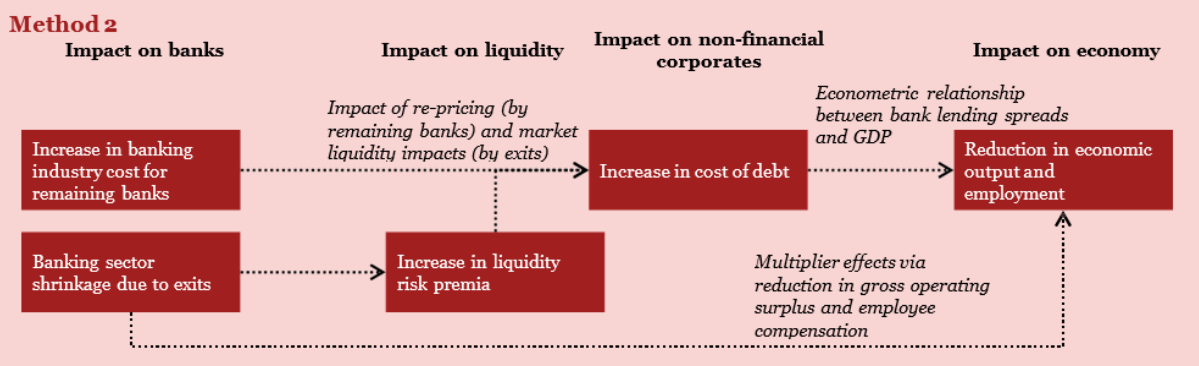
Furthermore, the BCBS method does not capture the associated market liquidity impacts and shrinkage of the banking sector that result from bank exits from capital markets activity. The report and the cost/benefit analysis omit the fact that banks have made significant reductions or exits from low scale businesses and product lines where they have faced increased capital requirements. This includes exits from some businesses where financial institutions play a key market making role and where non-regulated institutions may not be able to pick up the slack. Similar trends are also visible in geographic downscaling, as banks have exited from countries and regions with low market share in order to concentrate on regions and jurisdictions of key strength and utility. Many European banks for example have downscaled their APAC operations.

Due to these shortcomings, we propose an alternative method, Method 2 (summarised in figure 2), as used by the PwC in its bank structural reform impact assessment[31] in order to capture the

[31] https://www.pwc.co.uk/services/economics/insights/impact-of-bank-structural-reforms-in-europe.html

abovementioned important and substantial costs of reforms in the final report. This approach captures the impact of banking sector shrinkage (due to exits), which result in liquidity impacts and multiplier effects, in addition to the impact of re-pricing by the smaller number of banks that remain in capital markets.

Figure 2: PwC method for analysing costs of reforms



Source: PwC: Impact of Bank Structural Reform in Europe

Separately, we disagree with the conclusion reached about the extent of the benefit of increasing banks' CET1 ratio, as it depends on the starting point CET1 ratio. The financial safety benefit of additional capital declines as the level of capital goes up. FSB's working group assumes the average CET1 ratio increases from 7 percent to 7.59 percent because 7 percent is the CET1 current capital requirement for a non-G-SIB, and 59 bps is the impact of GSIB surcharges multiplied by their share in the banking system. The increase from 7 percent to 7.59 percent reduces the annual probability of a financial crisis by 30 basis points, from 1.6 percent to 1.3 percent. In reality, large banks' current CET1 ratios far exceed the FSB's starting point (European GSIBs CET1 ratio 13.4%, US BHCs 12.24%), because of many other constraints. Therefore, the financial stability benefits are seriously understated at 7.59%. By limiting the implications of raising capital levels from 7.0 to 7.59 percent, the FSB has essentially calculated the costs and benefits of the first 59 basis points of the massive capital build-up over the past decade.

Moreover, this method ignores the fact that the yardstick for capital ratios has been toughened dramatically over the last 10 years. A recent BCBS study (2016) estimated the increase at 28%, even before the more recent impacts of Basel 4 were included. This effect would escalate the 7.59% figure by a further 213 bps to 9.71%, a dramatic increase that far outweighs the 59 bps considered in the draft report. When applied to the higher capitalization rates presently in place for the major European and US GSIBs, the increase would be larger still. These effects are critically important, and should be considered more systematically in the draft report, and related FSB work. The results and conclusion would be very different, if the costs and benefits of the cumulative change (and especially the final 59 basis points) of the capital stack was to be calculated. Using the BCBS methodology (updated by Fender-Lewrick), the models suggest that the decrease in the likelihood of crises is three times larger when capital is increased from 7% to 8% than when it is raised from 10% to 11%.

For example, the annual probability of a financial crisis when the aggregate CET1 ratio is 12.24 percent (its current level in the United States) is 0.26 percent. When the CET1 ratio is 59 basis points lower (11.65 percent), the probability is 0.31 percent. Thus, the last 59 basis points of the post-crisis build-up in capital reduced the probability of a financial crisis by only 5 basis points, one-sixth as much as

the first 59 basis points. By this measure, the GSIB banks' CET1 ratios in all jurisdictions are theoretically above levels where net social benefit is maximised.

Further considerations – banks' role in capital markets intermediation

In the broader context, we should bear in mind that the systemic safety benefits of TBTF reforms are reduced if the role of SIBs shrinks as a share of the overall financial ecosystem. This shift in the regulatory perimeter means that the core is safer – but smaller – leading one to wonder if the resiliency of the overall system has moved forward or back. As evidenced in the FSB's draft report, while SIBs resilience has increased dramatically, the profitability of SIBs (especially of G-SIBs), has fallen relative to their competitors. While the profitability of SIBs varies across regions and bank specific business models, it has become a material concern for banks and their investors - and for systemic resilience.

It is also worth mentioning that in many lines of financial services, the smaller banks have not picked up the slack or benefitted from the G-SIBs' retreat, often due to barriers to entry. These barriers include the need for state-of-the-art infrastructure, investment in geographical footprint and higher cost of regulatory compliance. Instead, this market share has generally gone to NBFIs. To some extent, this was the objective of the reforms – to broaden the base of service providers and reduce the role of systemically important institutions. However, the consequences of bank withdrawals from markets businesses is a concern to market participants as well as many authorities, highlighted also during the current pandemic caused crisis.

For example, in the United States, foreign banking organizations (FBOs) have shrunk dramatically in size and scope over the past decade, with the largest FBO broker-dealers seeing asset declines of over 80% since 2008[32]. This reduced size and risk profile has been heavily shaped by a changed regulatory and supervisory landscape for FBOs. While the FBOs today are far safer, the overall diversity of the US financial system has declined, as has capacity in many key markets (many of their key capital markets businesses have not been fully absorbed by the US banking sector[33]).

While the impact of regulatory reforms on capital markets activity has not yet fully materialized, there is often limited, quantitative evidence available to estimate the effects to date. The full impact has not yet materialized for at least the following reasons:

1. Unconventional monetary policies followed by many central banks have temporarily inflated market liquidity and supressed volatility. These policies are not sustainable in the long run unless there is a wide acceptance that central bank balance sheets should be deployed as and when private sector cannot provide sufficient market capacity. Indeed, as highlighted by Andrew Bailey in his speech[34], the CB balance sheets can be used as a countercyclical policy tool in an environment when private sector just does not have the capacity to deal with the liquidity demand. However, the potential impact on the liquidity when the extended QE policies with purchases of ever broader types of financial assets revert to normal could be dramatic for the

[32] See for example Peter Ryan, "Resolution Planning for Large International Banks: Considerations for the Federal Reserve and the FDIC," SIFMA Blog Post, September 4, 2020. Available at: https://www.sifma.org/resources/news/resolution-planning-for-large-international-banks-considerations-for-the-federal-reserve-and-the-fdic/#_ftn2.

[33] SIFMA. "SIFMA Insights: The Importance of FBOs to US Capital Markets," April 2019. Available at: https://www.sifma.org/wp-content/uploads/2019/04/SIFMA-Insights-The-Importance-of-FBOs-to-US-Capital-Markets.pdf.

[34] Central Bank balance sheet as a policy tool: past, present and future; Accessible at: https://www.bankofengland.co.uk/speech/2020/andrew-bailey-federal-reserve-bank-of-kansas-citys-economic-policy-symposium-2020

market, as has been evidenced during the recent events (US Treasury market meltdown in March[35]). The size of the government bond markets will overwhelm the dealer bank balance sheets when significant selloffs occur regardless of the regulation. However, changes to some of the most capacity constraining regulations would allow them to safely intermediate the market through their balance sheets, limiting more frequent spells of market illiquidity. A significant increase in government bond market volatility will raise doubts over their safe haven status and increase the cost to taxpayers of financing growing government deficits.

2. Finalization of rules and full implementation of regulations is still in progress. Some of the key regulations have not yet been implemented, are being phased in, or are still very new. The Net Stable Funding Ratio and the Fundamental Review of the Trading Book, for example, have not yet been incorporated into national rules while mainly impacting markets businesses (broker-dealer entities) of SIBs. In summary, the still ongoing regulatory reform will lead to major changes in the structure of capital markets as well as banking business models. In effect, the regulatory requirements (markets as well as prudential) combined establish substantial barriers to entry for regulated banks and broker-dealers, force the withdrawal of smaller and mid-sized service providers and restrict the ability of large banks to develop their business models to accommodate for changes in client and market requirements while cost of equity remains high.
3. Banks are still in the process of determining how to revamp their approaches in response to regulations, creating a delay in the resulting impact on market structure and liquidity. For example, many banks are evaluating and potentially reducing their markets businesses when the FRTB will be implemented, based on the level of interest in implementing internal models-based approaches[36]. The ECB survey estimates that approximately 40% of the ECB supervised banks currently using the internal models approach intend to seek IMA approval under the new rules. Roughly half of these banks aim to include as many trading desks as possible under the IMA, while the other half plan to include only a subset of their trading desks. Approximately 40% of respondents intend to move from the IMA to the new standardised approach. The remaining 20% are currently undecided.
4. Banks and large securities dealers are phasing in their increases in pricing and reductions in the supply of services, for both competitive reasons and as a result of internal structural processes that slow response times. It should be noted that these moves could increase homogeneity of bank structures and concentrations of risk, possibly leading to higher systemic risk.
5. Market participants have adjusted to the new market conditions in a number of ways, including investors breaking up trades into smaller pieces and lengthening entry or exit timeframes, but this may not be sustainable in the long-term and exacerbates market illiquidity, volatility, and stability during stress periods[37].

SRISK and bank profitability

Overall, investors continue to remain sceptical about banks as an investment. This year, the uncertainty over loan-losses, concerns over revenues in low-rate environments (see table 12 below) and bans on dividends and share buybacks have translated into a material sector-wide sell-off. For example, European bank stocks have plunged nearly 40% per cent this year compared with a 13 per cent fall in the benchmark Stoxx Europe 600 index. In the US, the Nasdaq Bank Index has fallen by

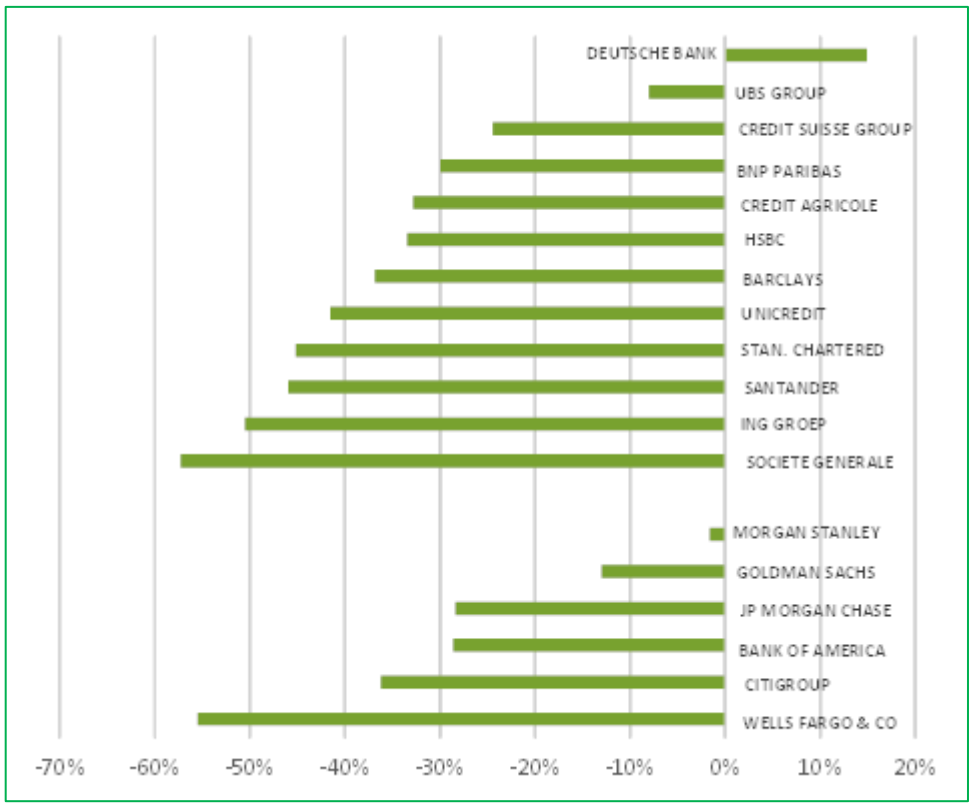
[35] For example: https://www.ft.com/content/ea6f3104-eeec-466a-a082-76ae78d430fd and https://www.brookings.edu/research/still-the-worlds-safe-haven/

[36] https://www.bankingsupervision.europa.eu/press/publications/newsletter/2020/html/ssm.nl200212_2.en.html

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

more than a third, while the S&P 500 is flat for the year. All this combined has wiped out a combined US$ one trillion in shareholder value[38] from banking stocks.

Table 12: Bank share price variation year to date (1 September)



Source: AFME Research

With the impact of further reducing bank near-term profitability, particularly in the core deposit taking and loan business, the benchmark policy rates have been slashed during the COVID-19 economic crisis by the central banks (see table 13 below). This adds to the instability of operating conditions for banks, fuelling the need to diversify income sources and adapting their business models, while losing market share to less regulated financial intermediaries.

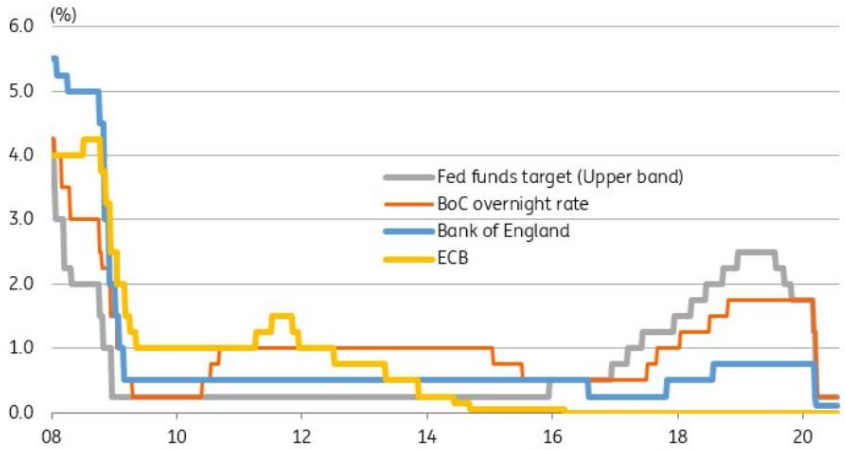
Bank profitability in the EU was already low by historical standards as well as compared to some other jurisdictions. According to ZEB's 2019 European Banking Study[39], the profitability of Europe's top 50 banks has steadily recovered over the last years and post-tax return on equity (RoE) reached 7.2% in 2018, 0.6 percentage points more than in 2017. However, the returns generated are below cost of equity of around 8.0% for EU banks in 2018. Adding to the conundrum that the RoE improvements over the last five years were mainly due to non-operational factors, such as lower litigation costs, lower taxes and especially reduced loan loss provisions, which reached a historical low in 2018, the

[38] https://www.ft.com/content/b0b241d9-7c94-4b91-b727-d39245005d07

[39] https://www.bankinghub.eu/banking/research-markets/european-banking-study-2019

outlook from an investment perspective remains negative. Because of the outlook, European banks trade at an average 48 per cent of the book value of their net assets.

Table 13: Central bank policy rates



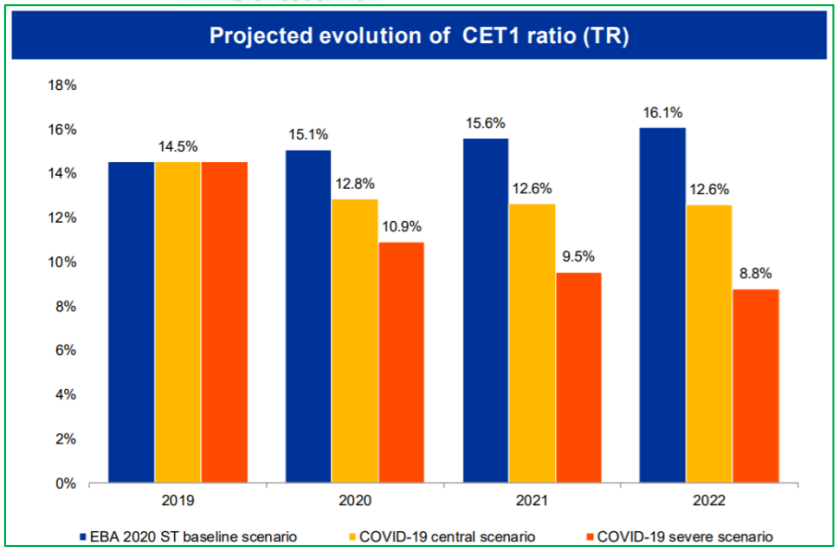
Source: ING Research[40]

In terms of competition, for example in Europe, non-bank financial intermediaries hold almost half of the assets in the European financial sector moving from 22% in 2008 to 48% in 2017, according to ZEB's 2018 European Banking Study[41]. If insurers and pension funds are added to the equation, non-banks' share of financial assets in Europe increases to 63%.

This trend is likely to be further exacerbated by the COVID-19 impacts. The SSM estimates that Eurozone banks' RWAs will increase by cumulative 8.3% in the central macro scenario within its bank vulnerability assessment. Under the wider range of scenarios, the capital ratio depletion of 1.9 percentage points (pp) under the central scenario and 5.7 pp under the severe scenario by 2022. Effectively this ties more capital against the existing balance sheets, reducing the capital available to extend balance sheets for new business.

Table 14: ECB estimates for evolution of bank capital ratios

[40] https://think.ing.com/articles/federal-reserve/
[41] https://zeb-consulting.com/en-DE/european-banking-study-2018-0



Source: ECB[42]

Similar profitability issues are also evident in other markets where persistently low interest rates have eroded profitability of core business lines, like in Japan[43]. To conclude, the persistency of low interest rates, declining and ageing populations and changes in how consumers access financial services, combined with the economic headwinds are at the core of the profitability conundrum in most advanced economies.

Globally, while banks would remain viable under many of the COVID-19 stress test scenarios from capital perspective, their ability to lend and generate profits will fall, and in many cases way below the cost of capital. This may limit banks' ability to strengthen their franchise, making them less competitive vs less regulated financial intermediaries.

Andrea Enria, the Chair of the ECB's Supervisory Board has noted that bank profitability is key to financial stability. He has further noted in this context that "as supervisors, we cannot consider the post-crisis repairs to have been completed if market valuations and price-to-book ratios remain at the current depressed levels[44]". Therefore, ensuring that banks can remain competitive vis-a-vis non-bank competitors offering similar products and maturity transformation is at the heart of financial stability, particularly if measured by the effectiveness of the post-crisis reforms. If they have resulted in a significant competitive shift, the broader impacts should be carefully considered in the FSB's final report.

In the context of bank profitability and systemic stability, the GFMA also recommends that the FSB reviews its toolset to analyse systemic risk. The draft report uses the SRISK measure, which was also extensively discussed in the FSB's TBTF workshop on 4 September 2020. The SRISK is a non-risk based measure that mainly captures large banks (and especially the ones that are currently trading below their book value). The GFMA believes that this analysis is largely irrelevant in the context of assessing

[42] ECB vulnerability assessment, accessible at:
https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200728_annex~d36d893ca2.en.pdf
[43] Fitch: Structural challenges pressure Japanese major banks' profitability; Accessible at:
https://www.fxstreet.com/news/fitch-structural-challenges-pressure-japanese-major-banks-profitability-201908130634

[44] Speech by Andrea Enria, Chair of the Supervisory Board of the ECB, at the SSM & EBF Boardroom dialogue;

https://www.bankingsupervision.europa.eu/press/speeches/date/2019/html/ssm.sp190307~28d206eae5.en.html

TBTF or the likelihood of systemic events. As can be seen from the graphs in appendix I, the SRISK measure in the jurisdictions that experienced the biggest financial crises was negligible before the 2007 – 2009 periods. This is caused by the fact that the SRISK measure is highly cyclical and volatile and increases exponentially after the event, when market conditions have already deteriorated, and financial stocks are trading below book values. Additionally, the SRISK measure can only capture listed companies and generally produces higher numbers for bigger banks, without any reference to the quality of the assets or term of the liabilities, which were the key contributors to bank failures during the great financial crisis. As a thought experiment, extended dividend bans (such as during the current crisis) will automatically devalue banking shares, thus increasing the SRISK measure, while ultimately the capital position and therefore solvency of banks has been improved.

In our view, the measure does not capture the multiple facets of systemic risk, as demonstrated by the lack of SRISK prior to the great financial crisis. We also note that it is not an adequate measure to capture the too-many-to-fail issue, when a large population of smaller banks are close to failure (such as for example cajas crisis in Spain), which can lead to financial crises of equal magnitude. In addition to the fundamental problems with the measure and as noted by the FSB, the SRISK does not take into account the recent developments in the BRRD, particularly regarding the loss absorbing capacity, which will reduce liabilities and increase equity at times of idiosyncratic or systemic stress that may shatter the market's trust in the solvency of the wider banking sector globally. However, given that bank share prices are much more driven by future earnings potential rather than likelihood of failure, we caution the FSB from relying too much on this top-down metric, even if adjusted for TLAC and to utilise more bottom-up methodologies and system-wide capital to assess if the financial system can withstand shocks.

As an example, 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[45]. The GFMA believes that such methods to assess the probability of default, as well as bank idiosyncratic and systemwide loss absorbing capacities are extremely helpful in analysing how effectively the issue of TBTF has been dealt with.

To summarise, considering the wider impacts of the reforms and the need to balance financial stability with G20 growth objectives and soundness of the financial sector, the GFMA recommends that the FSB continues to assess the coherence and calibration of the post-crisis reform package on a macro as well as business line levels to ensure that financial stability objectives are achieved at lowest cost to broader economic objectives, while ensuring fully functioning financial markets. We also recommend that a wider set of tools is used to assess build-up of systemic risk. This should include dialogue with the key central banks whose preparedness and risk appetite at times of crises is fundamentally important to the outcomes.

[45] 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. Additional considerations

This section covers areas that are relevant mainly to FSB's questions 10 and 11.

There are two specific areas, namely regulatory fragmentation and growing importance of central counterparties, which we believe are fundamentally important considerations in the context of costs and financial stability benefits of the TBTF reforms.

Impacts of regulatory fragmentation

The draft report overlooks the problem of regulatory fragmentation as a cost of the post-crisis reforms. Whether this conclusion was reached by defining the scope of assessment very narrowly or due to other reasons, the implementation of post crisis reforms has created significant barriers to flow of liquidity and capital across banking groups.

There are significant, well-recognised economic benefits to removing obstacles to the free flow of internal funds within a banking group. In particular, it improves resilience of the groups, by allowing capital and liquidity to move to where they are most needed – rather than where they are the most trapped. This also supports the efficient internal capital allocation within banks allowing resources to flow to where they are most in demand from businesses and households. The free flow of capital and liquidity also enables integrated, open, competitive and efficient financial markets and services. It allows companies and for example sponsors of infrastructure projects of all sizes to raise money where it is cheapest, matches investors with investment opportunities and enables financial institutions to extend credit where it is most needed. Ultimately, efficient capital allocation provides a foundation for sustainable economic growth and helps ensure continued funding of the real economy through cyclical downturns[46], thus contributing to the greater resiliency of the banking sector in general.

The economic benefits of an integrated business model are that client transactions can be managed across the legal entity structures and resources can be deployed to best facilitate cost-efficient execution of client requirements. The integrated model also allows for more centralised control over activities at the legal entity level and application of group-wide standards. If and when regulation is applied to lower levels of legal entity structures, many of these benefits will be lost and the benefits of the model can be destroyed. Costs for clients will inevitably rise, capacity will be reduced and risks (including reputational contagion) will increase.

A recent Bank of England paper also discusses proportionality, regulatory barriers and regulatory complexity in the context of sustainable growth of banks. They note that "*To make regulation proportionate, policymakers adapt regulatory requirements to the risks posed by each firm. But regulators face a trade-off between addressing systemic risks in a proportionate way and limiting regulatory complexity. New thresholds can create complexity and cliff-edge effects that can discourage healthy firms from growing*[47]". The Bank of England paper identifies that regulatory thresholds could become barriers to growth if they lead to higher operational costs (e.g. additional data or modelling costs) or balance sheet costs (e.g. higher capital or cost of funding). In our view, this is not limited to the bottom-end of the scale and growth barriers for new entrants. It is also very much an issue for

[46] There is empirical evidence to suggest that cross-border intra-bank funding is less volatile than inter-bank funding; see for example Reinhart and Riddough (2014).

[47] https://bankunderground.co.uk/2020/07/31/setting-boundaries-finding-thresholds-in-bank-regulation/#more-6705

large GSIB banks, whether in relation to their regional entities, the GSIB surcharge category, cost/benefit of internal models approaches or calibration of the leverage ratio (and the GSIB add-on).

In this vein, we believe it is worth highlighting that the current lack of international agreement on the prepositioning of liquidity more generally is providing ever greater challenges with regard to the transferability of resources, particularly in stressed market scenarios. Where this is the case this can lead to further impacts on the business activities entities can undertake, and this includes the amount of market liquidity firms are able to provide. While not directly in scope of the FSB analysis, the FSB recognises correctly that "*one of the drivers of (…) market fragmentation could be the ring-fencing of liquidity (…) within local markets*" (p. 64). Prepositioning of liquidity leads to a sub-optimal constellation in which jurisdictions tend to impose higher local liquidity requirements, thereby ring-fencing liquidity at the expense of the overall group's financial stability. The current divergence in approach to applying the LCR for example to branches is evidence of this lack of uniform application of such requirements.

We are concerned by the current approach to liquidity requirements, and especially the extensive pre-positioning of liquid resources at local levels. We believe that this issue should be considered in the broader debate of both financial stability and the resilience of institutions more generally. A group-level approach that emphasized transferability of liquidity could provide a much more resilient outcome. We therefore would welcome attention from the FSB further to this area to help avoid trading liquidity and hence reducing recoverability of institutions.

This issue is similar to – but perhaps even more urgent than – the challenges of internal TLAC fragmentation. The draft report acknowledges issues around internal TLAC in theory "*Excessive pre-positioning of internal TLAC could also reduce financial stability by making the banking group less resilient*" (p65). Excessive levels of ring-fenced liquidity can cause problems for banks in both going-concern operation and for resolution authorities in gone-concern administration, since they may be unable to move resources across the group to where they are most needed.[48] But the report dismisses these concerns - without substantial analysis or evidence – explaining merely that internal TLAC can serve as a useful "commitment device" and that the topic is under discussion.

The GFMA recommends that the FSB continues to assess regulatory fragmentation, particularly in the context of barriers to entry, as well as impacts of regulatory hurdles to growth.

Growing importance of Central Counterparties

We agree with the statements made within the draft report that as a direct result of reforms made after the crisis, central counterparties (CCPs) have become an ever more important 'node' in the financial system. The FSB draft report helpfully reminds us of their level of interconnectedness and highlights the importance of ensuring CCPs are resilient. The requirement to centrally clear more and more (including repo) activity through CCPs has heightened the need to consider the impact of their actions during a stressed scenario, or indeed their failure, but also how these interact with the requirements that apply to banks and have robust recovery and resolution plans in place.

[48] In the language of FSB Chair Quarles, we should look to ensure a good balance of "home flexibility" and "host certainty"; some of the dislocations of the March-April COVID shock showed that this balance is currently tilted too far to the latter; Accessible at: https://www.federalreserve.gov/newsevents/speech/quarles20180516a.htm

The increasing systemic importance of CCPs has heightened the need to consider the impact of actions CCPs may take during stress scenarios or during the execution of their recovery and resolution plans. These actions should also be considered in the context of how they interact with the requirements that apply to banks. Given their high degree of interconnectedness, CCPs' actions could act as a catalyst for contagion if not subject to appropriate limitations and oversight. For example, procyclical increases in margin requirements could lead to greater demand for liquidity, with onwards impacts on underlying cash and funding markets. Similarly, recovery and resolution tools such as variation margin gains haircutting and cash calls on clearing members could transmit stress through the market, from the CCP to clearing members and clients.

It is therefore necessary to consider workstreams on CCP resilience, recovery and resolution, how such actions may impact clearing members and other market participants, and to ensure that there is sufficient clarity and transparency around how CCPs, supervisors and resolution authorities will act in such situations. This will allow clearing members and other market participants to better measure and manage their exposures to CCPs and anticipate additional liquidity needs, thereby reducing the risk of contagion.

We therefore fully agree with the FSB that CCPs' resilience, recoverability and resolvability warrants further work. However, we would add that it is vital that this work is mindful of the broader regulatory framework, and the potential impacts on clearing member banks and their clients.

One clear overlap with the Too-Big-To-Fail reforms is bank recovery and resolution planning. Specific areas of such planning can only be advanced to the extent that a clear understanding of CCP actions is set out. This applies particularly to aspects of bank funding in resolution, but also to planning to ensure continuity of access to FMIs for banks in resolution. The FSB have recognised this and have helpfully published their final questionnaire for FMIs to complete[49], to help give banks the information they need to plan. However, this action further illustrates the importance of CCPs, and FMIs more broadly, and the need to consider their resilience alongside that of systemically important banks.

We also recommend that the FSB should assess the robustness of CCP supervisory frameworks. For example in the EU the CCPs are not under direct supervision by ESMA but national authorities, which can be a source of fragmentation, and making supervisory coordination within EU and cross-border less fluid.

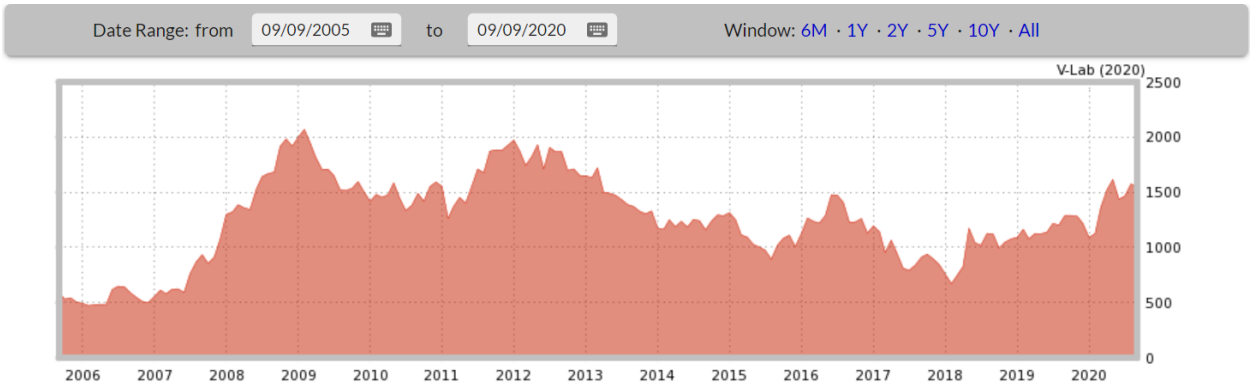
[49] https://www.fsb.org/2020/08/fsb-publishes-questionnaire-on-continuity-of-access-to-fmis-for-firms-in-resolution/

Appendix I: Evolution of the financial sector SRISK in selected countries and regions

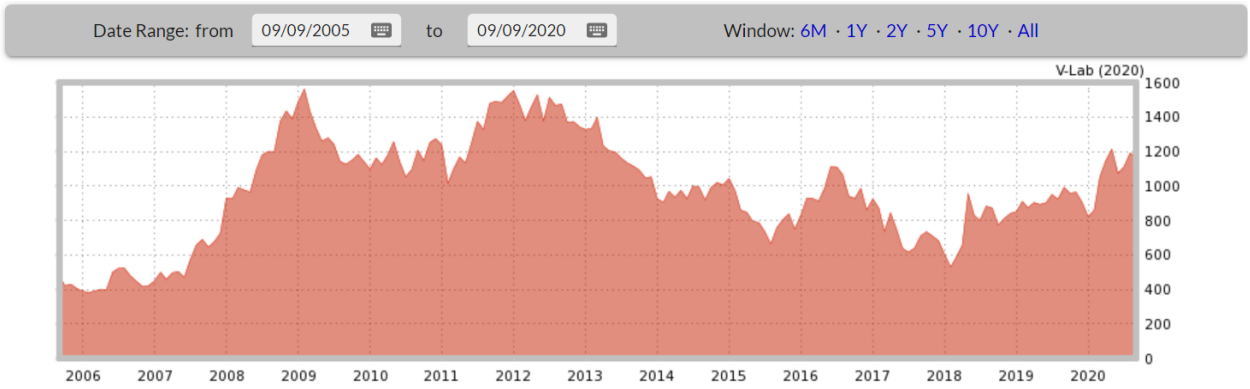
Source: V-Lab, Stern Business School, New York University. Accessible at:

https://vlab.stern.nyu.edu/welcome/srisk

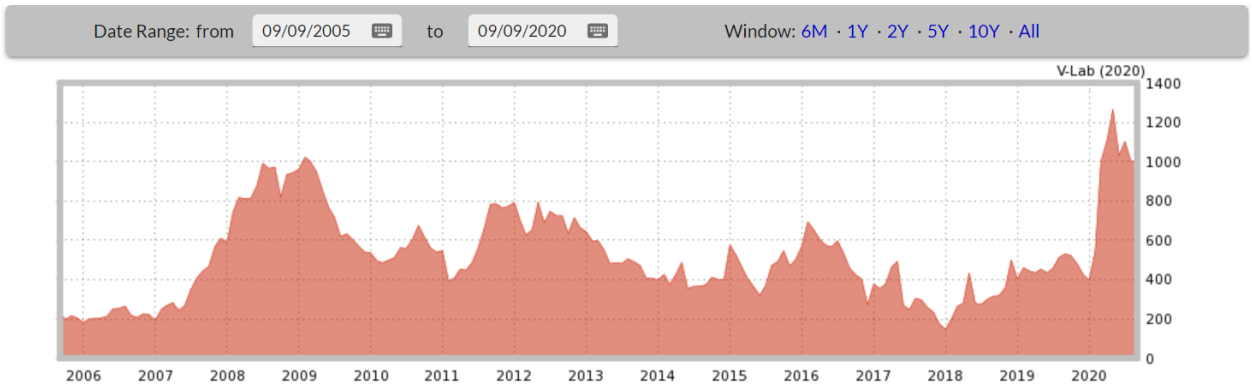
Europe GSIB home jurisdictions SRISK:



Rest of Europe SRISK

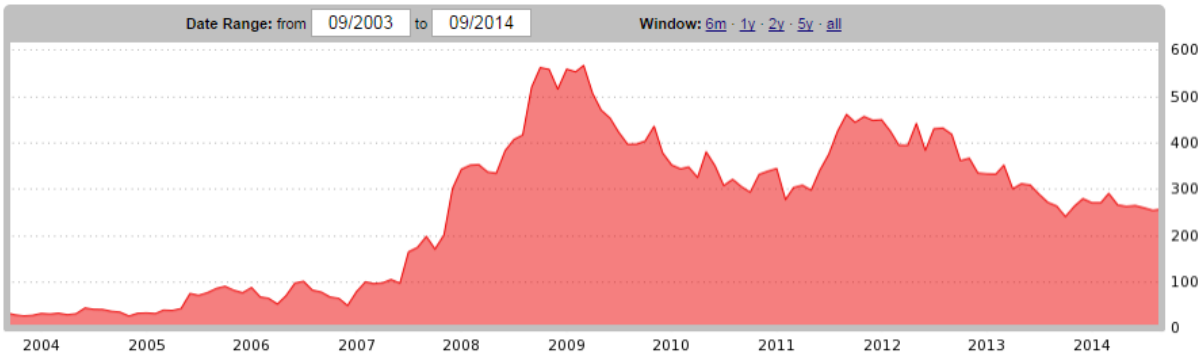


SRISK in the USA

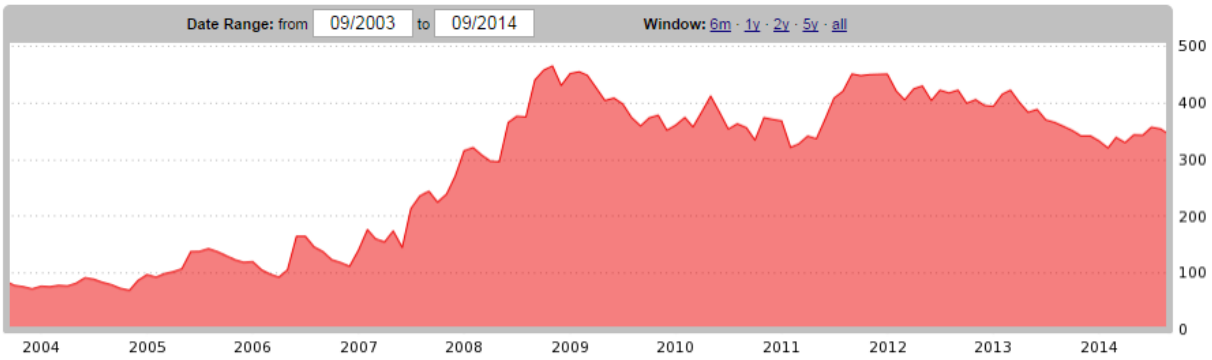
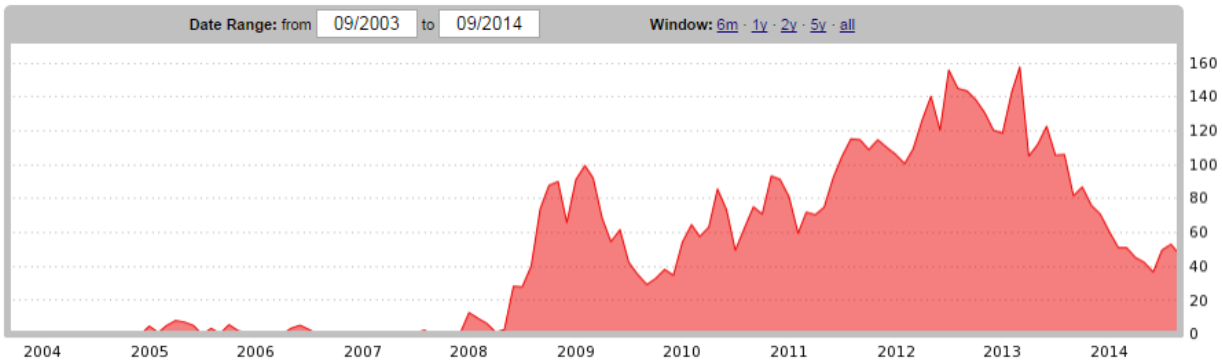


SRISK in selected European countries before, during and directly after the crisis

Risk Analysis Overview - United Kingdom Financials Total SRISK (US$ billion)



Risk Analysis Overview - France Financials Total SRISK (US$ billion)



Risk Analysis Overview - Spain Financials Total SRISK (US$ billion)