# The Banking Regulation Review

Thirteenth Edition

**Editor**
Jan Putnis

The Law Reviews

# THE BANKING REGULATION REVIEW

THIRTEENTH EDITION

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# PREFACE

The past year in banking regulation has been dominated, in most parts of the world, by the severe economic effects of the coronavirus pandemic. Governments and regulators have taken unprecedented steps to support businesses and individuals through the crisis. In financial terms, much of this support has been channelled through banks, and banks have had to work hard to continue to lend and to serve their customers in this difficult period.

Despite the human suffering and long-term economic damage that the pandemic has caused, there has been no significant banking crisis in the past year and, in most countries, no real sign that banks are failing to weather the storm so far. While there are of course exceptions, this is in large part a consequence of the relatively strong capital and liquidity position that banks around the world were in before the pandemic struck, which was itself a position that would not have arisen in many countries without the comprehensive prudential regulatory reforms that followed the global financial crisis of 2007–2009. Indeed, some regulators have commented that the pandemic is proving to be the first real test of those reforms and that, at least so far, the rules and institutional frameworks for banking regulation that were created after the global financial crisis have proven their worth.

As in all ongoing crises, there are causes for both pessimism and optimism. A pessimistic assessment with which it is hard to argue in many parts of the world is that we are still at an early stage in the economic damage that the pandemic has caused. The gradual withdrawal of government support programmes for businesses and the consequent further increases in non-performing loans with which banks have to deal will pose a further severe test for the banking systems of many countries at a time when governments will be relying on banks to support economic recovery. In some countries the strong links between bank viability and the ability of governments to issue sovereign debt at sustainable interest rates may re-emerge as a significant problem.

The optimistic assessment is necessarily a longer-term one given the challenges that the pandemic continues to present. The pandemic has undoubtedly provided the banking sector with an opportunity to show that it can be a force for financial stability and economic renewal at a time of crisis, in marked contrast to the blow to confidence that the sector suffered following the global financial crisis. This opportunity is closely linked to moves by many banks to consider their corporate purpose, the sustainability of their activities in environmental and social terms, and the quality, and in many cases the diversity, of their governance. This somewhat disparate collection of objectives, referred to as ESG (for environmental, social and governance) in many parts of the world, is increasingly dominating discourse between banks and their regulators and investors. Whether this would have happened in quite the way it has without the pandemic is impossible to know, but it does not seem much of an exaggeration to suggest that in many countries the banking sector that will emerge from the pandemic will have a series of cultural and business objectives that are quite different from those that existed before.

Regulators have become more assertive on these matters, particularly with regard to environmental objectives, and we will increasingly see a harder edge to the expectations that they are forming of banks' adherence to policies designed to address climate change. The repricing of many risks that is expected to take place as opinion settles on the pace at which transition to a low-carbon economy should take place will have a profound effect on the balance sheets of many banks. Shareholder pressure will force change in some banks, and banks with significant exposure to the petroleum economy will have to consider radical changes to their business models.

On social matters, financial inclusion and fair treatment of vulnerable customers are motivating legal and regulatory reform in many countries. There is a strong link between financial inclusion and the adoption of new technologies and business models, particularly in payment services. Many of the businesses that are contributing to the adoption of these technologies are not banks but rely on banks (or payment systems that are owned or controlled by banks) in order to operate. Allied to this are the increasingly serious and well-resourced attempts by firms using distributed ledger technologies to develop new means of payment, including stablecoins.

Regulators struggle to keep pace with these developments, but they hold back at their peril on addressing the implications for banks. The concept that the same or similar services and activities should be regulated in the same way is proving to be difficult to apply in practice, not least because there is a fundamental difference in financial stability terms between institutions that take deposits and those that do not. But the challenge of how to establish a level playing field on which to supervise banks and non-bank payment firms and lenders is one that must surely be addressed, and addressed soon, by regulators in a coordinated way around the world. The time for regulators to congratulate themselves on the effectiveness of financial sector reform following the global financial crisis has come to an end. It is now time to think hard about where risks lie and how risks will develop in the emerging tech-enabled financial system, and the possible causes of the next financial crisis.

It is perhaps surprising, given all the disruption caused by covid-19, that some countries have managed to push through significant legal and regulatory reforms in banking in the past year. These measures have included significant overhauls of the whole bank regulatory regime in some countries and, in other countries, further moves to implement Basel III standards. We have already seen some important changes of policy and emphasis in the United States under the new Biden administration. Legal and regulatory reform has continued in the European Union, although many initiatives have been delayed by the pandemic. The final departure of the United Kingdom from the European Union single market on 31 December 2020 and the resulting decoupling of London as a major banking centre from the European Union legal framework will continue to have reverberations and structural implications for banks operating in Europe. The long-term implications of Brexit for banks remain hard to predict; in particular, whether it will be a prelude to further fragmentation in banking regulation around the world.

This edition of *The Banking Regulation Review* covers 33 countries and territories in addition to the usual chapters on International Initiatives and the European Union. My thanks go to the authors for continuing to prepare informative chapters in the difficult and uncertain conditions in which many of them have been working over the past year. They continue to make this book the useful overview and guide to banking regulation around the world that it is.

Thank you also to the partners and staff of Slaughter and May in London and Hong Kong for continuing to support and contribute to this book, and in particular to Nick Bonsall, Ben Kingsley, Peter Lake, Emily Bradley, Ben Goldstein, Selmin Hakki, David Kasal, Tolek Petch, David Shone, Adrien Yeung and Ada Zhang.

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**Jan Putnis**
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**Chapter 1**

# INTERNATIONAL INITIATIVES

*Jan Putnis and Tolek Petch*[1]

## I INTRODUCTION

This chapter summarises the most important international developments in the field of banking regulation adopted by the principal global standard setting bodies.

Until the coronavirus pandemic, most attention had been devoted to the reform of banking regulation as a result of the 2007 to 2009 banking crisis. It is too early to ascertain how the global pandemic will end, despite the roll-out of vaccines in many countries, and its implications for the international banking system remain a work in progress. Undoubtedly, banks face both immediate and longer-term challenges as a result of the effects on global and domestic economies. Lockdowns have now been lifted in most countries, and economic activity is recovering across much of the developed world. On the other hand, restrictive measures imposed in earlier stages of the pandemic might be reimposed should new and more virulent variants of the coronavirus emerge. As governments in developed countries reopen and withdraw stimulus and emergency support measures for businesses, the overall legacy of the pandemic on national and regional economies will become more apparent. At the time of writing, economic headwinds exist in the form of skill shortages, supply chain bottlenecks, rising energy prices and inflation. If such trends continue, this will inevitably affect banks. However, not one globally significant bank has failed, or required a bail-out, during the pandemic. The pandemic has therefore not yet resulted in a banking crisis, and the banking system is stronger and more resilient than it was in 2007 as a result of the measures taken.

A report on Early Lessons from the Covid-19 Pandemic published by the Basel Committee in July 2021 states:

> *Throughout the unprecedented global economic downturn the banking system has continued to perform its fundamental functions, as banks have continued to provide credit and other critical services. While the report finds that some features of the Basel reforms, including the functioning of capital and liquidity buffers, the degree of countercyclicality in the framework, and the treatment of central bank reserves in the leverage ratio may warrant further consideration, it does not seek to draw firm conclusions regarding the need for potential revisions to the reforms.*

In other words, the Basel Committee does not currently believe that any major changes will be required to the framework of regulation described in this chapter. An updated report on the lessons of the pandemic is planned to be published in 2022.

1 Jan Putnis is a partner and Tolek Petch is a senior associate at Slaughter and May.

Many emergency measures taken during the early stages of the pandemic (such as shutting down housing and mortgage markets, or preventing banks from making distributions to shareholders) have been withdrawn, and there is no current indication that they will be restored.

On 27 March 2020, the Basel Committee on Banking Supervision's oversight body, the Group of Central Bank Governors and Heads of Supervision (GHOS), endorsed a set of measures to provide additional operational capacity for banks and supervisors to respond to the immediate financial stability priorities resulting from the impact of the coronavirus pandemic on the global banking system:

*a* the implementation date of the Basel III standards finalised in December 2017 was deferred by one year to 1 January 2023. The accompanying transitional arrangements for the output floor were also extended by one year to 1 January 2028;
*b* the implementation date of the revised market risk framework finalised in January 2019 was deferred by one year to 1 January 2023; and
*c* the implementation date of the revised Pillar 3 disclosure requirements finalised in December 2018 was deferred by one year to 1 January 2023.

Actual implementation dates in individual jurisdictions will be covered in the relevant national chapters.

The Basel Committee also announced that 'the Committee is suspending consultation on all policy initiatives and postponing all outstanding jurisdictional assessments planned in 2020 under its Regulatory Consistency Assessment Programme'. Inevitably, this was to prove temporary and consultation has now resumed, although most of the revisions proposed to Basel III to date are highly technical in nature.

Subsequently, the GHOS stated in November 2020:

> *[t]he Committee's future work will focus on new and emerging topics including structural trends in the banking sector, the ongoing digitalisation of finance and climate-related financial risk.*

This reflects the fact that almost all of the new regulatory framework is now in place, or due to be implemented in 2023.

As far as banking regulation is concerned, we focus on the two main bodies that lead the post-financial crisis debate: the Basel Committee on Banking Supervision and the Financial Stability Board (FSB), which emerged in 2009 as a new global leader in the debate on measures to improve international financial stability. FSB reports that address issues not relevant to banking regulation are not discussed in this chapter.

## II THE BASEL COMMITTEE

### i Introduction

The Basel Committee is the primary global standard-setter for the prudential regulation of banks and provides a forum for international cooperation on banking supervisory matters. It is principally concerned with the prudential regulation of banks rather than the regulation of their business activities as such. It must, however, be recognised that there are many overlaps between these two areas of regulation, with capital requirements creating incentives for banks to engage in certain activities but not in others.

The Basel Committee comprises senior officials with bank regulatory and financial supervisory responsibilities from central banks and banking regulators in 28 jurisdictions.[2] The current chair is Pablo Hernádez de Cos, who is also chair of the Bank of Spain. The Committee now reports to an oversight body, the GHOS, which comprises central bank governors and (non-central bank) heads of supervision from member countries. The current chair of the GHOS is François Villeroy de Galhau, Governor of the Banque de France. The Basel Committee reports to the GHOS and seeks its endorsement for major decisions. In addition, the Committee looks to the GHOS to approve the Basel Committee Charter and any amendments to it, to provide general direction for the Basel Committee work programme, and to appoint the Committee chair from among its members.

The stated mandate of the Basel Committee is to strengthen the regulation, supervision and practices of banks worldwide with the purpose of enhancing financial stability.[3] Its main focus has traditionally been on internationally active banks, although the Committee's standards have been applied more widely, particularly in the European Union.

The Basel Committee formulates standards and guidelines and recommends statements of best practice. The rules and guidance adopted by the Basel Committee have no legal force[4] and their authority derives from the commitment of banking supervisors in member countries (and, increasingly, non-member countries) to implement the standards agreed by the Committee. The Committee has adopted standards on a wide range of issues relevant to banking supervision, including banks' foreign branches, core principles for banking supervision (revised in September 2012), core principles for effective deposit insurance, internal controls, supervision of cross-border electronic banking and risk management guidelines for derivatives.

However, in recent decades, the Basel Committee has devoted most of its attention to regulatory capital, principles for effective banking supervision and cross-border banking supervision. It has also been active in the important areas of liquidity risk and developing frameworks for the recovery or orderly wind-down of internationally active banks that get into financial difficulties. The Committee has also become involved in the debate on the small but growing market for crypto-assets. The GHOS statement in November 2020 on the Committee's future focus has been quoted above.

The Basel Committee's work is largely organised around groups, working groups and taskforces. Groups report directly to the Committee and form part of its permanent internal structure. Working groups consist of experts who support the technical work of Committee groups. Taskforces comprise technical experts from Committee members and are created to undertake specific tasks for a limited time; high-level taskforces serve a similar purpose.

The Basel Committee's work is organised under five main groups:

*a* the Supervision and Implementation Group, which concentrates on the implementation

2 Argentina, Australia, Belgium, Brazil, Canada, China, the European Union, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. (In addition to members, a number of institutions currently hold observer status. These include as country observers: the Central Bank of Chile/Banking and Financial Institutions Supervisory Agency, the Central Bank of Malaysia and the Central Bank of the United Arab Emirates; and the following supervisory groups and international agencies or bodies: the Bank for International Settlements, the Basel Consultative Group, the European Banking Authority, the European Commission and the International Monetary Fund.)

3 Basel Committee on Banking Supervision Charter, Paragraph 1.

4 ibid., Paragraph 3.

of the Committee's guidance and standards and the advancement of improvements in banking supervision. The Supervision and Implementation Group is also responsible for the implementation of Basel III;

*b* the Policy Development Group, which is charged with identifying issues of importance to banking supervision as they emerge, and with developing policies for the Basel Committee that promote a sound banking system and high supervisory standards;

*c* the Macroprudential Supervision Group, which monitors and reports to the Committee on systemic risk and global developments that relate to macroprudential and systemically important bank supervisory policy;

*d* the Accounting Experts Group, which is concerned with international accounting and auditing standards and, in particular, with ensuring that those standards promote sound risk management at financial institutions, support market discipline through transparency, and reinforce the safety and soundness of the banking system; and

*e* the Basel Consultative Group, which provides an interface between the Basel Committee and non-member banking regulators.

### ii The Basel framework

The Basel Committee has its origins in the financial market turmoil that followed the breakdown of the Bretton Woods system of managed exchange rates in 1973, which led to a number of banks across the globe incurring large foreign currency losses, with some forced to close as a result. In response to these and other disruptions in the international financial markets, the central bank governors of the G10 countries established a Committee on Banking Regulations and Supervisory Practices, later renamed the Basel Committee on Banking Supervision. At the outset, one important aim of the Committee's work was to close gaps in international supervisory coverage so that no foreign banking establishment would escape supervision, and supervision would be adequate and consistent across member jurisdictions. A number of principles and standards on sharing supervisory responsibility and exchanging information between the regulatory authorities followed, laying down the foundation for supervision of internationally active banks.

Once this initial framework was in place, capital adequacy became the main focus of the Committee's activities. In 1988, a capital measurement system (commonly referred to as the Basel Capital Accord (Basel I)) was approved by the G10 governors and released to banks and national supervisors. Basel I comprised a set of international banking regulations setting out the minimum capital requirements aimed at controlling credit risk and creating a bank asset classification system. Over the next few years, the framework evolved with several amendments and additions introduced to it, most notably requiring capital to be held against market risks in 1996.

In June 1999, the Basel Committee issued a proposal for a new capital adequacy framework to replace Basel I. This led to the release of the Revised Capital Framework in June 2004 (generally known as Basel II), which remained the prudential regulatory framework until after the financial crisis of 2007 to 2009.

Basel II was based on three pillars that were intended to be interdependent and mutually reinforcing, and remain applicable today:

*a* Pillar 1 (minimum capital standards) set out the minimum capital requirements for banks;

*b* Pillar 2 (the supervisory review process) set out standards for banking supervisors in applying Basel II. In particular, it required that supervisors should have the power to compel banks to hold capital in excess of the 8 per cent minimum ratio set under Basel II, where this was justified. Standards were also established for the control of interest rate risk in a bank's loan portfolio, and to capture other risks not specifically covered under Pillar 1; and

*c* Pillar 3 (market discipline) provided for extensive disclosure of information to the market. The intention was that pressure from a bank's counterparties, analysts and rating agencies would serve to reinforce the minimum capital standards and ensure that banks carried on their business prudently. As was seen in the 2007 to 2009 financial crisis, it is highly debatable whether this aim was achieved. A revised Pillar 3 standard was published in November 2020 and is due for adoption in January 2023.

### iii The structure of Basel II

Basel II provided a choice of approaches for determining capital requirements. Generally, banks were free to choose between more complex methodologies with the potential for capital savings, and simpler approaches that generally led to a higher capital charge, but with lower operational and systems costs.

The focus of Basel II was on internationally active banks. However, the Basel Committee considered that the principles developed in Basel II, when taken with the reforms described later in this chapter, were suitable as an international benchmark and were adopted as such by the EU.

Overall, Basel II was considerably more risk-sensitive (and hence pro-cyclical) than its predecessor, Basel I. It also marked a shift away from the approach in Basel I of allocating specific capital charges for particular exposures in favour of greater reliance on banks' internal models and methodologies and external credit ratings. One of the main lessons of the financial crisis was that this process had gone too far, and that reliance on internal models should be reduced.

## III FROM BASEL II TO BASEL III

### i The limitations of Basel II

It is fair to say that critics of Basel II, who blamed aspects of the financial crisis on features of that regime, did not properly take into account the fact that when the crisis arose, Basel II had not been implemented at all in a number of key jurisdictions, and had not long been implemented in others. The main requirements of Basel II came into force on 1 January 2007, with the most advanced methodologies only being implemented in January 2008. On the other hand, it is reasonable to conclude that, had Basel II been implemented in more countries for a longer period of time before the financial crisis, it is likely that the regime would have prevented aspects of the crisis as they emerged.

In response to the crisis, the Basel Committee chose to build on Basel II incrementally rather than fundamentally change it, though the cumulative effect of the changes published between 2009 and 2019 will result in a radically updated approach to all aspects of Basel III when they finally come into effect.

### ii The Basel Committee's July 2009 reform package (Basel 2.5)

The first package of changes to Basel II following the crisis was adopted by the Basel Committee in July 2009, and included the following:

*a* increases to the capital charges for securitisation exposures;

*b* elimination of cases of regulatory arbitrage;
*c* improvements to banks' models; and
*d* introduction of an incremental risk capital charge to address the effect of credit risk migration (i.e., ratings downgrades) on a bank's holdings of debt instruments in the trading book. Subsequently, the Basel Committee published substantial changes to the treatment of this risk, which will apply from 1 January 2023.

The Basel Committee's July 2009 reform package initially addressed certain risks. However, the Committee recognised the need for a comprehensive set of measures to strengthen the regulation, supervision and risk management of the banking sector. The result was the adoption of a new, comprehensive reform package on design of capital and liquidity requirements in 2010 (see below). Since then, the main focus of the Committee has been on finalising Basel III, by progressively replacing the component parts of Basel II with new standards.

### iii Other work

The Basel Committee has also engaged in work in the following areas.

#### *Systemically important financial institutions*

The Basel Committee has undertaken work with the FSB to implement an integrated approach to systemically important banks. In September 2011, the Basel Committee finalised details of the additional capital buffer that applies to global systemically important banks (G-SIBs). G-SIBs are required to hold an additional buffer (above the Basel III requirements) of between 1 per cent and 2.5 per cent of common equity, depending on the bank's systemic importance (the percentages being of risk-weighted assets (RWAs)). An initially empty 3.5 per cent bucket exists for G-SIBs that become even more systemically important as a disincentive to such behaviour. In October 2012, the Basel Committee adopted a framework for domestic systemically important banks (D-SIBs), which builds on the rules adopted for G-SIBs. The framework is composed of 12 principles and gives states considerable national discretion to reflect the characteristics of their domestic financial system. D-SIBs are required to meet higher capital requirements to reflect their degree of systemic importance. An updated assessment methodology for G-SIBs was published by the Basel Committee in November 2021 and will come into force in 2023. The latest FSB list of banks identified as G-SIBs using the Basel Committee's methodology was issued in November 2021 (the list will next be updated in November 2022).

#### *Bail-in*

The Committee issued standards on the implementation of debt write-down and conversion of debt to equity to enable a failing bank to continue (whether temporarily or permanently) as a going concern, or be resolved in a way that avoids a government bail-out. The Basel Committee published its requirements for enhanced loss absorbency for additional Tier 1 and Tier 2 capital instruments in January 2011. These requirements are summarised in Section IV. The EU has implemented its own approach to bail-in through the Bank Recovery and Resolution Directive (recently updated) and the Single Resolution Mechanism Regulation for the eurozone (as well as countries that agree to close cooperation with the ECB under the EU banking union, which Bulgaria and Croatia did in 2020).

***Money laundering***

In January 2014, the Basel Committee published the Sound Management of Risks Related to Money Laundering and Financing of Terrorism guidelines. These were revised in July 2020.

***Securities financing transactions***

In July 2021, the Basel Committee adopted two technical amendments that set out the calculation of minimum haircut floors for securities financing transactions. The amendments seek to address an interpretative issue relating to collateral upgrade transactions and correct a misstatement of the formula used to calculate haircut floors.

***Crypto-assets***

In December 2019, the Basel Committee published a discussion paper on designing a prudential treatment for crypto-assets. According to the Committee:

> *the growth of crypto-assets and related services has the potential to raise financial stability concerns and increase risks faced by banks. Crypto-assets are an immature asset class given the lack of standardisation and constant evolution. Certain crypto-assets have exhibited a high degree of volatility, and present risks for banks, including liquidity risk; credit risk; market risk; operational risk (including fraud and cyber risks); money laundering and terrorist financing risk; and legal and reputation risks.*

In June 2021 the Committee published a consultative document on crypto-assets (which include cryptocurrencies). Essentially, such assets are proposed to be divided into two classes for prudential purposes. The first class consists of assets satisfying strict requirements as to regulation and other specified requirements. The second class includes all other crypto-assets and cryptocurrencies (such as Tether or bitcoin). The former are subject to a capital charge based on the banking book or trading book treatment, with possible add-ons to address additional risks. All other crypto-assets are subject to a capital treatment equivalent to a deduction from capital. We are not aware of any existing crypto-asset or cryptocurrency that would not be subject to the deduction equivalent treatment.

Jurisdictions that prohibit their banks from having any exposures to crypto-assets would be deemed compliant with any global prudential standard.

*Climate-related financial risks*

In April 2021, the Basel Committee published a report on conceptual issues connected to climate-related financial risk measurement and methodologies, as well as practical implementation by banks and supervisors. The report includes the following findings:

*a* climate-related financial risks have unique features, necessitating granular and forward-looking measurement;

*b* measurement of climate-related risks by banks and supervisors has centred to date on mapping near-term transition risk factor drivers; and

*c* banks and supervisors have predominantly focused on credit risk.

Key areas for future analytical exploration relate to measurement gaps in data and risk classification methods, as well as methodologies suitable for assessing long-term climate phenomena.

In November 2021, the Basel Committee published a consultative document on principles for the effective management and supervision of climate-related financial risks. The document sets out 18 principles, 12 directed at banks and six at supervisors.

At this stage the Committee is not proposing any prudential standards in respect of such risks, although the consultative document states:

> *The Committee is now examining the extent to which climate-related financial risks can be addressed within the Basel Framework, identifying potential gaps in the current framework and considering possible measures to address any identified gaps.*

The FSB has also undertaken work in this area (see below).

*Review of margining practices*

In October 2021, the Committee published jointly with IOSCO and the Committee on Payments and Market Infrastructures a 'Review of Margining Practices' in light of the covid-19 induced market turbulence in March 2020, including consultation on six areas where improvements could be made.

### iv Consolidated text of Basel III

On 22 January 2021, the Basel Committee published in modular form its consolidated Basel III Framework. The Framework brings together all the Committee's global standards for the regulation and supervision of banks. This includes both the current standards and the standards that come into force in January 2023.

## IV BASEL III: CAPITAL REQUIREMENTS

In September 2010, the Basel Committee announced its agreement on the first part of the Basel III minimum capital requirements for banks, which significantly increased the amount of common equity that banks were required to hold. The detailed requirements were published in December 2010, and revised in June 2011. Further guidance on the new capital definitions and the requirements for counterparty credit risk was published in the form of frequently asked questions in June 2020.

Basel III aims to strengthen the regulation, supervision and risk management of the banking sector, and is designed to target both microprudential regulation and macroprudential risks. More specifically, Basel III extends the former framework in a number of ways, including adopting the following additional measures:

*a* a capital conservation buffer, an additional layer of common equity that, when breached, restricts distribution of capital to help protect the minimum common equity requirement (see Section IV.iii for further details);

*b* a countercyclical capital buffer, which aims to restrict participation by banks in country-wide credit booms with the object of reducing their losses in credit busts (see Section IV.iv for further details);

*c* a leverage ratio (a minimum amount of loss-absorbing capital relative to all of a bank's assets and off-balance sheet exposures regardless of risk weighting) (see Section IV.v for further details);

*d* two liquidity requirements: a liquidity coverage ratio (LCR), a minimum liquidity ratio intended to provide enough cash to cover funding needs over a 30-day period of stress; and a net stable funding ratio (NSFR), a longer-term ratio intended to address maturity mismatches over the entire balance sheet (see Section V for further details); and

*e* additional requirements on systemically important banks, including requirements for supplementary capital, augmented contingent capital and strengthened arrangements for cross-border supervision and resolution.

### i New definitions of capital

#### *More common equity*

Under Basel III, the common equity component of capital (including reserves) increased to 4.5 per cent and the total Tier 1 ratio to 6 per cent of RWAs. For banks structured as joint-stock companies, the equity requirement must be met solely with ordinary shares.

#### *Non-core Tier 1 capital*

Detailed requirements were adopted in respect of additional (i.e., non-core) Tier 1 capital, which was effectively limited to 1.5 per cent of RWAs. The instruments must be perpetual, and may only be called after five years with prior supervisory consent. Interest payments must be made out of distributable profits and, if the instrument is classified as a liability for accounting purposes, it must have principal loss absorption through either conversion to common equity or write-down of principal. The trigger level for write-down or conversion must be at least 5.125 per cent, although banks can choose (or be required by their regulator) to apply a higher trigger. The EU also applies this requirement to equity-accounted instruments (e.g., most preference shares). During the covid-19 pandemic, banks in some jurisdictions were prevented from paying dividends, but permitted to pay coupons on additional Tier 1 capital.

#### *Other tiers of capital*

Basel III abolished innovative Tier 1 and Tier 3 capital, and harmonised Tier 2 capital, based on lower Tier 2 capital under Basel II. Recognition of Tier 2 capital is effectively limited to 2 per cent of RWAs. Tier 2 instruments are long-term subordinated debt with a mandatory coupon.

Under Basel III, all Tier 1 and Tier 2 capital instruments (other than common equity) must include a clause in their terms and conditions requiring the instrument to be written off on the occurrence of a trigger event (i.e., the bank ceases to be a going concern or receives an injection of public sector capital) if there is no statutory scheme under which such instruments can be required to absorb losses. The only compensation for such write-off that may be provided to investors is the issue of new ordinary shares (or the equivalent for mutuals).

#### *Minority interests*

Detailed rules set out the contribution that third-party minority interests in group companies can make towards consolidated capital.

### ii Deductions from capital

Basel III provides for a harmonised set of deductions from capital, most of which are made from common equity. The list of deductions includes:

*a* goodwill and other intangibles;
*b* deferred tax assets that rely on future profitability to be realised;
*c* cash-flow hedge reserves relating to hedging of items not fair valued on the balance sheet;
*d* shortfall of provisions to expected losses;
*e* cumulative gains and losses owing to changes in a bank's own credit risk on fair-valued liabilities (including derivatives);
*f* defined benefit pension fund assets and liabilities held on the balance sheet;
*g* investments in own shares;
*h* reciprocal cross-holdings; and
*i* significant investments in the capital of banking, financial and insurance entities outside of the consolidated group.

These deductions are made under a corresponding deduction approach, so the deduction is from the element of capital that it would have constituted had it been issued by the bank.

### iii Capital conservation buffer

A key element of Basel III is the requirement that banks hold a capital buffer on top of their minimum capital requirements. This buffer is not intended to form part of the minimum capital requirement. It follows that a bank that fails to hold sufficient common equity to satisfy the buffer (but meets the other minimum capital requirements) will not be subject to restrictions on its operations and will not be at risk of resolution or the withdrawal of its banking licence. However, banks that operate within the buffer are subject to restrictions on the distribution of capital, including the payment of dividends and staff bonus payments, with the result that the buffer is generally treated by banks as an effective floor. (Some evidence suggests that banks were unwilling to dip into their capital buffer during the covid-19 pandemic out of fear it might signal financial weakness). According to the Basel Committee:

*a* the purpose of the conservation buffer is to ensure that banks maintain a buffer of capital that can be used to absorb losses during periods of financial and economic stress. While banks are allowed to draw on the buffer during periods of stress, the closer their regulatory capital ratios approach the minimum requirement, the greater the constraints on earnings distribution; and
*b* banks are, of course, able to rebuild capital buffers through raising new capital. However, in the Committee's view, it is not acceptable for banks that have depleted their capital buffers to use future predictions of recovery as justification for maintaining generous distributions to shareholders, other capital providers and employees.

The restrictions on distributions, share buy-backs and staff bonus payments are as follows.

| Common Equity Tier 1 (%) | Minimum capital conservation ratio (expressed as a percentage of earnings) |
|---|---|
| Between 4.5 and 5.125 | 100 |
| Between 5.125 and 5.75 | 80 |
| Between 5.75 and 6.375 | 60 |
| Between 6.375 and 7 | 40 |
| More than 7 | Zero |

### iv Countercyclical capital buffer

The countercyclical capital buffer is intended to ensure that capital requirements take account of the macroprudential environment in which banks operate. It is applied when excess credit growth is associated with a build-up of system-wide risk. It is based on the following elements:

*a* each regulator decides, based on credit conditions in its country, when to activate the buffer. Once activated, the buffer takes the form of an add-on to minimum capital requirements. At all other times the buffer is zero;

*b* a decision to impose a buffer will be announced up to 12 months before it takes effect to give banks time to adjust (if necessary, by increasing capital or reducing lending). Reductions to the buffer take effect immediately when announced;

*c* banks with purely domestic exposure are subject to the full amount of the buffer; and

*d* banks that are internationally active will apply an add-on depending on the geographical location of their credit exposures.

The Basel Committee has stated that setting this buffer is likely to be appropriate where the ratio of credit to gross domestic product (GDP) exceeds its long-term trend. However, as this measure is not always a clear indicator of excessive credit growth, judgement needs to be applied.

The range of the buffer is generally between zero and 2.5 per cent, and is added to the capital conservation buffer. Unlike the capital conservation buffer, this additional buffer may be satisfied by common equity or other fully loss-absorbing capital, although until the Basel Committee issues further guidance on the requirements for such loss-absorbing capital, the buffer needs to be satisfied by common equity. During the covid-19 pandemic, most jurisdictions with a countercyclical capital buffer released it.

In November 2019, the Committee issued guiding principles for the operationalisation of a sectoral countercyclical capital buffer. The guiding principles are defined by tailoring the broad-based countercyclical capital buffer principles on a sectoral basis. The guiding principles are not included in the Basel standards and are only applicable for those jurisdictions that choose to implement them on a voluntarily basis.

### v Leverage ratio

The years leading up to the 2007–2009 financial crisis were characterised by a significant increase in the leverage of financial institutions, enhancing the (apparent) profitability of the financial sector, but also resulting in a greater probability of individual firms failing as well as increased systemic risk generally. Basel III's leverage ratio is defined as the capital measure (the numerator) divided by the exposure measure (the denominator), and is expressed as a percentage. The capital measure is defined as Tier 1 capital, and the minimum leverage ratio is 3 per cent. Accounting values generally apply. More detailed requirements for the leverage ratio were published by the Committee in January 2014. In 2016, the Committee published revised guidance on the leverage ratio in the form of frequently asked questions.

In December 2017, the Committee published various refinements to the definition of the leverage ratio exposure method. These include modifying the way in which derivatives are reflected in the exposure measure, and updating the treatment of off-balance sheet exposures. The new definitions come into force on 1 January 2023.

In December 2017, the Basel Committee also published a revised leverage ratio framework for G-SIBs, which will come into force in January 2023.

### vi Counterparty credit risk

Basel III brought about a number of improvements to the treatment of counterparty credit risk in 2013. The changes included the following:

*a* banks that use an internal model to calculate their counterparty credit risk on over-the-counter (OTC) derivatives, repurchase agreements and securities financing transactions are required to use stressed inputs to address the risk of the model underestimating low-frequency, high-impact events;

*b* a new capital charge was introduced to cover mark-to-market losses associated with a deterioration in the creditworthiness of counterparties;

*c* requirements have been imposed to address wrong-way risk (i.e., where an exposure to a counterparty is adversely correlated to the credit quality of that counterparty);

*d* risk weights on exposures to large financial institutions are subject to a multiplier to reflect the fact that during the financial crisis, the credit quality of financial institutions deteriorated in a more highly correlated manner than that of non-financial counterparties;

*e* standards for collateral management and margining were strengthened. Banks with large and illiquid derivatives exposures have to apply a longer margining period when determining their capital requirements;

*f* greater haircuts apply to securitisation collateral, with a prohibition on recognition of resecuritisation exposures as collateral to reduce counterparty exposures; and

*g* harmonised capital charges for exposures to central counterparties (CCPs) have been introduced distinguishing between qualifying and non-qualifying central counterparties.

A revised framework will come into force in 2023.

### vii Standardised approach to credit risk (January 2023)

In December 2014, the Basel Committee published a consultation document on revisions to the standardised approach to credit risk. The new standardised approach was published in December 2017 and is now due to be implemented by 1 January 2023. Securitisation exposures are addressed in the Basel securitisation standard. The key aspects of the changes are as follows.

*a* Exposures to sovereigns and public sector entities are the same as under Basel II (which, given the 2010–2011 eurozone crisis, and the increases in government indebtedness due to national responses to covid-19, may not be justifiable).

*b* Exposures to banks will be risk-weighted based on the following hierarchy: external credit risk assessments (where allowed) and the standardised credit risk assessment approach for unrated banks, as well as in jurisdictions that do not allow the use of external credit ratings. Under the latter approach, banks are allocated to three risk-weight buckets or grades ranging from 40 per cent to 150 per cent for the base risk weight. Compared with Basel II, some of the risk weights have been recalibrated. A stand-alone treatment for covered bonds has also been introduced.

*c* Exposures to corporates (including insurers) differentiate between general corporate exposures and specialised lending exposures. The former will be risk-weighted between 20 per cent and 150 per cent; unrated corporates will be risk-weighted at 100 per cent. Jurisdictions that do not allow the use of external ratings may allow a 65 per cent risk weight for exposures to investment grade borrowers (as defined in the standard). Unrated small and medium-sized enterprise exposures will generally receive a risk weight of 85 per cent. Specialised lending is divided into three categories: project finance, object finance and commodities finance. Issue-specific (not issuer-specific) ratings may be used where available and permitted by national regulators. Otherwise, object and commodities finance will be risk-weighted at 100 per cent and project finance at 130 per cent during the pre-operational phase, and at 80 per cent or 100 per cent, respectively, during the operational phase.

*d* A new risk class is introduced for subordinated debt, equity and other capital instruments not deducted from regulatory capital or risk weighted at 250 per cent under Basel III (i.e., threshold deductions). Speculative unlisted equity exposures will be risk weighted at 400 per cent and all other equity holdings at 250 per cent.

*e* A more granular treatment will apply to residential real estate, distinguishing between different types of portfolio, which is considerably more complex than the Basel II standard.

*f* A new treatment for commercial real estate will be introduced based on the loan-to-value ratio, and whether repayment is materially dependent on cash flows generated by the property.

### viii Internal ratings-based approach to credit risk (January 2023)

Basel II introduced two model-based approaches for the calculation of credit risk in the banking book: the foundation internal ratings-based (IRB) approach and the advanced IRB approach. New requirements for the IRB approach were published in December 2017 and will come into effect on 1 January 2023. According to the Basel Committee, the 2007 to 2009 financial crisis highlighted a number of shortcomings in the use of internal models, including the excessive complexity of IRB approaches, the lack of comparability in banks' internally modelled capital requirements and a lack of robustness in modelling certain asset classes. The intention is to remove own-estimates of loss given default and exposure at default for those portfolios that the Committee consider were important sources of RWA variability.

As a result, the availability of the IRB approach will be significantly curtailed. In summary, the position under Basel III, will be as follows:

*a* large and mid-sized corporates (consolidated revenues of greater than €500 million): only the foundation IRB approach will be available;

*b* banks and other financial institutions: only the foundation IRB approach will be available;

*c* equities: no IRB approach will be available; and

*d* specialised lending: the same approaches will be available as under Basel II.

The advanced IRB approach remains available for sovereign, small corporate, specialised lending and retail lending. Where available, Basel III will introduce revised floors, depending on the type of transaction (except for sovereigns). However, the Committee published a discussion paper in December 2017 on the regulatory treatment of sovereign exposures. This included a proposal (among others) that the IRB approach for sovereign exposures should be withdrawn. In November 2019, the Committee reviewed the feedback received to the discussion paper, and further evaluated the merits of pursuing such measures. The Committee sought the views of interested stakeholders on three potential disclosure templates, which would require banks to disclose their sovereign exposures and risk-weighted assets by jurisdictional breakdown, by currency breakdown, and according to the accounting classification of the exposures. According to the paper, '[t]he Committee has not reached a consensus to make any changes to the regulatory treatment of sovereign exposures at this stage. For this reason, these potential disclosure templates would be voluntary in nature, with jurisdictions free to decide whether or not to require their banks to implement them.' In November 2021, the Committee duly published a standard on voluntary disclosure of sovereign exposures 'with jurisdictions free to decide whether to require their banks to implement them'.

### ix Credit valuation adjustment risk framework (January 2023)

In December 2017, the Basel Committee published revisions to the framework addressing mark-to-market losses as a result of the deterioration of the creditworthiness of counterparties (credit valuation adjustment (CVA) risk). The main changes to the current rules are as follows: enhancement of the risk sensitivity of the framework and removal of the internal models approach to CVA risk (instead there will be a standardised approach and a basic approach); and improvement of consistency with the new market risk capital charges (see Section IV.x). A consultation paper on changes was published in November 2019 with new rules being published in July 2020. The changes are mainly technical and should result in a reduction of capital requirements for some banks.

### x Market risk framework (January 2023)

In 2009, the Basel Committee proposed amendments to the Basel II market risk framework to address weaknesses in the capital framework for trading activities that became apparent during the crisis: this was updated in December 2010. In addition, the Committee initiated a fundamental review of the trading book with the aim of tackling a number of structural flaws in the market risk framework that were not then addressed. This work has led to a revised market risk framework. Following a number of consultation papers and several quantitative impact studies, the Basel Committee issued standards on minimum capital requirements for market risk on 14 January 2016. In January 2017, the Basel Committee published its first set of frequently asked questions on market risk capital requirements. Before coming into effect, the Basel Committee published further consultation papers in 2017 and 2018. In January 2019, the Basel Committee revised its proposals for market risk.

In summary, the changes focus on the following key areas.

*a* A revised boundary between the banking book and the trading book based on rebuttable or irrebuttable presumptions as to the allocation of instruments to reduce the incentives for a bank to arbitrage its regulatory capital requirements between the two regulatory books, while continuing to respect banks' risk management practices. In particular, strict limits and capital disincentives are applied to the transfer of instruments between the banking book and trading book.

*b* A revised internal models approach for market risk with more coherent and comprehensive risk capture. In addition, the new approach introduces a more rigorous model approval process, based on model approval at the level of each individual trading desk rather than across the bank as a whole. The existing risk metric of value-at-risk (VaR) is replaced by expected shortfall (ES).

*c* A revised standardised approach for market risk that facilitates more consistent and comparable reporting on market risks across banks and jurisdictions, and is suitable for banks with limited trading activity while also sufficiently risk sensitive to serve as a credible fall-back for, as well as a floor to, the internal models approach.

*d* A simplified standardised approach, available to banks with small trading books, at supervisory discretion, that is based on the standardised approach under the 1996 market risk amendment as amended by Basel 2.5. The capital charges are subject to a multiplication factor to ensure broadly similar capital charges with banks using the standardised approach.

The reasons for the changes are essentially fourfold:

*a* existing incentives for banks to take on tail risk: this is inherent in current value-at-risk (VaR) models;

*b* inability to capture the risk of market illiquidity: in times of market stress, the market is likely to become illiquid when the banking system holds similar positions;

*c* inability to capture adequately the credit risk inherent in trading positions; and

*d* excessive recognition of the risk-reducing effect of hedging and diversification.

The basis of the new market risk standard is its new internal models approach. The new models-based metric is founded on three components: ES, which determines capital requirements for those risk factors for which a sufficient amount of data is available; a non-modellable risk factor capital charge for those risk factors for which there is insufficient market data; and a default risk requirement to determine the capital requirement associated with default risk for credit and equity positions (i.e., loss caused by a jump-to-default, as opposed to daily losses based on movements in market prices).

The new standardised approach for market risk is based on a sensitivities-based method, similar to a stress test. The framework specifies a set of risk factors considered to be the main market variables that affect the value of banks' trading portfolios; risk weights applicable to those risk factors calibrated to stressed market conditions; and a methodology for aggregating the losses calculated for each risk factor to determine the loss for the scenario at the portfolio level. The standardised approach must be used by all trading desks not allowed to use an internal model, and must be calculated both across the bank and by each trading desk with model approval.

The sensitivities-based method comprises delta risk (the potential loss due to a small change in the price of an equity or a commodity), vega risk (the potential loss due to a change in the implied volatility of an option) and curvature risk (the potential incremental loss beyond delta risk when large movements occur). Vega risk and curvature risk only apply to positions with 'optionality', which includes, but is broader than, options (e.g., debt securities with pre-payment rights). To this is added a standardised default capital requirement and a residual risk add-on for other risks not adequately addressed elsewhere (e.g., exotic derivatives).

In January 2019, the Basel Committee adopted a number of changes to the market risk framework based on feedback from banks. The main revisions are as follows:

*a* clarifications to the allocation of positions between the trading book and banking book;

*b* revisions to the internal models approach: these include, in particular, a traffic light system for distinguishing between well and poorly performing models, and a more risk-sensitive approach to non-modellable risk factors;

*c* reductions to the operational burdens of the new standardised approach; and

*d* retention of the current Basel 2.5 standardised approach as a simplified alternative to the revised standardised approach subject to the application of scalars set out in the document. These multiplication factors vary depending on the exposure category.

### xi Operational risk (January 2023)

According to the Basel Committee, the 2007–2009 financial crisis demonstrated flaws with the Basel II operational risk framework: basically, capital requirements for operational risk proved insufficient to cover losses suffered by some banks while the nature of those losses, such as those caused by misconduct, highlighted the difficulties associated with using internal models to estimate capital requirements. All existing operational risk approaches under Basel II will therefore be withdrawn. Instead, a new standardised approach based on two components will be introduced: a measure of a bank's income and a measure of a bank's historical losses. Operational loss will be calculated from 2023 as the multiplier of the business indicator component and an internal loss multiplier. The business indicator component is the sum of three components: (1) the interest, leases and dividends component; (2) the services component; and (3) the financial component. The internal loss multiplier (ILM) is a function of the business indicator component and the loss component, where the latter is equal to 15 times a bank's average historical losses over the preceding 10 years. It increases as the latter increases, although at a decreasing rate. At national discretion, the ILM may be set at 1, with the result that solely the business indicator component will drive the operational risk capital calculation.

The rules on operational risk are supplemented by the 2021 Principles for the Sound Management of Operational Risk. This is augmented by the 2021 'Principles for Operational Resilience'.

### xii Interest rate risk in the banking book

Interest rate risk in the banking book is part of the Pillar 2 framework of Basel II and subject to 2004 guidance. In April 2016, the Committee decided to update the principles to reflect changes in market and supervisory practices that remain within Pillar 2 under Basel III. The key changes to the principles are:

*a* greater guidance on expectations for a bank's management process, in particular the development of shock and stress scenarios, the key behavioural and modelling assumptions, and the internal validation process;
*b* updating disclosure requirements to promote greater consistency, transparency and comparability;
*c* updating the supervisory process; and
*d* Section IV of the standard sets out a standardised framework that supervisors could require banks to follow, or a bank could choose to adopt.

Banks are expected to apply the standard now.

### xiii Securitisation

The Basel Committee has undertaken a fundamental review of the securitisation framework, including adopting an alternative treatment for simple, transparent and comparable (STC) securitisations. The new framework came into force in 2018. The changes reflect the following deficiencies in the Basel II securitisation framework:

*a* mechanistic reliance on external ratings;
*b* excessively low risk weights for high-rated securitisations;
*c* excessively high risk weights for low-rated senior securitisation exposures;
*d* cliff effects; and
*e* generally insufficient risk sensitivity.

The new framework is based on a hierarchy that places the internal ratings-based approach at the top followed by the external ratings-based approach (where permitted in the jurisdiction concerned), and then the securitisation standardised approach. A slightly modified (and more conservative) version of the standardised approach is the only approach available for resecuritisation exposures (e.g., CDOs). The STC framework increases the risk sensitivity of the securitisation framework but, owing to its potential to introduce significant operational burdens, jurisdictions retain the option not to implement it. The Basel STC criteria build on the July 2015 Basel and International Organization of Securities Commissions (IOSCO) criteria with certain enhancements. The EU has implemented its own standards. In November 2020, the Basel Committee published technical amendments to the securitisation standard relating to non-performing loans.

### xiv Basel I floor (output floor)

Basel II introduced a capital floor based on Basel I capital requirements of 80 per cent. Basel III will replace the Basel II floor with a new floor based on the use of standardised approaches to limit the benefit obtained by banks from the use of internal models. This will be introduced in stages from 1 January 2023 to 1 January 2028, rising from 50 per cent to 72.5 per cent.

## V BASEL III: LIQUIDITY

The 2007 to 2009 financial crisis demonstrated the critical importance of liquidity. Before then, funding was easily available at relatively low cost. However, the rapid reversal of market sentiment demonstrated how quickly liquidity can evaporate, necessitating unprecedented central bank intervention to support the money markets and individual financial institutions (the similar extraordinary provision of liquidity during the covid-19 pandemic in many countries is not really related to the position of the banking sector but driven by a desire to support the general economy, and is now being withdrawn in most developed countries). As a result, the Basel Committee has adopted two liquidity standards: the LCR and the NSFR. These liquidity requirements apply on a consolidated basis. Revisions to the LCR, incorporating amendments to the definition of high-quality liquid assets (HQLA) and net cash outflows, were adopted in January 2013. Details of the NSFR were published in 2014, and were revised in 2018 to address extraordinary monetary policy operations.

### i LCR

The LCR is an essential component of the Basel III reforms. It seeks to ensure that banks have an adequate stock of unencumbered HQLA that can be converted into cash to meet their liquidity needs over a 30-day period under a significant liquidity stress scenario. The 30-day period is based on the assumption that this will be sufficient for corrective action to be taken by the bank, or for the bank to be resolved in an orderly manner without exposing the taxpayer to losses.

The LCR standard is as follows:

$$\frac{\text{Stock of HQLA}}{\text{Total net cash outflows over a 30-day period}} \geq 100 \text{ per cent}$$

The LCR is based on two elements: a definition of HQLA and a metric for calculating net cash outflows in a liquidity stress scenario.

### ii HQLA

The Basel Committee identified two types of eligible assets: Level 1 and Level 2. Level 1 assets can be used to satisfy the LCR without limit, whereas Level 2 assets are capped at 40 per cent of the overall stock of assets held to satisfy the LCR. The calculation of the limit is adjusted to reflect the impact of secured funding transactions or collateral swaps.

Level 1 assets include cash, central bank reserves, claims on sovereigns and public sector entities assigned a zero per cent risk weight under the Basel III standardised approach, and claims on non-zero per cent risk-weighted sovereigns and public sector entities that are issued in the domestic currency of the relevant sovereign.

Following the January 2013 revision to the LCR, Level 2 assets are divided into Level 2A and Level 2B assets. Level 2A assets include claims on sovereigns and public sector entities risk-weighted at 20 per cent or below under Basel II, together with corporate bonds and covered bonds that are rated AA- or better and have a proven record as a reliable source of liquidity during stressed market conditions. Level 2 assets are subject to a minimum 15 per cent haircut on their current market value. Level 2B assets comprise lower-quality assets and are capped at 15 per cent of overall liquid assets. This subclass includes corporate bonds rated A+ to BBB-, certain equities and residential mortgage-backed securities rated AA or higher. Haircuts of 15 per cent or 50 per cent apply to Level 2B assets. In addition, supervisors may choose to include within Level 2B assets the value of any committed liquidity facility provided by a central bank where this has not already been included in HQLA.

### iii Net cash outflows and inflows

Basel III sets out a metric with assumed outflows and inflows depending on the type of deposit or transaction, which was revised in January 2013. Some examples of outflows are set out in the following table. It should be noted that the metric is driven by supervisors. Banks cannot rely on actual inflow and outflow data to set their own parameters.

| Transaction type | Assumed cash outflow (%) |
|---|---|
| Trade finance | Zero or 5 |
| Fully insured retail deposits | 3 or 5 |
| Less stable retail deposits | 10 |
| Unsecured wholesale funding (small business) | 5 or 10 |
| Unsecured wholesale funding within operational relationships | 25 |
| Unsecured wholesale funding from non-financial corporates, sovereigns and public sector entities | 20 or 40 |
| Unsecured wholesale funding from others | 100 |
| Secured funding | Zero to 100, depending on collateral |
| Derivatives | Zero to 100, depending on collateral |
| Covered bonds and structured financing instruments | 100 |
| Asset-backed commercial paper, conduits, structured investment vehicles and other financing facilities | 100 |
| Committed credit and liquidity facilities | 5 to 100, depending on borrower |

The Basel Committee has also specified parameters for expected cash inflows. Some examples are given in the following table.

| Transaction type | Assumed cash inflow (%) |
|---|---|
| Maturing reverse repos and similar transactions | Zero to 100, depending on collateral |
| Lines of credit, liquidity facilities and similar arrangements | Zero |
| Retail and small business receivables | 50 |
| Receivables from non-financial wholesale counterparties | 50 |
| Receivables from financial institutions | 100 |
| Derivatives | 100 |

Of particular relevance to banks is the assumption that credit lines and other contingent funding arrangements provided by other financial institutions are assumed to be incapable of being drawn. The intention is to reduce the contagion risk of liquidity shortages at one bank causing shortages at other banks.

Inflows are capped at 75 per cent, requiring banks to hold liquid assets of at least 25 per cent of outflows.

During the covid-19 pandemic, some jurisdictions temporarily reduced or amended their LCR standard. Others publicly communicated their view that the metric was flexible and that banks could operate below the 100 per cent requirement.

### iv NSFR

The Basel Committee was unable to finalise the detailed requirements for the NSFR in the initial text of Basel III although this has since been done. The objective of the NSFR is to establish a minimum amount of stable funding based on the liquidity characteristics of a bank's assets and activities over a one-year horizon. The aim is to ensure that longer-term assets are funded with at least a minimum amount of stable liabilities.

The requirement is as follows:

$$\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} \geq 100 \text{ per cent}$$

Stable funding is defined as the portion of those types and amounts of eligible equity and liability financing expected to be reliable sources of funds over a one-year period in conditions of extended stress. The required amount of this funding depends on a bank's assets, off-balance sheet liabilities and activities. The detailed definitions of stable funding were published in October 2014.

The amount of available stable funding is summarised in the following table.

| Category of stable funding | Percentage recognised (%) |
|---|---|
| Regulatory capital before the application of deductions | 100 |
| Any capital instrument that has an effective residual maturity of one year or more | 100 |
| Secured and unsecured borrowings and liabilities with effective residual maturities of one year or more | 100 |
| Stable deposits provided by retail and small business customers | 95 |
| Less stable deposits provided by retail and small business customers | 90 |
| Funding with a residual maturity of less than one year provided by non-financial corporate customers | 50 |

| Category of stable funding | Percentage recognised (%) |
|---|---|
| Operational deposits | 50 |
| Funding with a maturity of less than one year from sovereigns, public sector entities and multilateral and national development banks | 50 |
| Other funding (secured and unsecured) not included in the above with residual maturity of not less than six months and less than one year | 50 |
| All other categories including liabilities without a stated maturity | Zero |

The amount of stable funding required depends on the broad characteristics of the risk profile of a bank's assets and off-balance sheet liabilities. Some examples are as follows.

| Asset | Required stable funding (%) |
|---|---|
| Coins and banknotes | Zero |
| Central bank reserves | Zero |
| Unencumbered Level 1 assets | 5 |
| Unencumbered loans to financial institutions with residual maturities of less than six months where the loan is secured against Level 1 assets | 10 |
| Unencumbered Level 2A assets | 15 |
| All other unencumbered loans to financial institutions with a maturity of less than six months | 15 |
| Unencumbered Level 2B assets | 50 |
| HQLA encumbered for a period of between six months and one year | 50 |
| Loans to financial institutions and central banks with a residual maturity of between six months and one year | 50 |
| Other assets not included in the above with a residual maturity of less than one year including loans to non-financial corporate clients, loans to retail customers, loans to sovereigns, central banks and public sector entities | 50 |
| Unencumbered residential mortgages with a residual maturity of one year or more attracting a risk weight of 35% or less under Basel II | 65 |
| Other unencumbered loans – excluding loans to financial institutions – with a residual maturity of one year or more and a risk weight of 35% or less | 65 |
| Unencumbered performing loans – excluding loans to financial institutions – with risk weights greater than 35% and a residual maturity of one year or more | 85 |
| Unencumbered securities that are not in default and do not qualify as Level 1 or Level 2 assets and exchange-traded equities | 85 |
| Physical commodities and gold | 85 |
| All other assets including assets encumbered for one year or more, net derivatives assets, non-performing loans and loans to financial institutions with a residual maturity of over one year | 100 |

Off-balance sheet liabilities are subject to the NSFR, based broadly on whether the commitment is a credit or a liquidity facility, or some other contingent funding obligation, without assigning actual percentages other than for irrevocable and conditionally revocable credit and liquidity facilities. National supervisors are able to specify the required stable funding based on national circumstances.

In June 2015, the Basel Committee published the final version of the disclosure requirements for the NSFR. The Committee expected national authorities to give effect to the liquidity disclosure requirements relating to the NSFR no later than 1 January 2018. Banks were required to comply with these requirements from the date of the first reporting period after 1 January 2018.

## VI FINANCIAL STABILITY BOARD

### i Introduction

The FSB is an international body that monitors and makes recommendations about the global financial system. It has its origins in the Financial Stability Forum (FSF), which was founded in 1999 by the finance ministers of the G7 countries.[5] The FSF was founded to enhance regulatory cooperation, and cooperation between regulators and international financial institutions to promote financial stability.

The FSF was re-established as the FSB at the G20 Summit held in London in April 2009, following calls in November 2008 by leaders of the G20 countries to enlarge the FSF's membership, and subsequent calls for the FSF to assume a more central role in developing structures and mechanisms to address international financial stability issues.[6] The FSB emerged from the 2009 G20 Summit with a broader mandate to promote financial stability. On 28 January 2013, the FSB established itself as a not-for-profit association under Swiss law, with its seat in Basel, Switzerland.

#### *The Charter and organisation of the FSB*

The Charter of the FSB came into effect on 25 September 2009, and was revised in 2012, but is not intended to create legal rights and obligations. It does, however, set out the FSB's objective, which is:

> *to coordinate at the international level the work of national financial authorities and international standard-setting bodies (SSBs) in order to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. In collaboration with the international financial institutions, the FSB will address vulnerabilities affecting financial systems in the interest of global financial stability.*[7]

The mandate and tasks of the FSB are stated in the Charter to be to:

*a* assess vulnerabilities affecting the global financial system, and identify and review on a timely and continuing basis, within a macroprudential perspective, the regulatory, supervisory and related actions needed to address them, and their outcomes;

*b* promote coordination and information exchange among authorities responsible for financial stability;

*c* monitor and advise on market developments and their implications for regulatory policy;

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5 Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

6 The member jurisdictions of the FSB now comprise Argentina, Australia, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Turkey, the United Kingdom, the United States and the European Union. Other members include international institutions (comprising the Bank for International Settlements, the International Monetary Fund, the Organisation for Economic Co-operation and Development and the World Bank) and international standard-setting, regulatory, supervisory and central bank bodies (comprising the Basel Committee, the Committee on Payments and Market Infrastructures, the Committee on the Global Financial System, the International Accounting Standards Board, the International Association of Insurance Supervisors and the International Organization of Securities Commissions).

7 FSB Charter, Article 1. The Charter was amended and restated in June 2012. It is supplemented by articles of association and procedural guidelines.

*d* advise on and monitor best practice in meeting regulatory standards;
*e* undertake joint strategic reviews of, and coordinate the policy development work of, the standard-setting bodies (SSBs) to ensure their work is timely, coordinated, focused on priorities and addressing gaps;
*f* set guidelines for and support the establishment of supervisory colleges;
*g* support contingency planning for cross-border crisis management, particularly with respect to systemically important firms;
*h* collaborate with the International Monetary Fund to conduct early warning exercises;
*i* promote member jurisdictions' implementation of agreed commitments, standards and policy recommendations through monitoring of implementation, peer review and disclosure; and
*j* undertake any other tasks agreed by its members in the course of its activities and within the framework of its Charter.[8]

The FSB has also taken on the task of coordinating the alignment of the activities of SSBs.[9]

The FSB comprises a Plenary Group, Steering Committee, standing committees, working groups, regional consultative groups, a chairperson and a secretariat.[10] The Plenary is the sole decision-making body of the FSB for all matters governed by its Charter, and comprises representatives of the members of the FSB,[11] chairs of the main SSBs and committees of central bank experts, and senior representatives of the International Monetary Fund (IMF), the World Bank, the Bank for International Settlements and the Organisation for Economic Co-operation and Development. Decisions are taken by consensus.[12] The Plenary may establish standing committees and working groups as necessary.[13]

The Steering Committee of the FSB is mandated with providing operational guidance for the FSB between meetings of the Plenary. The duties of the Steering Committee include monitoring the progress of the FSB's work, distributing information to members of the FSB, and reviewing the policy development work of the SSBs for the Plenary to consider.[14]

The chair of the FSB is Klaas Knot, president of De Nederlandsche Bank. In 2021, the main areas of work of the FSB were:
*a* learning lessons from the covid-19 pandemic;
*b* LIBOR transition;
*c* mapping a path forward for climate work; and
*d* non-bank financial intermediation.

### *Covid-19*

The FSB published a final report on Lessons Learnt from the Covid-19 Pandemic in October 2021. It stated:

8 FSB Charter, Article 2(1).
9 FSB Charter, Article 2(2).
10 FSB Charter, Article 7.
11 The representatives are to be at the level of central bank governor or immediate deputy, head or immediate deputy head of the main supervisory or regulatory agency, and the deputy finance minister: FSB Charter, Article 10(1).
12 FSB Charter, Article 9(2).
13 FSB Charter, Article 9(3)(g).
14 FSB Charter, Article 12(3).

> *The covid-19 pandemic is the first major test of the global financial system after the financial crisis of 2008. While the core of the financial system – including major banks and financial market infrastructures (FMIs) – proved resilient, the macroeconomic shock led initially to severe liquidity stress in other parts of the system. In particular, the stress in key funding markets highlighted financial vulnerabilities in parts of the NBFI sector and prompted unprecedented central bank intervention.*

The FSB continued:

> *The functioning of capital and liquidity buffers may warrant further consideration. Banks generally did not need to use their capital and liquidity buffers to meet loan demand thus far. They maintained strong capital positions during the pandemic, supported by public measures. However, there are indications that banks might be reluctant to dip into their buffers if needed to meet credit demand, in spite of the flexibility in the regulatory framework. Authorities released countercyclical capital buffers quickly, but such buffers were not always available or of sufficient scale to provide substantial additional prudential space. And while banks did not face large liquidity pressures overall, some took defensive actions to maintain their liquidity levels well above regulatory minima.*

Concluding on this point, the report adds that 'it may be beneficial to consider whether there is sufficient releasable capital in place to address future systemic shocks.' The report considers other matters outside the scope of this chapter, such as non-bank financial intermediation, operational resilience and the unwinding of crisis measures. The last was addressed in detail in an April 2021 publication on Covid-19 Support Measures.

***Peer reviews***

Peer reviews take place under the FSB Framework for Strengthening Adherence to International Standards. Under this Framework, member countries of the FSB disclose their level of adherence to international financial standards; they undergo periodic, thematic and single-country peer reviews to evaluate their adherence to these standards; and the FSB identifies non-cooperative jurisdictions (especially those of systemic importance with weak adherence) and assists them with adherence.

***OTC derivatives and rating agencies***

In October 2010, the FSB published a report on implementing OTC derivatives market reforms. The report includes 21 recommendations addressing practical issues in implementing the G20 leaders' commitments concerning standardisation, CCP clearing, exchange or electronic platform trading, and reporting of OTC derivatives transactions. In particular:

*a* the report concluded that the proportion of the OTC derivatives market that is standardised should be substantially increased to promote CCP clearing and trading on organised platforms, to reduce systemic risk and improve market transparency;

*b* the report specifies factors that should be taken into account when determining whether a derivative product is standardised and suitable for CCP clearing;

*c* authorities may consider measures to limit or restrict trading in OTC derivatives that are suitable for clearing but not centrally cleared. Authorities should also ensure that access to CCPs is based on objective criteria, and that a safe and sound environment exists for indirect access;

*d* work should be undertaken to identify those actions needed to ensure that all standardised OTC derivative products are traded on exchanges or electronic trading platforms, where appropriate; and

*e* national authorities need to have a global view of the OTC derivatives markets through full and timely access to relevant data.

***Dealing with systemically important financial institutions***

In November 2010, the FSB published a report containing recommendations for enhanced supervision of systemically important financial institutions (SIFIs). The FSB considered that the level of supervision applied by national authorities to SIFIs must be commensurate with the potential destabilisation risk that such firms pose to their domestic financial system, as well as the broader international financial system. The report made a series of recommendations covering the mandates of supervisors, independence, adequate resources, supervisory powers, techniques of supervision, group-wide and consolidated supervision, macroprudential surveillance and the use of third parties.

This was followed up with a report on reducing the moral hazard posed by SIFIs. Its recommendations included the following.

*a* All FSB member jurisdictions should put in place a policy framework to reduce the risks and externalities associated with domestic and global SIFIs (G-SIFIs) in their jurisdiction.

*b* G-SIFIs should have a loss-absorption capacity beyond the Basel III standards. They should have a higher share of their balance sheets funded by capital or by other instruments that increase the resilience of the institution as a going concern. Depending on national circumstances, this could be drawn from a menu of alternatives, and achieved by a combination of a capital surcharge, a quantitative requirement for contingent capital instruments, and a share of debt instruments or other liabilities represented by bail-inable claims. In November 2011, the FSB published an initial list of G-SIFIs that are subject to requirements for additional loss absorbency. The list is reviewed and updated annually; the most recent update was issued in November 2021.

*c* All jurisdictions should undertake legal reforms necessary to ensure that they have in place a resolution regime that makes feasible the resolution of any financial institution without taxpayer exposure to losses.

*d* Recovery and resolution plans that assess G-SIFIs' resolvability should be mandatory. Authorities must have powers to require a financial institution to make changes to its legal and operational structure to facilitate resolution. If a SIFI has multiple significant legal entities, it should:
- maintain information on a legal-entity basis;
- minimise any undue intra-group guarantees;
- ensure that service agreements are appropriately documented and cannot be abrogated in resolution; and
- ensure that significant global payment and settlement services are legally separable.

***Resolution regimes***

In November 2011, the FSB published its Key Attributes of Effective Resolution Regimes for Financial Institutions, setting out the core elements necessary for an effective resolution regime. The Key Attributes include essential features that should be part of the resolution regimes of all jurisdictions, including scope, the resolution authority, set-off, segregation of client assets, safeguards, crisis management and institution-specific cross-border cooperation arrangements. The Key Attributes continue to provide the fundamental practical and intellectual basis for resolution regimes in all major banking jurisdictions, including the UK, the EU and, to a significant extent, the United States. The FSB concluded that an effective resolution regime (interacting with applicable arrangements for the protection of depositors, insurance policyholders and retail investors) should:

*a* ensure continuity of systemically important financial services, and payment, clearing and settlement functions;

*b* protect, where applicable, depositors, insurance policyholders and investors that are covered by insurance arrangements, and ensure the rapid return of segregated client assets;

*c* allocate losses to firms' owners (shareholders) and unsecured and uninsured creditors in a manner that respects the hierarchy of claims;

*d* not rely on public support and not create an expectation that such support will be available;

*e* avoid unnecessary destruction of value, and therefore seek to minimise the overall costs of resolution and, where consistent with the other objectives, losses for creditors;

*f* provide for speed and transparency and as much predictability as possible through legal and procedural clarity, and advanced planning for orderly resolution;

*g* provide a legal mandate for cooperation, information exchange and coordination domestically and with foreign resolution authorities;

*h* ensure that non-viable firms can exit the market in an orderly manner; and

*i* be credible, and thereby enhance market discipline.

It was also determined that resolution powers should include stabilisation options (through the sale or transfer of shares to a purchaser or to a bridge bank, recapitalisation, or both) as well as liquidation options.

In July 2013, the FSB published three reports on aspects of recovery and resolution planning for SIFIs to assist authorities and firms in meeting the requirements of the FSB's Key Attributes of Effective Resolution Regimes.

The first of these set out guidance on developing effective resolution strategies; that resolution plans should help achieve an orderly resolution and facilitate the effective use of resolution powers. Common considerations included:

*a* the sufficiency of loss-absorbing capital;

*b* the position of that capital in the creditor hierarchy and the operational structure, legal structure, enforceability and implementation of bail-in;

*c* the treatment of financial contracts in resolution;

*d* funding arrangements; and

*e* cross-border cooperation and coordination in the proximity of failure.

The report considered as alternatives a single point of entry and multiple points of entry in a banking group in a resolution scenario. In the former case, resolution powers would be applied at the top parent or holding company level, and would involve the write-down or mandatory conversion of unsecured debt into equity. Multiple point of entry resolution involves the application of resolution powers by two or more resolution authorities to different parts of the group, and is likely to result in the break-up of the group into two or more separate units. The choice of resolution strategy should take into account the structure and business model of the group concerned and the group's particular characteristics. According to the report, a single point of entry may represent the most effective option for a banking group that operates in a highly integrated manner, whereas a multiple point of entry strategy may well be suitable for a group with a decentralised structure, with subgroups of relatively independently capitalised and separately funded subsidiaries. Neither strategy is, in reality, without significant legal and practical challenges, and it may be that, over time, the norm for global banking groups (if there could be such a thing) will be a resolution strategy that is a hybrid of the single point of entry and multiple point of entry strategies.

The second FSB report set out guidance on recovery triggers and stress scenarios. The report referred to both quantitative and qualitative triggers. Quantitative triggers include ratings downgrades, credit risk limits, withdrawal of deposits or other funding, and the three-month interbank rate. This will be replaced by risk-free rates as a result of the regulatory push to adopt risk-free rates. Qualitative triggers could include requests from counterparties for early redemption of liabilities, difficulties in issuing debt at current rates, an unexpected loss of senior management or adverse court rulings. The report noted that G-SIFIs typically use two to four stress scenarios for recovery planning purposes. These may include both systemic and idiosyncratic stress scenarios. Examples of stress scenarios include losses through a rogue trader, a euro or dollar crisis, decreasing GDP rates, loss of goodwill, a significant withdrawal of deposits, an exodus of talent, a collapse of global financial markets, and fraud. The report notes that some G-SIFIs also perform reverse stress testing (which involves identifying scenarios in which the group would fail).

The third FSB report provided guidance on the identification of critical functions and critical shared services that resolution regimes and strategies should seek to preserve. A critical function is one provided by a G-SIFI to third parties where the sudden failure to provide the function would be likely to have a material impact on third parties because of the systemic relevance of the function or of the G-SIFI in providing the function.

In October 2016, the FSB published the Key Attributes Assessment Methodology for the Banking Sector. The Methodology is intended primarily for use in assessments performed by authorities of existing resolution regimes and of any reforms, and peer reviews of resolution regimes, and IMF and World Bank assessments of resolution regimes. The document sets out five preconditions for effective resolution regimes and 12 key attributes. The preconditions include:

*a* a well-established framework for financial stability, surveillance and policy formulation;
*b* an effective system of supervision, regulation and oversight of banks;
*c* effective protection schemes for depositors and clear rules on the treatment of client assets;
*d* a robust accounting, auditing and disclosure regime; and
*e* a well-developed legal framework and judicial system.

In June 2018, the FSB published Principles on Bail-in Execution to assist authorities in developing bail-in resolution strategies and making resolution plans operational for G-SIBs.

In November 2019, the FSB published a report providing an update on progress in implementing policy measures to enhance the resolvability of SIFIs and setting out plans for further work. In 2021, this was followed up by reports on Bail-in Execution Best Practices and an Evaluation of the Effects of Too-Big-To-Fail Reforms. The latter report concluded that the reforms provided significant net benefits for society, observing that 'banks – thanks also to the unprecedented fiscal, monetary and supervisory support measures – have so far been able to absorb the shock [of covid-19]. In the absence of post-crisis reforms it might well have turned out differently.' However, there are still gaps to be addressed. The report notes the following:

*a* obstacles to resolvability remain;
*b* state support for failing banks has continued;
*c* data needs to be improved;
*d* there needs to be closer monitoring of the application of the reforms to D-SIBs; and
*e* risks arising from the shift of credit intermediation to non-bank financial intermediaries needs to be monitored.

### ii Total loss-absorbing capacity principles for G-SIBs

#### *G-SIBs*

In November 2015, the FSB published a report on the adequacy of loss-absorbing capacity of G-SIBs, expounding the concept of total loss-absorbing capacity (TLAC). This consisted of two parts. The first set out principles on loss absorption and recapitalisation capacity of G-SIBs in resolution. The second part contained a term sheet for instruments that contribute to TLAC as an implementing measure of these principles in the form of an internationally agreed standard for G-SIBs.

G-SIBs are required to meet the TLAC requirement alongside the minimum regulatory requirements set out in the Basel III framework. Specifically, they are required to meet a minimum TLAC requirement of at least 18 per cent from 1 January 2022. Minimum TLAC must also be at least 6.75 per cent of the Basel III leverage ratio from 1 January 2023.

G-SIBs headquartered in emerging market economies are required to meet a 16 per cent RWA and 6 per cent leverage ratio TLAC requirement not later than 1 January 2025, and an 18 per cent RWA and 6.75 per cent leverage ratio exposure minimum TLAC requirement not later than 1 January 2028. The FSB monitors implementation of the TLAC Standard and undertook a review of the technical implementation at the end of 2019. The report concluded that progress had been steady and significant in both the setting of external TLAC requirements by authorities and the issuance of TLAC by G-SIBs. All relevant G-SIBs met or exceeded the TLAC target ratios of at least 16 per cent of risk-weighted assets and 6 per cent of the Basel III leverage ratio. As noted above, these figures increased in January 2022.

In December 2016, the FSB consulted on the Guiding Principles on the Internal TLAC Capacity of G-SIBs (internal TLAC). Internal TLAC is the loss-absorbing capacity that resolution entities have committed to material subgroups. It provides a mechanism by which losses and recapitalisation needs of material subgroups may be passed with legal certainty to the resolution entity of a G-SIB resolution group without the entry into resolution of the subsidiaries within the material subgroup. A material subgroup is either an individual subsidiary or group of subsidiaries that are not resolution entities, and that meet certain quantitative criteria, or are identified by a firm's crisis management group as material to the exercise of the firm's critical functions. Each material subgroup must maintain internal TLAC of between 75 per cent and 90 per cent of the external minimum TLAC requirement that would apply if the subgroup were a resolution group.

The guiding principles cover:

*a* the process of identifying material subgroups and their composition;
*b* the role of home and host authorities, and the factors to be considered when determining the size of the internal TLAC requirement;
*c* practical considerations relating to the issuance and composition of internal TLAC;

*d* features of the trigger mechanism for internal TLAC; and
*e* cooperation and coordination between home and host authorities in triggering internal TLAC.

The Basel Committee published a standard for the prudential treatment of banks' investments in TLAC in October 2016. In principle, G-SIBs and non-G-SIBs are required to deduct non-regulatory capital TLAC holdings from Tier 2 capital. However, a materiality threshold applies of 10 per cent of the common shares and TLAC holdings of the issuer. Amounts above 10 per cent are deducted and lower amounts risk-weighted. For G-SIBs, there is a 5 per cent threshold for the investing bank's common equity for TLAC holdings held in the trading book and sold within 30 business days. A review was published of the technical implementation of the TLAC Standard in July 2019:

> *The review concludes that progress has been steady and significant in both the setting of external TLAC requirements by authorities and the issuance of external TLAC by G-SIBs. This has been instrumental in enhancing the resolvability of G-SIBs, strengthening cooperation between home and host authorities and boosting market confidence in authorities' capabilities to address too-big-to-fail risks.*
>
> *The FSB sees no need to modify the TLAC Standard at this time. However as implementation is ongoing, further efforts are needed to implement the TLAC Standard fully and effectively and to determine the appropriate group-internal distribution of TLAC resources across home and host jurisdictions.*

### iii Stablecoins

In October 2019, the G7 (which is not an international standard-setting body) published a report on the impact of global stablecoins. According to the G7 report, stablecoins, regardless of size, pose legal, regulatory and oversight challenges and risks related to:

*a* legal certainty;
*b* sound governance, including the investment rules of the stability mechanism;
*c* money laundering, terrorist financing and other forms of illicit finance;
*d* safety, efficiency and integrity of payment systems;
*e* cybersecurity and operational resilience;
*f* market integrity;
*g* data privacy, protection and portability;
*h* consumer and investor protection; and
*i* tax compliance.

Moreover, stablecoins that reach global scale could pose challenges and risks to:

*a* monetary policy;
*b* financial stability;
*c* the international monetary system; and
*d* fair competition.

Whether these criticisms are valid or a reflection of a government desire to control the provision of means of payment will be left to the reader to decide.

In October 2020, the FSB published its Regulation, Supervision and Oversight of 'Global Stablecoin' Arrangements report. This report sets out high-level recommendations for the regulation, supervision and oversight of global stablecoin (GSC) arrangements. It includes the following principles.

*a* Authorities should have and utilise the necessary powers and tools, and adequate resources, to comprehensively regulate, supervise and oversee a GSC arrangement and its associated functions and activities, and enforce relevant laws and regulations effectively.

*b* Authorities should apply comprehensive regulatory, supervisory and oversight requirements and relevant international standards to GSC arrangements on a functional basis and proportionate to their risks.

*c* Authorities should ensure that GSC arrangements have in place a comprehensive governance framework with a clear allocation of accountability for the functions and activities within the GSC arrangement.

*d* Authorities should ensure that GSC arrangements provide users and relevant stakeholders with comprehensive and transparent information necessary to understand the functioning of the GSC arrangement, including with respect to its stabilisation mechanism.

*e* Authorities should ensure that GSC arrangements meet all applicable regulatory, supervisory and oversight requirements of a particular jurisdiction before commencing any operations in that jurisdiction, and adapt to new regulatory requirements as necessary.

A progress report was published in October 2021.

### iv Leveraged loans and collateralised loan obligations

In December 2019, the FSB published a report assessing the financial stability implications of developments in the leveraged loan and collateralised loan obligation (CLO) markets. The report concludes that:

*a* vulnerabilities in the leveraged loan and CLO markets have grown since the global financial crisis. Borrowers' leverage has increased; changes in loan documentation have weakened creditor protection; and shifts in the composition of creditors of non-banks may have increased the complexity of these markets;

*b* banks have the largest direct exposures to leveraged loans and CLOs. These exposures are concentrated among a limited number of large global banks and have a significant cross-border dimension;

*c* a number of non-bank investors, including investment funds and insurance companies, are also exposed to the leveraged loan and CLO markets; and

*d* given data gaps, a comprehensive assessment of the system-wide implications of the exposures of financial institutions to leveraged loans and CLOs is challenging.

### v Climate change

An issue newly on the agenda of the FSB concerns the potential risks to financial stability arising out of climate change. In November 2020, the FSB published the Implications of Climate Change for Financial Stability report. The report identified two main categories of risk.

*a* Physical risk: this comprises the possibility that the economic costs and increasing severity of extreme weather events, as well as gradual changes in climate, might erode the value of financial assets or increase liabilities, or both.

*b* Transition risk: this category refers to risks that relate to the process of adjustment towards a low carbon economy, which could affect the value of financial assets and liabilities.

In July 2021, the FSB published a Roadmap for Addressing Climate-Related Financial Risks. The Roadmap covers four main areas:

*a* firm-level disclosures;

*b* data;

*c* vulnerabilities analysis; and

*d* regulatory and supervisory practices and tools.

According to the Roadmap:

> *The steps set out in the roadmap are indicative and each step described to be taken is subject to the outcomes of necessary prior steps being satisfactorily achieved. Given this indicative status, they do not represent commitments either by jurisdictions or by international bodies to the individual actions or dates.*

Individual aspects of the Roadmap are allocated to SSBs, including the Basel Committee.

The Roadmap was accompanies by two further reports on Promoting Climate-Related Disclosures and the Availability of Data with which to Monitor and Assess Climate-Related Risks to Financial Stability.

**Appendix 1**

# ABOUT THE AUTHORS

## JAN PUTNIS

*Slaughter and May*

Jan Putnis has been a partner at Slaughter and May in London since 2003. His practice focuses on financial regulation, with particular emphasis on international corporate and commercial transactions. Mr Putnis acts for a broad range of financial institutions, including banks, insurance groups and asset managers, on strategic regulatory matters and investigations, cross-border and domestic mergers and acquisitions, and outsourcings. His work involves extensive advice on regulatory capital and on capital structures of new businesses, as well as capital structures to facilitate acquisitions and group reorganisations.

Mr Putnis qualified as a solicitor in 1996. In a previous life, he graduated with a degree in physics from Oxford University in 1992.

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Tolek Petch is a senior associate at Slaughter and May in London. He qualified as a solicitor in England and Wales in 1995. From 1996 to 1999, he taught competition law at Oxford University, and from 1997 to 1999, was a tutor at Wadham College, Oxford. In 1999, he returned to private practice and now advises on financial regulation, banking law, insolvency law, private international law and public international law. He has published in the fields of financial law, competition law and private international law, and is the author of *Legal Implications of the Euro Zone Crisis* (Wolters Kluwer, 2014).

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