Ten years on: fixing the fault lines of the global financial crisis

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In the immediate aftermath of the crisis, G20 leaders created the Financial Stability Board (FSB) to fix the fault lines of the financial system, working with national authorities and international standard-setting bodies. Given the depth of the problems and the scale of the solutions needed, detailed policy development and implementation has taken time. But now all the main elements of the reform package have been agreed, and their implementation is well underway.

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The post-crisis reforms have laid the foundations of an open and resilient global system. The reforms are built on the four pillars of: making financial institutions more resilient; ending the problem of financial institutions being too-big-to-fail; making over-the-counter (OTC) derivatives markets safer; and transforming shadow banking into resilient market-based finance.

It is nearly ten years since the global financial crisis began in the summer of 2007. A decade on, its aftershocks are still being felt not just in the financial markets at the epicentre, but across households and businesses globally. Despite massive public liquidity and solvency support for the financial system, the unprecedented severity of the crisis led to the worst global recession of the post-World War II era and has left a debt burden in its wake that is still weighing on growth. In the process, trust in the system and confidence in open markets has been reduced.

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Strong, sustainable and balanced growth requires open markets, durable international capital flows, resilient financial institutions, robust sources of market-based finance, and an end to too-big-to-fail.

The financial crisis exposed the inadequacy of pre-crisis regulatory frameworks in most advanced economies to meet the challenges posed by a financial system that had grown progressively more complex, capital-market focused, and globally integrated. As a result, national authorities often found themselves unable to effectively address the financial stability risks that developed nationally, or were transmitted through markets and financial institutions operating across borders. The global nature of the crisis meant that solutions also had to be global – and new methods of international cooperation had to be developed.

The commitment of the G20 leaders has been essential to maintaining an open and global financial system. Post-crisis reforms have been the result of intense cooperation between central banks, finance ministries, supervisors and regulators, across the G20 and beyond, coordinated by the FSB in conjunction with international standard-setters and organisations.

The FSB's strength lies in its members, who bring expertise and a sense of shared objectives, and who work together closely and effectively to find common solutions to common problems. The standards developed are not directly applicable; members must implement agreed standards through national law and regulation. But the FSB's consistent ability to forge consensus has led to common ownership and, in most cases, timely and comprehensive implementation of reforms at the national level. That progress is building both trust and effectiveness, keeping global finance open and diverse, and making it more resilient.

While the focus of the FSB's work is primarily on its 24 member jurisdictions, which account for over 80% of global economic activity and all globally-active systemically-important financial institutions (G-SIFIs), the FSB has also fostered dialogue and cooperation with the financial authorities from around 65 non-FSB jurisdictions through its Regional Consultative Groups. Regular dialogue during the policymaking stage and in evaluating the effects of reform has encouraged adoption of these strengthened standards well beyond FSB member jurisdictions.

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- transforming shadow banking into resilient market-based finance.

In addition to these four pillars, the FSB continues to scan for and address emerging vulnerabilities, as well as building institutional capacity for cross-border cooperation, and conducting peer reviews of reform implementation. In turn, this growing track record of cooperation, collaboration, and progress has strengthened the relationships and trust between authorities, which are essential for effective oversight of cross-border financial institutions at all times but especially during inevitable times of stress.

1| Making financial institutions more resilient

Post-crisis reforms have sought to make financial institutions more resilient, with higher capital and liquidity requirements and via more effective supervision.

Work to make banks more resilient started with wholesale reform of international banks' prudential rules by the Basel Committee on Banking Supervision (BCBS). The Basel III package is designed to address the inadequate pre-crisis minimum capital standards, to ensure that there is sufficient high quality bank capital to absorb losses, as well as to increase the stability of banks' funding and ensure they can withstand periods of stress. The common equity the world's largest banks are required to maintain in normal times, is now ten times higher than the pre-crisis standard. At the same time, banks' trading books have shrunk drastically – in Europe they have more than halved as a share of total assets – whilst the capitalisation of trading books has strengthened. The Liquidity Coverage Ratio (LCR) requires banks to maintain sufficient liquid assets to cover thirty days of stress. The Net Stable Funding Ratio (NSFR) will ensure banks' assets are financed with appropriate stable sources of funding. Globally-active systemically-important banks (G-SIBs) are now identified and required to maintain an equity surcharge that increases with systemic importance, to ensure their safety and reduce the likelihood of their failure. The BCBS continues to work to finalise Basel III, which will restore confidence to the bank capital framework and give certainty to international banks by revising risk-weights and introducing a non-risk sensitive capital backstop (leverage ratio), and will help to promote a level playing field internationally.

Following agreement on enhanced global standards, the BCBS initiated a peer-based programme of country reviews to assess the consistency of implementation. This found that implementation of Basel III has generally been timely and all large internationally active banks are on track to meet the fully phased-in minimum risk-based capital and LCR requirements ahead of the deadlines. Most jurisdictions are now focusing on implementation of the leverage ratio and the NSFR, which are due to come into force in 2018.

The peer-based assessments of the BCBS have, however, found some major advanced economies to be non-compliant with aspects of the agreed capital framework. Where these areas of non-compliance are material, it is important that they are addressed to reduce the risks that regulatory arbitrage weakens overall resilience of the system.

The crisis also showed weaknesses in standards of resilience in other financial sectors and highlighted the need for regulatory action. To this end, the International Association of Insurance Supervisors has been working to address more effectively systemic risks in the global insurance sector.

2| Ending too-big-to-fail

On its own, the increased resilience of individual financial institutions is not sufficient to deliver financial stability. Financial institutions also need to be able to fail in a safe manner, without significantly impacting on financial stability or public finances. The global financial crisis highlighted that national authorities were not able to resolve the failures of large cross-border financial institutions safely and without recourse to public funds. This was amply demonstrated by the instability that followed Lehman Brothers' insolvency: every other major financial institution at risk of failure thereafter was bailed out using public funds. The largest G-SIBs today are far larger than Lehman Brothers was in 2007, and provide a greater number of critical economic functions – such as retail deposits and payment services. In order for the financial sector to function effectively, firms need to be able to both enter and exit the market, as in other sectors of the economy.

As a consequence, in 2011, G20 leaders endorsed an integrated set of policy measures to address the risks to the global financial system from systemically important financial institutions (SIFIs), with a specific focus on global SIFIs (G-SIFIs) to reflect the greater risks that these institutions pose to the global financial system. The measures designed to end "too-big-to-fail" comprised:

- requirements for FSB member countries to implement in national law the FSB's *Key Attributes of Effective Resolution Regimes for Financial Institutions*. This is the minimum set of legal powers and operational arrangements needed to successfully resolve a G-SIB;

- requirements for resolvability assessments, recovery and resolution plans, to be developed by institution-specific cross-border crisis management groups for each G-SIB, underpinned by cooperation agreements;

- requirements for additional total loss-absorbing capacity (TLAC) to ensure that, should a bank enter resolution, there are sufficient liabilities to absorb losses and provide for recapitalisation, without disrupting critical economic functions (such as deposits, derivatives and payment functions) and without recourse to public funds.

All jurisdictions that are home to G-SIBs have put in place resolution regimes that are broadly in line with the *Key Attributes* and have implemented, or are in the process of implementing, legislation or regulation to give effect to the FSB's TLAC standard.[1] And G-SIBs are now putting in place arrangements to support operational continuity of critical functions and shared services in resolution, including by adopting contractual provisions to ensure that temporary stays on early termination rights have cross-border effect.

It is critical that G20 governments maintain momentum in making the needed legislative and regulatory changes to ensure that resolution plans for G-SIBs are credible and effective. Financial market participants are increasingly recognising that the owners and creditors of financial institutions will be required to meet the costs of a financial institution's failure, and as a result are now pricing this into bank funding accordingly, increasing market discipline and feeding back into resilience of institutions. Whilst the most immediate post-crisis focus has been on addressing the too-big-to-fail risks arising from systemic banks, work is currently also underway to put in place effective policies and regimes for systemically important non-bank financial institutions, in particular central counterparties (CCPs) and systemic insurers.

3| Addressing systemic risks from OTC derivatives markets

Effectively regulated OTC derivatives markets have an important role to play in reducing system risks and in helping financial and non-financial corporates manage their risks. However, during the crisis, banks did not have sufficient risk

1 With the exception of China, due to the unique nature of its banking sector.

management or loss-absorbing capacity (in the form of both capital and margin) in place to safely manage their derivatives exposures. In addition, banks' complex web of bilateral derivative exposures meant that nobody was sure of their credit exposures to troubled institutions. These complicated exposures caused contagion and uncertainty, which led to banks being unwilling to lend to one another; the subsequent removal of liquidity further exacerbated the crisis.

In Pittsburgh in 2009, reforming the broken OTC derivatives markets was made a key plank of the G20 reforms. Leaders committed to: trade reporting of all OTC derivatives; central clearing of standardised OTC derivatives; higher capital and minimum margin requirements for non-centrally cleared derivatives trades; and exchange or electronic platform trading of standardised OTC derivatives, where appropriate. Together, the purpose was to reduce systemic risk, increase transparency and curb market abuse.

The majority of FSB jurisdictions (covering over 90% of OTC derivative transactions) now have in force frameworks for determining when standardised OTC derivatives should be centrally cleared. Moreover trade reporting requirements covering over 90% of OTC derivative transactions are expected to be in force for 23 FSB jurisdictions by year end. Comprehensive trade reporting is important as it means that financial authorities can better understand emerging risks in the derivatives market.

More generally, implementation of these reforms has progressed more slowly than intended. Addressing the technical challenges to the reform of OTC derivatives markets has not been easy, and authorities continue to face a range of implementation challenges, many of which FSB members are seeking to address through both international and domestic workstreams.

These reforms have been implemented alongside measures to improve the resiliency, risk-management, and resolvability of CCPs, in order that the increase in central clearing reduces systemic risk and that these entities do not become "too-big-to-fail".

Together, with standard-setting bodies, the FSB has taken forward a workplan to address the risks posed by CCPs with a number of key reforms set to be developed and implemented in 2017. Earlier this year the FSB published a second consultation on proposed guidance on CCP resolution and resolution planning. The guidance will be finalised by mid-2017, along with resilience and recovery guidance issued by Committee on Payments and Market Infrastructures (CPMI) and the International Organisation of Securities Commissions (IOSCO).

As a whole these reforms aim to ensure that the important role of the derivatives markets in helping effective risk management can be maintained, but in the context of a simpler, safer market. The FSB, as part of its third Annual Report on the implementation and effects of the reforms, to be published ahead of the G20 leaders' Summit in July 2017, will comprehensively review members' implementation of reforms to derivatives markets and whether the package of reforms have put the right incentives and protections in place.

4I Building an open and resilient system of market-based finance

The financial system is changing to rely more on markets and less on banks. This is a major, positive development but it is also one that raises new vulnerabilities.

The financial crisis revealed how risks, which had built up outside the core banking system and without effective regulation, could have devastating effects on the real economy. Off-balance-sheet vehicles allowed enormous leverage to be masked, monoline insurers supported a system of unsustainable debts,

and banks became overly reliant on fragile short-term funding from money market funds. As the complex chains in shadow banking unravelled, a spiral of asset fire sales and liquidity strikes followed, threatening the entire financial system and withdrawing access to credit from millions of households and businesses.

In 2011, the FSB set out a comprehensive framework – the Shadow Banking Roadmap – to strengthen oversight and regulation of shadow banking. Since then, the FSB has systematically mapped the shadow banking system and developed new mechanisms to monitor and address risks. The FSB has created a system-wide monitoring framework to track developments in the non-bank financial system with a view to identifying the build-up of systemic risks and initiating corrective actions where necessary, publishing an annual Global Shadow Banking Monitoring Report.

Enhanced monitoring has been accompanied by a comprehensive series of policy actions. The policy work of the FSB and the international standard-setters has focused on five areas: (i) mitigating risks in banks' interactions with shadow banking entities; (ii) reducing the susceptibility of money market funds to runs; (iii) improving transparency and aligning the incentives in securitisation; (iv) dampening the procyclicality and other financial stability risks in securities financing transactions; and (v) assessing and mitigating financial stability risks posed by other shadow banking entities and activities. Each of these areas has been accompanied by detailed policy work that addresses these risks.

The FSB's latest assessment shows that this comprehensive policy response is moving these activities out of the shadows and into the light of resilient market-based finance. The toxic forms of shadow banking at the heart of the crisis – with their large funding mismatches, high leverage and opaque, off-balance-sheet arrangements – have declined to a point where they no longer represent a global stability risk. And the other, more constructive forms of shadow banking that were once sources of vulnerability, including money market funds and repo markets, are now subject to effective policy measures that reduce their risks and reinforce their benefits.

In tandem with these efforts, the importance of asset management has grown rapidly. In 2015, asset managers held USD 77 trillion of assets under management, making up 40% of global financial system assets – an increase from USD 54 trillion in 2005. Collective investment vehicles with run risk now account for almost two-thirds of identified shadow banking up from less than one-third prior to the crisis. The growth of asset management is positive overall. It is creating new sources of funding and investment, promoting international capital flows, reducing reliance on bank funding and bringing welcome diversity to the financial system. At the same time, however, asset management's vastly increased importance reinforces the need to minimise the risk of sudden stops in times of stress.

In January 2017, delivering on its commitment to the G20 leaders in Hangzhou, the FSB finalised its recommendations to address structural vulnerabilities and reduce liquidity mismatches associated with asset management. These recommendations will be operationalised by IOSCO with work on liquidity mismatches in open-ended funds to be completed by end-2017 and development of consistent leverage measures by end-2018.

In completing the Shadow Banking Roadmap, the FSB has not identified new shadow banking risks that currently require additional regulatory action at the global level. However, given that new forms of shadow banking activities are certain to develop in the future, FSB member authorities must maintain and continue to invest in an effective and ongoing programme of surveillance, data sharing and analysis so as to support judgements on any required regulatory response in the future.

5| Full, timely and consistent implementation of the reforms is essential

Since 2009, G20 leaders have called on the FSB to coordinate detailed monitoring of the implementation of these post-crisis reforms.

The FSB published its second Annual Report on the implementation and effects of post-crisis reforms last August. The report demonstrated that implementation has progressed steadily, though unevenly, across the four priority reform areas, and that the implemented reforms have been substantially net positive and have allowed the global financial system to cope with episodes of heightened stress and volatility. The FSB's third Annual Report on the implementation and effects of the reforms will consider these issues in more detail.

The FSB has identified three areas that merit ongoing attention as the reforms are implemented: the effects of reforms on market liquidity, on emerging market and developing economies (EMDEs), and on the maintenance of an open and integrated global financial system. While there is limited evidence of a broad deterioration in market liquidity, work is underway to assess the liquidity and depth of sovereign debt, corporate debt, and repo markets. While EMDEs have not reported any major unintended consequences from implementing the reforms in their domestic economies, there are signs of global banks reducing their presence and activities in EMDE markets. The FSB will further examine the drivers and implications of this trend. Lastly, the reforms appear to have helped avoid significant retrenchment and market fragmentation, which were common features of past financial crises. While cross-border bank lending has declined since the crisis, its structure has shifted towards more stable locally funded lending. The FSB will continue to monitor developments in all these areas.

Over the coming year the FSB will deepen its work to consider the effects of reforms. This includes further work with academics and industry participants, as we develop a structured post-implementation policy evaluation framework. The approach of dynamic implementation allows for learning-by-doing and improving reforms where new evidence comes to light.

6| Addressing new and emerging vulnerabilities

The FSB provides a forum to assess emerging vulnerabilities affecting the global financial system and to identify, within a macroprudential perspective, the regulatory and supervisory actions needed to address them. The FSB is currently considering a number of different emerging vulnerabilities, including risks from FinTech, climate-related financial risks and misconduct in financial institutions, and taking steps to mitigate them, where appropriate.

The FSB's work on FinTech is focused on harnessing the benefits while understanding any risks that might emerge, including cyber risks. The FSB is drawing out supervisory and regulatory issues raised by FinTech from a financial stability perspective, informed by a stock take of national authorities' existing and evolving regulatory approaches to FinTech activities. The FSB will also look to leverage the expertise and work of other international bodies exploring FinTech activities for financial inclusion, consumer protection, and investor protection. A report will be delivered to the G20 Summit.

The FSB's work has identified the potential of climate change to pose risk to financial stability. Access to better quality information on climate-related risks is essential to enable market participants to better understand and manage these risks. Without the necessary information, market adjustments to climate change could be incomplete, late and potentially destabilising. The private-sector industry-led FSB Task Force for Climate-related Financial Disclosures, under the leadership of Michael R. Bloomberg, was established to develop voluntary, consistent climate-related financial disclosures for use by

market participants. In December 2016, the Task Force issued its report for consultation, setting out specific disclosure recommendations, and it will publish its final report in June 2017.

In the years following the financial crisis significant issues have emerged with misconduct in financial institutions. Ethical conduct, and compliance with both the letter and spirit of applicable laws and regulations, is critical to public trust and confidence in the financial system. Cases of misconduct have threatened to undermine the safety and soundness of major financial institutions, including through financial and reputational costs. Particularly severe patterns of misconduct can damage the efficient functioning of financial markets and raise broader questions about the adequacy of corporate governance, risk management, and compensation practices.

Given the misconduct scandals identified since the crisis, the FSB has developed a workplan to address these risks. This work examines whether reforms to governance and compensation structures are having sufficient impact on reducing misconduct, and it includes efforts to improve global standards of conduct in the fixed income, commodities and currency markets; as well as steps to reform major financial benchmarks.

7| Reflecting on the reforms

A decade on from the first signs of the financial crisis, now is the right time to take stock. The G20 has made substantial progress in building a financial system that is more resilient and better able to fund households and business in a sustainable way. During recent episodes of market turbulence the financial system has continued to function effectively, by dampening rather than amplifying shocks – demonstrating some of the benefits of the agreed reforms. As the global recovery gains strength, it is important to avoid complacency. Now is not the time to risk these hard-won gains.

The FSB needs to adapt constantly as the financial system continues to evolve and new financial stability risks inevitably emerge. The development of a new structured framework for evaluating policies underscores the FSBs commitment not just to full, timely and consistent implementation, but also to dynamic evaluation of effects and effectiveness of our reforms. Based on such rigorous analysis, the FSB will propose targeted adjustments to measures, if required.

Eight years after the creation of the FSB, the fault lines of the crisis have been repaired. The financial system is now better supervised and regulated. We have built a safer, simpler, and fairer system. To avoid a repeat of the intense economic and social upheaval created by the financial crisis, the collective priorities of governments and regulators must now be to implement the agreed post-crisis reforms in a full, timely and consistent manner; to address new risks and vulnerabilities; and to continue to build an open global financial system that benefits all. In these ways, the FSB will make a lasting contribution to the objective of strong, sustainable, and balanced growth.