Promoting Global Financial Stability

2024 FSB Annual Report

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Executive summary

Long-standing financial system vulnerabilities remain.

- Asset valuations remain elevated. Recent episodes of volatility demonstrate the heightened market reaction to economic news and a tendency for markets in different jurisdictions to become highly correlated when reacting to bad news. The episodes also highlight amplification mechanisms related to liquidity and leverage, as well as interlinkages between asset and funding markets. Market valuations could be susceptible to further shocks.

- Private sector debt and property strains could spill back to the financial sector. Problems with debt repayments could lead to losses and increases in non-performing loans at banks. These problems could also spill over into investment funds, generating mark-to-market losses that, in turn, may spark redemptions and result in forced asset sales. Moreover, government debt burdens could prompt debt sustainability concerns in some jurisdictions.

- Although capital flows to emerging market and developing economies (EMDEs) have recovered since 2022, unanticipated changes in policy rate expectations or geopolitical tensions might lead to further turbulence in capital flows and exchange rates. This could induce margin calls and spikes in demand for liquidity that can lead to market strains.

Vulnerabilities from structural changes continue to emerge.

- The non-bank financial intermediation (NBFI) sector continues to grow and evolve. Private credit is growing rapidly and there is increasing evidence of its connections with the banking system and with institutional investors. Private credit funds are exposed to credit risk, leverage and liquidity vulnerabilities, but their opacity makes it difficult to assess them.

- Cyber-attacks continue and two recent operational incidents caused by faulty software that had global impacts demonstrate how operational disruptions to third-party service providers can impact the ability of financial institutions to carry out their business.

- Continually high global greenhouse gas emissions raise concerns about potential financial stability consequences. The materialisation of transition risk could lead to stranded assets and abrupt asset repricing. Physical risks are resulting in greater economic damage, which may impact institutions' ability to provide financial services in certain segments and geographies.

The FSB is working to address current and emerging vulnerabilities.

- The FSB has assessed vulnerabilities in the global financial system from the intersection of solvency and liquidity risks in an environment of higher interest rates, as a follow-up to the March 2023 banking turmoil. It has further investigated deposit runs, including by looking at the role of technology, social media, and interest rates on depositor behaviour and deposit "stickiness"; and assessed how the use of technologies may affect banks' and authorities' planning and execution of a resolution. The unprecedented speed with which the turmoil unfolded means that it is critical for authorities to react quickly during periods of stress.

- The FSB continues to prioritise work to enhance the NBFI sector's resilience. In the past year, it published revised policy recommendations to address liquidity mismatch in open-ended funds and proposed recommendations to enhance liquidity preparedness of non-bank market

participants for margin and collateral calls. A key area of current policy focus is to enhance the monitoring of, and address financial stability risks from, leverage in NBFI.

- Progress continues across the four pillars of the 2021 FSB Roadmap for addressing climate-related financial risks. The FSB also carried out a stocktake of members' supervisory and regulatory initiatives relating to nature-related financial risks.

- Good progress has been made by the FSB and partner international organisations on the cross-border payments Roadmap actions, with more than half completed, although the supporting quantitative targets in the Roadmap have not progressed as well this year.

- The FSB has issued for public consultation a format for operational incident reporting exchange (FIRE), including cyber incidents, which aims to promote common information elements while allowing for flexible implementation practices. FIRE will be finalised in 2025.

- The financial sector has long used artificial intelligence (AI) tools, but adoption has become more widespread and use cases have become more diverse in recent years. The FSB has identified third-party dependencies and service provider concentration, market correlations, cybersecurity risks and fraud, and model risk, data quality and governance as vulnerabilities that have the potential to increase systemic risk. While existing policy frameworks address many of these, more work may be needed to ensure they are sufficiently comprehensive.

- The FSB has examined the financial stability implications of tokenised assets, identifying many of the same vulnerabilities as in traditional finance. Given its small scale, tokenisation does not currently pose a material risk to financial stability but may need to be monitored.

- Over the past year, the FSB issued a new global standard to support the orderly resolution of systemically important central counterparties (CCPs) and to ensure resolution authorities have ready access to financial resources and tools to support CCP resolution.

Progress in implementing G20 reforms continues but is uneven and challenges remain (see next page).

- Member jurisdictions continue to make progress implementing the finalised Basel III reforms that were due January 2023 and have reiterated their expectation of implementation in full, consistently, and as soon as possible. However, implementation in some jurisdictions remains uncertain in timing and substance.

- Progress on developing and implementing resolution regimes for insurers is mixed, with many jurisdictions introducing legislation this year.

- The design and implementation of policies relating to NBFI continue to advance, albeit at an uneven pace across jurisdictions. It is critical to finalise and implement international reforms to enhance NBFI resilience so that market participants internalise their own liquidity risks and authorities are better prepared for stress events.

- Nearly all FSB members either have relevant frameworks in place or plans for new or revised frameworks for crypto-asset activities and global stablecoin arrangements.

Priority G20 reforms: implementation progress and challenges

Building resilient financial institutions

Main elements

- Basel III – risk-based capital, requirements for systemically important banks (SIBs), large exposures, leverage ratio, liquidity ratios, interest rate risk in the banking book and disclosures
- Compensation practices for financial institutions

Implementation progress

- Reforms agreed pre-2017 are mostly implemented consistently with the Basel Framework. Implemented reforms helped shield the banking sector during Covid-19 and the March 2023 banking turmoil
- Continued but uneven progress in implementing the final Basel III framework as agreed in 2017 which was due to take effect in 2023
- Implementation of FSB principles for sound compensation practices is advanced for banks

Key challenges and issues

- Delayed implementation and outstanding implementation issues in some jurisdictions
- Follow-up on lessons from March 2023 banking turmoil for supervisory effectiveness and regulation of aspects such as liquidity risk and interest rate risk in the banking book

Enhancing the resilience of NBFI

Main elements

- Mitigate spillovers between banks and non-bank financial entities, reduce run risk of money market funds (MMFs), align incentives for securitisation, mitigate financial stability risks from securities financing transactions (SFTs), address liquidity mismatch and leverage risks in investment funds

Implementation progress

- Implementation of Basel III reforms to mitigate bank-NBFI spillovers is well advanced
- Securitisation reforms are largely implemented but with significant jurisdictional deviations
- Uneven implementation of FSB's MMF policy proposals
- Slow progress on global SFT data collection and delays on minimum SFT haircuts

Key challenges and issues

- Implementation hampered by heterogeneity of NBFI sector, diversity of institutional frameworks and market practices, and data challenges
- Evolving NBFI reforms in light of lessons from March 2020 turmoil and other stress events (e.g. enhancing margin/liquidity preparedness)

Ending too-big-to-fail

Main elements

- Higher loss absorption, intensive supervision and enhanced resolution requirements for global systemically important financial institutions

Implementation progress

- Implementation of higher loss absorbing capacity for global systemically important banks (G-SIBs) is proceeding on a timely basis
- Almost all G-SIB home and key host jurisdictions have comprehensive bank resolution regimes in place, but key resolution powers are lacking in others

Key challenges and issues

- Lessons from March 2023 banking turmoil for operationalising bank resolution frameworks
- More work needed to implement resolution regimes for insurers and central counterparties

Making derivatives markets safer

Main elements

- Trade reporting, central clearing and platform trading frameworks, capital and margin requirements for non-centrally cleared derivatives

Implementation progress

- Implementation well advanced in most FSB jurisdictions for several years now; limited progress in other jurisdictions accounting for a low share of global market activity
- Continued progress in harmonisation of identifiers and data formats in trade reporting

Key challenges and issues

- Work continues to strengthen the resilience of financial market infrastructures
- More work needed to ensure effective use and sharing of trade repository data

1. Financial stability outlook

1.1. Long-standing vulnerabilities in the global financial system persist

- Asset valuations remain elevated, and the heightened market reaction to economic news in early August 2024 suggests that they are susceptible to further shocks. Debt is at a very high level across the government, corporate and household sectors. Debt servicing pressures and potential falls in property prices could spill over to banks and non-bank investors.

- These vulnerabilities could lead to instability if acted upon by shocks, such as unexpected and sudden changes in interest rates, a flare-up in geopolitical tensions, or domestic political events. Changing investor expectations about these events could spark exchange rate volatility and capital flow reversals in emerging economies (EMDEs).

Market valuations could be susceptible to further shocks.

- Markets experienced a sudden but short-lived bout of volatility in early August, particularly in Japan and the US (Box 1). This episode illustrates a number of long-standing concerns, including the heightened reaction that markets can have to economic news; a tendency for different markets to become highly correlated when reacting to bad news; amplification mechanisms related to liquidity and leverage; and interlinkages between asset and funding markets. It is possible that future unexpected news could lead to further market turbulence, and, in the event of a large shock, the market reaction could be more prolonged and disruptive than in the August episode.

Box 1: The episode of volatility in early August 2024

Increased investor concerns about the economic outlook precipitated a sell-off in financial markets in early August. The sell-off was reportedly exacerbated by an unwinding of yen-funded carry trades[1] following market expectations of a narrowing in the US-Japanese interest rate differential, an appreciation of the yen, and higher volatility in the yen-dollar exchange rate. The episode also involved the depreciation of other currencies, reflecting the multiple possible destinations of the carry trades.

The sell-off involved a large, but short-lived, fall in the Japanese stock market and an intraday spike in equity volatility indices in Japan and the US. Volatility was much greater than might have been expected by the decline in equity indices. This may be partly due to thin liquidity during the holiday season, coupled with concerns about escalation of the conflict in the Middle East, but it appears that technical factors associated with calculation of volatility indices and market makers' adjustments of quotes, in response to uncertain conditions, may have also played a role in the volatility spike.

Higher volatility might have induced margin calls and – in turn – an unwinding of strategies predicated on continued tranquillity in markets. The combination of margin calls and deleveraging of positions illustrated some of the concerns highlighted in previous FSB work on vulnerabilities in NBFI.

Ultimately, risk sentiment stabilised, and volatility subsided. However, the episode showed that markets remain susceptible to bouts of volatility and illustrated the potential for leverage and liquidity mismatches to interact with one another and amplify the impact on the system.

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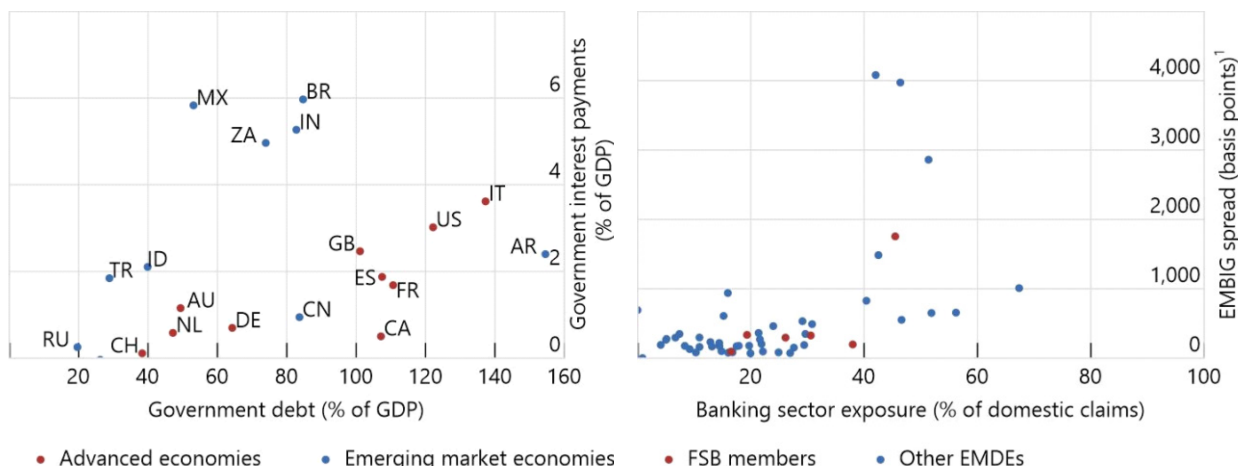
[1] See M. Aquilina et al. (2024), "The market turbulence and carry trade unwind of August 2024", *BIS Bulletin*, No. 90, August. The "carry trade" is not well defined so market participants include different strategies under this term, and data in this area is limited.

Government debt burdens could prompt sustainability concerns in some jurisdictions.

- Government debt reached unprecedented levels after the onset of the pandemic as countries sought to offset slowdowns in economic activity with increased fiscal spending. While debt-to-GDP ratios have fallen somewhat since then, debt remains at a high level (Graph 1, left-hand panel).

Government debt remains elevated in several jurisdictions — **Graph 1**

Government debt and interest payments in FSB member jurisdictions, 2023 | EMDE sovereign spreads and bank-sovereign exposures, 2024



[1] JPMorgan Chase Emerging Markets Bond Index Global (EMBIG) sub-indices, stripped spreads.

Sources: BIS; IMF; JP Morgan; FSB calculations.

- Concerns about government interest burdens partly relate to the risk of continued expansionary fiscal policies and the expected medium-term increase in government debt in many jurisdictions. This creates the potential for risk premia to rise precipitously, sparking a sharp increase in government debt costs.

- In EMDEs, some smaller and lower-income countries facing high financing costs remain vulnerable to debt distress. Sovereign pressures could lead to spikes in debt spreads and potentially spill over to banks that have large exposures to their domestic sovereign (Graph 1, right-hand panel).

Private sector debt and property strains could spill back to the financial sector.

- Debt levels and debt service ratios are also elevated in the private non-financial sector (Graph 2, left-hand panel). Household finances have so far been supported by low unemployment, increases in nominal incomes, and pandemic support packages. However, savings have been exhausted in a number of jurisdictions, and more mortgage holders may have to pay higher interest rates as existing mortgages with temporary fixed-interest periods move to floating rates. Indeed, there are already signs of stress among more vulnerable borrowers, particularly on their repayments of auto, credit card and other personal loans.

- In the corporate sector, many large businesses have high cash balances that should help them weather higher funding costs and pay down part of their debt burdens. There are, however, companies that are already facing repayment difficulties, and this is reflected in rising credit rating downgrades and corporate bond default rates.

- The real estate sector, in particular, remains a potential source of vulnerability. Commercial property prices have already fallen in several jurisdictions, and valuations – particularly of office buildings in metropolitan areas – are being challenged amid an ongoing structural decline in demand and thin transaction volumes. House prices have risen following the pandemic-related "race for space" and there are now a number of jurisdictions facing stretched housing valuations that could unwind in the event of an economic shock.

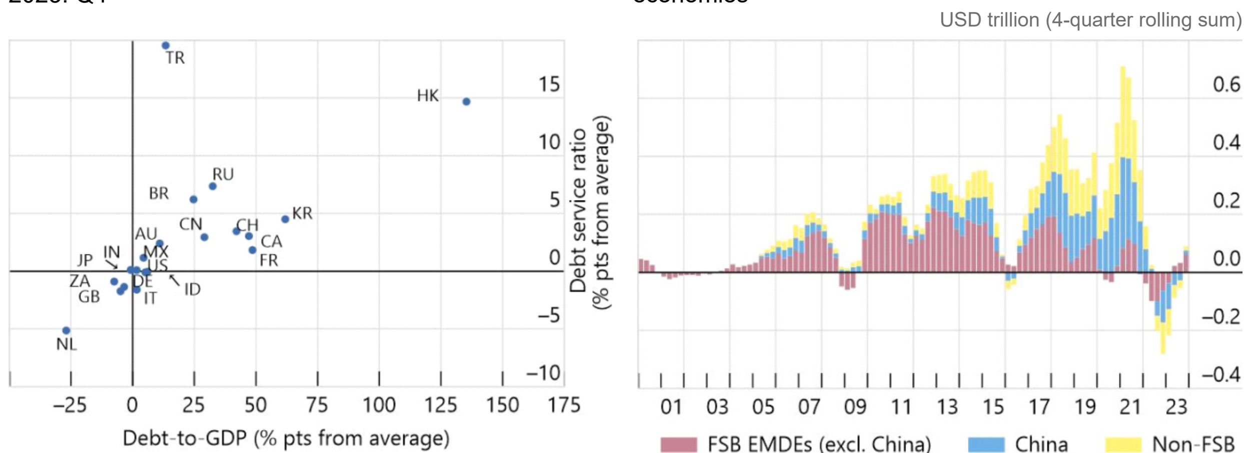
- Problems in real estate and debt repayments could lead to losses and increases in non-performing loans at banks. Challenges in the corporate and real estate sectors might also spill over to investment funds, which could face mark-to-market losses that, in turn, may spark redemptions and result in forced asset sales. Private credit funds could also face losses that might spill over to other areas in fixed income markets or other financial institutions. However, the opacity of these funds makes it difficult to assess their vulnerabilities. See Box 2 for more information on vulnerabilities in private credit.

Jurisdictions could face debt and capital flow pressures **Graph 2**

Private non-financial sector debt and debt service ratios, 2023: Q4[1]

Portfolio flows to emerging market and developing economies

USD trillion (4-quarter rolling sum)



[1] The debt service ratio is shown relative to each jurisdiction's average over the available time series. In jurisdictions with financial centres, debt levels can appear high relative to economic activity as multinational companies may issue debt there.

Sources : BIS ; IMF ; FSB calculations.

Unanticipated changes in policy rate expectations or geopolitical tensions might lead to further turbulence in capital flows and exchange rates.

- Capital flows to EMDEs have recovered since 2022 (Graph 2, right-hand panel). However, there is the potential for any sudden change in investor expectations of policy rate differentials, or a rise in geopolitical tensions, to induce rapid, and possibly disorderly, movements in capital flows and exchange rates. Higher exchange rate volatility could, in turn, induce margin calls for market participants and lead to a spike in demand for liquidity from financial institutions, something that has led to unfavourable market dynamics in the past.

Box 2: Private credit – trends and vulnerabilities

Private credit does not have a single agreed definition but typically refers to direct lending by non-banks to businesses via private negotiations, without banks acting as intermediaries. Institutional investors and high-net worth individuals are the most prevalent investors in private credit funds, although retail investors also invest in these funds in some jurisdictions, for example business development companies (BDCs) in the US. Approximately 60% of global private credit assets under management are based in North America, 30% in the United Kingdom and the European Union (EU), and 10% in the rest of the world.[2] In addition to private credit funds, some institutional investors are exposed to private credit through structured credit investments and their direct participation in lending to those businesses.

Private credit has grown rapidly in recent years, with some sources estimating global assets to be around $2 trillion.[3] Traditionally, private credit has been directed towards higher-risk unrated businesses, including highly indebted firms or small and medium-sized enterprises that may increasingly struggle to secure funding from banks[4] or public markets. As the private credit industry continues to expand, it is reaching a broader array of borrowers, including larger and more diverse companies. Private finance groups have, in some jurisdictions, built relationships with insurers to obtain access to their large asset portfolios.[5] Another recent trend is the increasing issuance of collateralised loan obligations backed by private credit.[6] Finally, there seems to be evidence of growing relationships between banks and private credit funds. Banks may originate their own deals by partnering with private credit funds and BDCs, which help them manage capital costs as loans are not consolidated in the bank's portfolio. Lending from banks to private credit funds appears to be limited, but exposure is growing at a rapid pace.[7]

Private credit funds typically hold illiquid assets but are mostly closed-ended, or cap withdrawals to certain amounts over specified time periods, which can help address liquidity mismatch. In some jurisdictions, however, funds can be open-ended, allowing for the redemption of shares monthly or less frequently.[8] The other liquidity vulnerability for the funds stems from the need to roll over funding due to leverage, although there is currently little evidence of high leverage among such funds. Private credit funds may, however, opt to call down committed capital – so-called dry powder – from investors (estimated to be approximately $500 billion),[9] which could cause liquidity pressure at the investor level.

The concentration of funds' activities on the riskiest segments of the debt market and their discretion in underwriting standards may expose them to heightened credit risk. On the other hand, the fact that the terms of private credit are agreed bilaterally, and any workouts involve fewer lenders, may mitigate the consequences of this risk. However, this type of lending has not yet been tested in a prolonged downcycle – and leverage may not be taken only at the fund level but also at the portfolio company level or by holding companies/special purpose vehicles set up for this purpose. Moreover, because private credit holdings are typically valued less frequently compared to publicly traded investments and may be subject to a range of valuations, investors may be exposed to lagged losses.

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2 BlackRock (2023), *Global Credit Outlook: 1Q2024; A Widening Divide*, December.

3 IMF (2024), *Global Financial Stability Report*, April.

4 In the past, banks typically held these loans on their own balance sheets, but have more recently started to scale back financing to these borrowers, in part due to more stringent bank capital requirements.

5 Box 1.3 in IMF (2023), *Global Financial Stability Report*, October; and IAIS (2022), *Global Insurance Market Report*, December.

6 According to some estimates, there are approximately $130 billion of outstanding US private credit CLOs; see C. Arroyo et al. (2023), "Private Credit Is So Big That It's Changing Part of a $1.3 Trillion Market", *Bloomberg*, July.

7 F. Cai and S. Haque (2024), "Private Credit: Characteristics and Risks", *FEDS Notes*, Board of Governors of the Federal Reserve System, February.

8 ECB (2024), *Financial Stability Review*, May.

9 R Wigglesworth (2023), *The private credit 'golden moment'*, Financial Times, July.

Depending on jurisdiction and fund type, private credit entities can have considerably fewer reporting obligations than, for example, publicly listed or registered funds. Comprehensive data are lacking on financing by private credit funds or on the characteristics of their borrowers (leverage) and the default risk in private credit portfolios,[10] as well as on the extent of the interconnections among those funds and banks or other institutional investors such as insurers and pension funds.

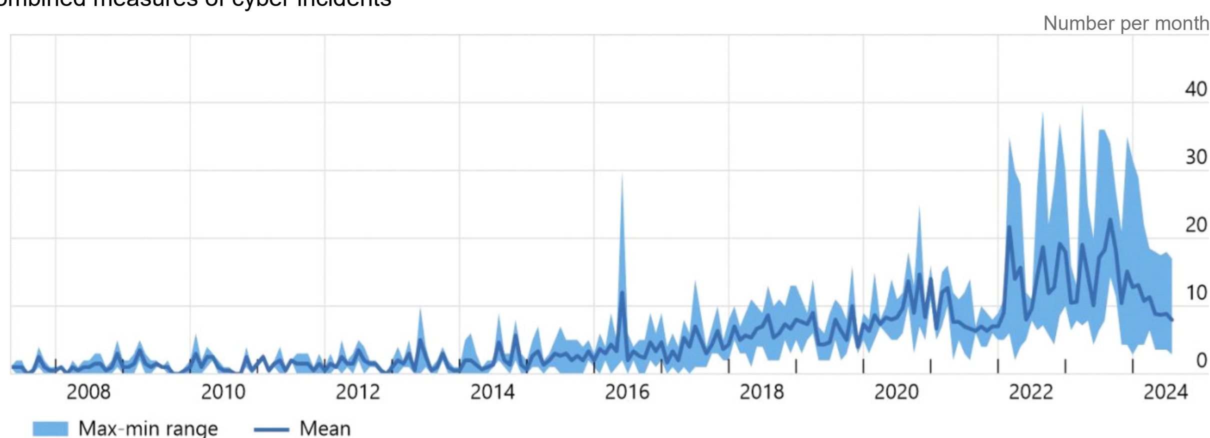
1.2. Vulnerabilities from structural changes continue to emerge

Digitalisation of the financial system and ongoing technological advances contribute to greater complexity and interconnectedness, adding to operational vulnerabilities.

- Cyber-attacks continue at a high rate (see Graph 3). A successful cyber-attack affecting a systemically important financial institution could disrupt services, undermine public trust, and have severe economic and reputational implications. A high degree of interconnection between financial intermediaries and with third-party providers means that such events can propagate widely.

Cyber-attacks remain an important challenge **Graph 3**

Combined measures of cyber incidents[1]



[1] The combined measure shows the max-min range and mean across three different indicators of cyber incidents. These indicators are based on: (1) University of Maryland CISSM cyber-attacks database showing attacks on the finance industry; (2) CSIS timeline of significant cyber incidents (not specific to the financial industry); and (3) Carnegie Endowment timeline of cyber incidents involving financial institutions.

Sources: Carnegie Endowment; CSIS; Harry & Gallagher (2018) with updated data; University of Maryland CISSM cyber-attacks database; FSB calculations.

- Operational failures can have an impact similar to that of cyber-attacks. Two recent operational incidents that were caused by faulty software show that operational disruptions to third-party service providers could impact the ability of many financial institutions to carry out their core business (Box 3). Increasing resilience to such events may be challenging, not only because certain services are provided by a limited number of firms,[11] but also because there may be a lack of substitutability and interoperability that constrains the use of multiple services.

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[10] See IOSCO (2023), *Thematic Analysis: Emerging Risks in Private Finance*, September.

[11] Sub-contracting by third-party service providers can further increase the concentration risk in areas where only a few firms dominate a particular market.

Box 3: Recent operational disruptions affecting the financial system

An outage at Swift took place for several hours on 18 July 2024 and disrupted high-value transactions across Europe. In the United Kingdom, the Bank of England said it had suffered a temporary outage to its Clearing House Automated Payment System service that delayed some high-value and time-sensitive payments, including some house purchases. In the euro area, the European Central Bank said its settlements system was affected by the outage and the cutoff times of some operations of its T2 real-time gross settlement system were delayed. Swift services resumed to normal on the same day, after what was characterised as an "operational incident."

The next day, another (unrelated) outage took place and affected companies across the world. This outage was due to a security update from the company CrowdStrike, a provider of cybersecurity services, which caused a problem with Microsoft Windows. Several global banks, brokers, and financial technology companies were affected, in addition to many non-financial firms and government agencies, in what looks to have been one of the biggest information technology failures on record.

- There are a number of examples of emerging vulnerabilities linked to new technologies. First, the use of artificial intelligence (AI) can amplify contagion and herding. Financial intermediaries could come to rely on similar models and data aggregators that are trained on similar data and therefore generate similar actions, including in a crisis (see section 2.5). Second, the entry of new types of financial service providers, such as big tech and fintech firms, may challenge the profitability of incumbent institutions. Third, the use of foreign currency pegged global stablecoins could pose significant challenges to financial stability in some EMDEs by destabilising financial flows and straining fiscal resources.[12]

Continually high global greenhouse gas emissions raise concerns about the potential financial stability consequences of transition and physical risks.

- Global greenhouse gas emissions are projected to increase significantly by 2030 under current national plans and there is a widening gap between climate goals and the actions being taken globally.[13] Abrupt government action to bring policies more into line with the goal of limiting global warming, or changes in investor expectations or preferences, could result in the materialisation of transition risk and stranded assets, with deteriorating financial conditions for certain borrowers.[14] Such policies could also trigger an abrupt repricing of assets in financial markets that could spread across sectors, given interdependencies among financial institutions and other investors. Recent analytical work gives an indication of the potential magnitude of this risk and some of the transmission channels,[15] although the timing and form of such impacts remain highly uncertain.

- Physical risks are resulting in greater economic damage, which raises concerns over institutions' ability to continue to provide financial services in certain segments and geographies. The global macroeconomic effects of climate-related natural disasters have remained limited to date, partly due to their localised impacts and the reliance (primarily in

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[12] See FSB (2024), *Cross-border Regulatory and Supervisory Issues of Global Stablecoin Arrangements in EMDEs*, July.

[13] See United Nations (2023), *World massively off track to limiting global warming to 1.5C*, press release, November.

[14] See NGFS (2023), *Conceptual note on short-term climate scenarios*, October.

[15] See, for example, Bank of Japan and JFSA (2024), *Climate-related scenario analysis*, May; Bundesbank (2023), *Financial Stability Review 2023*, November; ECB (2024), *Risks from misalignment of banks' financing with the EU climate objectives*, January; ACPR (2024), *Main results of the climate exercise for the insurance sector*, May; and R. Rebonato et al. (2024), *How Does Climate Risk Affect Global Equity Valuations? A Novel Approach*, EDHEC-Risk Climate Impact Institute, EDHEC Business School, July.

advanced economies) on insurance as a risk mitigation tool. However, as climate change intensifies, the impacts of chronic physical risks such as sea level rise and heat stress may be increasingly hard or impossible to insure. Availability and affordability of natural catastrophe insurance in vulnerable areas are being impacted due to increasing frequency and severity of natural catastrophe events, raising concerns about possible effects on the financial system. There have already been various instances in which insurers have pulled out of market segments, reduced coverage or raised premiums, while reinsurers are seeing some climate-related events becoming uninsurable.[16]

2. Priority areas of work and new initiatives in 2024

- The FSB is carrying out policy work to foster global financial stability in response to new and emerging risks, and to enhance the functioning of G20 reforms introduced since the 2008 global financial crisis (GFC). Key priorities include addressing lessons from the March 2023 banking turmoil; enhancing the resilience of NBFI; addressing financial risks from climate change; improving cross-border payments; responding to technological innovation; and enhancing the resolvability of central counterparties.

2.1. Addressing lessons from the March 2023 banking turmoil

The FSB and the Basel Committee on Banking Supervision (BCBS) have continued their work on the March 2023 banking turmoil.

- The FSB has assessed vulnerabilities in the global financial system stemming from the intersection of solvency and liquidity risks in an environment of higher interest rates. It has further investigated deposit runs, including by looking at the role of technology, social media, and interest rates on depositor behaviour and trends in deposit "stickiness" (see Box 4 for details). The FSB has also assessed how the use of technology may affect the planning and execution of a bank resolution.

- BCBS analysis of the March 2023 banking turmoil found fundamental shortcomings in bank risk management practices and governance arrangements.[17] In response, the BCBS has prioritised further work to strengthen supervisory tools and practices. Key areas of focus will be assessing the viability of banks' business models, bank governance and risk management practices, and the supervision of interest rate risk in the banking book and liquidity risk. The BCBS is also pursuing additional analytical work based on empirical evidence to assess whether specific features of the Basel Framework performed as intended during the turmoil and assessing the need to explore policy options over the medium term. The BCBS has assessed whether specific features of the Basel liquidity standards performed as intended during the turmoil.[18] Whilst the evidence examined highlighted specific dynamics of liquidity risk for certain banks and some jurisdictions, more generalised conclusions were not drawn. The BCBS noted that the scale and scope of public

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[16] See, for example, Sastry et al. (2024) *When Insurers Exit: Climate Losses, Fragile Insurers, and Mortgage Markets*, January; and Keys and Mulder (2024), *Property Insurance and Disaster Risk: new Evidence from Mortgage Escrow Data*, June.

[17] BCBS (2023), *Report on the 2023 banking turmoil*, October.

[18] BCBS (2024), *The 2023 banking turmoil and liquidity risk: a progress report*, October.

support measures may have affected the subsequent crystallisation of liquidity risk and the peak of the turmoil was limited to a few jurisdictions. The importance of strong supervision and monitoring practices remains critical.

Box 4: Follow-up work on the March 2023 banking turmoil[19]

While the March 2023 turmoil was generally limited to banks, other types of financial institutions may have similar vulnerabilities in an environment of rising rates. To this end, the FSB assessed entities across the global financial system that may be exposed to the confluence of solvency and liquidity risks. The analysis found that life insurers, non-bank real estate investors and a weak tail of banks were most exposed to these risks at the current juncture. This is because these entity types typically have a high proportion of interest rate-sensitive assets and liabilities and are affected by higher rates through various solvency and liquidity risk channels. These entities also have funding, loan and investment linkages with the rest of the financial system and with the real economy, meaning that any shocks to these entities can propagate across the system. Further work to assess the identified vulnerabilities in these types of entities is being undertaken by the FSB and relevant standard-setting bodies.

The FSB also analysed past and recent deposit run episodes in FSB member jurisdictions. The speed of the recent runs was very high on average and unprecedented in some cases. Furthermore, the implications of technological developments and social media for deposit stickiness suggest that there could be more such runs in the future. This raises issues about risk management practices and liquidity supervision, as it implies that bank managers, supervisors, and central banks may need to be able to react much more quickly to deposit outflows than in the past. In a few of the recent cases, the speed and magnitude of deposit outflows was so extreme that no amount of liquidity would have prevented the crisis. This implies that bank managers, regulators, and supervisors need to focus on ways to address the liquidity and solvency vulnerabilities that give rise to such extreme outflows. At the system level, deposit-related vulnerabilities metrics may need to be developed for financial stability surveillance, with a focus on concentration measures and uninsured deposits.

Social media have the potential to spread false information and rumours about financial institutions. Banks and authorities may wish to consider whether monitoring social media could be helpful in flagging potential stress at a bank or wider turmoil that might affect banks. At the same time, authorities need to be aware of the limitations in monitoring social media, including imperfect information, technical, capacity, expertise and resource constraints, and concerns about privacy protection.

The analysis has also found various data gaps across jurisdictions, e.g. on the availability of public information on unrealised losses on bank securities portfolios, uninsured deposits, and the composition of the deposit base. Consideration could be given to collecting and publishing information in these areas, although the costs of this would need to be weighed against the benefits.

The March 2023 bank failures and the possibility of further rapid deposit runs in the future raise challenges for authorities relating to the planning and execution of resolution.

- The banking turmoil in 2023 showed that while the overall crisis management policy framework of the *Key Attributes of Effective Resolution Regimes for Financial Institutions*[20] is adequate, further work is needed to promote its consistent and effective implementation

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[19] FSB (2024), *Depositor Behaviour and Interest Rate and Liquidity Risks in the Financial System – Lessons from the March 2023 banking turmoil*, October.

[20] FSB (2024), *Key Attributes of Effective Resolution Regimes for Financial Institutions (revised version 2024)*, April.

and operationalisation.[21] A significant area of focus for the FSB in 2024 was supporting the effectiveness of a crisis framework for the banking sector.

- In the event that a global systemically important bank (G-SIB) fails, the ability of an authority to effectively implement resolution in a cross-border context is essential. Increased efforts are needed to ensure the effective execution of bail-in powers in a cross-border context. The FSB worked to enhance the common understanding of existing approaches to recognition of resolution measures across jurisdictions. It also fostered a shared understanding of the impact of securities laws and disclosure and reporting requirements for the execution of bail-in conversion in a cross-border context.

- The FSB explored existing public sector backstop funding mechanisms across jurisdictions to analyse their key features in the context of ensuring effective and orderly resolution while minimising moral hazard issues. Effective public sector backstop funding mechanisms, prudently used, are important to support an effective and orderly resolution while minimising moral hazard. As a last resort, temporary public sector funding in resolution can be provided by a mix of ordinary, emergency, and resolution-specific funding mechanisms. For public sector backstop funding mechanisms to be effective, authorities need to establish a process in advance. Banks need to prepare operationally to use them. The FSB will continue to provide a forum for sharing information and practices in this important area.

- The FSB examined issues around the identification of banks that could be systemically significant or critical if they fail,[22] and emphasised the importance of resolution preparedness and loss-absorbing capacity for such banks.[23]

- The bank failures in 2023 underscore the need for optionality in responding to distress and failure events. While bail-in remains the primary tool for resolution of a G-SIB, resolution transfer tools can support the orderly resolution of a bank systemic in failure and increase optionality. The FSB is undertaking additional work to support resolution authorities and banks in further operationalising resolution transfer tools.

2.2. Strengthening the resilience of NBFI

The FSB is coordinating work to assess and address systemic risk in NBFI.

- The NBFI sector has grown to almost half of global financial assets and become more diverse.[24] As a result, the importance of NBFI for the financing of the real economy has increased. However, the experience of the GFC in 2008, the March 2020 turmoil, and more recent episodes of market stress demonstrated that NBFI can create or amplify systemic risk and underscored the need for policy measures to enhance the sector's resilience.

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[21] FSB (2023), *2023 Bank Failures: Preliminary lessons learnt for resolution*, October.

[22] FSB (2024), *Key Attributes of Effective Resolution Regimes for Financial Institutions (revised version 2024)*, April. The Key Attributes were adopted by the FSB Plenary in October 2011 and endorsed by the G20 Heads of State and Government as "a new international standard for resolution regimes" at the Cannes Summit in November 2011.

[23] FSB (2024), *The importance of resolution planning and loss-absorbing capacity for banks systemic in failure: Public statement*, November.

[24] See FSB (2023), *Global Monitoring Report on non-bank financial intermediation 2023*, December.

- Enhancing NBFI resilience is intended to ensure a more stable provision of financing to the economy and reduce the need for extraordinary central bank interventions. The aim of policies of the FSB and standard-setting bodies (SSBs) has been to reduce excessive spikes in demand for liquidity; enhance the resilience of liquidity supply during periods of stress; and enhance risk monitoring and the preparedness of authorities and market participants. To date, these policies have largely involved repurposing existing policy tools rather than creating new ones, given the policy toolkit already available.[25]

A number of NBFI policy deliverables have already been agreed upon, including enhancing money market fund (MMF) resilience and addressing liquidity mismatch in open-ended funds (OEFs).

- In 2021, the FSB published policy proposals to address MMF vulnerabilities by imposing on redeeming investors the cost of their redemptions; enhancing the ability to absorb credit losses; addressing regulatory thresholds that may give rise to cliff effects; and reducing liquidity transformation.

- In December 2023, the FSB published revised policy recommendations to address liquidity mismatch in OEFs,[26] complemented by new International Organization of Securities Commissions (IOSCO) guidance on anti-dilution liquidity management tools.[27] The goal of these recommendations, combined with the new IOSCO guidance, is a significant strengthening of liquidity management by OEF managers compared with current practices. The FSB is also developing a toolkit that authorities can use within their domestic frameworks to monitor these vulnerabilities.

Current key areas of policy focus are to enhance margining practices and liquidity preparedness, and to address financial stability risks from leverage in NBFI.

- The objective of the non-bank leverage work is to (i) enhance authorities' and market participants' ability to monitor vulnerabilities from NBFI leverage; (ii) contain NBFI leverage where it is likely to create risks to financial stability; and (iii) mitigate, in coordination with SSBs, the financial stability consequences of NBFI leverage. Accordingly, by early 2025 the FSB will publish a consultation report with proposed policy recommendations for authorities to monitor vulnerabilities and use policy measures to address systemic risk from NBFI leverage.

- Following up on the findings of a review of the March 2020 experience,[28] the FSB, BCBS, the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI), and IOSCO are developing recommendations and best practices to enhance margining practices in centrally and non-centrally cleared markets.

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[25] FSB (2024), *Enhancing the Resilience of Non-Bank Financial Intermediation: Progress report*, July.

[26] FSB (2023), *Revised Policy Recommendations to Address Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds*, December. These recommendations supersede the relevant part of FSB (2017), *Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities*, January.

[27] IOSCO (2023), *Anti-dilution Liquidity Management Tools – Guidance for Effective Implementation of the Recommendations for Liquidity Risk Management for Collective Investment Schemes: Final Report*, December.

[28] See BCBS, CPMI and IOSCO (2022), *Review of margining practices*, September.

- In April 2024, the FSB published a consultation report with cross-sectoral, high-level policy recommendations on liquidity preparedness for margin and collateral calls.[29] The aim of the proposed recommendations is to reduce the excessive procyclical behaviour of some non-bank market participants in response to margin and collateral calls during times of market-wide stress. The final report will be published in December 2024.

- Complementing this work, the BCBS, CPMI, and IOSCO launched two consultation reports and issued a discussion paper in early 2024 on transparency and responsiveness of initial margin (IM) in centrally cleared markets; streamlining variation margin (VM) processes and the responsiveness of IM models in non-centrally cleared markets; and streamlining VM in centrally cleared markets.[30] The BCBS, CPMI and IOSCO intend to finalise these reports by end-2024.

The FSB will continue to work with SSBs to address systemic risk in NBFI.

- The work is structured into vulnerabilities assessments, policy development, and implementation monitoring and evaluations. It includes sharing experiences and lessons on the design and use of policy tools in FSB jurisdictions to address systemic risk in NBFI and understanding better and considering how to address common NBFI data challenges that have been identified through the FSB's data work on OEFs, margin preparedness and leverage. This will help the FSB assess, in due course, whether collectively the reforms have sufficiently addressed systemic risk in NBFI, including whether additional tools are required.

2.3. Addressing financial risks from climate change

At the request of the G20 Presidency, the FSB conducted a stocktake of FSB members' supervisory and regulatory initiatives relating to nature-based risks.[31]

- The stocktake found that financial authorities are at different stages of evaluating the relevance of financial risks from biodiversity loss and other nature-related risks, with approaches varying in part due to differing mandates. Analytical work faces major data and modelling challenges to connect nature risks with financial exposures and to translate estimates of financial exposures into measures of financial risk. Regulatory and supervisory work is at an early stage globally, with diverse approaches across jurisdictions.

Progress continues to be made across the four pillars of the 2021 FSB Roadmap for addressing climate-related financial risks, which was endorsed by the G20.

- The Roadmap addressed the need for coordinated work by outlining actions to be taken by the FSB, SSBs, and international organisations (IOs) over a multi-year period in four areas:

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[29] FSB (2024), *Liquidity Preparedness for Margin and Collateral Calls: Consultation report*, April.

[30] BCBS, CPMI and IOSCO (2024), *Transparency and responsiveness of initial margin in centrally cleared markets: review and policy proposals*, January; BCBS and IOSCO (2024), *Streamlining VM processes and IM responsiveness of margin models in non-centrally cleared markets*, January; and CPMI and IOSCO (2024), *Streamlining variation margin in centrally cleared markets – examples of effective practices*, February.

[31] FSB (2024), *Stocktake on nature-related risks: Supervisory and regulatory approaches and perspectives on financial risk*, July.

firm-level disclosures, data, vulnerabilities analysis, and regulatory and supervisory practices and tools.[32]

- On firm-level disclosures, the focus now is on jurisdictional implementation of the International Sustainability Standards Board (ISSB)'s inaugural standards – International Financial Reporting Standards (IFRS) S1 and IFRS S2.[33] Efforts are also underway on capacity building, particularly in EMDEs; interoperability of the ISSB standards with other disclosure frameworks; finalisation of sustainability assurance and ethics standards; and connectivity between sustainability-related disclosures and financial reporting.[34]
- On data, there is a wide variety of official and private sector initiatives to improve climate data by addressing coverage, granularity, accessibility, comparability, and reliability issues.
- On vulnerabilities analysis, work is underway to develop forward-looking metrics and climate scenarios and to better understand the transmission of climate shocks (see below).
- On regulatory and supervisory practices and tools, the SSBs are developing expectations and guidance in their respective sectors by integrating climate risks into existing risk classification and risk management frameworks. Work is also ongoing by various bodies on transition planning and transition plans of financial institutions and non-financial firms.

The FSB is continuing work to assess climate-related vulnerabilities and to enhance supervisory and regulatory practices.

- The FSB has developed a conceptual framework to assess physical and transition climate risks and an analytical toolkit with forward-looking indicators on climate vulnerabilities. It has also begun to examine specific climate vulnerabilities through analytical deep dives, such as on physical risks in real estate markets and insurance protection gaps.
- The FSB examined the relevance of transition plans and transition planning by financial and non-financial firms for financial stability, including the role they could play in providing information for monitoring climate-related financial risks and vulnerabilities.
- The FSB also discussed progress and challenges in implementing its recommendations on supervisory and regulatory approaches to climate-related risks (Box 5).

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[32] FSB (2023), *FSB Roadmap for Addressing Financial Risks from Climate Change: 2023 Progress Report*, July. The next progress report will be published in 2025.

[33] IFRS S1 sets out the general requirements for a complete set of sustainability-related financial disclosures. It is designed to be applied in conjunction with IFRS S2, which is a topic-based standard that specifies disclosures relating to climate.

[34] FSB (2024), *Achieving Consistent and Comparable Climate-Related Disclosures: 2024 progress report*, November.

Box 5: Implementation of the FSB recommendations on supervisory and regulatory approaches to climate-related risks – progress and challenges

The recommendations aim to assist supervisory and regulatory authorities in developing their approaches to monitoring, managing, and mitigating risks arising from climate change and to promote consistent approaches across sectors and jurisdictions.[35]

There has been progress on the supervisory and regulatory reporting and collection of climate-related data following the introduction of the ISSB standards, supplemented by the development of data repositories.[36] To strengthen the reliability of climate-related data, some authorities have taken steps to enhance governance, processes, and controls around risk data and reporting. However, data gaps relating to the level of granularity, comparability, and consistency continue to persist. Where there is uneven coverage or a lack of granularity and reliability of climate data, the ability to use data to inform supervisory reporting and risk assessments of financial institutions is limited.

Less progress has been made in developing system-wide views for supervisory and regulatory approaches to address climate-related risks. Analytical exercises are commonly used to identify risks, but it has proven challenging to look at these risks in aggregate and factor in system-wide aspects such as risk transfers between financial sectors and feedback loops between the financial system and the real economy. Some authorities have explicitly modelled second-round effects, while others have relied on gathering qualitative responses from financial institutions to identify such interactions. There are also difficulties in taking account of financial risks other than credit and market risks, such as liquidity and insurance (underwriting) risks, because of data gaps and methodological challenges that limit the ability to account for these channels. More work is needed for the findings of these analytical exercises to inform the effectiveness of macroprudential frameworks to address the build-up of climate-related risks.

Many FSB jurisdictions are conducting scenario analysis and stress testing exercises to incorporate material climate-related shocks to the financial system and their potential impact on financial institutions. In line with the findings of the Network for Greening the Financial System (NGFS)-FSB joint report,[37] the focus has been on transition and physical risks and many authorities use NGFS scenarios (off-the-shelf or customised to reflect jurisdictional specificities) for modelling these risks. However, the approaches may not account for the interplay between physical, transition, and liability risks across the financial system in their definitions and modelling approaches. Peer learning on good practices in climate scenario stress testing, including on physical risk, transition risk and related innovations will be of benefit.

2.4. Improving cross-border payments

The FSB, in coordination with the CPMI, IOs, and other SSBs, is leading efforts to implement the Roadmap for enhancing cross-border payments.[38]

- The Roadmap, endorsed by the G20 in 2020, aims to address the high costs, low speed, limited access, and insufficient transparency of cross-border payments.
- Enhancing cross-border payments requires addressing a number of frictions in existing processes, such as frictions arising from fragmented regulatory and supervisory frameworks

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[35] FSB (2022), *Supervisory and Regulatory Approaches to Climate-related Risks: Final report*, October.

[36] See, for example, the Net Zero Data Public Utility and the IMF's G20 Data Gaps Initiative.

[37] FSB-NGFS (2022), *Climate Scenario Analysis by Jurisdictions: Initial findings and lessons*, November.

[38] FSB (2020), *Enhancing Cross-border Payments: Stage 3 roadmap*, October.

or a lack of interoperability in payment systems, while maintaining the safety and security of cross-border payments.

- In 2023, the FSB published a Prioritised Roadmap,[39] which focuses on 15 priority actions across three themes: payment system interoperability and extension; legal, regulatory, and supervisory frameworks; and cross-border data exchange and message standards.

- The G20 also endorsed a set of quantitative targets that define the ambition of the Roadmap programme and facilitate accountability. The FSB reports on progress toward the targets by monitoring key performance indicators (KPIs) on an annual basis. It is recognised that it will take time for changes occurring in the industry to be reflected in the KPIs.[40]

More than half of the Roadmap's priority actions have been completed.

- The FSB made good progress this year with priority actions intended to address fundamental legal, regulatory, and supervisory frictions in cross-border payments.[41] This includes issues related to data-sharing and to the uneven playing field resulting from the inconsistent supervision and regulation of banks and non-bank payment service providers. The FSB expects to finalise policy recommendations to address these frictions by year-end.[42]

- Strong progress has been made in priority actions relating to key foundational areas for cross-border payments, such as developing harmonised ISO 20022 data requirements,[43] considering the extension of operating hours, developing recommendations for harmonised application programming interfaces in cross-border payments,[44] and setting out key decisions for the governance of interlinking of fast payment systems and developing recommendations for their oversight.[45]

While implementation of the Roadmap continues apace, it will take more time for the efforts to date to show improvements in KPIs.

- The FSB published its second annual estimate of KPIs, which indicates that significant progress will be needed to move towards the G20 targets across all market segments: wholesale, retail, and remittances.[46]

- Consistent with the 2023 KPI monitoring results, there are differences across regions and corridors. Some regions continue to face greater challenges, particularly in meeting the

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[39] FSB (2023), *G20 Roadmap for Enhancing Cross-border Payments: Priority actions for achieving the G20 targets*, February.

[40] FSB (2022) *Developing the Implementation Approach for the Cross-Border Payments Targets: Final report*, November.

[41] FSB (2024), *G20 Roadmap for Enhancing Cross-border Payments: Consolidated progress report for 2024* October.

[42] In July 2024, the FSB published two consultative reports which will be finalised in December 2024. See FSB (2024), *Recommendations to Promote Alignment and Interoperability Across Data Frameworks Related to Cross-border Payments: Consultation report*, July; and FSB (2024), *Recommendations for Regulating and Supervising Bank and Non-bank Payment Service Providers Offering Cross-border Payment Services: Consultation report*, July.

[43] CPMI (2023), *Harmonised ISO 20022 data requirements for enhancing cross-border payments – final report*, October.

[44] CPMI (2024), *Promoting the harmonisation of application programming interfaces to enhance cross-border payments: recommendations and toolkit*, October.

[45] CPMI (2024), *Linking fast payment systems across borders: governance and oversight – final report,* October.

[46] FSB (2024), *Annual Progress Report on Meeting the Targets for Cross-border Payments: 2024 Report on Key Performance Indicators*, October.

targets for cost and speed. Further engagement with these regions will be key to identify and understand better the factors hindering progress towards the targets to determine what efforts would yield the most benefits to these regions.

- The FSB and partner organisations will continue to monitor progress and will evaluate whether further steps (by the public and private sectors) might be required.

2.5. Responding to the challenges of technological innovation

Cyber threats remain elevated in an environment of digital transformation, increased dependencies on third-party service providers, and geopolitical tensions.

- The recent global CrowdStrike-related outage exemplified the need for effective capabilities to respond to, and recover from, disruptive events and how the failure of a third-party service provider can have spillover effects across borders and sectors (Box 3).

- Efficient and effective response to and recovery from incidents is essential to limiting related financial stability risks. Greater harmonisation of regulatory reporting supports firms' efficient incident response and recovery, as well as effective supervision and cooperation among authorities.

- The FSB has issued for public consultation a format for operational incident reporting exchange (FIRE), including cyber incidents which aims to promote common information elements for incident reporting while allowing for flexible implementation practices.[47]

- The FSB has published its policy toolkit for financial authorities, institutions, and service providers to enhance third-party risk management and oversight.[48] This toolkit aims to reduce fragmentation in regulatory and supervisory approaches to third-party risk management across jurisdictions and different areas of the financial services sector; strengthen financial institutions' ability to manage third-party risks and financial authorities' ability to monitor and strengthen the resilience of the financial system; and facilitate coordination among financial authorities, financial institutions, and third-party service providers.

The FSB has examined the financial stability implications of the tokenisation of assets.[49]

- Tokenisation, in the context of the FSB report, refers to a process that involves utilising new technologies, such as distributed ledger technology (DLT), to issue or represent assets in digital forms known as tokens. The report focuses on the tokenisation of financial assets.

- The limited publicly available data on tokenisation suggest that its adoption is very low but appears to be growing. Given its small scale, tokenisation does not currently pose a material risk to financial stability. However, the FSB identified several vulnerabilities of DLT-based

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[47] FSB (2024), *Format for Incident Reporting Exchange (FIRE): Consultation Report*, October.

[48] FSB (2023), *Final report on enhancing third-party risk management and oversight – a toolkit for financial institutions and financial authorities*, December.

[49] FSB (2024), *The financial stability implications of tokenisation*, October. See also BIS-CPMI (2024), *Tokenisation in the context of money and other assets: concepts and implications for central banks*, October.

tokenisation relating to the underlying reference asset that has been tokenised; the participants in tokenisation projects; and new technology as well as its interaction with legacy systems. Taken together, these factors can amplify many of the same vulnerabilities as in traditional finance – such as liquidity or operational vulnerabilities – although they may play out differently depending on design choices, adoption, and scale of initiatives.

- In light of these findings and the rapid evolution of technologies that facilitate DLT-based tokenisation, the report identifies initial issues for the FSB, SSBs, and national authorities. These include considering ways to address data and information gaps in monitoring the adoption of tokenisation as well as to increase understanding of how tokenisation fits into legal and regulatory frameworks and supervisory approaches; and continuing to facilitate cross-border regulatory and supervisory information-sharing on tokenisation.

The fast pace of innovation and AI integration in financial services in recent years, along with limited data on AI usage, poses challenges for monitoring vulnerabilities.[50]

- The financial sector has long used AI tools, but adoption has become more widespread and use cases have become more diverse in recent years. Most use cases focus on enhancing internal operations and improving regulatory compliance, though generative AI (GenAI) and large language models have also given rise to new use cases, such as document summarisation, information retrieval, and code generation. Financial institutions appear to be taking a cautious approach to GenAI usage at present, though interest is high and the technology's accessibility could facilitate its more rapid integration in financial services.
- AI has the potential to improve operational efficiency, enhance regulatory compliance, and provide more personalised financial products and advanced data and analytics capabilities. However, it may also amplify third-party dependencies and service provider concentration, market correlations, cybersecurity risks and fraud, and model risk, data quality and governance. These vulnerabilities stand out for their potential to increase systemic risk.
- While existing policy frameworks address many of these vulnerabilities, more work may be needed to ensure that these frameworks are sufficiently comprehensive. To this end, the FSB report suggests addressing data and information gaps in monitoring AI developments; assessing whether current frameworks adequately address the identified vulnerabilities; and considering ways to enhance regulatory and supervisory capabilities for AI in finance.

2.6. Enhancing the resolvability of central counterparties

The FSB introduced a new global standard to support an orderly resolution of systemically important CCPs[51]

- The new global standard aims to ensure that resolution authorities have ready access to a set of resolution-specific financial resources and tools, as well as any unused recovery

[50] FSB (2024), *The Financial Stability Implications of Artificial Intelligence*, November.

[51] FSB (2024), *Financial Resources and Tools for Central Counterparty Resolution*, April.

resources, to support the orderly resolution of a CCP, and that they make their approach to calibrating the resolution-specific resources and tools transparent.

- The standard requires that adequate liquidity, loss-absorbing and recapitalisation resources and tools are available to maintain the continuity of a CCP's critical functions and mitigate adverse effects on financial stability.
- The FSB will monitor implementation for CCPs that are systemically important in more than one jurisdiction through its resolvability assessment process for CCPs. The next exercise will be conducted in 2025 and will encompass the requirements of the new standard for those CCPs.

3. Implementation and effects of reforms

3.1. Building resilient financial institutions

The implemented Basel III reforms helped shield the global banking sector and real economy from a more severe banking crisis during the March 2023 banking turmoil.[52]

- The turmoil again highlighted the importance of prudent regulatory standards and effective supervision and reinforced the conclusions of the BCBS in its December 2022 holistic evaluation which found that the Basel III reforms have been an important driver of improving overall bank resilience. No evidence of negative side effects from the reforms on banks' lending and capital costs were found.[53]
- Following up on its analysis of the March 2023 events, the BCBS has been pursuing additional analytical work based on empirical evidence to assess whether specific features of the Basel Framework performed as intended during the turmoil, such as its standards on interest rate risk in the banking book and liquidity risk (see Section 2.1).
- The events of March 2023 also underlined the importance of implementing all aspects of the Basel III framework in full, consistently, and as soon as possible. BCBS members have reiterated their expectation of implementing the finalised Basel III post-crisis reforms.[54]

Member jurisdictions made significant progress last year in implementing the outstanding Basel III standards, although the pace of implementation has been uneven across jurisdictions.

- As of September 2024, the full set of final Basel III standards are in force in one quarter of FSB member jurisdictions (see Graph 4).[55] A further third of FSB member jurisdictions have

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[52] BCBS (2023), *Report on the 2023 banking turmoil*, October.

[53] BCBS (2022) *Evaluation of the impact and efficacy of the Basel III reforms*, December.

[54] BCBS (2024), *Governors and Heads of Supervision reiterate commitment to Basel III implementation and provide update on cryptoasset standard*, press release, May and RCAP: Basel III implementation dashboard.

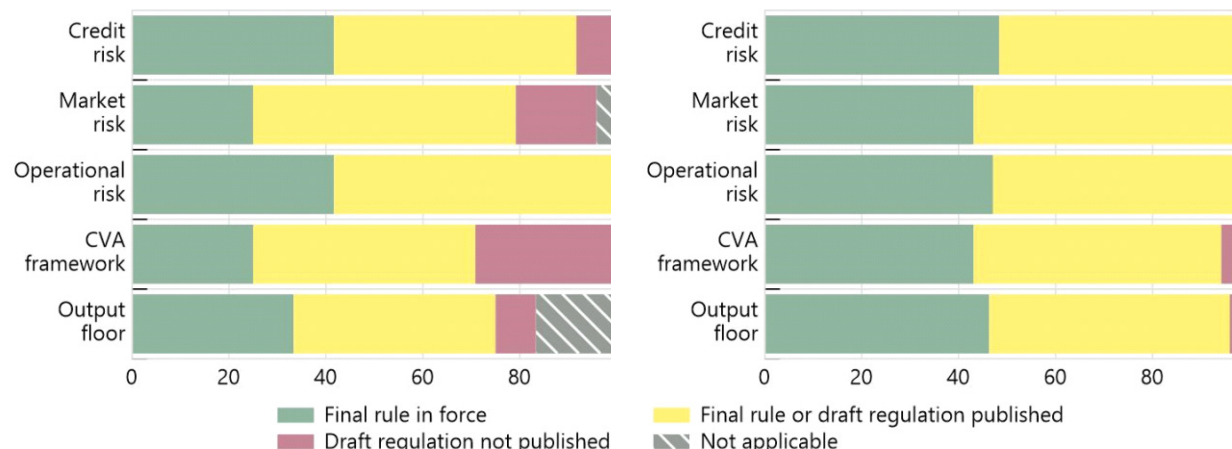
[55] The final Basel III standards refers to those Pillar 1 standards with an implementation date of 1 January 2023.

published final rules.[56] However, implementation in some jurisdictions is planned for 2026 or features an uncertain timeline.

- During the past 12 months, more than a third of FSB member jurisdictions published final rules for the revised credit risk, market risk and operational risk standards as well as the output floor. In addition, two member jurisdictions issued final rules for the revised leverage ratio exposure definition (2017).
- The net stable funding ratio (NSFR), which took effect in 2018, and the supervisory framework for measuring and controlling large exposures, which took effect in 2019, are in force in almost all jurisdictions. BCBS jurisdictional assessments of the consistency of implementation of the NSFR and the large exposures framework have found the 20 jurisdictions assessed so far to be compliant or largely compliant with both standards, including most recently, Mexico and Switzerland.
- Further progress has been made on other Basel III standards, the implementation deadline for which passed before 2023. Implementation was completed in eight jurisdictions for the interest rate risk in the banking book standard. Final rules were also issued by two FSB member jurisdictions for margin requirements for non-centrally cleared derivatives and for the capital requirements for exposure to CCPs.

Despite good progress over the past year, several jurisdictions have yet to implement final Basel III standards due January 2023 — **Graph 4**

As a percentage of FSB member jurisdictions[1] | As a percentage of market size[2]



[1] The five EU members of the FSB are presented as separate jurisdictions. [2] Market size based on assets of banks domiciled in each FSB jurisdiction at end-2022.

Finalisation of the global Insurance Capital Standard in final year

- The International Association of Insurance Supervisors (IAIS) is in the final year of the five-year Insurance Capital Standard (ICS) monitoring period. The ICS is on track for adoption as a group-wide prescribed capital requirement for internationally active insurance groups at end-2024. To support implementation, in June 2024, the IAIS agreed to high-level

[56] See BCBS, 2024 RCAP: Basel III Implementation dashboard, October.

timelines for its plans to assess the comprehensive and consistent implementation of the ICS across jurisdictions.[57]

Implementation of FSB principles and standards for sound compensation practices remains uneven.

- Regulatory progress remains uneven across sectors. Banking regulation is the most advanced and best aligned with the FSB principles. Since the last progress report published in March 2021, several jurisdictions have implemented legal and regulatory changes related to the use of compensation tools, and many jurisdictions have updated legislation or issued regulatory or supervisory guidance.

- An upcoming FSB report identifies potential ways to address challenges in the use of compensation tools and includes case studies drawn from member submissions and information gathered from participants in an industry workshop (Box 6).[58]

Box 6: Lessons learned from the 2023 banking turmoil with respect to compensation

The FSB Principles for Sound Compensation Practices and their accompanying Implementation Standards were developed to align compensation with prudent risk-taking at significant financial institutions.[59]

Compensation practices at firms were a contributing factor to the banking failures of 2023. In July 2024, the Compensation Contact Monitoring Group (CMCG) held an industry workshop on the use of compensation tools and discussed key learnings relating to compensation from the 2023 banking turmoil.[60] The main findings are below.

Importance of risk culture and governance

The banking failures highlighted the importance of establishing and maintaining a sound risk culture, with a clear tone from the top (i.e. board and senior management), and incentive structures linked to prudent risk metrics. Fundamental failures in risk management and oversight, including the absence of robust and prudent risk metrics, contributed to the failures of both Credit Suisse and Silicon Valley Bank. The board should set the business strategy and corporate culture and ensure that compensation policies are aligned with the firm's risk appetite and long-term strategy.

Compensation practices and tools

Compensation tied to short-term financial profits contributed to vulnerabilities, misconduct, and issues in managing non-financial risks at Credit Suisse and Silicon Valley Bank. For example, Credit Suisse had a history of risk management failures, which were exacerbated by compensation schemes that did not adequately penalise or discourage excessive risk-taking. The Barr Review of the supervision of Silicon Valley Bank noted that the incentive compensation arrangements and practices at Silicon Valley Bank encouraged excessive risk taking to maximise short term financial metrics and did not adequately reflect longer-term performance, non-financial risks or unaddressed issues. [61]

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[57] IAIS (2024), *IAIS charts course on Insurance Capital Standard implementation ahead of adoption in December 2024*, press release, June.

[58] FSB (2024), *Legal and regulatory challenges to the use of compensation tools,* November

[59] FSB (2009), *Principles for Sound Compensation Practices*, April and FSB (2009), *Implementation Standards for the FSB Principles for Sound Compensation Practices*, September.

[60] The CMCG, which comprises national experts from FSB member jurisdictions with regulatory or supervisory responsibility for compensation practices, is responsible for monitoring and reporting on national implementation of the Principles and Standards.

[61] Barr, Michael, Vice Chair for Supervision of the Federal Reserve Board (2023), *Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank*, April.

The FSB's Supplementary Guidance emphasises the need for robust governance structures to oversee compensation practices, ensuring they do not incentivise excessive risk-taking or short-termism.[62] The use of compensation adjustment tools such as in-year adjustments, malus, and clawback provisions are encouraged. Nevertheless, the effectiveness of these tools is subject to a firm's cultural and legal context. In-year adjustments are straightforward, but malus and clawback are more challenging to enforce in certain regions due to employment law and cultural norms.

Role of supervisors

The 2023 banking failures highlighted the need for more supervisory focus on compensation practices and governance. For example, although in the Credit Suisse case FINMA repeatedly used its influence at Credit Suisse to bring its compensation in line with the long-term business results, this was only partially successful. The Federal Council report on banking stability noted that more specific corporate governance requirements - which constitute the starting point for supervision - would have assisted FINMA in its work and enhanced its impact on the bank in the Credit Suisse case.[63] The Barr review noted that stronger or more specific supervisory guidance or rules on incentive compensation for firms of SVBFG's size, complexity, and risk profile - or more rigorous enforcement of existing guidance - may have mitigated the risks.

3.2. Ending too-big-to-fail

The 2023 banking turmoil demonstrated that resolution planning and loss-absorbing capacity can also be important for banks that are not G-SIBs or D-SIBs. Jurisdictions should undertake further work to increase the usability of resolution tools, measures to address liquidity in resolution, and the optionality in responding to distress without severe systemic disruption and without exposing taxpayers to loss.

- Significant progress has been made to enhance the resolvability of G-SIBs. However, existing FSB guidance on resolution planning and resolution execution may also be relevant for a wider set of banks and there is a need for authorities and such banks to be prepared for resolution.
- The FSB published a statement in November 2024 that stressed the importance of authorities considering the application of existing FSB guidance on resolution planning and execution for banks that may be systemically significant or critical if they fail, including (i) assessing which banks may be systemically significant or critical if they fail; (ii) maintaining crisis preparedness for a resolution event; and (iii) considering the need for loss-absorbing capacity for such banks.[64]
- Graph 5 below shows the implementation of resolution powers, recovery planning for systemically important banks (SIBs) and resolution planning for SIBs both as a proportion of FSB member jurisdictions and as a percentage of market size.

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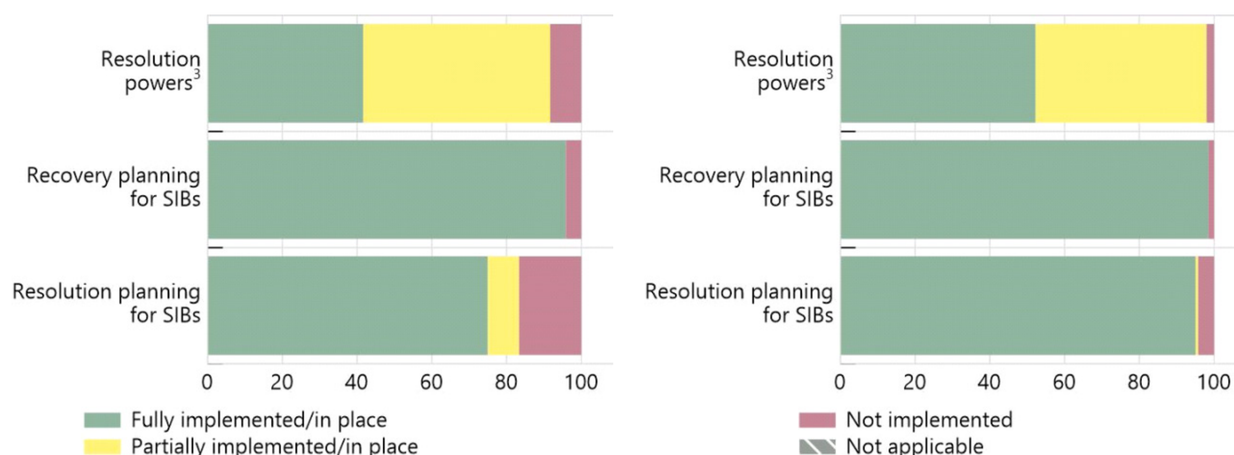
[62] FSB (2018), *Supplementary Guidance to the FSB Principles and Standards on Sound Compensation Practices*, March.

[63] Federal Council (2024), *Federal Council report on banking stability*, April.

[64] FSB (2024), *The importance of resolution planning and loss-absorbing capacity for banks systemic in failure: Public statement*, November.

Work remains to implement comprehensive bank resolution regimes — Graph 5

As a percentage of FSB member jurisdictions[1] | As a percentage of market size[2]



[1] The five EU members of the FSB are presented as separate jurisdictions. [2] Market size based on assets of banks domiciled in each FSB jurisdiction at end-2022. [3] Composite indicator on extent to which jurisdictions have transfer, bail-in and temporary stay powers in their regime.

The FSB's insurance resolvability monitoring process showed mixed progress in developing and implementing resolution regimes for insurers consistent with the Key Attributes.

- Some jurisdictions have advanced resolution regimes for insurers that include comprehensive resolution planning requirements, and resolution powers and tools. However, several jurisdictions lack resolution planning requirements or powers and tools needed to operationalise resolution plans. Some of these gaps will be filled by recent or anticipated changes in legislation, regulation, or policy.

- Resolution regimes continue to evolve. Key legislation came into effect on 1 January 2024 in Australia and Switzerland. The European Union is in the final stages of adopting the Insurance Recovery and Resolution Directive, which is expected to result in material changes to existing insurance resolution regimes or introduction of completely new ones for several FSB members. The Monetary Authority of Singapore has also issued recovery and resolution planning requirements that will come into effect on 1 January 2025.

3.3. Making derivatives markets safer

Implementation of the G20 over-the-counter (OTC) derivatives reforms has been well advanced in major jurisdictions for several years.

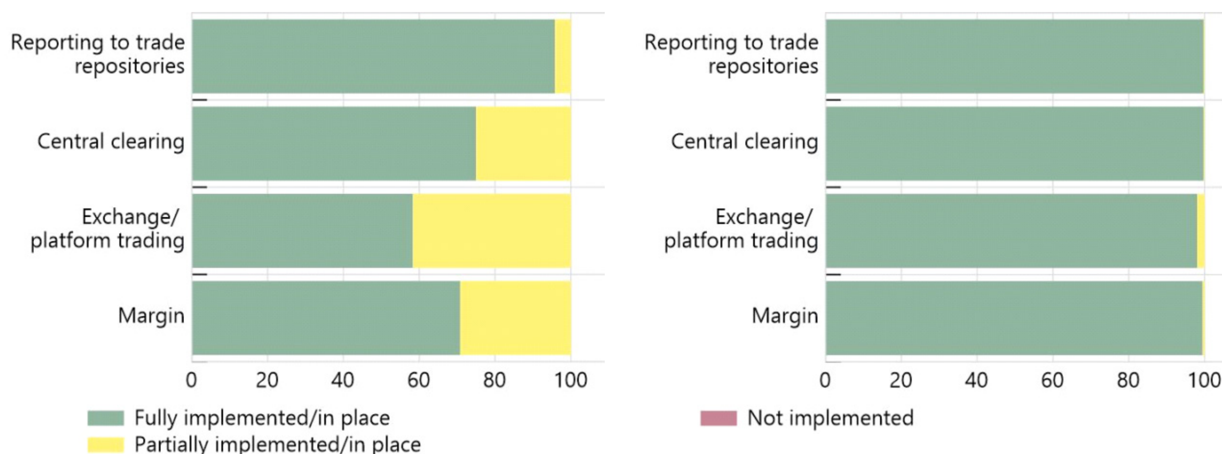
- Jurisdictions with the vast majority of global OTC derivatives activity have implemented comprehensive trade reporting requirements, central clearing and platform trading frameworks, and capital and margin requirements for non-centrally cleared derivatives. Jurisdictions yet to implement these reforms account for a low proportion of global OTC derivatives market activity (Graph 6).

- There has been no increase over the past five years in the number of FSB member jurisdictions with comprehensive trade reporting requirements, and only one increase over the same period (last year) for central clearing frameworks or platform trading frameworks.

- Legal barriers are preventing better sharing of trade reporting data between authorities, notably between jurisdictions.

Implementation is most advanced in the largest OTC derivatives markets **Graph 6**

As a percentage of FSB member jurisdictions[1] As a percentage of market size[2]



[1] The five EU members of the FSB are presented as separate jurisdictions. [2] Market size is proxied by single currency interest rate derivatives' gross turnover in April 2022 (Bank for International Settlements (BIS) 2022 Triennial Survey, Annex Table 9.1).

Work continues at the international level to strengthen the resilience of financial market infrastructures (FMIs)

- CPMI-IOSCO published in 2023 a report on current CCP practices to address non-default losses (NDLs) arising, for example, from investment risk or cyber-attacks.[65] Given the range of CCP practices to address NDLs and industry requests for further clarifications, CPMI and IOSCO are working to identify areas where further guidance or recommendations may be useful for all FMI types. This will inform a public consultation on further guidance or recommendations with respect to NDLs.

3.4. Enhancing the resilience of NBFI

The pace of implementation of agreed policies relating to NBFI has been uneven across jurisdictions and has slowed in recent years in some cases.

- Recent incidents of market stress and liquidity strains have demonstrated that NBFI can create or amplify systemic risk. Many of the underlying vulnerabilities that contributed to these incidents are still largely in place. To enhance the resilience of the global financial system, it is critical to have full and timely implementation.

- Implementation of Basel III reforms to mitigate spillovers between banks and non-bank financial entities is still ongoing. Three jurisdictions have yet to implement applicable risk-based capital requirements for banks' investments in the equity of funds[66] and one

[65] CPMI-IOSCO (2023), *Report on current central counterparty practices to address non-default losses*, August.

[66] Since last year, one jurisdiction has implemented the requirements, and one jurisdiction has moved out of the "not applicable" category into the "not implemented" category.

jurisdiction (two fewer than last year) has yet to fully implement the supervisory framework for measuring and controlling banks' large exposures.[67]

- Implementation of the other securities financing transactions (SFT) recommendations is still incomplete and continues to face significant delays in most jurisdictions, generally with little progress over the past year (Box 7).

Box 7: Implementation of FSB policy recommendations on securities financing transactions

To address financial stability risks from SFTs such as repo and securities lending, the FSB published 18 updated policy recommendations in October 2015.[68] The recommendations covered three broad areas: (i) regulatory reporting and market transparency, including the global collection of granular SFT data and aggregation through the FSB, financial institutions' public disclosures of SFT activities, and SFT reporting requirements for fund managers to end-investors; (ii) regulatory requirements such as minimum standards for cash collateral reinvestment, principles for regulations governing the re-hypothecation of client assets, minimum regulatory standards for collateral valuation and management, and minimum haircut standards for non-centrally cleared SFTs (including numerical haircut floors); and (iii) structural aspects such as the evaluation of the possible introduction of central clearing for inter-dealer repos.

The objective of global SFT data collection and aggregation is to help authorities identify global trends and risks in SFT markets in a timely manner. Implementation of these recommendations remains behind schedule with only one jurisdiction fully complying, 14 partially complying and nine not complying. The technical and governance work within the FSB and BIS for global SFT data collection and aggregation has been completed, and reporting of aggregated national data has started. However, implementation by most jurisdictions has been slow mainly due to operational and technical issues (e.g. data availability and information technology systems) and legal (e.g. data confidentiality) challenges.

Implementation of the other SFT recommendations is still incomplete and continues to face significant delays in most jurisdictions, with generally little progress over the past year. Some of these delays stem from the delayed implementation of the final Basel III framework, given that the minimum haircut standards on bank to non-bank SFTs were incorporated into banking regulation as part of Basel III. The FSB similarly adjusted implementation timelines for its recommendations related to minimum haircut standards. In other cases, however, jurisdictions report that the cost of implementing some of the relevant FSB recommendations exceeds the benefits, given the size and characteristics of their domestic SFT market, or that a major challenge in implementation relates to level playing field concerns because some jurisdictions have deferred implementation of the haircut floors for several years.

Notwithstanding limited implementation progress, the potential risks to financial stability from SFTs continues to be an area of focus for the FSB. These risks, which the FSB policy recommendations aim to address, stem from the procyclical build-up of leverage and of liquidity and maturity mismatches by entities in the non-bank financial intermediation sector through the use of SFTs.[69]

- The adoption of IOSCO recommendations to reduce the run risk of MMFs is most advanced in 19 FSB jurisdictions (Graph 7), unchanged since 2021. The fair value approach for

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[67] BCBS RCAP: Basel III implementation dashboard (October 2024).

[68] FSB (2013), *Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos*, August and FSB (2015), *Regulatory framework for haircuts on non-centrally cleared securities financing transactions*, November. Annexes of the November 2015 framework document were further updated on 19 July 2019, 25 November 2019, and 7 September 2020.

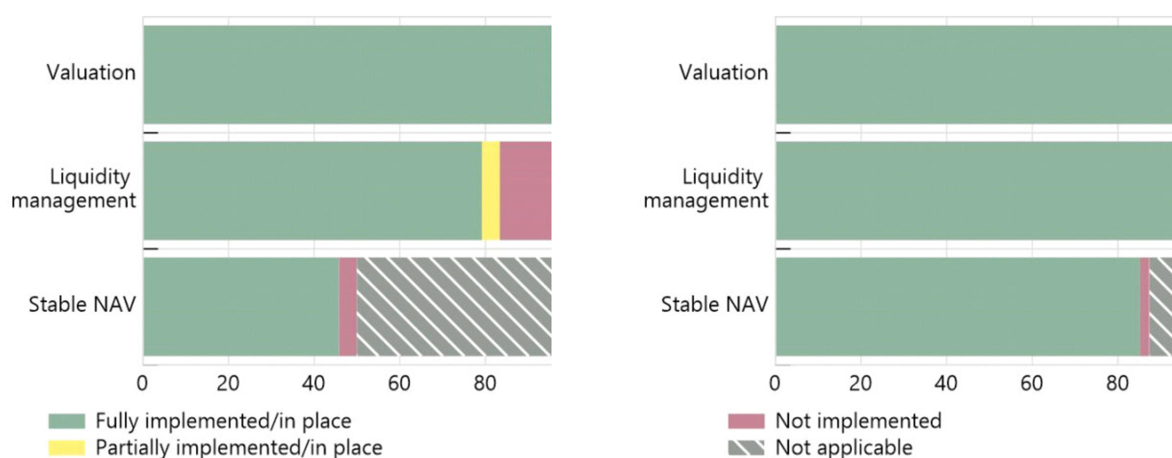
[69] See FSB (2012), *FSB Report on Securities Lending and Repos: Market Overview and Financial Stability Issues*, April; and FSB (2017), *Assessment of shadow banking activities: risks and the adequacy of post-crisis policy tools to address financial stability concerns*, July.

valuation of MMF portfolios has been adopted in all FSB jurisdictions, although one jurisdiction does not have requirements in place for use of the amortised cost method in limited circumstances only. Progress in liquidity management is less advanced, with 19 jurisdictions having reforms in effect. Further, 12 FSB jurisdictions do not permit MMFs to offer a stable net asset value.

- The FSB, in collaboration with IOSCO, issued policy proposals in 2021 to enhance MMF resilience.[70] An FSB review found that progress in implementing the 2021 FSB policy proposals had been uneven across FSB member jurisdictions, and concluded that further progress on implementing the FSB policy toolkit would be needed to enhance MMF resilience and limit the need for extraordinary central bank interventions during times of stress.[71]

Implementation is most advanced in the largest MMF markets **Graph 7**

As a percentage of FSB member jurisdictions[1] | As a percentage of market size[2]



[1] The five EU members of the FSB are presented as separate jurisdictions. [2] Market size based on assets under management in FSB jurisdictions at end-2022.

- Adoption of the IOSCO recommendations on incentive alignment approaches for securitisation has been completed by 18 FSB jurisdictions (one more than last year) and two jurisdictions have yet to implement the revised BCBS securitisation framework, compared with three last year.

- An evaluation of the effects of reforms on securitisation agreed by the G20 in the aftermath of the GFC is underway.[72] See Box 8 for preliminary findings.

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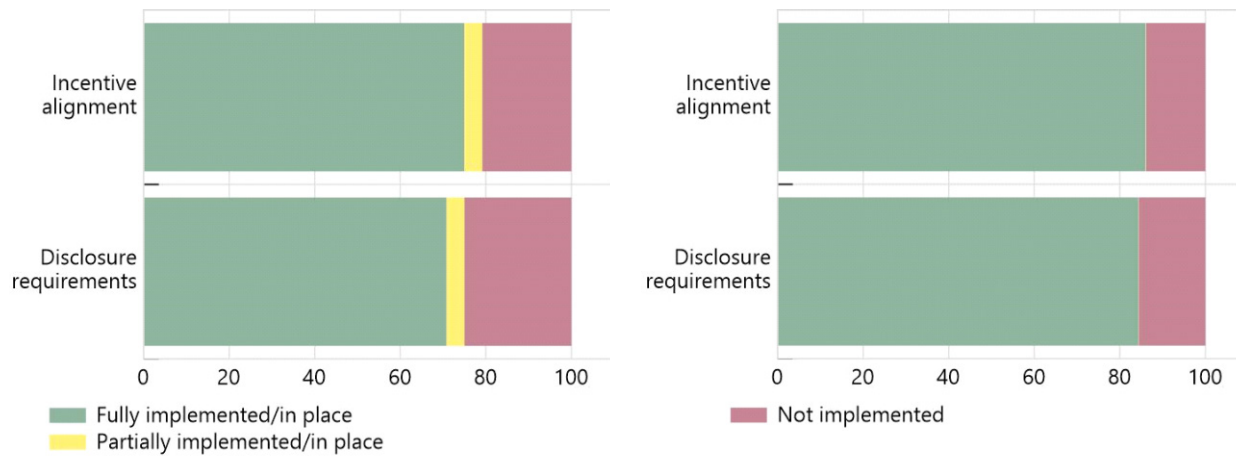
[70] FSB (2021), *Policy Proposals to Enhance Monet Market Fund Resilience: Final report*, October.

[71] FSB (2024), *Thematic Review on Money Market Fund Reforms: Peer review report*, February.

[72] FSB (2024), *Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation: Consultation report*, July.

Implementation of incentive alignment reforms for securitisation is uneven **Graph 8**

As a percentage FSB member jurisdictions [1] As a percentage of market size[2]



[1] The five EU members of the FSB are presented as separate jurisdictions. [2] Market size based on value of securitisation outstanding (collateralised debt obligations, mortgage-backed securities and asset-backed securities) in FSB jurisdictions during 2022.

Box 8: Evaluation of the effects of the G20 financial regulatory reforms on securitisation

The FSB is conducting an evaluation of the effects of the G20 financial regulatory reforms on securitisation. The evaluation is focusing, in terms of reforms, on the IOSCO minimum retention recommendations and the BCBS revisions to prudential requirements for banks' securitisation-related exposures; and in terms of scope, on the collateralised debt obligations, collateralised loan obligations (CLOs) and non-government guaranteed part of the residential mortgage-backed securities (RMBS) market. The preliminary results, included in the consultation report published in July 2024, suggest that risk retention and higher prudential requirements have enhanced the resilience of securitisation markets.[73]

The BCBS prudential requirement of lower risk weights for simple, transparent and comparable (STC) securitisations may have contributed to more transparent post-GFC structures and increased investor confidence in securitisation markets, though STC securitisation to date has not been taken up widely. Market pricing for STC transactions in the EU generally shows relatively lower spreads, likely reflecting the perception of lower risk among investors and – in the case of banks and insurers – reduced capital requirements. On the other hand, some stakeholders view the introduction of STC as a relabelling of existing structural transactions rather than stimulating activity in the securitisation market.

The growth and credit performance of CLOs after the GFC have been strong and analyses provide evidence of increased resilience of the senior tranches of CLO structures despite a deterioration in lending standards (e.g. increased so-called "covenant-lite" loans) in the leveraged loan market. CLOs issued after the GFC have higher levels of credit enhancement and subordination, which may be protecting senior tranche holders from losses due to lower collateral quality. Non-bank investors hold most of the mezzanine and junior tranches, while banks hold the senior tranches. The extent to which these outcomes can be attributed to the reforms is not clear given that structural improvements were largely market-driven; risk retention is only one of the factors considered by CLO investors for risk alignment; and CLO managers are able to actively manage their portfolios.

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[73] FSB (2024), *Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation: Consultation report*, July.

The preliminary results find that risk retention is effective in better aligning the incentives of originators and investors in the RMBS market. Credit performance in the European and US RMBS markets has been strong post-GFC, while average subordination levels are much lower compared with the overall securitisation market, reflecting the comparatively lower credit risk of the underlying loans. Stress testing exercises also highlight the resilience of this market. A large portion of RMBS is retained by banks in some jurisdictions as collateral for accessing central bank financing facilities.

Some stakeholders assert that the reforms have diminished the appeal of securitisation as a financing tool. While securitisation has diminished in relation to private sector credit since the GFC, the decline has not been uniform across all segments and mostly took place in the immediate aftermath of the GFC, before the reforms were implemented. The preliminary results find that it is not clear that overall financing to the economy has been negatively affected if one considers growing corporate and household indebtedness and the growth in alternative financing instruments over this period (e.g. corporate bonds, covered bonds in Europe, and agency MBS in the US and other countries).

The reforms appear to have contributed to a redistribution of risk from banks to the NBFI sector, with banks shifting towards higher-rated tranches leading to an overall decrease in their risk-weighted asset density. The financial stability impact of the redistribution of risks from the banking to the NBFI sector is difficult to assess since it is unclear if the non-bank entities taking on the risks previously held by banks are well-placed to assume them, given their funding structure and ability to withstand losses in stress events.

3.5. Progress in other reform areas

A key priority for the FSB is to promote, support, and monitor effective implementation of the agreed FSB Global Regulatory Framework for crypto-asset activities and markets and for global stablecoin arrangements.[74]

- At the request of the G20 Brazilian Presidency, the International Monetary Fund (IMF) and the FSB delivered a crypto-asset Roadmap status report in October 2024 that summarises implementation progress and identifies experiences and challenges.[75]
- Jurisdictions have made progress implementing policy frameworks consistent with the FSB framework. Nearly all FSB members have plans to develop new or revised frameworks, or already have those frameworks in place, while a majority of members expect to reach alignment with the FSB framework by 2025.
- The FSB is facilitating information-sharing among members and engaging non-FSB members to promote the implementation of the FSB framework.
- The FSB has analysed the cross-border regulatory and supervisory issues of global stablecoin arrangements in EMDEs and identified risks and regulatory challenges, which EMDEs are more exposed to.[76] The published report also offers measures that EMDEs may consider to address these risks and challenges.

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[74] FSB (2023), *FSB Global Regulatory Framework for Crypto-asset Activities*, July.
[75] FSB (2024), *G20 Crypto-asset policy implementation roadmap status report*, October.
[76] FSB (2024), *Cross-border Regulatory and Supervisory Issues of Global Stablecoin Arrangements in EMDEs*, July.

- The FSB conducted targeted follow-up work on three key areas identified as important or challenging through its survey of jurisdictional implementation progress. Box 9 provides an overview of these experiences and challenges.

Box 9: Crypto-asset implementation experiences and challenges

Cross-border crypto-asset activities that originate from offshore jurisdictions present elevated regulatory and supervisory challenges for authorities. Inconsistent implementation of the FSB framework may hinder its effectiveness and lead to regulatory arbitrage. Implementation challenges are amplified when many crypto-asset activities originate from non-FSB member jurisdictions. If the risks from cross-border crypto-asset activities originating from jurisdictions without appropriate regulation and supervision increase, international organisations, standard-setting bodies and jurisdictional authorities would need to consider whether additional steps are appropriate

The prevalence of non-compliance with applicable laws and regulations significantly undermines efforts to implement the FSB Framework and other international standards on crypto-assets. This may further encourage wider non-compliance and regulatory arbitrage, and can also exacerbate data gaps, require greater enforcement resources, and lead to heightened cross-border challenges for enforcement.

Stablecoins should be subject to specific regulatory requirements due to their exposure to a sudden loss in confidence and to a potential run on the issuer or underlying reserve assets. The FSB Framework recommends that jurisdictions require Global Stablecoins to provide a robust legal claim to all users against the issuer and/or underlying reserve assets and guarantee timely redemption, to have an effective stabilisation mechanism, and satisfy prudential requirements. A number of FSB member jurisdictions are developing detailed regulatory requirements based on the FSB framework. Authorities should evaluate the benefits and costs of potential approaches when developing their regulatory frameworks.

The FSB continues to support broad adoption of the Legal Entity Identifier (LEI), recognising its value in enhancing transparency and risk management.

- The FSB reviewed progress in implementing its 2022 recommendations to promote the use of the LEI in cross-border payment transactions and those of the 2019 LEI peer review.[77]

- The number of active LEIs has increased from 1.4 million in 2019 to 2.6 million at present.[78] Widespread adoption has been reached in OTC derivatives and securities markets, and the LEI's benefits have been recognised for a broad range of use cases in the financial sector.

- However, broader adoption remains a challenge. The main obstacles to wider LEI adoption include the lack of perceived incentives for voluntary adoption by market participants and end users, and costs (particularly for low-income jurisdictions). Furthermore, some jurisdictions have made no tangible progress towards implementing the actions set out in the 2019 and 2022 reports.

[77] See FSB (2024), *Implementation of the Legal Entity Identifier: Progress report*, October.

[78] See the Global LEI Foundation dashboard.

- To continue the momentum to broaden LEI adoption, particularly in cross-border payments, the FSB recommends full and timely implementation of the 2022 FSB recommendations that have yet to be implemented.

The third phase of the G20 Data Gaps Initiative (DGI-3) is making good progress.

- DGI-3 covers 14 recommendations that address data gaps in the priority areas of (i) climate change; (ii) distributional information; (iii) fintech and financial inclusion; and (iv) access to private and administrative data and data-sharing.[79] The FSB is working with the Inter-Agency Group on Economic and Financial Statistics, as well as with the G20 and participating economies, to fill the identified data gaps – with a particular focus on those recommendations related to financial stability. The FSB has contributed to Recommendation 4 on climate finance (green debt and equity securities financing), providing a user perspective; Recommendation 5 on forward-looking physical and transition risk indicators; Recommendation 11 on digital money, again providing a user perspective; and has been leading the work on Recommendation 10 on fintech credit. In 2024, FSB members provided fintech credit data for the first time, on a best-efforts basis. An overview of the information collected will be made available in the forthcoming 2024 FSB Global Monitoring Report on NBFI.

4. Looking ahead

Authorities must maintain focus on building resilience, as tail risks remain.

- Episodes of market volatility will likely continue to occur amid interest rate uncertainty and geopolitical tensions.

- Vulnerabilities in NBFI, including pockets of hidden or excess leverage, remain a potential source of systemic risk. Combined with rich asset valuations in some markets, there is the potential for sharp price corrections in the event of a shock. Policy approaches need to be combined with improved monitoring to mitigate vulnerabilities.

Committing to full and timely implementation of reforms is crucial.

- Following through on each reform is critical. So too is clarity on what remains to be implemented. This includes implementation of all aspects of the Basel III framework in full, consistently and as soon as possible. The FSB will take steps to review further implementation and its approach to implementation monitoring.

The FSB's work in 2025 will continue to reflect its global and cross-sectoral approach to financial stability policy and will explore emerging vulnerabilities.

- Key priorities include further work on addressing leverage-related vulnerabilities in NBFI; continued support for global cooperation on financial stability; further progress on the key

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79 See the IMF website on the G20 Data Gaps Initiative.

policy areas in Section 2 (NBFI resilience, climate financial risks, cross-border payments, and technological innovation); and new deliverables for the South Africa G20 Presidency.

- The FSB will also place an emphasis on implementation monitoring of its recommendations on crypto-asset activities and global stablecoin arrangements; further work on resolution reforms; and regular monitoring and progress reports on financial stability issues.[80]

The FSB's role to promote coordination and information exchange among authorities responsible for financial stability remains critical.

- Maintaining a high level of cooperation to develop strong regulatory, supervisory and financial sector policies and encouraging coherent implementation across sectors and jurisdictions fosters a level playing field.

- The FSB and SSBs will continue to promote approaches to deepen international cooperation and promote member jurisdictions' implementation of agreed commitments, standards and policy recommendations.

[80] These include, for example, continuing the annual review and publication of the list of designated G-SIBs; joint FSB-IMF Early Warning Exercise publication of the annual Global Monitoring Report on NBFI; monitoring, together with SSBs, the implementation of G20 reforms through regular progress reports and peer reviews; and encouraging consistent application of accounting standards, auditing of financial statements, and enhanced audit quality.

Annex 1: FSB reports published in the past year

Month	Report
November 2023	• *The Financial Stability Implications of Multifunction Crypto-asset Intermediaries*
December 2023	• *Final report on enhancing third-party risk management and oversight - a toolkit for financial institutions and financial authorities* • *2023 Resolution Report: "Applying lessons learnt"* • *Global Monitoring Report on Non-Bank Financial Intermediation 2023* • *Revised Policy Recommendations to Address Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds*
January 2024	• *Peer Review of Italy*
February	• *Peer Review of Switzerland* • *Thematic Review on Money Market Fund Reforms: Peer review report*
March	• *FSB Guidance on Arrangements to Support Operational Continuity in Resolution (revised version 2024)*
April	• *Liquidity Preparedness for Margin and Collateral Calls: Consultation report* • *Financial Resources and Tools for Central Counterparty Resolution* • *Guidance on Financial Resources to Support CCP Resolution and on the Treatment of CCP Equity in Resolution (revised version 2024)* • *Key attributes of Effective Resolution Regimes for Financial Institutions (revised version 2024)*
May	• *Enhancing the Functioning and Resilience of Commercial Paper and Negotiable Certificates of Deposit Markets*
July	• *Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation: Consultation report* • *Recommendations to Promote Alignment and Interoperability Across Data Frameworks Related to Cross-border Payments: Consultation report* • *Recommendations for Regulating and Supervising Bank and Non-bank Payments Service Providers Offering Cross-border Payment Services: Consultation report* • *Stocktake on Nature-related Risks: Supervisory and regulatory approaches and perspectives on financial risk* • *Enhancing the Resilience of Non-Bank Financial Intermediation: Progress report* • *Cross-border Regulatory and Supervisory Issues of Global Stablecoin Arrangements in EMDEs*
October	• *Format for Incident Reporting Exchange (FIRE): consultation report* • *G20 Roadmap for Enhancing Cross-border Payments: Consolidated progress report for 2024* • *Annual Progress Report on Meeting the Targets for Cross-border Payments: 2024 Report on Key Performance Indicators* • *Implementation of the Legal Entity Identifier: Progress report*

	• *G20 Crypto-asset Policy Implementation Roadmap: Status report* • *The Financial Stability Implications of Tokenisation* • *Depositor Behaviour and Interest Rate and Liquidity Risks in the Financial System: Lessons from the March 2023 banking turmoil*
November	• *Achieving Consistent and Comparable Climate-Related Disclosures: 2024 Progress Report*

Annex 2: Implementation of reforms in priority areas by FSB member jurisdictions

The table provides a snapshot of the status of implementation progress by FSB jurisdiction across priority reform areas, as of September 2024. The colours and symbols in the table indicate the timeliness of implementation. For Basel III, the letters indicate the extent to which implementation is consistent with the international standard. For trade reporting, the letters indicate to what extent effectiveness is hampered by identified obstacles. For compensation, letters indicate the sectoral application of the FSB Principles and Standards (where not applied to all sectors).

Reform Area	BASEL III^					COMPENSATION	OVER-THE-COUNTER (OTC) DERIVATIVES				RESOLUTION					NON-BANK FINANCIAL INTERMEDIATION		
	Risk-based capital	Require-ments for SIBs	Large exposures framework	Leverage	Net Stable Funding Ratio (NSFR)		Trade reporting	Central clearing	Platform trading	Margin	Minimum external TLAC for G-SIBs	Transfer / bail-in / temporary stay powers for banks	Recovery and resolution planning for systemic banks	Transfer / bridge / run-off powers for insurers	Resolution planning for systemic CCPs in more than one jurisdiction	Money market funds (MMFs)	Securiti-sation	Securities financing transactions (SFT)
Phase-in (completed) date	*2023*	*2016 (2019)*	*2019*	*2023*	*2018*		*end-2012*	*end-2012*	*end-2012*	*2016 (2022)*	*2019/2025 (2022/2028)*							*2017/2023*
Argentina			C		C	B, I												
Australia			C		C											*		
Brazil			C		C												**	
Canada			C		C													
China		C	C		C		R, F											
France		C	LC		LC													
Germany		C	LC		LC													
Hong Kong			C		C	B, I												
India			C		C													
Indonesia			C		C											**		
Italy		C	LC		LC													
Japan		C	LC		C	B, I												
Korea																		
Mexico			C		C											**	*	
Netherlands		C	LC		LC													
Russia[1]																**		
Saudi Arabia			C		C	B	R					#		#				
Singapore			C		C, &													
South Africa			C		LC													
Spain		C	LC		LC													
Switzerland		C	LC		LC												***	
Türkiye																**		
United Kingdom		C		#														
United States		C, &	LC		LC	B, I												

Legend

Symbol	Description
(green)	**Basel III:** Final rule published and implemented. Risk-based capital: revised standardised approach for credit risk and output floor in force. Leverage: revised leverage ratio and G-SIB leverage buffer (as applicable) in force. Requirements for SIBs: covering both D-SIBs and higher loss-absorbency for G-SIBs (for G-SIB home jurisdictions) – published and in force. **OTC derivatives:** Legislative framework in force and standards/criteria/requirements (as applicable) in force for over 90% of relevant transactions. **Resolution:** Final rule for external Total Loss-Absorbing Capacity (TLAC) requirement for G-SIBs published and implemented. For the powers columns, all three of the resolution powers for banks (transfer, bail-in of unsecured and uninsured credit claims, and temporary stay) and insurers (transfer, bridge and run-off) are available. Both recovery and resolution planning processes are in place for systemic banks. For CCPs that are systemically important in more than one jurisdiction (SI>1) resolution planning, crisis management group (CMG) established, cross-border cooperation agreement (CoAg) signed, resolution planning commenced and resolvability assessment commenced. **Compensation:** All or almost all (all but 3 or less) FSB Principles and their Implementation Standards for Sound Compensation Practices (Principles and Standards) implemented for significant banks, insurers and asset managers (as applicable in the jurisdiction – see below). **Non-bank financial intermediation (NBFI):** MMFs – Final implementation measures in force for valuation, liquidity management and (where applicable) stable net asset value (NAV). Securitisation – Final adoption measures taken (and where relevant in force) for an incentive alignment regime and disclosure requirements. SFT: Implementation complete for minimum standards for cash collateral re-investment, regulations on re-hypothecation of client assets, minimum regulatory standards for collateral valuation and management (all due January 2017) and numerical haircut floors on bank-to-non-bank transactions (due January 2023).
(yellow)	**Basel III:** Final rule published but not implemented, or draft regulation published. For risk-based capital column, draft regulation published for at least one of revised standardised approach for credit risk and output floor. For leverage, draft regulation published for at least one of leverage ratio and G-SIB leverage buffer (as applicable). **OTC derivatives:** Regulatory framework being implemented. **Resolution:** Final rule for external TLAC requirement for G-SIBs published but not yet implemented, or draft rule published. For the powers columns, one or two of the resolution powers for banks (transfer, bail-in of unsecured and uninsured credit claims, and temporary stay) and insurers (transfer, bridge and run-off) are available. Recovery planning is in place for systemic banks, but resolution planning processes are not. For SI>1 CCP resolution planning, CMG established and resolution planning commenced but CoAg not signed or resolvability assessment not commenced. **Compensation:** FSB Principles and Standards implemented for some but not all of the applicable banking, insurance and asset management sectors. **NBFI:** MMFs – Draft/final implementation measures published or partly in force for valuation, liquidity management and (where applicable) stable NAV. Securitisation – Draft/final adoption measures published or partly in force for implementing an incentive alignment regime and disclosure requirements. SFT: Implementation complete for at least 1 of the 4 areas described above.
(red)	**Basel III:** Draft regulation not published. **Resolution:** Draft rule for external TLAC requirement for G-SIBs not published. For the powers columns, none of the three resolution powers for banks (transfer, bail-in of unsecured and uninsured credit claims, and temporary stay) and insurers (transfer, bridge and run-off) are available. Neither recovery nor resolution planning processes are in place for systemic banks. **NBFI:** MMFs – Draft implementation measures not published for valuation, liquidity management and (where applicable) stable NAV. Securitisation – Draft adoption measures not published for implementing an incentive alignment regime and disclosure requirements. SFT: Implementation not complete for any of the four areas described above.
(grey)	**Resolution:** Minimum TLAC requirements not applicable for jurisdictions that are not home to G-SIBs or to a subsidiary of a G-SIB that is a resolution entity under a multiple point of entry resolution strategy.
C / LC / MNC / NC	**Basel III:** Regulatory Consistency Assessment Programme (RCAP) – assessed as "compliant" (C), "largely compliant" (LC), "materially non-compliant" (MNC) and "non-compliant" (NC) with Basel III rules. See the RCAP scale. The grade for SIB requirements relates only to the G-SIB requirements.
^	**Basel III:** All FSB jurisdictions have implemented the liquidity coverage ratio and were assessed as compliant or largely compliant. All FSB jurisdictions have implemented the initial (2013) risk-based capital framework; 18 jurisdictions have been assessed as C or LC, while six jurisdictions were assessed as MNC. Leverage ratio column based on the 2017 definition. All FSB jurisdictions but one have implemented the leverage ratio based on the 2014 exposure definition.
&	**Basel III:** The US does not identify any additional D-SIBs beyond those designated as G-SIBs; its framework was found to be broadly aligned with the D-SIB principles; see BCBS (2016), *US RCAP assessment* (June).
B / I / A	**Compensation:** FSB Principles and Standards deemed applicable by the jurisdiction for certain sectors only: banks (B), insurers (I), and/or asset managers (A).
R / F	**OTC derivatives:** Further action required to remove barriers to full trade reporting (R) or to access trade repository data by foreign authority (F). See FSB (2018) *Trade reporting legal barriers: Follow-up of 2015 peer review recommendations* (November). Mexico issued a regulation in 2020 to allow the direct sharing of Mexican TR data with foreign TRs.
#	**Basel III:** A few provisions relating to the credit conversion factor will be implemented by the UK in 2026 along with other finalised Basel III reforms. **Resolution:** Saudi Arabia issued a resolution law, which came into force in 2021 and will be followed by detailed rules and regulations to complete implementation.
*** / **/ *****	**NBFI:** Implementation is more advanced than the overall rating in one or more / all elements of at least one reform area (MMFs), or in one or more / all sectors of the market (securitisation). Switzerland reports that it lacks an active domestic securitisation market. The 2019 update was undertaken by IOSCO using the assessment methodology in its 2015 peer reviews in these areas.
1	**Russia:** The status of implementation in Russia has not been updated and reflects progress only as of end-September 2021.

Changes in implementation status over the past year

The table shows the changes in implementation status by FSB member jurisdictions across priority areas from September 2023 (left-hand cell) to September 2024 (right-hand cell).

Reform area / Jurisdiction	Basel III	OTC derivatives	Resolution	Non-bank financial intermediation+
Argentina	Risk-based capital		Recovery and resolution planning for systemic banks	Securitisation
Brazil	Risk-based capital			
	Leverage			
China	Risk-based capital			
	Leverage			
Korea	Large exposures			
Singapore	Risk-based capital Leverage			Securitisation
South Africa			Transfer / bail-in / temporary stay powers for banks	
Spain			Transfer/bridge/ runoff powers for insurers	
Türkiye	Large Exposures NSFR			
United Kingdom			Resolution planning for systemic CCPs in more than one jurisdiction	

+ The 2023 update on MMFs and securitisation was undertaken by IOSCO using the assessment methodology in its 2015 peer review reports in these areas.

Abbreviations

AI	Artificial intelligence
BCBS	Basel Committee on Banking Supervision
BDCs	Business development companies
CCPs	Central counterparties
CLOs	Collateralised loan obligations
CMCG	Compensation Contact Monitoring Group (FSB)
CPMI	Committee on Payments and Market Infrastructures
DGI	Data Gaps Initiative (G20)
DLT	Distributed ledger technology
D-SIB	Domestic systemically important bank
EMDEs	Emerging market and developing economies
EU	European Union
FIRE	Format for incident reporting exchange
FMI	Financial market infrastructure
FSB	Financial Stability Board
GenAI	Generative artificial intelligence
G-SIB	Global systemically important bank
GFC	Global financial crisis (2008)
IAIS	International Association of Insurance Supervisors
ICS	Insurance Capital Standard (IAIS)
IFRS	International Financial Reporting Standards
IM	Initial margin
IMF	International Monetary Fund
IO	International organisation
IOSCO	International Organization of Securities Commissions
ISSB	International Sustainability Standards Board
KPIs	Key performance indicators
LEI	Legal Entity Identifier
MMF	Money market fund
NAV	Net asset value
NBFI	Non-bank financial intermediation
NDL	Non-default loss
NGFS	Network for Greening the Financial System
NSFR	Net stable funding ratio (Basel III)
OEF	Open-ended fund
OTC	Over-the-counter (derivatives)
RCAP	Regulatory Consistency Assessment Programme (BCBS)
SFTs	Securities financing transactions
SIBs	Systemically important banks
SSBs	Standard-setting bodies
STC	Simple, transparent and comparable
TLAC	Total loss-absorbing capacity (FSB)
USD	United States dollar
VM	Variation margin