# Annual Report

2020/21

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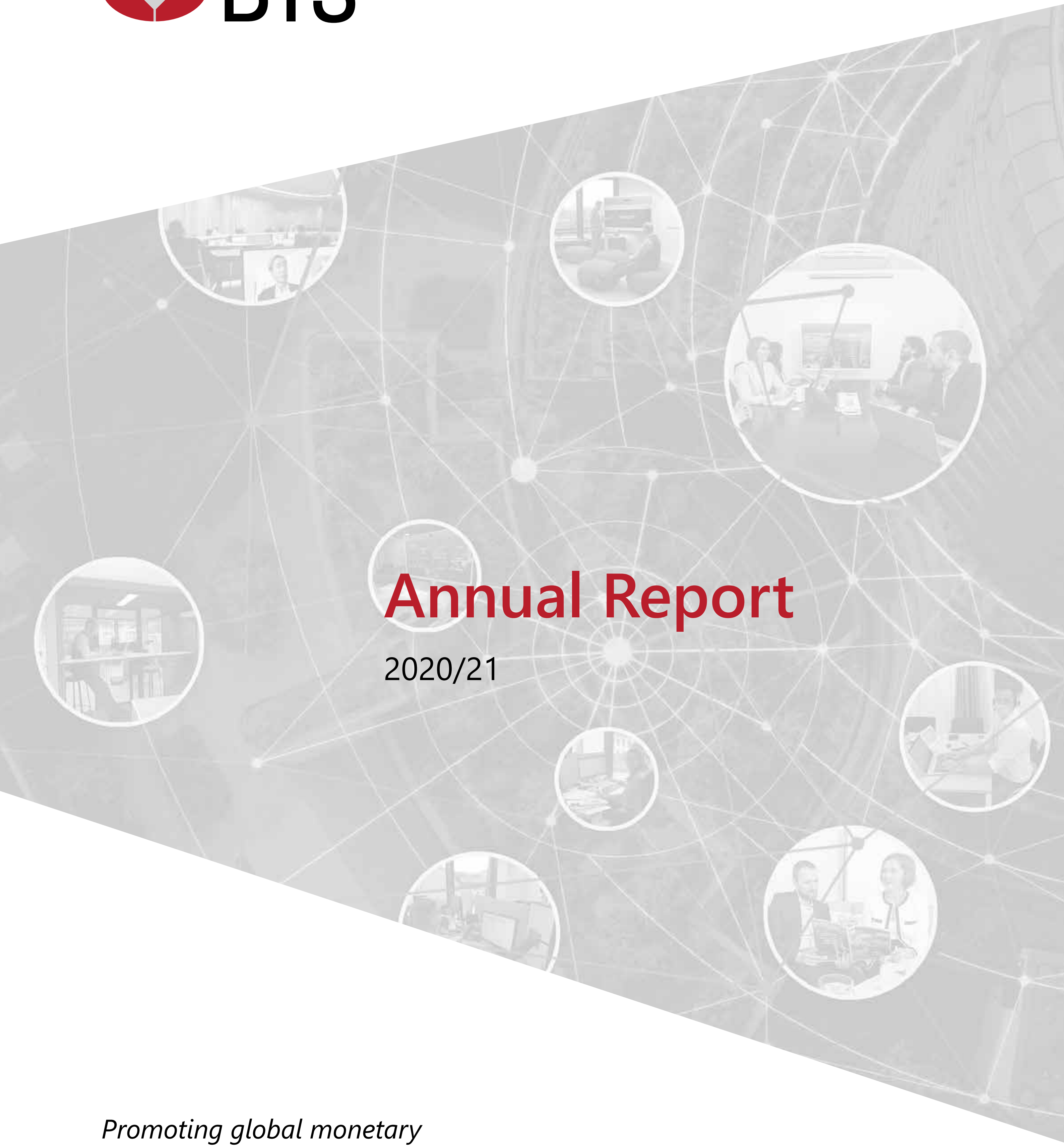


# Annual Report

2020/21

*Promoting global monetary and financial stability*

# Foreword by the General Manager

It is my pleasure to present the BIS Annual Report for 2020/21. This report highlights the great strides made to deliver our Innovation BIS 2025 strategy and how the BIS has responded over the past year to the unprecedented challenges presented by the Covid-19 pandemic.

In the year that marked our 90th anniversary, the world experienced a health crisis unlike anything we have seen before in our lifetimes. Central banks have been at the front line of the economic policy response, leveraging the full scope of their tools and expertise. Working together with governments, they have prevented the pandemic's dramatic financial and economic shock from spiralling into a worst case scenario.

Even though the global economy is not out of the woods yet, there are good reasons for optimism, largely because central banks and their determined efforts have laid the foundations for economic recovery. But, even though the global recession has been milder than expected, economic conditions have diverged significantly across sectors and countries.

Continued international dialogue and cooperation are crucial in a crisis of this magnitude, underscoring the BIS's essential role as the global forum for central banks. The BIS has risen to the challenge alongside central banks, adapting and innovating to meet central banks' evolving needs.

We have continued to implement our Innovation BIS 2025 strategic vision, without sacrificing any of our original ambition. The strategy's focus on embracing innovation in order to respond to our stakeholders' needs proved to be vital for the BIS to meet the challenges of the pandemic.

We have strengthened our data tools, expanded our outreach and enhanced our resilience, and we are on target to achieve all of our goals in the next phase of the strategy. We have also made changes to promote a more agile way of working, including modernising our digital support and human resources framework, establishing the three lines of defence model for operational risk management and streamlining our governance for risk and IT management.

The BIS Innovation Hub, one of the cornerstones of Innovation BIS 2025, aims to foster innovation and collaboration among the central banking community to enhance understanding of financial technology and aid development of innovative solutions to benefit and enhance the financial system. Last year we opened Hub Centres in Hong Kong SAR, Switzerland and Singapore in partnership with the local central banks. This year the BIS launched a strategic partnership in New York. Hub Centres will open this summer in London and Stockholm, with new Centres in Toronto and Frankfurt/Paris to follow, making the BIS Innovation Hub a global force for innovation. Along with the Innovation Hub's geographic expansion, we have published our thematic work programme and launched the BIS Innovation Network.

Our economic analysis explored and assessed the pandemic's implications for financial markets, the real economy and policymakers. The shift to a more digitalised economy, accelerated by the pandemic, has intensified our analysis around the potential for central bank digital currencies, including what they imply for the payment systems of the future. Through the new publications we launched early on in the pandemic, we provided timely analysis of fast-moving developments in financial markets, monetary policymaking and regulation.

Our banking services weathered the challenges of the past year very successfully. Leveraging our three interlinked dealing rooms covering all time zones, customer deposits reached new records, and the valuation losses seen at the beginning of the pandemic were quickly reversed. As a result, net profits increased to SDR 1.2 billion by end-March 2021, while total comprehensive income amounted to SDR 1.1 billion. We began offering new banking products and services to meet the evolving needs of our global customer base. In addition, we responded to the growing demand for sustainable investments with the launch of euro- and US dollar-denominated green bond funds.

In terms of engagement and direction for the institution, our Representative Offices in Hong Kong SAR and Mexico leverage their regional presence and expertise to anticipate and respond proactively in Asia and the Americas to meet central banks' emerging needs. In addition, our Cyber Resilience Coordination Centre supports central banks in anticipating and countering cyber threats, now via virtual exercises and webinars. And the Financial Stability Institute has started offering crisis simulation exercises and has further enhanced the activities of its Informal Suptech Network for experts at financial authorities.

Along with the growing demand for sustainable investments, central banks and supervisory authorities are seeking to improve their understanding of climate-related risks that could impact individual institutions and the financial system. The BIS supports these efforts through our participation in international forums discussing the financial stability implications of climate change and our research on related topics.

Throughout the year, our staff showed extraordinary resourcefulness and energy in supporting our mission in the face of Covid-19 challenges. Their efforts and adaptability made possible the achievements described in this report. Thanks to their commitment, we have successfully navigated the pandemic and will emerge as resilient as ever.

Although Covid-19 is casting a longer shadow than initially anticipated, the BIS is adjusting its strategies accordingly, and preparing to adapt to a rapidly changing world. As always, the BIS remains vigilant and ready to reinvent itself in order to meet our stakeholders' needs as we continue to support them in their pursuit of monetary and financial stability.

**Agustín Carstens**

# The year in numbers 2020/21

## FINANCIALS

**Total deposits** (SDR)
**288.0** billion in currency
**18.8** billion in gold

**Net profit** (SDR)
**1,237.3** million

**Total comprehensive income** (SDR)
**1,070.9** billion

**Operating expense** (SDR)
**316.5** million

**Shareholders' equity** (SDR)
**22.8** billion

**Balance sheet** (SDR)
**356.2** billion

**180** clients

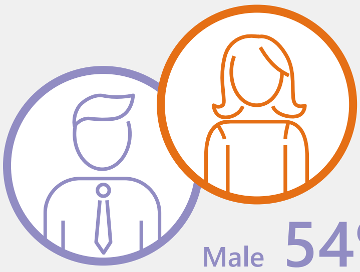
**Customer asset management holdings** (SDR, market value)
**22.3** billion

## RECRUITMENT

**106**
Staff members
(internal and external)

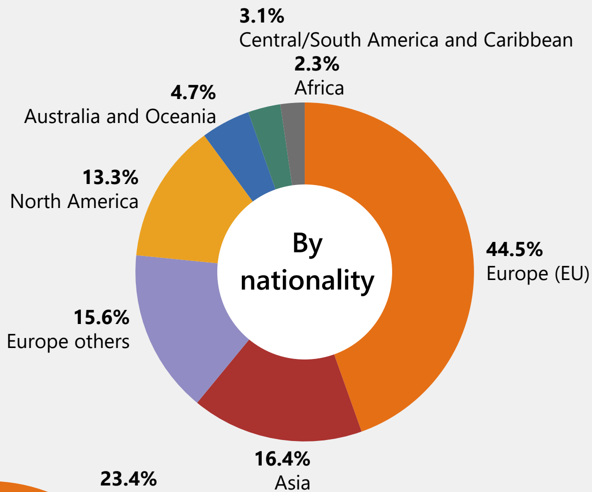
**22**
Graduate Programme

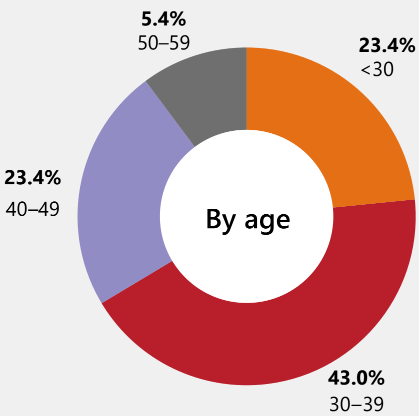
**20**
Secondees, fellows and assignees



Female **46%**

Male **54%**




## HIGH-LEVEL HOSTED MEETINGS

**395**
virtual meetings

**25,000+**
participants

## RESEARCH SEMINARS AND MEETINGS

174 speakers

87 external speakers

87 BIS speakers

## ANNUAL REPORT

20,000 downloads

## VISITING ECONOMIC RESEARCHERS

60

15 BIS Research Fellows
5 Central Bank Research Fellows
25 Technical Advisers
9 Senior Associates
4 Graduates
2 Lamfalussy Fellows

## DIGITAL ENGAGEMENT

13.9 million unique website visitors
(+48% from 2019/20)

68,200 LinkedIn followers
(+59% from 2019/20)

98,600 Twitter followers
(+24% from 2019/20)

## BIS GLOBAL PRESENCE

3 dealing rooms
Basel, Hong Kong SAR and Mexico City

5 Innovation Hub Centres
Basel/Zurich, Hong Kong SAR, London, Singapore and Stockholm

2 Representative Offices
Hong Kong SAR and Mexico City

# Contents

# 1 Promoting global monetary and financial stability

We live in a time of rapid change. Monetary policy plays a key role in stabilising the business cycle. Increasing the resilience of the financial system remains imperative. Rapid technological progress and innovation are also transforming central banking. In our role to support central banks and promote global monetary and financial stability, the BIS is focusing particular attention on developments in financial markets, monetary policy and rapid technological innovation.


## Promoting global monetary and financial stability

With our Innovation BIS 2025 strategy, we have embarked on a transformation journey to shape the Bank for tomorrow. This ambitious programme enables the BIS to adapt to better serve central banks as they face new challenges and reap the benefits of technological financial innovation, while reducing its risks.

We are already two years into the implementation of our strategy, which means we are well placed to respond to central banks' evolving needs and embrace new ways of working.

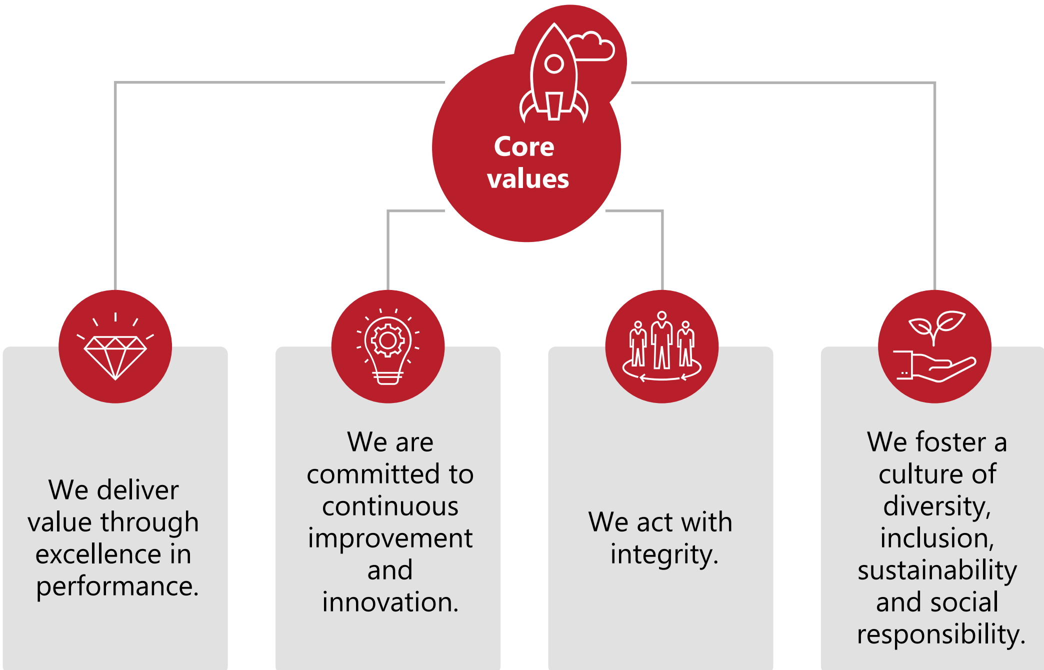
### Our mission

We support central banks' pursuit of monetary and financial stability through international cooperation, and we act as a bank for central banks.

To pursue our mission, we provide central banks with a forum for dialogue and broad international cooperation, a platform for responsible innovation and knowledge-sharing, in-depth analysis and insights on core policy issues, and sound and competitive financial services.

## Our core values

To deliver on our mission and be able to respond to the evolving nature of our business, our work is anchored in strong core values that shape the way in which we work. These values are the shared principles and beliefs that unite our staff and guide our actions to promote a cohesive, purpose-driven culture to support central banks through their current and future challenges (see Chapter 6).




> We embrace our core values to help us achieve our ambition and a shared mindset that sets us apart and makes the BIS a unique place to work, where perspectives meet.

Whether it is through the research that informs policymakers' work, the financial services that we offer to central banks worldwide or the platforms that we provide for collaboration and knowledge-sharing, our core values are strongly anchored in what we do, how we think and how we work.

## A forum for dialogue and broad international cooperation

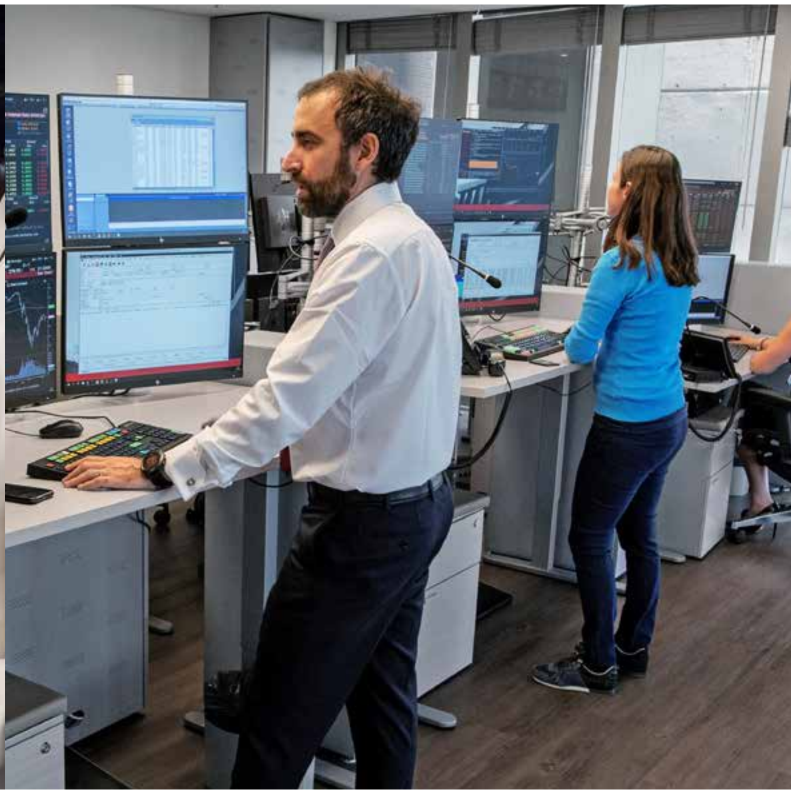
The BIS provides central banks and financial supervisory authorities with a forum for dialogue and cooperation, where they can freely exchange information, forge a common understanding and decide on common actions. Through our programme of regular meetings and our support to the main global standard setters for the international financial system, we help to promote dialogue among central banks and supervisory authorities to foster global monetary and financial stability.

Through its Financial Stability Institute, the BIS supports central banks and other financial authorities in the implementation of global regulatory standards and sound supervisory practices. The Bank's Representative Offices for Asia-Pacific and the Americas play a key role in strengthening relationships and promoting cooperation between the BIS and regional central banks and supervisory authorities. For more information about the Bank's role in fostering international collaboration, see Chapter 3.

## A platform for responsible innovation and knowledge-sharing

The future of central banking is inextricably linked to innovation. Whether it is in the area of artificial intelligence, big data, fintech, digital currencies or green finance, innovation gives us the opportunity to leverage technology to explore new public goods for central banks and make the financial system work better for everyone.

To respond to the increasing need for central banks to collaborate in this space, the BIS Innovation Hub provides a platform for responsible innovation, and the Cyber Resilience Coordination Centre enables central banks to protect themselves from the associated risks. We have embarked on a number of proofs of concept together with central banks to explore the technological innovation that is rapidly transforming the financial landscape, and to help them realise its benefits while reducing its risks. Find out about the BIS's role in fostering innovation in Chapter 5.



## In-depth analysis and insights on core policy issues

The BIS draws on its unique position at the intersection of research and policy. Our economic analysis responds to pressing short-term issues while exploring themes of strategic importance for central banks and financial supervisory authorities. In this role, we support central bank cooperation and provide an independent voice to sound policymaking.

Working closely with our central bank counterparts, we produce in-depth research and statistical analysis which is made freely available to the public. For more on our research and statistics, see Chapter 2.

## Sound and competitive financial services

We offer financial services exclusively to central banks, monetary authorities and international organisations, mainly to assist them in the management of their foreign exchange assets. Our banking transactions fund our own activities and provide us with first-hand insights into current financial market conditions, which contribute to our research activities.

As an institution owned and governed by central banks, the BIS is well placed to understand the needs of reserve managers their primary focus on safety and liquidity, as well as the evolving need to diversify their exposures and obtain a competitive return. With banking operations in Basel, Hong Kong SAR and Mexico, we offer sound and competitive financial services to central banks around the globe and around the clock. For more information on BIS banking activities, see Chapter 4.

# Innovation BIS2025
Shaping the Bank for tomorrow

2019 2020 2021

## Highlights 2020/21

Launched in 2019, Innovation BIS 2025 is the Bank's medium-term strategy comprising a set of initiatives to build a stronger BIS that embraces continuous innovation on both the analytical and business fronts. It reflects how innovation and technology are reshaping the financial landscape and the way we work. Under the strategy, we are investing in next-generation technology to build a resilient and future-ready digital workplace across the Bank, and introducing best practices at the organisation-wide level.

Two years since we embarked on this programme, our strategic actions have ensured the BIS is in a position to meet our stakeholders' evolving needs, whether they were triggered by the pandemic, macroeconomic developments or rapid digitisation. In 2020/21, we saw many achievements related to our Innovation BIS 2025 strategy; this timeline highlights some of them.

### April 2020

First TechSprint competition in the areas of regtech and suptech

### May 2020

Opening of new dealing room in BIS Americas Office

### June 2020

Announcement of expansion of the BIS Innovation Hub to four new centres


### June 2020

First virtual BIS Annual General Meeting

### August 2020

Launch of TechChallenge competition for trade finance mechanisms

2022 2023 2024 2025

## October 2020

[New recruitment gender balance targets set]

## November 2020

New interactive data dashboards for systemically important banks' scores and Liquidity Coverage Ratios

## December 2020

Completion of Project Helvetia, a joint proof of concept experiment that integrates tokenised digital assets and central bank money

## December 2020

Rollout of BIS automatic data exchange system (Bulkdata) to 20 central banks

## January 2021

[Establishment of a BIS Innovation Hub strategic partnership with the New York Fed]

## January 2021

Launch of a euro-denominated green bond fund

## February 2021

[Launch of ISO 20022 Challenge hackathon to improve cross-border payments]

## March 2021

[BIS Innovation Summit: global leaders discuss how central banks can meet the challenges of innovation in the digital age]

## April 2021

BIS launches its updated mission statement, vision and core values

## June 2021

[The Green Swan conference looks at how the financial sector can take immediate action against climate change-related risks]

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# In-depth analysis and insights

Research at the BIS supports central banks in their pursuit of monetary and financial stability. The BIS provides our stakeholders with in-depth analysis and insights by drawing on its unique position at the intersection of research and policy.

# Economic research and analysis

The Bank's research and analysis are the result of the joint effort between various areas of the BIS. The bulk of this work is carried out in the Monetary and Economic Department (MED), in both the Bank's headquarters in Basel and its Representative Offices. The Representative Offices also lead programmes of research activities in their own right, in collaboration with the central banks in their respective regions. The BIS's Financial Stability Institute (FSI) publishes studies to contribute to the design, dissemination and implementation of sound regulatory and supervisory policies worldwide.

The BIS has a distinctive vantage point at the intersection of conceptual advances and policymaking. BIS research draws on this unique position to provide insights that are topical and of direct relevance for policy. In performing this role, BIS staff collaborate with external researchers, including those from member central banks. The BIS also convenes conferences and collaborative research networks for the community of researchers and officials from central banks, supervisory agencies, international financial institutions and academia.

Research findings are the basis for the briefing notes that the BIS produces for regular meetings of senior central bank officials and for its support for the Basel-based groups. Policy-relevant insights are then published in a timely way in the BIS Annual Economic Report, Quarterly Review, Bulletins and FSI publication series. Research output of a generally more technical and in-depth nature is made available via BIS Working Papers and publications in peer-reviewed journals.

## The year's highlights

The highlights of BIS research and analysis reflect key events in 2020/21, not least the economic impact of the Covid-19 pandemic. They include fault lines laid bare in non-bank financial intermediation, evolving monetary policy frameworks and financial innovation.

> The Covid-19 pandemic has raised fundamental challenges for central banks and policymakers worldwide. BIS research and analysis aim to support policymakers as they address these challenges by providing in-depth and timely insights on core themes.

# BIS publications

# 2020/21

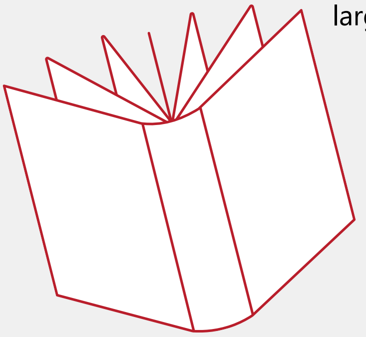
Research at the BIS contributes to policy discussions on topical financial and economic issues.

**85** Working Papers
257,000
Offer insights into key economic and financial developments

**40** BIS Bulletins


351,500
Provide insights on current events in banking, markets and the larger economy

**27** Committee publications
297,000
Provide background analysis and policy recommendations



**12** FSI Briefs


98,500
Focus on Covid-19 policy measures

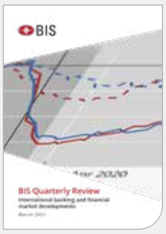
**5** FSI Insights

31,500
Outline range of regulatory and supervisory approaches

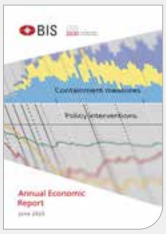
**4** BIS Papers
32,000
Facilitate discussions of senior officials from central banks held at the BIS

**3** FSI Occasional Papers
18,500
Shed light on special focus topics

## Flagship publications



Quarterly Review
48,500
Examines developments in international banking and financial markets



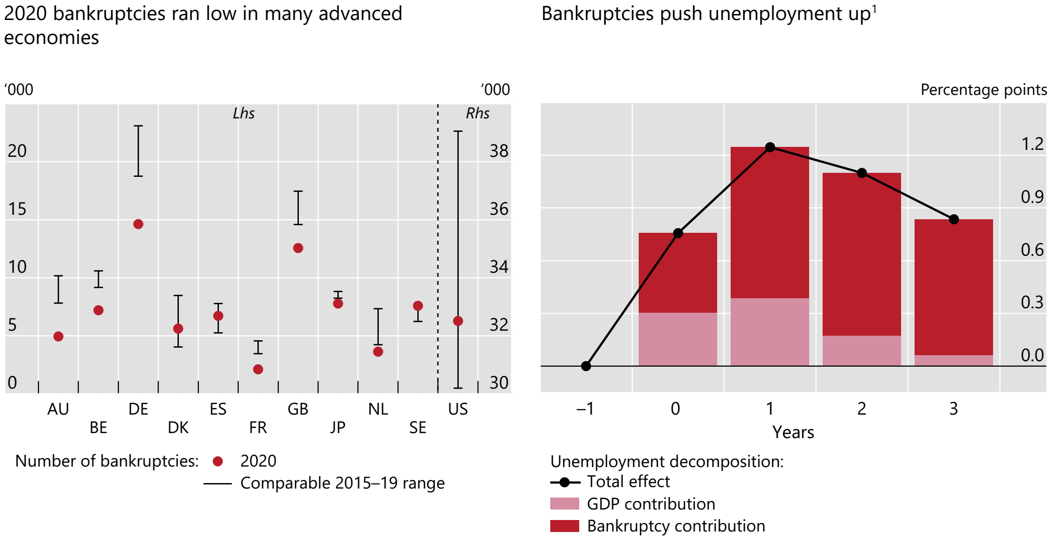
Annual Economic Report
29,500
Presents commentary on the global economy and outlines policy challenges

## Recession, recovery and reallocation

The Covid-19 recession was the steepest economic downturn in the modern era. Fiscal authorities and central banks undertook unprecedented measures to shore up the global economy. At the same time, supervisory authorities introduced measures to ensure the continued smooth flow of credit to the economy. Together, these measures helped contain the depth of the contraction and fended off the risk of an economic sudden stop. In containing the pandemic's economic woes, authorities probably also limited the related death toll in poorer countries.

The effects of the Covid-19 crisis have been felt unevenly across sectors, and the output of customer-facing services could remain well below its pre-Covid-19 trend for some time. Economies where this sector is large could grow more slowly in the near term, suggesting that large advanced economies could face a "98% economy", with GDP recovering to at best 2% below its pre-crisis trend, until constraints on customer service industries ease. The likely trajectory for some other economies that emerged from the pandemic first, such as China, is less affected, reflecting early gain of control over the virus and therefore less need for prolonged containment measures.

### Covid-19 recession, bankruptcies and unemployment




[1] Change in unemployment rate following a one standard deviation drop in GDP and a one standard deviation increase in bankruptcies. The sample comprises Australia, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Iceland, Italy, Japan, the Netherlands, New Zealand, Norway, South Africa, Spain, Switzerland, the United Kingdom and the United States. Estimation includes country dummies.

Sources: www.bis.org/publ/bisbull30.htm; www.bis.org/publ/bisbull31.htm; OECD, *Timely Indicators of Entrepreneurship* and *Economic Outlook*; Datastream; Epiq AACER.

Some of the pandemic-induced changes in demand patterns are likely to be long-lasting. These structural shifts will require substantial resource reallocations towards the more productive sectors of the economy, while the sectors most affected by the pandemic will see more insolvencies. In many countries, bankruptcies ran low in 2020 despite the pandemic (see graph above), largely due to policy support – fiscal, monetary and prudential. The expected wave of business failures related to the Covid-19 recession therefore has yet to materialise. The eventual toll will reflect the evolution of the real economy.

Bankruptcies weigh heavily on labour markets, as unemployment typically increases considerably in their wake (see graph above). At the same time, the reallocations may be a catalyst for renewal, as they make space for new firms that could become the engine of future growth and employment. This underscores the need to support a quick and efficient reallocation of resources to drive growth in the post-pandemic world.

## Fault lines in market-based finance

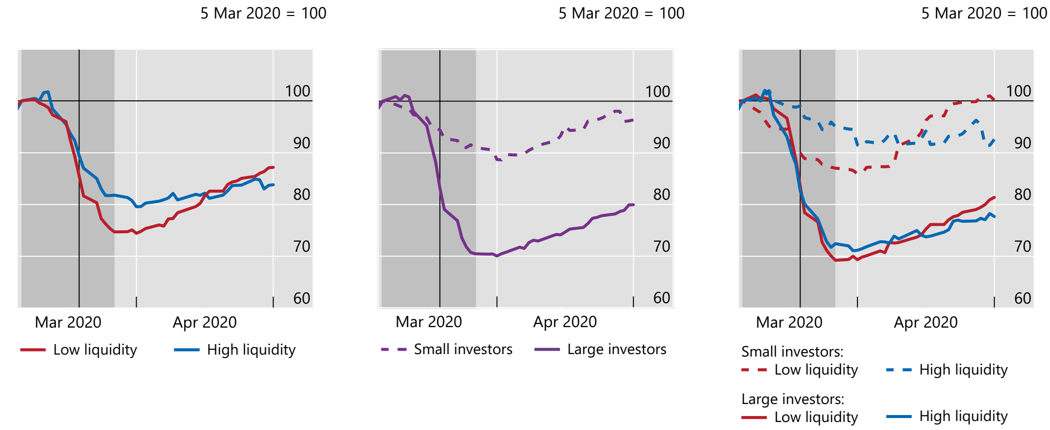
In the early stages of the pandemic, in March 2020, the global financial system came under severe stress, especially in the non-bank financial intermediation (NBFI) sector. Several BIS research articles over the past year focused on NBFIs' interlinkages with the rest of the financial system and studied the impact on market functioning during the stress period.

> The market turmoil during the Covid-19 crisis in March 2020 highlighted structural vulnerabilities in non-bank financial intermediaries – a sector which has gained significantly in importance since the Great Financial Crisis of 2007–09.

A key focus of BIS research has been to understand how NBFI leverage in government bond markets and liquidity mismatches in money market funds (MMFs) and open-ended bond funds have played a role in the propagation of financial stress. Faced with substantial redemptions by investors, money market funds played an important role in the "dash for cash" amid the deterioration in overall funding liquidity conditions. MMFs that cater to large investors in particular experienced substantial withdrawals during March 2020, in a manner that was largely unrelated to funds' liquidity conditions (see graph below). To respond to the redemption shock, MMF portfolio managers attempted to preserve their funds' liquidity conditions. In the case of open-ended bond funds, fund managers appeared to respond to the dash for cash by anticipating further sales, and ended up with larger cash balances at the end of March 2020 compared with the beginning of the month, in spite of the very substantial redemptions by investors. In this sense, asset sales were larger than might have been implied by investor redemptions, and were especially important in emerging market economy (EME) local currency bonds.

## Large investors ran on prime money market funds irrespective of fund liquidity[1, 2]

Fund-level runs were somewhat driven by fund liquidity conditions… | …but large investors' withdrawals were very sharp… | …irrespective of the liquidity conditions of the individual funds




The black vertical lines indicate 18 March 2020 (Federal Reserve unveils the MMLF programme). The shaded area indicates 6–26 March 2020 (period of consecutive outflows).

AUM = assets under management; MMLF = Money Market Mutual Fund Liquidity Facility; WLA = weekly liquid assets.

[1] Calculated on US prime institutional funds as classified by CRANE. [2] Funds (portfolios) are sorted into the low/high groups based on the average of their minimum investment amount (WLA) during January–February 2020. Then, funds (portfolios) whose average stands above the cross-sectional median are assigned to the high groups, and the rest are assigned to the low groups. [3] WLA generally include cash, US Treasury securities, other government securities with remaining maturities of 60 days or less, and securities that convert into cash within one week. [4] Minimum initial investment amount.

Sources: www.bis.org/publ/qtrpdf/r_qt2103b.htm; CRANE.

As in previous episodes (eg the Great Financial Crisis and European sovereign debt crisis), strains spilled over to offshore US dollar funding markets, affecting financing around the globe. These spillovers, which prompted a strong central bank response via swap lines, again highlighted the close interaction of funding and market liquidity and the importance of currency mismatches.

Another key effort of BIS research was aimed at better understanding the role of NBFIs' leverage and its impact on market functioning. BIS research highlighted how the use of leverage can result in destabilising dynamics due to perverse feedback loops. Such dynamics in part arise because market prices not only reflect fundamentals, but may also trigger a response through the various constraints under which NBFIs operate. These effects were at play during March in the long-dated US Treasury market. More generally, risk management strategies designed to preserve capital lead to individual retrenchment at times of high volatility and may amplify initial shocks. Margining practices at central counterparties are a case in point. Concerns about counterparty credit risk in March were allayed given the widespread adoption of central clearing, which served to limit the erosion of confidence. But by triggering a need to come up with cash to meet margin calls at short notice, the arrangements also generated liquidity pressures elsewhere in the financial system.

The March 2020 turmoil showed that effective regulation was key to ensuring that banks could take on the role of "elastic nodes" in the financial system. They did so by supplying deposits through committed credit lines to clients, including to NBFIs, thereby acting as shock absorbers rather than amplifiers. But the increase in non-bank intermediation highlighted the need to gain a better understanding of its systemic implications and to put in place better regulation of this very heterogeneous sector. In an increasingly market-based financial system, within which NBFIs have taken over key intermediation functions, a pertinent question is whether the toolkit is (still) appropriate. Market-based finance is an identified gap in the macroprudential framework which needs to be addressed.

## Monetary policy responses and frameworks

Central banks around the globe responded in forceful and innovative ways to the challenges of the pandemic. Central banks in advanced economies deployed the full range of crisis tools. The initial response focused primarily on easing financial stress and ensuring a smooth flow of credit to the private non-financial sector. The pandemic triggered complementary responses from monetary and fiscal authorities. Fiscal backstops and loan guarantees supported central bank actions. Large-scale asset purchases, designed to achieve central banks' objectives, helped contain the costs of fiscal expansions. The footprint of central banks' measures is and will be sizeable. Across the five largest advanced economies, balance sheets had risen by more than 17% of 2019 GDP by end-2020 and are projected to remain large in the near future.

> The pandemic has shone a spotlight on the challenges central banks have been facing over the past decade.

The response by advanced economy central banks has further exposed the challenge of providing monetary accommodation at the zero lower bound (ZLB). The ZLB constraint raises questions about how to maintain central banks' capacity to stabilise the economy, and about the interaction of fiscal and monetary policy in such an environment. BIS research presented at a session on "The monetary-fiscal nexus with ultra low interest rates" at the Annual Meeting of the American Economic Association explored these questions from a conceptual angle, finding that central bank bond purchases are a critical tool to support the stability of the economy and of public debt in a low interest rate environment.

Central banks in EMEs departed from their monetary policy playbook by cutting rates even in the face of sharp currency depreciations and massive capital outflows. Monetary easing, FX intervention and domestic asset purchases helped cushion the impact of portfolio outflows on local currency sovereign bond markets. Three factors were at play. First, the forceful monetary policy response in advanced economies resulted in very easy global financial conditions, which shielded EMEs. These policies capped the appreciation pressures on the US dollar, an EME risk factor, and gave EMEs greater room to cut interest rates. Second, the cyclical position of EMEs provided more room for easing of monetary policy. Third, better fiscal and monetary frameworks made countries less vulnerable to external influences, improved the anchoring of inflation expectations and kept a lid on exchange rate pass-through.

In EMEs, capital flow and exchange rate swings have loomed large over the past couple of decades, interacting with domestic financial cycles, and have made it harder to pursue price and financial stability. Expanding on a special chapter in its 2019 Annual Economic Report, the BIS has contributed to collaborative efforts by EME central banks to further lay out the nature of challenges and the policy implications based on surveys of BIS member central banks both in Asian and in Latin American and other economies. The insights gained from these surveys will lay the foundation for further work at the BIS to draw lessons for policy.

Recently, the outlook for inflation has moved into the focus of the policy debate. BIS research has documented a general decline in upside inflation risks over time in both advanced and emerging market economies, reflecting successful adoption of inflation targeting regimes and disinflationary processes. But important risks remain. In EMEs, large exchange rate depreciations are associated with upside inflation risks. In advanced economies, the ZLB can heighten downside inflation risk.

## Financial innovation and the digital economy

Following a special chapter on big techs in finance in the 2019 Annual Economic Report, the 2020 Report featured a special chapter on central banks and payments in the digital era. The current pandemic has further accelerated the shift to digital payments. Central banks are working to improve existing payment systems in pursuit of key public policy objectives. These objectives include financial inclusion; guaranteeing safety and integrity in digital payments; establishing resilient, fast and inexpensive payments; and encouraging continued innovation in payments.

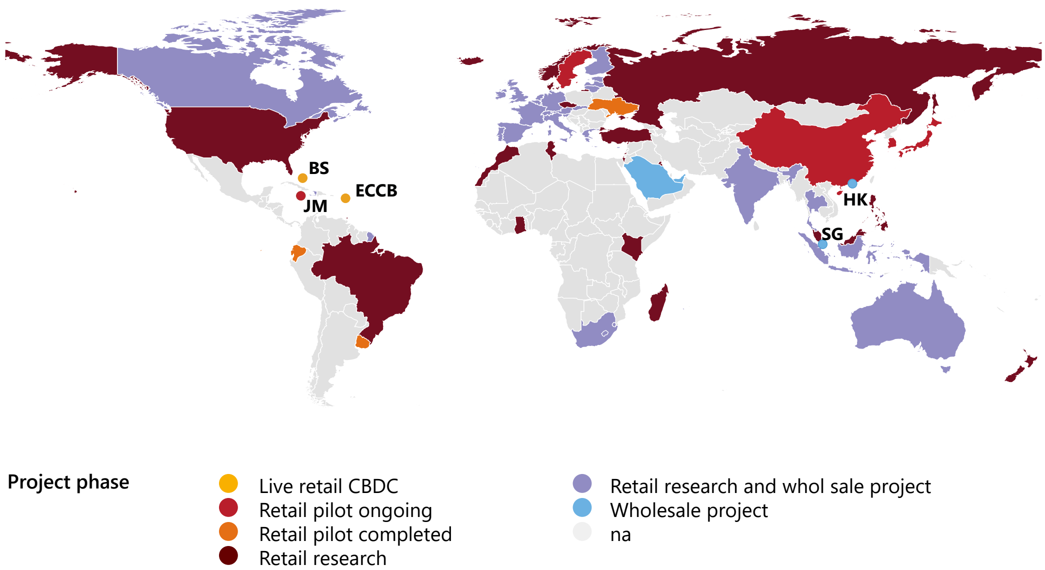
> A technological revolution is reshaping all aspects of the economy and, with it, the financial sector. This has an impact on the full range of central bank functions, from payments to monetary policy to financial regulation.

At a Hoover Institution policy seminar on digital currencies and the future of the monetary system, BIS General Manager Agustín Carstens said that central banks today have the possibility to produce a technologically superior representation of central bank money. This can combine novel digital technologies with the tried and trusted characteristics of central banks – such as accountability to society, transparency, legal backing and finality. By contrast, private stablecoins may offer innovative features but pose a range of risks. In particular, historical examples indicate that there may be strong incentives to deviate from an appropriate asset backing, such as pressure to invest in riskier assets to achieve higher returns. A centralised ledger is likely to be superior to a decentralised one, except in cases of a weak rule of law or contract enforcement.

> "Today we have the possibility to produce a technologically superior representation of central bank money."
>
> **Agustín Carstens**
> BIS General Manager

Central bank digital currencies (CBDCs) are a prime example of how central banks can stand at the cutting edge of innovation. More and more central banks are considering retail CBDC architectures in which the CBDC is a direct cash-like claim on the central bank but where the private sector handles all customer-facing activity (see graph below). Yet a thoughtful approach is warranted. Societies face forks in the road in designing digital money, which should be seen as an evolution of the public-private partnership.

## Overview of CBDC project status




BS = The Bahamas; ECCB = Eastern Caribbean Central Bank; HK = Hong Kong SAR; SG = Singapore.

Correct as at 31 May 2021. The use of this map does not constitute, and should not be construed as constituting, an expression of a position by the BIS regarding the legal status or sovereignty of any territory or its authorities, the delimitation of international frontiers and boundaries and/or the name and designation of any territory, city or area.

Source: www.bis.org/publ/work880.htm.

Technological innovations are evident not only in payments but also in other financial services. BIS research has developed a new database for fintech and big tech credit, which illustrates how these financial inclusion; alternative forms of credit are booming in regions around the world. They are more developed where the ease of doing business is greater; where investor protection, disclosure and the efficiency of the judicial system are more advanced; and where bond and equity markets are more developed. Overall, alternative credit seems to complement other forms of credit, rather than substitute for them.

**Implications of financial innovation**

These changes may have wide-ranging implications. Non-traditional data, for example from applications on mobile phones or e-commerce platforms, can help to improve credit scores and reduce the need for collateral. BIS research finds that big tech credit for small and medium-sized enterprises in China is less correlated with house prices and local business conditions. This could reduce the procyclicality of credit and potentially weaken the financial accelerator mechanism. That said, there are open questions as to whether big tech credit performance is superior to bank models that also use soft information and can be sustained over full business and financial cycles.

Technological adoption may also have distributional effects. BIS research indicates that women are less likely to adopt fintech than men. Evidence from Italy indicates that the wealthy have benefited from higher returns due to financial technology – although inequality has fallen over time, as such technologies have become more widely adopted. This points to the need for policies to promote a wide diffusion of technology.

Another implication of a larger digital footprint is a greater vulnerability to cyber risk. The financial sector has been hackers' preferred target during the Covid-19 pandemic. Firms using cloud services enjoy lower costs, particularly when cyber incidents are relatively small-scale, but as cloud providers become systemically important, cloud dependence may give rise to tail risks. The official sector response to Covid-19 took the form of operational resilience standards for critical employees, IT infrastructure, third-party service providers and cyber resilience. Financial institutions were expected to introduce enhancements to their cyber resilience frameworks.

> As supervisors and regulators, central banks and other financial authorities need to be creative, nimble and tech-savvy to cope with a rapidly shifting financial landscape.

The digital transformation of financial services gives rise to a set of important policy issues regarding competition, regulatory perimeters and ensuring a level playing field. A number of regulatory initiatives have taken place in different jurisdictions. The FSI has compared those initiatives and has developed a repository of policy actions in the fintech space. For digital banking, most jurisdictions apply existing banking laws and regulations to banks within their remit, regardless of the technology they apply.

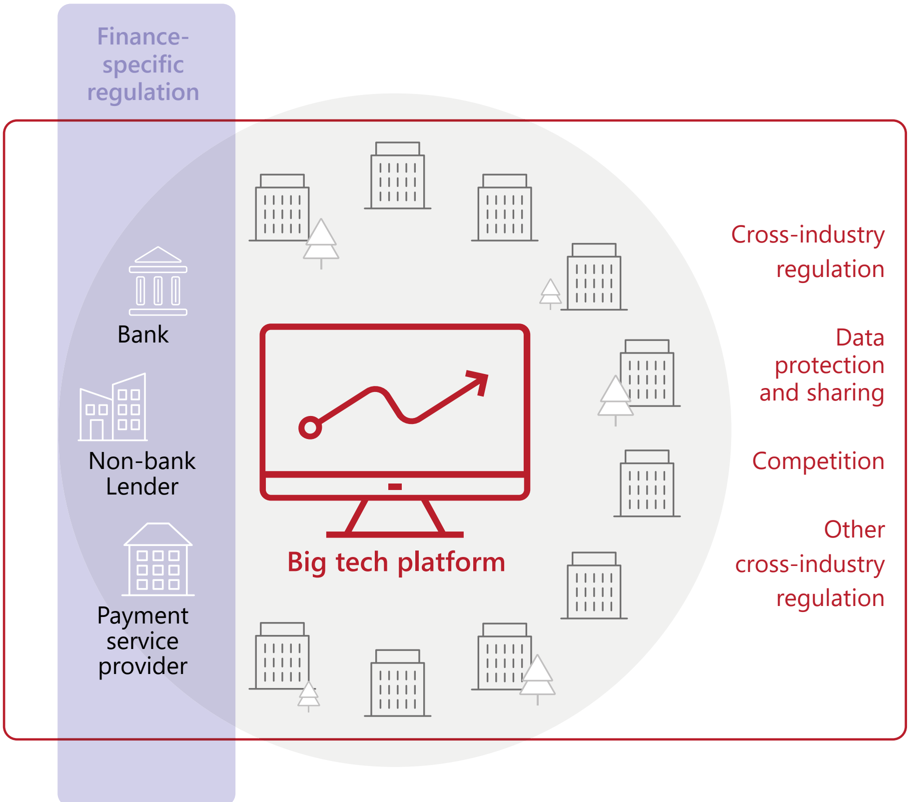
**Big techs and regulation**

The current regulatory approach to big techs may not fully capture the risks involved in their activities in finance (see graph below). Public policy regarding big techs in finance needs to build on a more comprehensive approach that combines financial regulation, competition policy and data privacy. The widely used slogan "same activity, same regulation" is not sufficient as a basis for the required regulatory reform. There is scope to address the risks of big techs by directly regulating some aspects of them through entity-based rules.

**Suptech**

Suptech applications can improve the contents and procedures of regulatory reporting and facilitate the establishment of "data-sharing" arrangements between firms and supervisors. Meanwhile, policymakers around the world are adopting regulatory sandboxes to spur innovation in the financial sector while staying alert to emerging risks. BIS research provides initial evidence from the United Kingdom on the effectiveness of sandboxes in improving fintechs' access to finance.

Regulatory environment for big tech groups



# Statistical work and data analytics

The BIS international banking and financial statistics are compiled in cooperation with central banks, other national authorities and international organisations. They inform and support analysis of financial stability, international monetary spillovers and global liquidity. BIS research also makes use of the BIS Data Bank of key economic indicators shared among member central banks. This overall statistical offering has steadily expanded in recent years, facilitating deeper analysis of the global financial system. BIS work to compile, disseminate and analyse data is a key element of the Innovation BIS 2025 strategy, aiming to develop capabilities in advanced analytics and new online tools for external collaboration.

## BIS statistics track the impact of the pandemic

The BIS statistical tool chest proved particularly valuable as the Covid-19 pandemic spread. It shed light on notable financial developments, such as the gyrations in international banking: at the onset of the crisis, banks' cross-border credit flows expanded strongly, as they redistributed liquidity across the banks' international operations, before reversing once the financial market stress subsided. Moreover, credit issued by internationally active banks has turned more domestic, reflecting their higher holdings of government bonds and reserves at central banks.

Other macro indicators that the BIS compiles have also helped to document various global phenomena in the course of 2020. These include the surge in public and private debt, the acceleration in house price inflation, and the reduced momentum in credit to non-residents denominated in key international currencies.

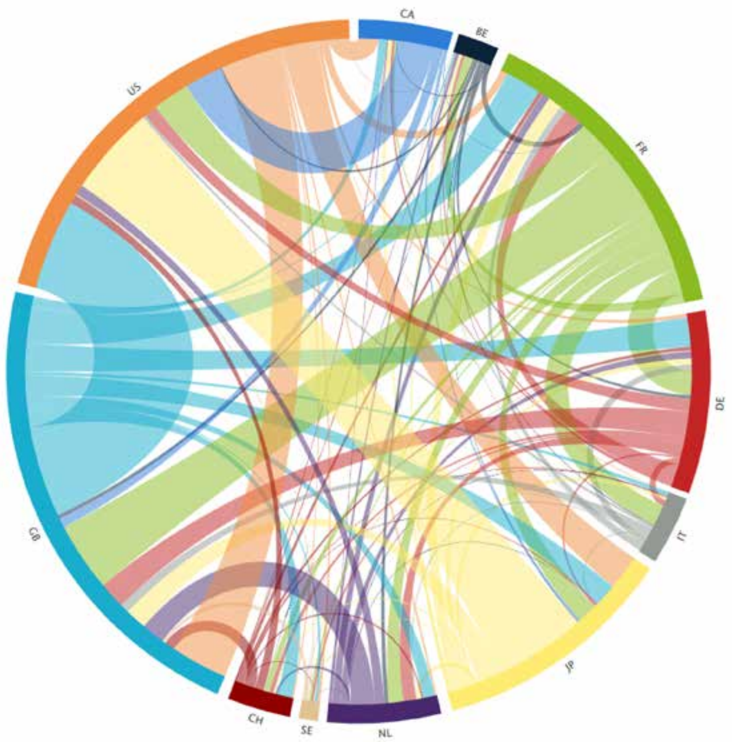
The BIS also organises more granular data collections to better monitor the behaviour of individual financial institutions in response to global regulatory initiatives. In particular, institution-level data collected to support the various Quantitative Impact Studies organised by Basel-based regulatory groups, especially by the Basel Committee on Banking Supervision, are used in monitoring the impact of Basel III and assessing ongoing policy initiatives.

Another source of valuable information is managed by the Bank's International Data Hub, where balance sheet data for systemically important banks are stored and analysed on behalf of participating supervisory authorities. This information helped supervisors track the impact of the Covid-19 pandemic on the largest institutions' credit exposures and funding profiles.

Developing new analytical tools to make better sense of the data collected is becoming increasingly important. Indeed, the results of a recent survey conducted by the BIS Irving Fisher Committee shed light on the importance of using new techniques such as machine learning and big data analytics. Around 80% of central banks are discussing the topic of big data within their institutions and its use in a variety of areas, including research, monetary policy and financial stability. Moreover, ongoing projects show how the new techniques can be leveraged to go beyond the "standard" offering of official statistics in times of crisis and fully exploit the alternative data sources available. Examples include internet searches, such as Google Trends, that can be used to gauge certain economic factors – for instance, expectations of labour market dynamics.

The BIS has also drawn on cutting-edge visualisation tools to make the relevant data more easily accessible. As an example, the "dreamcatcher" (see below) is an interactive chart to visualise international banking flows. Other examples of the Bank's efforts to facilitate public access to its statistical data are the newly developed interactive dashboards, as well as the Financial Regulation Assessment Meta Exercise (FRAME). FRAME is an online repository of studies on the economic impact of various types of financial regulations. It was initially focused on Basel III's capital and liquidity regulations and was expanded in 2020 to also track the latest quantitative estimates of the economic impact of the G20's too-big-to-fail reforms. This expansion was the result of a joint collaboration with the Deutsche Bundesbank and the Financial Stability Board. Going forward, FRAME is expected to expand further, with contributions from other organisations.

Bilateral cross-border positions for G10 countries




Visit www.bis.org/statistics/statx/dreamcatcher/creditx.htm for an interactive chart.

Based on claims on all sectors in all instruments as of Q4 2020. Data cited as released on 7 June 2021. Data dimensions can be customised, such as the balance sheet position (eg claims or liabilities), sector (eg all sectors or non-banks), instruments (eg all instruments or loans and deposits) and country (as a reporter a counterparty).

## Contribution to international statistical collaboration

The pandemic highlighted the importance of international cooperation in official statistics. The BIS participated in the joint initiative of the international organisations federated in the inter-agency Committee for the Coordination of Statistical Activities (CCSA) to create a dedicated publication containing the latest information available on the pandemic's impact. The Bank also cooperated closely with other international financial organisations as a member of the Inter-Agency Group on Economic and Financial Statistics (IAG), which has been tasked with coordinating and monitoring the implementation of the recommendations of the G20-endorsed Data Gaps Initiative (DGI), to be completed by the end of 2021.

> Looking ahead, a key lesson of the pandemic is the need to continue to enhance existing core official statistics while addressing newly emerging data needs.

Together with other IAG members, the BIS sponsors the Statistical Data and Metadata eXchange (SDMX) standard to foster international data-sharing and cooperation. This ISO standard is now widely used by international organisations, national statistical offices, and other data-producing agencies. To further strengthen its data exchange capabilities, the BIS is leading an international initiative to develop a new version of the standard (SDMX 3.0), which will in particular facilitate the work on large micro-data sets and alternative big data sources.

Looking ahead, a key lesson of the pandemic is the need to continue to enhance existing core official statistics while addressing newly emerging data needs. This calls for a revamped international framework for statistical cooperation after the completion of the DGI, building upon its approach of structured collaboration between international organisations and national statistical systems, its close connection to current authorities' priorities and its effective peer pressure mechanism for spurring the active involvement of national jurisdictions in the compilation of official statistics.

## Collaboration with central bank and academic researchers around the world

Collaboration with central bank and academic researchers around the world stimulates a broad dialogue on key policy questions. During the past year, the BIS welcomed 60 academics and central bank researchers under its various visitor programmes to conduct collaborative research on policy-related issues of relevance to the BIS. These include the Alexandre Lamfalussy Senior Research Fellowship, which was awarded in 2020 to Ricardo Reis. Fernando Alvarez took up his postponed Lamfalussy Fellowship virtually.

In addition, the BIS expanded its Graduate Fellowship Programme. This programme allows PhD- and master's-level students in economics, finance or related fields to acquire practical experience in policy research and analysis in monetary and financial stability issues at an institution with a unique international perspective.

### Lamfalussy Fellows

2020/21

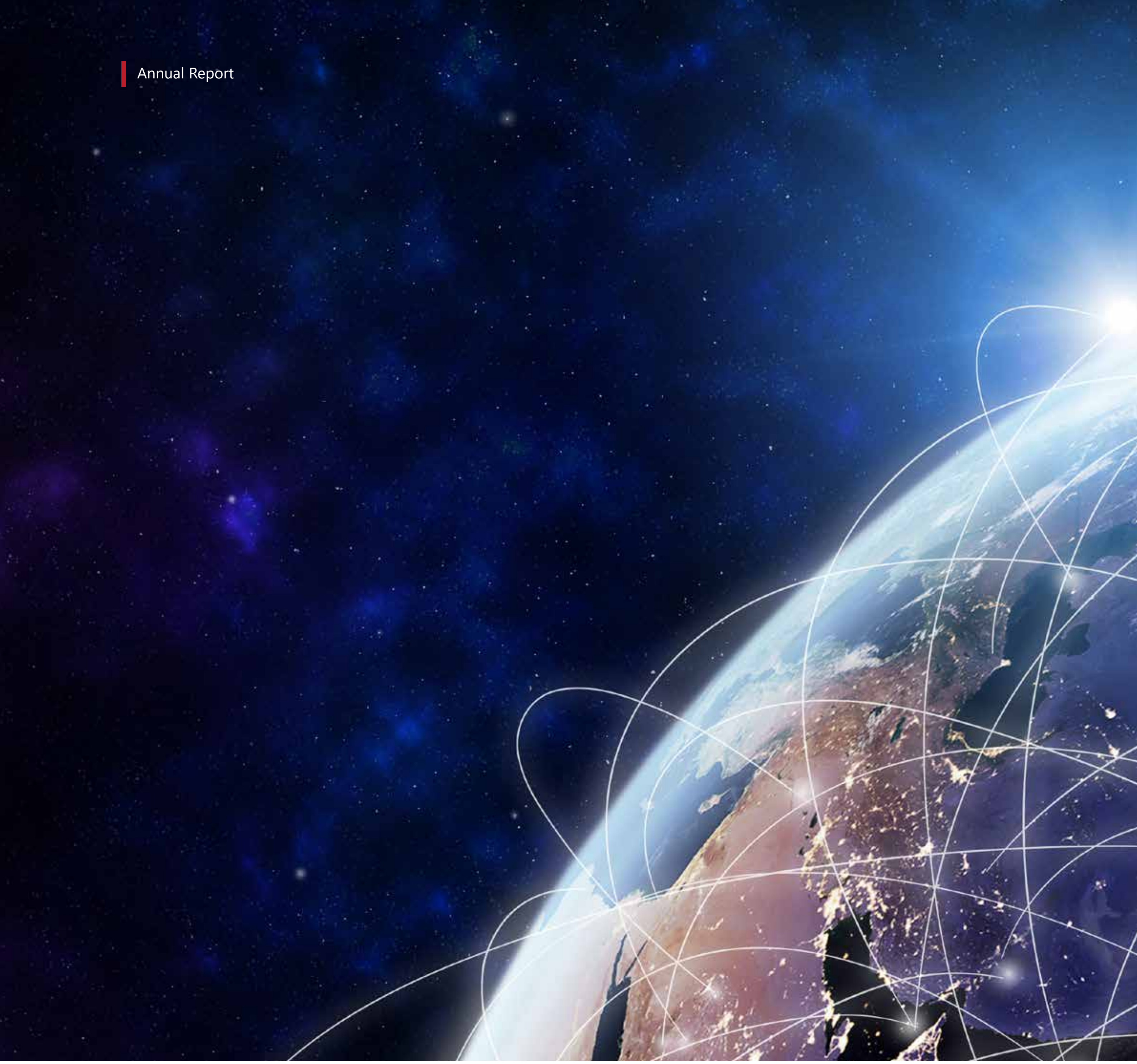
**Ricardo Reis**
A W Phillips Professor of Economics, London School of Economics and Political Science

**Fernando E Alvarez**
inaugural Saieh Family Professor, University of Chicago Department of Economics

Conferences and workshops are organised at frequent intervals to bring together participants from policymaking, academia and business. The 19th BIS Annual Conference, held in virtual format as a series of public webinars, focused on central banking in the wake of the pandemic. The annual meeting of the BIS Research Network, held in collaboration with the Centre for Economic Policy Research and the Bank of England, provided another opportunity to discuss financial innovation. The Americas Office hosted the final conference of the 5th CCA Research Network on "Monetary policy frameworks and communication" on 8–10 March.

The BIS also collaborates closely with international research bodies, such as the International Banking Research Network. Working with international banking and financial statistics, the BIS conducts global analyses to complement this and the respective country-specific studies of other network members, and helps to improve the comparability of country-level results.

More about BIS research at www.bis.org/forum/research.htm.



# 3

# Promoting international cooperation

The pandemic and its aftermath call for even more intense engagement among policymakers in their pursuit of monetary and financial stability. The BIS contributes with its commitment to act as a global forum for dialogue and cooperation among central banks and financial supervisory authorities from around the world.

## A global forum for dialogue and cooperation

The BIS is committed to fostering international cooperation among central banks and financial supervisory authorities from around the world, with a view to supporting their efforts to ensure monetary and financial stability. Innovation BIS 2025 has allowed us to increase our global outreach by further deepening our engagement with central bank committees and hosted organisations in the context of the Basel Process.

The BIS convenes high-level meetings of central bank Governors and financial supervisory authorities to enable dialogue and knowledge-sharing. These meetings are coordinated at a global level in Basel and complemented by regional discussions through the Bank's Representative Offices for Asia-Pacific and the Americas. The offices serve as centres for BIS activities in their respective regions and are uniquely positioned to understand the needs of the central banks in those regions and anticipate the changes affecting them.

> The outcome of this collaboration is a greater and shared understanding of the developments and challenges facing central banks and financial supervisory authorities around the world, including lessons drawn from their individual experiences.

The Bank's Financial Stability Institute assists central banks and financial regulatory and supervisory authorities worldwide in strengthening their financial systems, by supporting the implementation of global regulatory standards and sound supervisory practices. It does so through policy work, knowledge-sharing activities and capacity-building.

Importantly, the BIS hosts and supports international committees and collaborates with international associations pursuing financial stability.

# Governors' meetings

All Governors and other senior officials of BIS member central banks meet approximately six times a year to discuss current global economic developments and the outlook for the world economy and financial markets. They also exchange views and experiences on issues of particular interest to central banks. In the year under review, these meetings all took place in a virtual format in the light of the Covid-19 pandemic.

The three principal bimonthly global meetings are the Global Economy Meeting, the Economic Consultative Committee and the All Governors' Meeting. On the occasion of these meetings, Governors of central banks in major emerging market economies (EMEs) and small open economies also gather to discuss themes of special relevance to their economies.

In addition, the Bank's Representative Offices convene central bank Governors from their respective regions through the Asian Consultative Council (see page 44) and the Consultative Council for the Americas (see page 47). The Financial Stability Institute gathers senior monetary and financial supervisory authorities in high-level and policy implementation meetings (see page 40).

## Global Economy Meeting

The Global Economy Meeting (GEM) comprises the Governors of 30 BIS member central banks in major advanced and EMEs that account for about four fifths of global GDP. The Governors of another 22 central banks attend the GEM as observers.

**Jerome Powell**
Chair of the Global Economy Meeting and the Economic Consultative Committee

Chaired by Jerome Powell, Chair of the Board of Governors of the Federal Reserve System, the GEM has two main roles:

- monitoring and assessing developments, risks and opportunities in the world economy and the global financial system; and

- providing guidance to three Basel-based central bank committees: the Committee on the Global Financial System, the Committee on Payments and Market Infrastructures and the Markets Committee.

In 2020/21, the GEM's economic discussion focused on current macroeconomic and financial developments in major advanced and emerging market economies. Topics included the global pandemic and its immediate consequences, the uneven recovery, dealing with related insolvencies and unemployment, inflation in wake of the pandemic, its effects on the household sector, and challenges related to an exit from the pandemic.

### Economic Consultative Committee

The Economic Consultative Committee (ECC) is a 19-member group that supports the work of the GEM. Also led by the GEM Chair and comprising all Governors participating in the BIS Board meeting and the BIS General Manager, the ECC reviews reports and work programmes and prepares proposals for the GEM's consideration. In addition, the ECC Chair makes recommendations to the GEM on the appointment of Chairs of the three central bank committees mentioned above and on the composition and organisation of those committees.

A major focus of the ECC in the year under review was the economic and financial market developments related to the Covid-19 pandemic, the global repercussions and central banks' policy responses.

### All Governors' Meeting

The All Governors' Meeting comprises the Governors of the 63 BIS member central banks and is chaired by the Chairman of the BIS Board, Jens Weidmann, President of the Deutsche Bundesbank. It convenes to discuss selected topics of general interest to its members. In 2020/21, topics discussed included cyber security, big data and central banks, foreign exchange markets and reserve management, the pandemic and health, and climate change.

**Jens Weidmann**
Chairman of the Board and Chair of the All Governors' Meeting

By agreement with the GEM and the BIS Board, the All Governors' Meeting oversees the work of two groups that have a broader network or membership than the GEM. These are the Central Bank Governance Group (see page 60) and the Irving Fisher Committee on Central Bank Statistics (see page 61).

### Other regular gatherings

The Group of Central Bank Governors and Heads of Supervision (GHOS) meets periodically to decide on global banking regulations and oversees the work of the Basel Committee on Banking Supervision (see page 52). Chaired by François Villeroy de Galhau, Governor of the Bank of France, the GHOS is the highest-level forum responsible for international collaboration on banking regulation and supervision.

**François Villeroy de Galhau**
Chair of the Group of Central Bank Governors and Heads of Supervision

The central bank Governors of major EMEs typically meet during the January, May and September bimonthly meetings to discuss issues of importance to their economies. Topics discussed during the virtual meetings in 2020/21 included near-term challenges and policy implications caused by the pandemic, and monetary policy space in EMEs.

The BIS also holds regular meetings for the Governors of central banks from small open economies. Discussion themes during the past year included the policy responses to the economic shock, financing the medium-term recovery, public debt and monetary policy after the pandemic, and central bank stimulus.

In November, the BIS held a roundtable of Governors from African central banks on "The economic and financial fallout from Covid-19 in Africa and the policy response".

In addition, various meetings brought together senior central bank officials and, occasionally, representatives from other financial authorities, the private financial sector and the academic community to discuss topics of shared interest.

# Financial Stability Institute

The Financial Stability Institute (FSI) plays a key role in the BIS's efforts to foster international cooperation in the area of financial stability. Its mandate is to support central banks and other financial authorities in the implementation of global regulatory standards and sound supervisory practices.

The FSI delivers on its mandate through three main activities: policy work, policy events and training. These activities closely reflect the FSI's key priorities under the Bank's Innovation BIS 2025 strategy, namely the digitisation of capacity-building activities, knowledge-sharing in financial technology-related regulatory developments, and supporting authorities' efforts to enhance their tools for financial crisis management.

## The year's highlights

In 2020/21, the FSI undertook various projects to support international cooperation and collaboration in financial technology and crisis management. In particular, the FSI:

- organised six webinars for its Informal Suptech Network, a knowledge-sharing forum for the exchange of practices and experiences in the implementation of suptech tools among its more than 100 members from around 50 financial authorities. The webinars involved presentations on suptech-related work of members and international organisations.

- developed a prototype for a fintech repository (FinRep) containing regulation and other policy material related to fintech. It aims to provide BIS stakeholders with a useful reference to facilitate policymaking and benchmarking. In October 2020, the prototype was made available to 33 BIS member central banks whose feedback will help shape the development of the final version.

- conducted its first Crisis Simulation Exercise (CSE) for Latin America in collaboration with the Association of Supervisors of Banks of the Americas. The CSE is based on a stress and failure scenario of at least one regionally active bank, with the aim of identifying and informing necessary enhancements to the domestic procedures of participating countries and possible improvements to cross-border cooperation arrangements. The Latin American CSE saw virtual participation by 11 authorities from six jurisdictions. The FSI is preparing to conduct a CSE in Asia in financial year 2021/22.

## Policy work

The FSI's policy work contributes to the design, dissemination and implementation of sound regulatory and supervisory policies worldwide. This work results in various publication series covering financial technology, financial crisis management and core regulatory and supervisory issues (Chapter 2 discusses financial technology-related papers and *FSI Briefs*). They are all available on the FSI website.

In 2020/21, the FSI published three papers on financial crisis management that discussed the banking crisis in Ireland, bank failure management in the European banking union and institutional arrangements for resolution. It also published five other papers on policy objectives of central banks, multiple mandates of financial authorities, anti-money laundering supervision of correspondent banking, accounting standards and insurer solvency assessment, and insurance supervision in the new normal.

"The realignment of our activities to respond to the pandemic has allowed us to better support the implementation of sound regulatory and supervisory policies worldwide."

**Fernando Restoy**
Chair, Financial Stability Institute

## Policy events

Through its high-level meetings, the FSI provides top officials from financial authorities with a forum to discuss the latest regulatory developments and supervisory priorities. Its policy implementation meetings also provide a valuable opportunity for senior and specialist staff from financial authorities to discuss key prudential policy topics. Moreover, the FSI conducts webcasts to discuss issues that are covered in its publications with a wider audience.

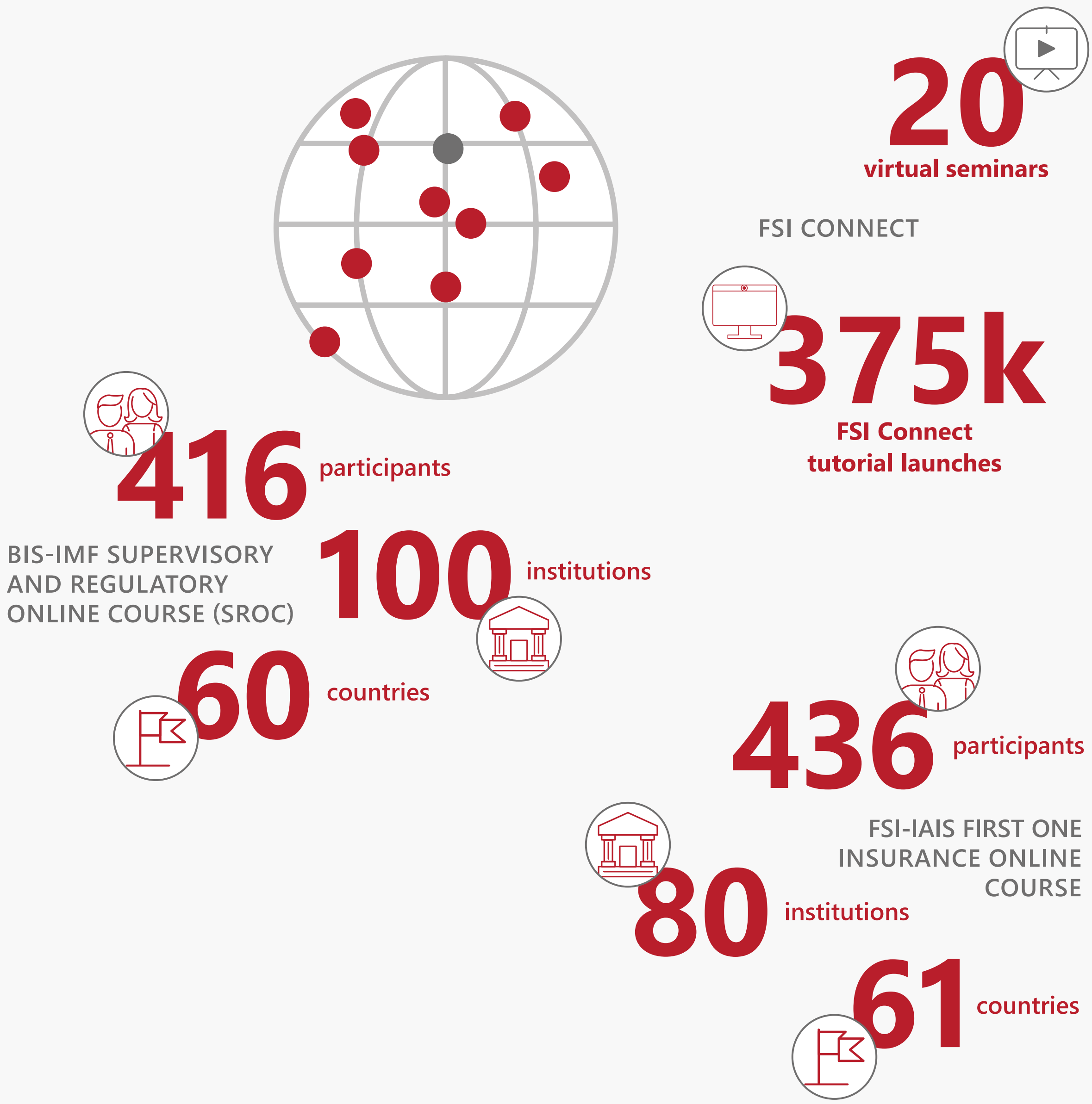
In 2020/21, more than 3,300 participants from some 570 institutions attended FSI policy events, which primarily focused on regulatory responses to the Covid-19 crisis. These included capital relief measures, restrictions on dividend distribution and debt moratoriums, and discussions on how authorities were preparing for a post-Covid-19 financial system.

## Training

The FSI supports the capacity-building efforts of financial authorities through its training activities, which are predominantly done online. The FSI's training activities comprise FSI Connect (the FSI's online learning platform), seminars and online courses. FSI Connect contains tutorials on a broad range of regulatory and supervisory topics mostly relating to global regulatory standards.

## FSI online training

## 2020/21



FSI virtual seminars in 2020/21 covered topics such as risk-based supervision, Basel III implementation, crisis management, insurance standards, Covid-19-related prudential issues, cyber risk and climate risk. The FSI's two annual online courses the FSI-IMF Supervisory and Regulatory Online Course (SROC) and the FSI-IAIS Regulatory and Supervisory Training Online New Entrants (FIRST ONE) – cover the fundamentals of banking and insurance supervision, respectively.

## FSI policy events


10
virtual high-level meetings

13
virtual policy implementation meetings

5
special webcast

104
virtual sessions in total

# Representative Offices

The BIS has two Representative Offices: one for Asia and the Pacific (the Asian Office), located in Hong Kong SAR, and one for the Americas (the Americas Office), located in Mexico City. They serve as centres for BIS activities in those regions, strengthening relationships and promoting cooperation between the BIS and central banks and supervisory authorities.

They deliver on their mission by fostering the exchange of information, facilitating the organisation of meetings and seminars, and contributing to the Bank's financial and economic research on Asia and the Pacific and the Americas. They also support BIS banking services in the Asia-Pacific region and the Americas.

## Representative Office for Asia and the Pacific

The Asian Office continues its efforts to strategically position the BIS as a thought leader on macro and monetary issues as well as financial innovation in the Asia-Pacific region, leveraging its regional presence in Hong Kong SAR. The region's influence on the world economy continues to grow – a trend that is expected to continue, especially as regional economies shift into the digital space at a fast pace. Underpinned by its revamped operational model, which is forward-looking and focused on agility, the Asian Office delivered on its strategic priorities in 2020/21, playing a key role in the implementation of Innovation BIS 2025.

The Asian Office contributes substantively and acts as a catalyst for key institutional initiatives, including the conceptualisation and launch of the BIS Innovation Hub (see Chapter 5). The Asian Office continues to strengthen its role as a centre of excellence of macro-monetary research, contributing to topical and timely research pieces published in the BIS Bulletin and BIS Quarterly Review, as well as other research papers. Issues covered vary from the policy responses to Covid-19 to inflation, exchange rates, green bonds and e-commerce (see Chapter 2). Working closely with colleagues in Basel and Mexico, banking operations in Asia continue to meet the evolving needs of the BIS's global base of central bank customers, including with the launch of new banking products and services offered in local currencies (see Chapter 4).

### The year's highlights

**Deeper engagement with the region's stakeholders**

The Asian Consultative Council (ACC), comprising the Governors of the 13 BIS member central banks in the Asia-Pacific region, serves as the advisory body for the BIS in the region. The BIS expanded its footprint in the region by welcoming as a shareholder and new ACC member the State Bank of Vietnam. This is the first such expansion of the ACC since 2003. The ACC meets twice a year and provides guidance on the broad directions for the work of the Asian Office. Its Chair is Ravi Menon, Managing Director of the Monetary Authority of Singapore.

In line with the more strategic role for the ACC in guiding the BIS work programme for the region, the Asian Office has deepened its engagement with stakeholders. This has entailed reaching out to member central banks and stakeholders more proactively to better understand their perspectives, with a view to incorporating them in the Office's research and policy agenda and the Bank's financial services offerings. This new approach has also allowed the Asian Office to leverage existing platforms to build up long-lasting working relationships with a broad group of stakeholders in efficient and cost-effective ways.

"A more nimble Asian Office has made its presence felt more widely and deeply in the region, thereby expanding the BIS footprint in Asia."

**Siddharth Tiwari**
Chief Representative,
Asian Office

The sustained and forward-looking engagement of BIS senior leaders with ACC Governors over the past year, albeit virtually, has produced tangible results in the priority areas identified by the ACC in March 2020, including on the development of an integrated policy framework and increased use of local currencies.

### Integrated policy frameworks

In 2020/21, the Asian Office led efforts among regional central banks to examine their policy frameworks, focusing on capital flows, exchange rates and the joint use of monetary, macroprudential, exchange rate and capital flow management policies. The outcome of this work is reflected in *Capital flows, exchange rates and policy frameworks in emerging Asia*, published in November 2020. Endorsed by all ACC Governors, this work represents a key milestone for Asian policymakers from emerging markets to develop a coherent perspective on their policy frameworks and has further helped to inform global discussions, including at the All Governors' Meeting.

### Increased use of local currencies

The Asian Office continued its efforts to promote greater use of regional currencies in the management of countries' foreign exchange reserves, enabling better portfolio diversification and enhanced risk-adjusted returns. As a result, the Bank's range of CNY-denominated products was further expanded, including through a new facility strengthening short-term liquidity support and financial stability in the region (see Chapter 4).

**Sustainable investments**

Looking ahead at the region's sustainable development, there is growing recognition of the significant challenges and opportunities of promoting greening of the economies in Asia. Based on the experience gained with the Bank's existing suite of sustainable reserve management products (see box in Chapter 4), at their March 2021 the ACC Governors tasked the Asian Office with exploring the development of an Asian Green Bond Fund to help finance investments in green projects, promote green finance and support the adoption of best market practices and reporting standards to deepen the green bond market in the region.

**Agility, innovation and partnership**

Anticipating and responding to changes and challenges brought about by the pandemic and the increased use of technology, the Asian Office is responding to the evolving needs of BIS shareholders in the region by focusing on agility, innovation and partnership.

Working closely with colleagues at the Bank's headquarters in Basel and regional central banks, the Asian Office has expanded its meeting offerings with a large number of virtual gatherings, including topical webinars such as ones on the BIS Annual Economic Report. Through sustained engagement with regional organisations and institutions such as the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP), South East Asian Central Banks (SEACEN), the Asia Society in Hong Kong, the Securities and Exchange Board of India, the China Banking and Insurance Regulatory Commission and Tsinghua University in China, the Asian Office has strengthened existing partnerships and forged new ones with a broader group of stakeholders, to join and shape the policy debate on issues of importance to the policymakers in the region.

As part of the ongoing efforts to share the Asian experience more widely within the BIS community and to help build capacity and learning across regions, the Asian Office partnered with the Committee on Payments and Market Infrastructures (CPMI) to inform relevant stakeholders about the CPMI's work on cross-border payments, which in turn supported the development of the G20 global roadmap for enhancing cross-border payments. In a similar vein, the Asian Office partnered with the Americas Office to invite the National Payments Corporation of India (NPCI) to share its experience and practice on cross-border payments with central bank officials from the Americas in January 2021.

## Representative Office for the Americas

The Americas Office strengthens the BIS's cooperation within the central banking community in the Americas by providing central bank senior officials with many forums for regularly discussing and sharing knowledge on topical issues. It also coordinates research networks and working groups, especially in the area of financial technology and monetary policy frameworks.

The Americas Office also carries out research and in-depth analysis on issues of relevance to EMEs, with a special focus on Latin America (see Chapter 2). Working closely with staff from Basel and Hong Kong, it also provides banking services to central banks and international financial institutions in the region and beyond. In its first year of activity, the new Americas Office dealing room expanded BIS banking business to 32 central banks from the region, 11 representative offices from central banks of other regions and four supranational institutions (see Chapter 4).

### The year's highlights

In 2020/21, the Americas Office further expanded its presence in the region in line with Innovation BIS 2025. It made significant progress in its cooperative and outreach activities despite the challenges posed by Covid-19.

#### Closer engagement with central banks

The Consultative Council for the Americas (CCA) is an advisory committee to the BIS Board of Directors comprising the Governors of BIS member central banks in the Americas. The CCA serves as a forum where central banks can exchange views on relevant economic and financial developments. It is currently chaired by John Williams, President and Chief Executive Officer of the Federal Reserve Bank of New York.

In response to the Covid-19 pandemic, the CCA has met more frequently and in virtual format, discussing the latest economic developments and policy challenges faced by central banks in the region. Each meeting benefited from a briefing note prepared by Americas Office staff. Discussion topics included real-time perspectives on the pandemic contraction and recovery and associated inflation impacts; liquidity needs of the sectors most affected by the pandemic; fiscal and external financing trends and policy buffers; and experiences with credit support programmes and unconventional monetary policy tools. At the request of CCA Governors, the Americas Office also coordinated the creation of a joint reference database detailing CCA central bank policy responses to the pandemic.

The notes and the database showed how long-term research and shorter-term policy-oriented analysis can complement each other. Indeed, the notes often benefited from past and ongoing research by BIS economists (see Chapter 2). They also helped better formulate and motivate new research projects. The data set provided a timely source of information for policymakers at the height of the crisis and is now an input into a number of research projects.

The CCA additionally met twice with private sector stakeholders. It hosted the fourth CCA meeting of CEOs of major financial institutions in Latin America and the Caribbean. It also hosted the first meeting of US-based chief economists and strategists for Latin America. In the future, this meeting is expected to be held once a year in New York, co-hosted by the Federal Reserve Bank of New York.

"The pandemic presented an opportunity for our experts to better align their economic analysis with the emerging challenges faced by the region's central banks."

**Alexandre Tombini**
Chief Representative,
Americas Office

**Greater support to member central banks during the Covid-19 crisis**

Besides forums for CCA Governors, the Americas Office created other opportunities for central bankers to exchange information on the fast-changing economic and financial conditions, especially at the height of the Covid-19 crisis. The Consultative Group of the Directors of Market Operations met six times in virtual format to discuss financial market developments and market operations in the region. The Consultative Group of the Directors of Financial Stability met twice to discuss the resilience of financial systems and the policy measures taken during the pandemic. The Scientific Committee, which comprises the CCA Heads of Research and oversees research activities in macroeconomics and monetary policy, met in June 2020 to exchange information on the main economic analysis tools and data used to monitor and analyse the economic effects of the pandemic and policy response measures.

**Further areas of cooperation**

In line with Innovation BIS 2025, substantial efforts were directed towards two important areas of cooperation.

### Digital foundations for greater competition and financial inclusion

The first concerns the development of a digital infrastructure that can make retail payments and banking less costly and more inclusive. Established in 2020, the Consultative Group on Innovation and the Digital Economy (CGIDE) provides central banks with a forum for sharing the necessary technical know-how. The group decided to focus first on how financial institutions' data can be shared securely with third-party providers to initiate retail payments and other financial operations. The technical task force of this group conducted an analysis of an application programming interface (API) scheme for identification and authentication based on a central validator. The results of this analysis were published in the report *Enabling open finance through APIs* in December 2020. Since then, the task force has been working on analysing technical solutions for payment initiation. In addition, the CGIDE reached out to some of the major developers of digital payments.

### Revisiting monetary policy frameworks

The second area of cooperation concerns the analysis of monetary policy frameworks, where two initiatives were completed last year. The first was the preparation of the report *Exchange rates, capital flows and monetary policy frameworks in Latin American and other economies* based on a survey distributed to the CCA member central banks (except the Federal Reserve) and Turkey and South Africa. The second initiative was the CCA Research Network on "Monetary policy frameworks and communication" launched in April 2019. The final conference of the network took place in virtual format in March 2021. The report and the research produced by the network led to many valuable new insights into how monetary policy frameworks and communication should be designed to ensure the resilience of economies in the region in the face of volatile exchange rates and capital flows.

**Broadened outreach**

An important strategic objective of the Americas Office in line with Innovation BIS 2025 is to extend its reach beyond BIS member central banks in the Americas. In this context, several outreach initiatives were undertaken. This included participation in a number of virtual seminars with the Association of Supervisors of Banks of the Americas, non-CCA central banks and several media outlets to share the main findings from the BIS Annual Economic Report. The Americas Office also organised a series of webinars for both CCA and non-CCA central banks in the region to present the results of the BIS survey of asset managers, explain the functioning of the renminbi market and present the range of financial products offered by the BIS. It also teamed up with the CPMI to present the CPMI-G20 report on the building blocks to make cross-border payments more efficient and affordable.

Looking ahead, one important initiative is the launch of the Consultative Group on Risk Management to give central banks in the Americas a forum to share their experiences and know-how about monitoring, assessing and mitigating financial, operational and cyber security risks. In addition, the Americas Office will continue to deepen its engagement with the region's central banks and to adapt its economic analysis and research to their evolving needs.

# International groups at the BIS

The BIS hosts nine international groups engaged in standard setting and the pursuit of financial stability. The BIS supports their work by contributing its expertise in economic research and statistics, its practical experience in banking and its knowledge in regulatory and supervisory issues. In addition, its close relationships with policymakers and stakeholders allow the Bank to enrich the debate and to add value to the work of these groups.

These international groups include six central bank committees and three associations. Co-location on BIS premises facilitates communication and collaboration among these groups and prevents overlaps and gaps in the various work programmes. It also facilitates interaction of these groups with policymakers in the context of the BIS's regular meetings.

## Central bank committees

The BIS supports six central bank committees responsible for financial stability by providing background analysis and developing policy recommendations. Each is supported by a BIS secretariat, which prepares the committee meetings, background papers and reports and publishes the group's work. Their agendas are guided by various groups of central banks and supervisory authorities.

### BIS committees

- The **Basel Committee on Banking Supervision** develops global regulatory standards for banks and seeks to strengthen micro-and macroprudential supervision.
- The **Committee on Payments and Market Infrastructures** establishes and promotes global regulatory/oversight standards for payment, clearing, settlement and other market infrastructures, and monitors and analyses developments in these areas.
- The **Committee on the Global Financial System** monitors and analyses issues relating to financial markets and systems.
- The **Markets Committee** monitors developments in financial markets and their implications for central bank operations.
- The **Central Bank Governance Group** examines issues related to the design and operation of central banks.
- The **Irving Fisher Committee on Central Bank Statistics** addresses statistical issues relating to economic, monetary and financial stability.

## Basel Committee on Banking Supervision

**Pablo Hernández de Cos**
Chair of the Basel Committee on Banking Supervision

The Basel Committee on Banking Supervision (BCBS) is the primary global standard setter for the prudential regulation and supervision of banks and provides a forum for regulatory cooperation on banking supervisory matters. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions. Chaired by Pablo Hernández de Cos, Governor of the Bank of Spain, the BCBS consists of senior representatives of banking supervisory authorities and central banks responsible for banking supervision or financial stability in their respective jurisdictions.

The work of the Basel Committee is overseen by the Group of Central Bank Governors and Heads of Supervision (GHOS), comprising central bank Governors and heads of non-central bank supervisory agencies from BCBS member jurisdictions. The GHOS approves the BCBS's work programme and key policy decisions, and provides overall strategic direction to the Basel Committee.

### Response to Covid-19

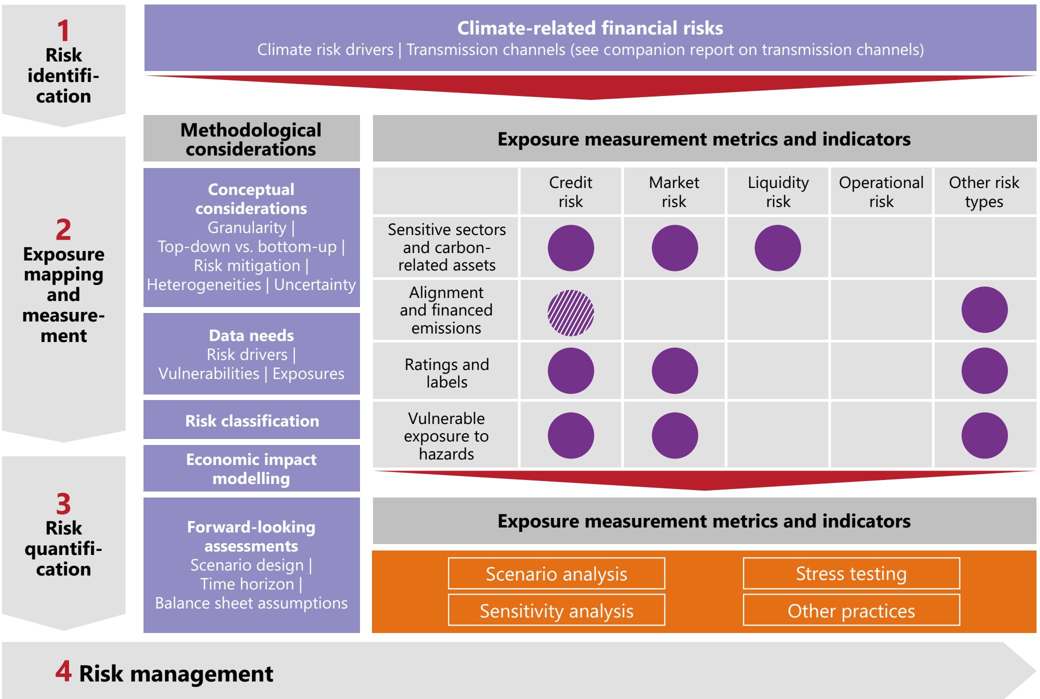
From the onset of the Covid-19 pandemic, the BCBS has been proactive in responding to the evolving risks and vulnerabilities to the global banking system. Policy measures have been developed and deployed to meet the BCBS's two overarching objectives with regard to the pandemic:

- to maintain, and strengthen if needed, the resilience of the global banking system in order to mitigate risks and absorb shocks related to the ongoing crisis; and
- to ensure that the banking system continues to provide critical services to the real economy in order not to amplify the macroeconomic and macro-financial impact of the crisis, and to support the economic recovery.

In April 2020, the BCBS issued technical guidance to reinforce the flexibility in the Basel Framework that enables banks to accommodate the impact from Covid-19, and amended the capital treatment of loan loss provisions. It also reiterated that a measured drawdown of banks' Basel III capital and liquidity buffers is deemed appropriate, with supervisors committing to give banks sufficient time to restore these buffers.

In addition, the BCBS continued to coordinate actions to free up operational capacity for banks and supervisors, supporting their actions to counteract the effects of the pandemic. This included a temporary scaling-back of its data collection exercises and implementation assessments.

A conceptual climate risk assessment framework for banks and supervisors




Source: www.bis.org/bcbs/publ/d518.pdf.

### Post-crisis Basel III policy reforms concluded

In November 2020, the GHOS put a clear end to the Basel III policy agenda, concluding a period of policymaking in response to the Great Financial Crisis. The BCBS's Basel III-related work will now focus on monitoring how members implement these policies and evaluating the effects of reforms based on thorough analyses of the relevant evidence.

The Basel Committee advanced other policy and supervisory initiatives to enhance bank resilience. It finalised targeted adjustments to its standards and published a stocktake of current initiatives on climate-related financial risks from members (see figure above for a conceptual climate risk assessment framework for banks and supervisors). The BCBS also consulted publicly on proposals for principles for operational resilience and for sound management of operational risk.

### Strong international coordination

The BCBS continues to promote close international cooperation and coordination, which are particularly important for an effective response to the challenges that the pandemic poses to the resilience of the global banking system. In 2020/21, it held 20 virtual meetings, including outreach sessions with banks and investors to gather information on the wide-reaching impact of Covid-19 on banks. Additionally, it organised, together with its Basel Consultative Group and the Saudi Central Bank, a virtual workshop for banking supervisors on regulatory and supervisory proportionality.

> The Basel Committee contributed to an effective and coordinated supervisory response to Covid-19, while remaining vigilant for existing and emerging risks to banks and banking systems.

In October 2020, the BCBS hosted the 21st International Conference of Banking Supervisors (ICBS) together with the Bank of Canada and the Canadian Office of the Superintendent of Financial Institutions. The ICBS is a biannual event that gathers senior bank supervisors from all over the world. This was the first time that the event was held virtually, with a record number of participants from 75 jurisdictions. Among the topics discussed were the future of banking supervision and how to adapt to transformative trends affecting both banks and supervisors.

More information about the Basel Committee at www.bis.org/bcbs.

## Committee on Payments and Market Infrastructures

**Sir Jon Cunliffe**
Chair of the Committee on Payments and Market Infrastructures

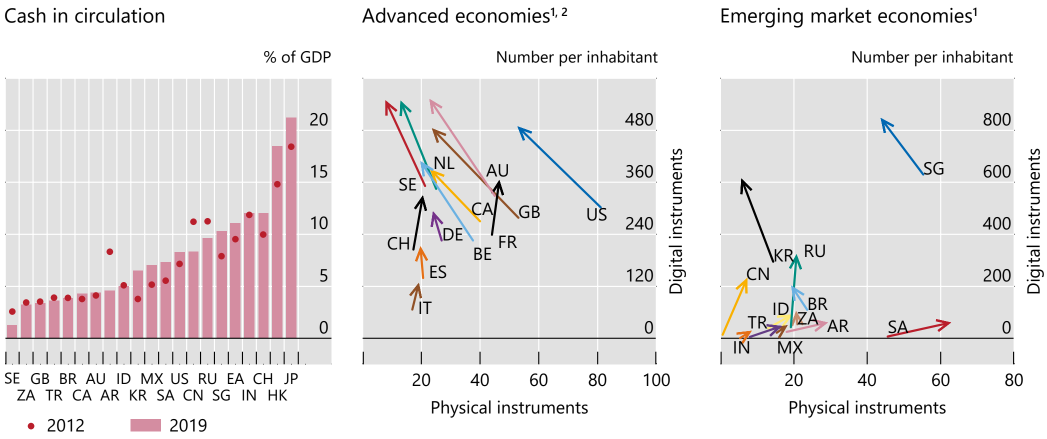
The Committee on Payments and Market Infrastructures (CPMI) is a global standard-setting body that promotes the safety and efficiency of payment, clearing, settlement and reporting systems and other financial market infrastructures (FMIs). The CPMI also serves as a forum for central banks to monitor and analyse developments and cooperate in related oversight, policy and operational matters, including the provision of central bank services. Chaired by Sir Jon Cunliffe, Deputy Governor of the Bank of England, the CPMI comprises senior officials from 28 central banks.

**Improving cross-border payments**

In close coordination with the Financial Stability Board (FSB) and other international bodies, the CPMI contributed to the development of an ambitious multi-year programme on enhancing cross-border payments, which was endorsed by the G20 in October 2020. The programme sets out the necessary elements to improve cross-border payments to make them faster, cheaper, more transparent and inclusive. The implementation phase has begun, including with a number of global and regional stakeholder engagement events.

> The CPMI is committed to taking a leading role in implementing the global roadmap to enhance cross-border payments.

## Cash is still in demand, but payments are shifting to digital instruments




[1] The start (end) of an arrow represents 2012 (2019). Digital instruments include credit transfers, direct debits, card and e-money payments, and other cashless instruments. Physical instruments include paper-based payment instruments (cheques) and cash withdrawals at ATMs (used as a proxy for cash payments). Data not available or HK and JP.
[2] For CA, latest data for cash withdrawals at ATMs is for 2017. For ES, the start of the arrow represents 2014. For CH and GB, physical instruments include cheques and total cash withdrawals.

Source: CPMI Red Book.

### Addressing payment innovations

As part of advancing the cross-border payments programme, the CPMI is promoting industry action to address FX settlement risk in cooperation with the BCBS. In December, the CPMI issued a joint letter to encourage bank supervisors and banks and other participants in the FX market to follow the expectations set out in the 2013 BCBS Supervisory guidance for managing risks associated with the settlement of foreign exchange transactions and the FX Global Code of the Global Foreign Exchange Committee.

As the digitalisation in payments accelerated amid the pandemic, and private and public sector initiatives on payment innovations (such as stablecoins and central bank digital currencies (CBDCs)) advanced, the CPMI continued to collect payments data, monitor new developments and analyse emerging issues in payment innovations. The CPMI has also been reviewing, including through its contributions to the broader FSB work, how its international standards – the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMI) – apply to so-called stablecoin arrangements to ensure they will remain fit for purpose in addressing digital innovations.

Technological innovation has made major inroads into financial services, especially payments. Against this background the CPMI developed a report, *Payment aspects of financial inclusion in the fintech era*, which sets out how fintech can promote financial inclusion. It also published the report *Payment aspects of financial inclusion: application tools*, which provides tools to facilitate the application of the 2016 CPMI-World Bank guidance on payment aspects of financial inclusion.

**Responding to the Covid-19 pandemic and securing FMI resilience**

In 2020/21, the CPMI and IOSCO worked together to evaluate and address risks in FMIs, including those that emerged during the Covid-19 pandemic. CPMI members intensified information exchange regarding: (i) issues and challenges in risk management of FMIs in their jurisdictions, including those associated with more remote working operational environments; (ii) changing behaviour in cash and other payment instruments; and (iii) oversight, supervisory or regulatory measures taken in response to the pandemic.

The CPMI also contributed to the analysis and policy discussions by the FSB regarding broader financial stability issues accentuated in the March 2020 financial market turmoil. Together with other relevant standard-setting bodies, it launched work on issues related to margins in cleared and uncleared markets and the market participants' preparedness as regards to their liquidity management. It also worked together with IOSCO and the FSB to strengthen resilience, recovery and resolvability of central counterparties (CCPs).

The market turmoil in the early stage of the pandemic underscored the critical role that FMIs play in maintaining resilience in the financial system. Yet some risks to FMIs and the broader financial system might have increased with the pandemic. Accordingly, the CPMI remains committed to facilitating and monitoring the implementation of the PFMI across member jurisdictions; advancing its strategy to reduce the risk of wholesale payments fraud related to endpoint security; and fostering broad adoption of the CPMI-IOSCO cyber resilience guidance for FMIs through industry engagement and other work to secure FMI resilience.

More information about the Committee on Payments and Market Infrastructures at www.bis.org/cpmi.

## Committee on the Global Financial System

**Philip Lowe**
Chair of the Committee on the Global Financial System

The Committee on the Global Financial System (CGFS) monitors developments in financial markets and sectors for the Governors of the BIS Global Economy Meeting and analyses their implications for financial stability and central bank policy. Chaired by Philip Lowe, Governor of the Reserve Bank of Australia, the CGFS comprises senior officials from 28 central banks plus the BIS.

### Monitoring global financial vulnerabilities

The Covid-19 crisis focused attention on the immediate risks to the stability of the financial sector. The CGFS held a series of virtual meetings where members shared their perspectives on the impact of the crisis on financial conditions and financial markets and reviewed the resilience of the banking sector. They exchanged views about whether the sustained rally in equity and credit prices in the latter part of the period under review was consistent with economic prospects, and about the impact of the rise in long-term US dollar yields on financial conditions in EMEs.

A recurrent theme in the monitoring discussions was the so-called cliff effects that might arise when support programmes implemented to lessen the impact of lockdowns on economic activity end. If the expiration of temporary programmes such as government credit guarantees, debt service moratoriums or employment subsidies were to result in a tightening of financial conditions, this might undermine the recovery. The CGFS reviewed the benefits of turning "cliffs" into "ramps" by prolonging support against the longer-term costs associated with delaying structural changes brought about or accelerated by the pandemic.

### US dollar funding: an international perspective

The stress seen in US dollar funding markets at the height of the Covid-19 crisis brought into sharp focus many of the findings from the report the CGFS published in June 2020 on US dollar funding. The US dollar plays a central role in the international monetary and financial system. The report analyses how the international landscape for US dollar funding and related vulnerabilities have changed since the Great Financial Crisis and how these changes came to the fore during the Covid-19 crisis. Banks nowadays play a less prominent role as providers and users of US dollar funding, while markets and non-banks have become more significant. This has implications for global financial stability. Non-banks have access to fewer sources of US dollar funding; for example, most cannot access central bank facilities. Thus, when subjected to stress, their actions are likely to amplify market volatility, as was seen in March 2020.

The report sets out a number of policy options to address these vulnerabilities. Greater visibility about dollar funding markets in general and the activities of non-banks in particular, through additional data collection, greater data-sharing and improved disclosure, would help to monitor and manage vulnerabilities. Regulatory policies can also reduce certain vulnerabilities, especially those related to currency mismatches.

**Changing patterns of capital flows**

The Covid-19 crisis also highlighted the risks to macroeconomic and financial stability posed by extreme swings in capital flows. Whereas the CGFS's previous report on capital flows to EMEs, published in 2009, did not come to a definitive conclusion about the net benefits of capital account liberalisation, its latest report, published in May 2021 using the richer data and empirical methods available today, finds these benefits in a clearer way. The risks are also clearer, especially the adverse consequences of sudden stops in capital inflows and the challenges faced by economies with weaker institutions and less developed domestic financial markets. Moreover, the risks have evolved over the past decade as a result of the rising importance of portfolio investors and other changes in the pipes channelling capital flows to EMEs.

The report assesses the effectiveness of policy tools to manage the risks associated with extreme movements in capital flows, drawing on central banks' views and previous studies. It concludes that, even for EMEs with strong structural policies and sound fundamentals, there are circumstances in which additional policy tools, particularly macroprudential measures, occasional foreign exchange intervention and liquidity provision mechanisms, can help to mitigate capital flow-related risks.

**Markets for bail-in-able bank debt**

Resolution regimes are a cornerstone of the post-Great Financial Crisis regulatory framework for banks. To ensure their effectiveness, banks must hold sufficient amounts of capital and bail-in-able debt – unsecured bonds that can be written down or converted into equity when a bank is at risk of failure – to help recapitalise the bank or support its orderly resolution. The market for bail-in-able debt is now well established, and the CGFS brought together market participants, central banks and international groups to discuss the resilience and efficiency of this market. A key conclusion from the discussion was that the pricing of bail-in-able debt, the breadth of the investor base and the analysis of potential financial stability risks are hampered by a lack of information. The CGFS shared a summary of the discussions with the BCBS and the FSB as input for their ongoing work on resolution regimes.

More information about the Committee on the Global Financial System at www.bis.org/cgfs.

## Markets Committee

**Jacqueline Loh**
Chair of the Markets Committee

The Markets Committee is a forum for senior central bank officials to discuss current market conditions, market functioning and monetary operations. Chaired by Jacqueline Loh, Deputy Managing Director at the Monetary Authority of Singapore, the Committee comprises senior officials from 27 central banks plus the BIS.

**Market dysfunction and central bank tools**

In 2020/21, the Markets Committee held regular meetings to analyse market developments and share experiences relating to the implementation of Covid-19 crisis-related central bank tools. The secretariat also coordinated a survey among member central banks under the leadership of the Netherlands Bank. The survey focused on central banks' responses to the crisis, including asset purchases and funding for lending type programmes, as well as overarching policy lessons. A summary report based on the survey results was presented to the ECC.

**FX markets**

The study group on FX execution algorithms (EAs) and market functioning published its final report in October 2020. The report explores the causes and implications of the rising use of EAs in an increasingly fragmented and automated FX market. In addition to existing data and research, the report draws on insights from extensive industry outreach and a unique survey of major providers and users of EAs. It also offers insightful observations on the performance of these algorithms during the peak of the Covid-19-induced FX market volatility in March 2020.

**ESG and central bank operations**

The Markets Committee enhanced its focus on environment, social and governance (ESG) considerations in central bank operations. A session was held with the Network for Greening the Financial System in June 2020 to discuss these issues.

**Financial markets and monetary policy implementation**

The Markets Committee launched an online interactive tool to provide easy access to the Markets Committee Compendium: Monetary policy frameworks and central bank market operations.

More information about the Markets Committee at www.bis.org/markets.

## Central Bank Governance Group

**Lesetja Kganyago**
Chair of the Central Bank Governance Group

The BIS supports central banks in thinking about their institutional design. It facilitates Governors' discussions and knowledge-sharing on that subject, curated by the Central Bank Governance Group (CBGG). Since October 2020, the CBGG has been chaired by Lesetja Kganyago, Governor of the South African Reserve Bank. The CBGG comprises Governors from nine BIS member central banks as standing members while other Governors join discussions when the topic is of particular relevance. The CBGG's secretariat prepares background analyses for these meetings. It also supports the Central Bank Governance Network, and acts as a clearing house for information on the institutional design of BIS members, making that information available to central banks on a confidential basis.

**Central Bank Governance Network**

The Network is an informal mechanism to facilitate the flow of information on central bank governance and organisational issues between central banks. Responding to requests from central banks for information on the governance and organisational arrangements of other central banks, the Network improves the efficiency of information-gathering. Specialised surveys are conducted, with the information available for members' use. The requests also provide insights into the issues of current relevance for central banks, helping to inform CBGG deliberations.

**Central banks during the pandemic**

Considering the exceptional range and reach of central bank actions in fighting the economic consequences of the Covid-19 pandemic, the CBGG analysed a number of key issues during the period, including monetary policy communication in times of high uncertainty, the mechanisms for the interactions between government and central banks, the organisational aspects of monetary policy reviews, building strategies for disengaging from some of the extraordinary measures, and governance challenges arising from recent central bank actions in response to the Covid-19 crisis.

More information about the Central Bank Governance Group at www.bis.org/cbgov.

## Irving Fisher Committee on Central Bank Statistics

**Rashad Cassim**
Chair of the Irving Fisher Committee on Central Bank Statistics

The Irving Fisher Committee on Central Bank Statistics (IFC) is a forum where central bank economists and statisticians engage with and address statistical topics related to monetary policy and financial stability. Governed by BIS member central banks, it is hosted by the BIS and associated with the International Statistical Institute (ISI). The IFC has 94 members, comprising almost all BIS member central banks. It is chaired by Rashad Cassim, Deputy Governor of the South African Reserve Bank.

### Facing the Covid-19 challenges

The IFC adapted its work programme to respond to Covid-19 disruptions by increasing its focus on topical statistical surveys and publications. It developed a central repository of statistical initiatives in response to the pandemic and shed light on how to prioritise statistical needs in the coming years. The analysis focuses on the experience of central banks, which have been confronted with significant data gaps and methodological challenges as producers of official statistics, while at the same time they need information themselves to pursue their policy objectives.

This exercise highlighted three main lessons. First is the importance of efforts made since the Great Financial Crisis to develop higher-quality statistics, especially under the G20 Data Gaps Initiative that will be completed in December 2021. Second, official statistics still present significant shortcomings and gaps. Third, the pandemic underscored the need to go beyond the standard offering and cover broader ESG issues. These lessons call for further enhancing the international cooperative framework to both enhance existing core official statistics and address emerging data needs.

### Big data and financial innovation

The IFC continued its work on big data by conducting a survey on central banks' use of and interest in this topic. Around 80% of the respondents now use big data more than routinely, compared with only one third in 2015. They increasingly rely on big data and techniques to support economic analyses and nowcasting exercises, construct real-time market signals and develop sentiment indicators.

In addition, the IFC published a survey on fintech data issues at central banks that took stock of user needs, referred to ongoing statistical activities and shed light on potential initiatives to address related data gaps. Based on this experience, a dedicated IFC Report presented a targeted roadmap for compiling fintech statistics, with various case studies and selected key recommendations.

More information about the Irving Fisher Committee at www.bis.org/ifc.

# International associations at the BIS

The following associations have secretariats at the BIS. They have their own separate legal identity and governance structures. The BIS is a member of the FSB and IAIS.

FSB FINANCIAL STABILITY BOARD

## Financial Stability Board

The Financial Stability Board (FSB) promotes international financial stability by coordinating the work of national financial authorities and international standard-setting bodies as they develop regulatory, supervisory and other policies. It fosters a level playing field by encouraging coherent implementation of these policies across sectors and jurisdictions. The FSB is chaired by Randal K Quarles, Vice Chair of the US Federal Reserve; its Vice Chair is Klaas Knot, President of the Netherlands Bank.

This exceptional year underlined the FSB's ability to provide a quick and coordinated response to meet financial stability challenges and support the continued flow of financing to the real economy. FSB work covered: vulnerabilities exposed by the pandemic; policy responses, including the extent to which jurisdictions responded in a flexible yet coordinated manner; and areas of concern or where there have been lessons to learn. This work included a holistic review of the market turmoil in March 2020, which sets out a comprehensive work programme to enhance the resilience of non-bank financial intermediation.

> The FSB, through its cross-sectoral membership, has fostered global financial stability and real economy financing during the pandemic.

The FSB also delivered on a set of initiatives that were already on the agenda when the year began, but became even more timely as the Covid-19 pandemic increased the emphasis on digital payments, remote working and, more generally, on financial technology. These included a roadmap to enhance cross-border payments, recommendations for regulatory and supervisory approaches to global stablecoins, and a toolkit of effective practices for cyber incident response and recovery. Other initiatives included work to: deliver resilient, recoverable and resolvable central counterparties; support transition away from Libor; and explore the impact of climate change on financial stability.

The FSB continued to monitor the implementation of post-Great Financial Crisis reforms and assess their effects. It issued a consultative document on its evaluation of whether the implemented reforms to address too-big-to-fail are reducing the systemic and moral hazard risks associated with systemically important banks.

More information about the FSB at www.fsb.org.

## International Association of Deposit Insurers

The International Association of Deposit Insurers (IADI) is the global standard-setting body for deposit insurance systems. It contributes to the stability of financial systems by advancing standards and guidance for effective deposit insurance systems and promoting international cooperation among deposit insurers, bank resolution authorities and other safety net organisations. IADI includes 86 deposit insurers as Members, eight central banks and bank supervisors as Associates and 16 institutional Partners. The President and Chair of IADI's Executive Council is Yury Isaev, General Director of the Deposit Insurance Agency of the Russian Federation.

> IADI seeks to contribute to global financial stability by developing principles, standards and guidance, based upon research and sharing of expertise, in order to enhance the effectiveness of deposit insurance systems.

In March 2021, the IADI Executive Council approved the new IADI Strategic Plan for the next planning cycle (2022–26), which sets the goals of: (i) promoting the Core Principles for Effective Deposit Insurance Systems (Core Principles); (ii) advancing deposit insurance research and policy development; and (iii) providing Members with technical support to modernise and upgrade their systems.

In the year under review, the IADI produced research, guidance and brief papers on topics including differential premium systems, risk management and internal control systems, and depositor preference. It also developed in March a new programme for conducting thematic assessments of compliance with the Core Principles.

IADI conducted numerous international virtual conferences and training and technical assistance activities throughout the year. It developed remote training guidance detailing the types of training that can be conducted virtually. It worked closely with the FSB, the FSI and other international financial institutions in conducting conferences and meetings on deposit insurance and bank resolution issues.

IADI continues to monitor developments around the Covid-19 pandemic and its impact on financial stability and deposit insurance. In April, it released the results of the IADI survey on Covid-19 implications for deposit insurers conducted among Members to understand the different measures put in place or under consideration to respond to the pandemic. The survey was updated in May 2021.

More information about IADI at www.iadi.org.

## International Association of Insurance Supervisors

The International Association of Insurance Supervisors (IAIS) is the global standard-setting body for insurance supervision. The IAIS is chaired by Victoria Saporta, Executive Director of Prudential Policy Directorate at the Bank of England.

The IAIS adjusted its work programme to help insurance supervisors assess and manage the impact of the Covid-19 pandemic on the global insurance sector, while actively coordinating with the FSB and other standard-setting bodies to build an overall response to potential financial stability issues. The IAIS's Global Monitoring Exercise, which collects data directly from major insurance groups and supervisors representing over 90% of the global insurance sector, was refocused to monitor the impact of Covid-19. The IAIS database captures policy and supervisory measures implemented by insurance supervisors worldwide in response to the pandemic, with the aim of sharing lessons and good practices.

> The Covid-19 pandemic has highlighted the importance of a common language for cross-border supervision of internationally active insurance groups and analysis of systemic risks to the insurance sector.

Despite adjustments to data collection and consultation timelines to provide operational relief to members and insurers, substantial progress was made on key projects and activities.

The Insurance Capital Standard, which aims to provide a global risk-based measure of capital adequacy for internationally active insurance groups, completed the first year of its five-year monitoring period.

Concurrently, implementation of the Holistic Framework, an integrated set of supervisory measures and activities for the assessment and mitigation of system risk in the insurance sector, progressed according to plan.

The IAIS also made significant strides on key emerging themes outlined within its 2020–24 Strategic Plan, publishing papers with an insurance supervisory perspective on topics such as cyber risk underwriting, big data analytics, climate-related financial disclosures and climate risk.

More information about the IAIS at www.iaisweb.org.


## Other areas of international cooperation

The BIS also participates in international forums such as the G20 and collaborates with key international financial institutions such as the International Monetary Fund, the World Bank Group and the International Organization of Securities Commissions. It also contributes to the activities of central banks and regional central bank organisations by participating in their events as well as hosting joint events.

- During the past year, the Bank co-organised events or collaborated with the following organisations:
- Arab Monetary Fund (AMF)
- Association of African Central Banks (AACB)
- ASEAN Insurance Training and Research Institute (AITRI)
- Asian Bureau of Finance and Economic Research (ABFER)
- Asian Forum of Insurance Regulators (AFIR)
- Association of Insurance Supervisors of Latin America (ASSAL)
- Association of Southeast Asian Nations (ASEAN)
- Association of Supervisors of Banks of the Americas (ASBA)
- Caribbean Group of Banking Supervisors (CGBS)
- Center for Latin American Monetary Studies (CEMLA)
- Centre for Economic Policy Research (CEPR)
- Central Banks and Supervisors Network for Greening the Financial System (NGFS)
- Community of African Banking Supervisors (CABS)
- European Banking Authority (EBA)
- European Stability Mechanism (ESM)
- European Supervisor Education Initiative (ESE)
- Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)
- Group of Banking Supervisors from Central and Eastern Europe (BSCEE)
- Group of International Finance Centre Supervisors (GIFCS)
- Joint Vienna Institute (JVI)
- Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI)
- South East Asian Central Banks (SEACEN)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# The bank for central banks

The BIS provides a full range of banking services to central banks and other official sector customers. Activities include deposit-taking, mostly in the form of money market and tradable instruments, the provision of gold and foreign exchange trading services, and the management of pooled fixed income products and dedicated investment mandates. Banking staff also manage the Bank's own funds and provide knowledge-sharing services.

# Banking activities

BIS banking services are designed to meet the reserve management needs of central bank customers, in particular in terms of safety and liquidity – two key central bank requirements that received added emphasis in the context of the Covid-19 pandemic. This demands reliable execution, continuation of service across the whole product range and competitive pricing. Just like the Bank itself, as part of the Innovation BIS 2025 strategy, BIS banking activities thus need to continuously evolve to keep pace with the central bank community's adaptation to the changing macroeconomic, political and technological environment, giving rise to a significant emphasis on product innovation.

The BIS's banking business is underpinned by a strong capital position and a conservative risk management framework (see page 76). It is conducted in accordance with the relevant industry standards, such as the FX Global Code and the SWIFT Customer Security Programme, as well as with best market practices and the highest ethical standards. As part of its overall environmental sustainability agenda (see Chapter 6), the Bank also strives to promote green finance through sizeable climate-friendly investments and by helping to establish relevant market standards, both in the context of its own investments and by offering a range of green financial products to reserve managers and other BIS clients (see below).

## Financial strength in the midst of a pandemic

Amid strong demand for BIS banking products, and despite continuing constraints on the physical presence of Banking Department staff across the institution's three locations, key activity metrics for financial year 2020/21 point to an exceptional year. At end-March 2021, total assets stood at 356.2 billion Special Drawing Rights (SDR, a basket of currencies defined by the IMF which serves as the Bank's unit of account or "numeraire"), up from SDR 308.5 billion the previous year. With customer deposits rising to new record levels and the valuation losses experienced at the beginning of the Covid-19 pandemic being quickly reversed as financial year 2020/21 progressed, net profits increased to SDR 1,237.3 million by end-March 2021, from SDR 165.5 million the previous year, while total comprehensive income stood at SDR 1,070.9 million (see page 134).

## The year's highlights

During the past financial year, the Banking Department made important progress on the implementation of the ambitious agenda adopted as part of the Bank's overall Innovation BIS 2025 strategy. One key objective under this initiative is to enhance product development and reduce "time-to-market", where progress is reflected in a number of additions to the Bank's suite of green products as well as its Chinese renminbi-denominated offerings. In addition, reflecting the strong emphasis among BIS customers on the liquidity of their investments during the initial phase of the Covid pandemic (see figure below), working with key reserve currency-issuing central banks the Bank added a number of new facilities to ease access by client central banks to liquidity in those currencies. Finally, following the successful opening of the new dealing room at the Representative Office for the Americas in May 2020, the range of services delivered has continuously expanded, benefiting BIS customers in all regions via enhanced time zone coverage (see Chapter 3).

Reserve manager views on "early experiences in the context of Covid"[1]


[1] The size of each keyword in the word cloud is proportional to its observed frequency in the full text responses; based on responses from 43 reserve managers.

Source: BIS.

Progress has also been made on the asset diversification programme adopted for the Bank's own funds, which seeks to moderately increase the BIS's risk-return profile and broaden its drivers of return. Implementation has proceeded in a prudent manner, adding further investments in diversifying assets, such as US agency mortgage-backed securities (MBS) and inflation-protected securities (TIPS).

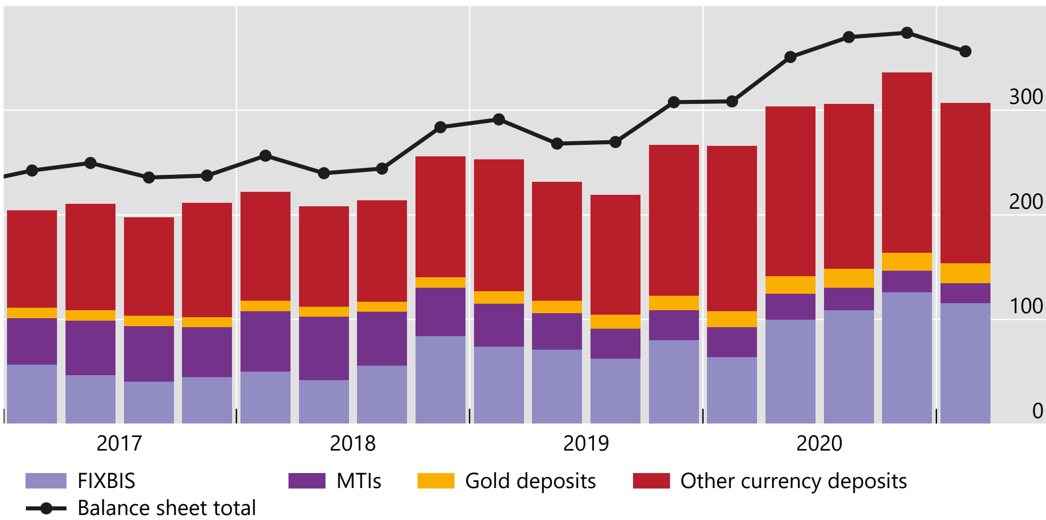
> Progress on the Bank's Innovation BIS 2025 strategy has allowed faster product development and shorter time-to-market.

Strategy implementation in all these areas was supported by ongoing upgrades of the Bank's trading and reporting systems. Progress has been made, in particular, on the key foundational and asset management infrastructure projects as well as in the area of cyber security. As the initiatives in these areas continue to proceed, they will help support even shorter time-to-market, improved electronic trading and enhanced customer services.

## Scope of banking services

The BIS offers its financial services to a global customer base of about 180 central banks, monetary authorities and international organisations. To provide these services, the Banking Department operates from three interlinked dealing rooms, located in Basel, Hong Kong SAR and Mexico City. They offer services on a near 24-hour basis to all our clients and maintain close contact with reserve managers and other counterparties across the globe.

### Balance sheet total and deposits by product[1]



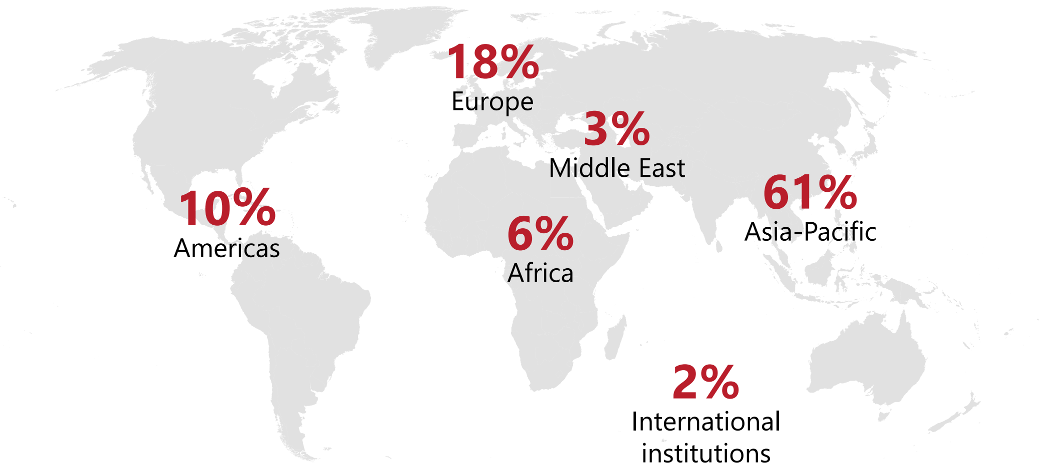

[1] End-quarter figures in billions of SDR.

Source: BIS.

Reflecting the Bank's expanding product range and competitive pricing, average customer deposits over the financial year increased to about SDR 275 billion, from around SDR 220 billion in 2019/20, with a record level of daily deposits of SDR 317 billion reached on 4 January. As of 31 March 2021, total deposits at the BIS, a broader measure covering additional placements, stood at almost SDR 307 billion, of which about 94% was denominated in currencies (SDR 288 billion) and the remainder in gold (see graph above).

In terms of geographical distribution, about 61% of the Bank's currency deposits came from the Asia-Pacific region, with European customers contributing another 18%. The Americas contributed 10%, with the remainder shared by Africa, the Middle East and international institutions (see graph below).

Geographical distribution of currency deposits[1]




[1] Percentage; based on balance sheet values in SDR, excluding gold; end-financial year.

Source: BIS.

## Financial products and services

### Money market and tradable instruments

The BIS offers money market placements, such as sight/notice accounts and fixed-term deposits, and tradable instruments in maturities ranging from one week to five years. These take the form of Fixed-Rate Investments at the BIS (FIXBIS), Medium-Term Instruments (MTIs) and products with embedded optionality (known as callable MTIs). All these products are designed and priced to offer competitive returns over and above comparable sovereign debt instruments, while providing the credit quality and liquidity (see above) demanded by reserve managers.

> New liquidity facilities allow client central banks to benefit from the BIS's strong links within the central bank community, its operational capabilities and the liquid BIS balance sheet.

Over the past year, leveraging local market expertise (see Chapter 3), additional instruments denominated in onshore renminbi (CNY), such as negotiable certificates of deposit (NCDs), were added to the range of investment products. On the customer products side, new sterling-denominated MTIs referencing SONIA benchmark rates were launched in March 2021. Further additions, such as MTIs referencing the new risk-free benchmark interest rates in other currencies that are being phased in as part of Libor reform, are under development, and work on the management of Libor legacy positions is proceeding as planned.

Furthermore, working closely with major central banks such as the Federal Reserve, the ECB and the Bank of England, the BIS has introduced new liquidity facilities to provide its client institutions with liquidity backstops in key reserve currencies that supplement the facilities offered by the issuing central banks themselves Similar work with other major central banks continues.

**Foreign exchange and gold services**

Foreign exchange (FX) services are another integral part of the BIS product offering. The Bank conducts FX transactions on behalf of its central bank customers, providing access to a large and diversified liquidity pool. BIS FX services encompass spot transactions, swaps, outright forwards, options and dual currency deposits (DCDs). Following the opening of the dealing room in the Americas Office in May 2020, ahead of schedule, staff across all three of the Bank's locations worked closely to be able to offer the full range of BIS FX products from October 2020 onwards to an expanded customer base.

Highlighting the value of cutting-edge technology for the Bank's business, rising client demand for automation and efficiency in FX trading in the context of Covid-19-induced remote work arrangements was a key driver of spot market activity. Over the past few years, advanced electronic FX trading capabilities have been developed to provide BIS customers with enhanced liquidity and transparency for their spot transactions. The Bank's own e-FX platform, in particular, offers algorithmic trade execution capabilities to help customers navigate the increasingly fragmented FX marketplace and implement even large-sized spot trades at competitive rates (see page 59). In 2020/21, the overall

"Close cooperation between our offices has been key to successful product development and the expansion of the Bank's FX business."

**Peter Zöllner**
Head of Banking


number of deals handled by the platform rose by about 10%, with 42% of the BIS's client FX spot trades now conducted in this way.

The Bank also provides gold services that include buying and selling on a spot basis and through outright forwards, swaps and options. In financial year 2020/21, activity in all these areas benefited from rising gold prices, with a peak reached in August. Other gold services comprise sight accounts, fixed-term deposits (as well as DCDs), quality upgrading, refining and location exchanges. The latter are also available for other precious metals, such as palladium, platinum and silver.

**Asset management services**

The Banking Department's Asset Management unit offers two types of products: dedicated portfolio management mandates tailored to each central bank customer's individual preferences, and in-house open-ended fund structures – so-called BIS Investment Pools (BISIPs) – that allow groups of BIS customers to invest in a common pool of assets. Client assets across both types of products, which are not included in the BIS balance sheet, amounted to a record SDR 22.3 billion at 31 March 2021, up from SDR 20.2 billion the previous year.

> Continuous dialogue with green bond issuers supports the adoption of best market practices, including improved impact reporting, and helps deepen the green bond market.

In addition to offering investments in core US dollar- and euro-denominated sovereign bonds, the BISIP structure is now extensively used to accommodate central bank interest in more diversified foreign exchange reserve portfolios. This includes BISIPs dedicated to US inflation-protected Treasury securities, sovereign bonds denominated in emerging market economy (EME) currencies such as the Chinese renminbi (CNY) and the Korean won (KRW), and a new BISIP investing in CNY bonds issued by Chinese policy banks. In addition, working with an advisory panel of client central banks, the BIS has developed a suite of products to help meet reserve managers' growing demand for climate-friendly investments. With a new euro-denominated green bond BISIP added in January 2021 and an additional BISIP under development (see box and page 46), the overall size of these sustainable investments amounted to a total of about SDR 2.1 billion by end-financial year 2020/21.

**Other financial services**

The BIS offers a range of additional financial services, including short-term liquidity facilities and credit extension to central banks, typically on a collateralised basis. The BIS may also act as a trustee and collateral agent in connection with international financial operations. Moreover, it provides ancillary reserve management services, such as supporting client central banks in reviewing and assessing their reserve management practices, and providing them with customised quantitative studies on asset allocation topics.

## Management of the Bank's own funds

The equity capital of the BIS stems from the paid-in capital of its shareholders and the retained earnings from its banking activities. The Bank's shareholders' equity was SDR 22.8 billion as of 31 March 2021, up from 21.6 billion the previous year, of which about SDR 3.9 billion was held in gold (102 tonnes). The remainder of the Bank's equity is invested in high-quality, highly liquid fixed income instruments, with additional asset classes being phased in as part of the Innovation BIS 2025 strategy.

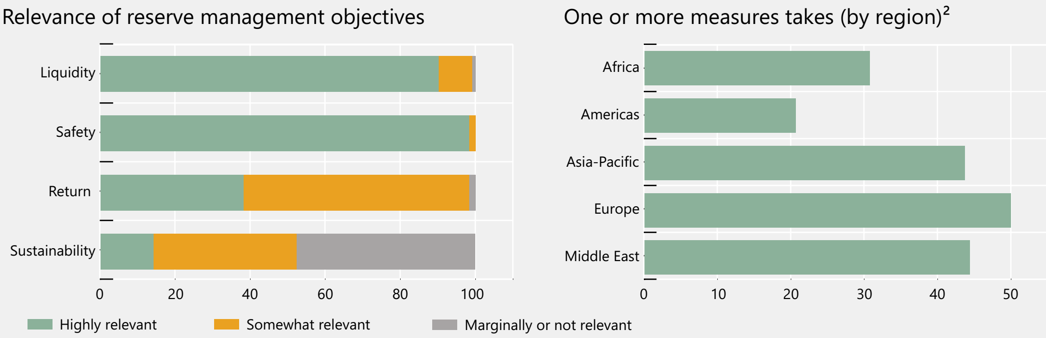
> The own funds strategy seeks to broaden the BIS's drivers of return by diversifying into a range of additional asset classes, while moderately increasing the risk-return profile.

The strategic benchmark for the Bank's fixed income investments is set by BIS Management within parameters established by the Board of Directors, and is regularly reviewed in the context of an established strategic asset allocation (SAA)

## Sustainability in reserve management and the BIS's green products

Reserve managers have traditionally focused on a triad of objectives: liquidity, safety and return. Recently, however, concerns about environmental risks and large-scale climate-friendly investment needs have raised the question of whether sustainability should be added as a fourth objective. Indeed, when asked about the importance of different reserve management objectives, more than 50% of the responding reserve managers indicated that sustainability was deemed at least somewhat relevant for their asset allocation decisions (see graph below, left-hand panel).

### Sustainability objectives in reserve management: relevance and measures taken[1]




[1] Percentage of respondents; based on over 120 responses from reserve managers collected in 2020. [2] Respondents indicating that at least one measure has been taken.

Source: BIS.

Thus, while safety and liquidity, followed by return, remain the most important reserve management objectives, sustainability has clearly gained traction. This is in line with a broader trend towards assessing portfolios and balance sheets against sustainability criteria. As a result, across world regions, upwards of 21% of central banks have implemented at least one measure integrating sustainability into their reserve management processes (right-hand panel). This includes: (i) investments in instruments such as green bonds; (ii) use of environmental, social and governance (ESG) criteria in their decision-making; (iii) integration of notions of climate risk into their investment beliefs; and (iv) steps towards environmental risk management.

To meet the rising demand for green investments and support the adoption of best market practices and reporting standards for these new instruments, the BIS now offers a suite of investment products and related services dedicated to sustainability objectives. In addition to the US dollar- and euro-denominated green bond BIS Investment Pools (BISIPs) issued in September 2019 and January 2021, respectively, this includes a corporate bond BISIP managed on the basis of responsible investment guidelines as well as dedicated investment mandates offered to BIS clients. As an additional service for its green BISIP investors, in November 2020 the BIS introduced a dedicated annual impact report, based on information provided by the issuers of the underlying bonds, to provide a sense of the environmental benefits (such as $CO_2$ emissions avoided or renewable energy produced) that investors can expect from their green bond investments.

process. It comprises SDR-weighted bond indices and currently has a target average duration of about 2.6 years, with Asset Management being charged with managing these investments within the constraints established by the Bank's Risk Management Framework.

In line with the Bank's strategic objective to broaden the drivers of return of the Bank's own funds, additional diversifying exposures to assets such as US agency MBS, selected highly rated investment grade corporate bonds and US inflation-protected government securities were added in financial year 2020/21. Implementation proceeded in a prudent fashion, after being temporarily halted in the context of Covid-19-related market events in spring 2020. Following the regular reassessment of the Bank's SAA in early 2021, further diversification steps are planned for financial year 2021/22, subject to market conditions.

## Customer outreach

The BIS Banking Department maintains an active programme of regular, bilateral client meetings as well as a schedule of larger knowledge-sharing events. These are enhanced by more ad hoc outreach activities, such as seminars dedicated to particular topics or BIS products. BIS banking staff also regularly participate in events organised by other central banks or industry bodies. As part of the Bank's broader outreach activities, these meetings strengthen the feedback mechanism between the BIS and its banking customers, and inform product development as well as service delivery. They also facilitate the exchange of information among reserve managers and promote the development of investment and risk management capabilities within the reserve management community.

**Online offerings**

Due to the contraints imposed by the Covid-19 pandemic, all bilateral client meetings in financial year 2020/21 took place in virtual format. In addition, replacing the regular schedule of workshops and seminars, three series of knowledge-sharing webinars were conducted in the latter half of 2020, attracting participation from a total of 365 reserve managers from 75 BIS client institutions. Topics included recent trends in foreign exchange reserve management, developments in gold markets and Covid-related findings from BIS research and their implications for reserve managers.

**Enhanced regional focus**

Leveraging the move to online delivery as well as the presence of the two regional dealing rooms in Asia and the Americas, the Bank's outreach activities provided an enhanced regional focus (see Chapter 3). Various dedicated webinars featuring BIS banking products were organised for regional clients, and part of the knowledge-sharing programme was offered in time frames and with content focused on particular regions, while making recordings available for clients from other time zones.

# 5

# Fostering innovation

The pace of technological change continues to accelerate in the financial sector, where the use of new technologies is drastically changing the financial industry. This rapid change brings both opportunities and risks. To continue to deliver on their core mandates of monetary and financial stability in a changing environment, central banks must embrace sound innovation in the digital era to maintain the safety, integrity and stability of money and payments.

## The BIS's role in fostering responsible innovation

The Innovation BIS 2025 strategy leverages technology and new collaboration channels to serve the central banking community in an environment of rapid technological change. A key manifestation of these strategic objectives is the establishment of the BIS Innovation Hub and a Cyber Resilience Coordination Centre, to enable central banks to work together to effectively seize the opportunities of financial innovation, while identifying, responding to and minimising the associated risks.

The BIS Innovation Hub has been created to serve as an international focal point for central banks on innovation. It will enable central banks to work together to effectively identify and develop in-depth insights into critical trends in financial technology of relevance to central banks and to explore the development of public goods to enhance the functioning of the global financial system.

One of the most prevalent risks associated with digital innovation is cyber risk, which is pervasive, systemic and global in scope. To identify, respond to and minimise this risk, the BIS has created a Cyber Resilience Coordination Centre (CRCC) to serve the central bank community by providing and promoting a number of cyber resiliency services. The CRCC's goal is to enable central banks to carry out their respective missions by fostering collaboration, knowledge-sharing and operational readiness to allow them to anticipate and thus rapidly adapt to cyber threats.

# BIS Innovation Hub

The BIS Innovation Hub was established in 2019 to foster international collaboration on innovative financial technology within the central banking community. Through the Innovation Hub, central banks can work together to respond to the technological innovation that is rapidly transforming the financial landscape, to realise its benefits while avoiding the associated risks. The Innovation Hub focuses on the development of technological solutions to practical problems in the financial sector of importance to the central banking community.

In cooperation with member central banks, the BIS Innovation Hub has centres in Hong Kong SAR, Switzerland and Singapore, and is in the process of opening new centres across Europe and in North America (see box on next page). A Centre Head in each location leads multidisciplinary teams of technologists and policymakers from around the world, supported by a secretariat located at BIS headquarters in Basel.

## Work programme

The Innovation Hub's work programme, endorsed by the BIS Economic Consultative Committee (ECC), takes an agile approach in seizing emerging opportunities to put forward new proposals and activities, while adapting existing projects in the light of evolving circumstances. The work programme is built around six key themes of critical importance to the BIS and the central banking community:

### BIS Innovation Hub projects

| Strategic focus themes | Switzerland | Singapore | | Hong Kong SAR | |
|---|---|---|---|---|---|
| 1 Suptech and regtech | Monitoring of fast-paced markets (Rio) | G20 TechSprint 2020 | Regulatory reporting (Ellipse) | | |
| 2 Next-generation FMIs | | Nexus | | | |
| 3 Central bank digital currency (CBDC) | Central bank money on tokenised platforms (Helvetia) | Platform for settling cross-border payments using multiple wCBDC (Dunbar) | | mCBDC Bridge | rCBDC (Aurum) |
| 4 Open finance | | | | Digitising Trade Finance | |
| 5 Cyber security | Secure Coding Competition | | | | |
| 6 Green finance | | G20 TechSprint 2021 | | Tokenisation of Green Bonds | |

mCBDC = multi-CBDC; rCBDC = retail CBDC; wCBDC = wholesale CBDC.

■ Concluded projects ■ Existing projects continuing into 2021/22
■ New projects in 2021/22 ⓘ projects in brackets

The projects of the Innovation Hub's work programme, including proofs of concept (PoCs) and prototypes, are implemented in order to investigate the technological and practical feasibility of particular designs and products. They do not imply or express any regulatory policy stance or endorsement by the BIS or any other party.

## Enlarged global presence with new centres and a strategic partnership

In June 2020, the Board of the BIS authorised the expansion of the Innovation Hub within two years to further the development of fintech initiatives for the enhancement of the global financial system (see map below).

The expansion builds on the foundations put in place by the first three Innovation Hub Centres with the opening of new centres in collaboration with the Bank of Canada (Toronto), the Bank of England (London), the ECB/Eurosystem (Frankfurt and Paris) and four Nordic central banks (Danmarks Nationalbank, the Central Bank of Iceland, the Central Bank of Norway and Sveriges Riksbank) in Stockholm. In addition, the BIS entered into a memorandum of understanding with the Federal Reserve Bank of New York establishing a Strategic Partnership with the Federal Reserve System. The London and Nordic Hub Centres were scheduled to open in June 2021. The new centres will expand the Hub's reach and help create a global force for innovation.

### BIS Innovation Hub Centres

## The year's highlights

In 2020/21, the BIS Innovation Hub team made progress on key projects that reflect the innovation priorities of the central bank community.

### TechSprint and TechChallenge

In April 2020, the Hub and the Saudi G20 Presidency launched the first global regtech and suptech TechSprint. The TechSprint was a hackathon-style competition aimed at highlighting the potential for technology to resolve regulatory compliance and supervisory challenges. A total of 128 applications from over 40 countries were received, and the winners were announced in October 2020 in a virtual symposium, "Enabling regulatory and supervisory solutions for the digital era", hosted by the Saudi Central Bank.

Separately, the Hub and the Hong Kong Monetary Authority hosted the TechChallenge, a joint initiative designed to showcase the potential for new innovative technologies to resolve problems in trade finance. Launched in August 2020, it was supported by the Asian Development Bank, the International Chamber of Commerce, the International Institute of Finance, the People's Bank of China and the Wolfsberg Group.

Participants were invited to propose technology solutions to the following three problem statements in trade finance: (i) connecting digital islands and increasing network size and effects; (ii) trade finance inclusion for small and medium-sized enterprises (SMEs); and (iii) tradetech for emerging markets. A total of 103 solutions were received. Seventeen winners and runners-up were announced on 2 November 2020, all of which were invited to showcase their submissions at the Hong Kong Fintech Week in November 2020.

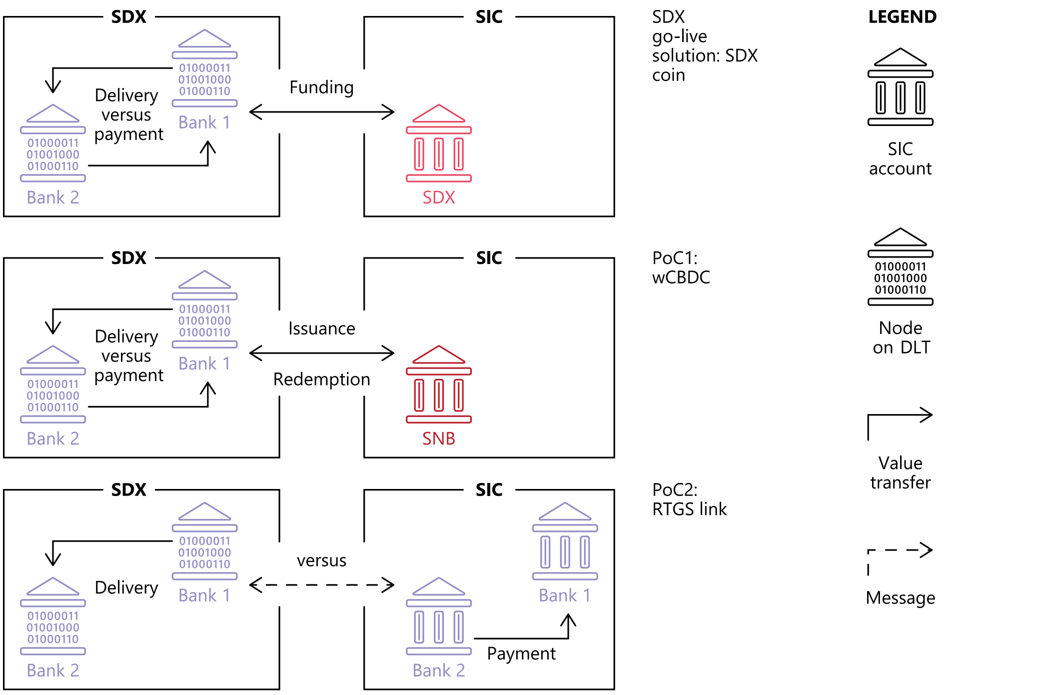
### Project Helvetia

Project Helvetia is a joint experiment undertaken by the Innovation Hub's Swiss Centre, SIX Group AG and the Swiss National Bank (SNB), exploring the integration of tokenised assets and central bank money on a new securities settlement platform created by the SIX Digital Exchange (SDX). In 2020, two proofs of concept for settling tokenised assets were conducted: (i) issuing a novel wholesale central bank digital currency (wCBDC); and (ii) building a link between the SDX platform and the existing central bank payment system (see figure on next page). Both PoCs used the testing environments of live or near-live systems, and transfers were shown to be legally robust.

The next steps for this work are to deepen the understanding of the practical considerations of issuing a wCBDC into the existing financial system, and to explore cross-border use cases with a diverse set of participants.

Project Helvetia is an example of how open collaboration can further improve the common understanding of the impact of digital innovation on the future of the financial system. It helps central banks fulfil their mandates and contribute to the broader international discussions on CBDC.

Project Helvetia: proofs of concept




DLT = distributed ledger technology infrastructure; RTGS = real-time gross settlement; SIC = Swiss Interbank Clearing payment system.

## Additional areas of work

In addition to the initiatives described above, and in line with the goals of Innovation BIS 2025, the BIS Innovation Hub moved forward with the Nexus project (formerly Foundational Digital Infrastructure) through the Singapore Centre, which will develop a blueprint for a next-generation cross-border payment network that involves the interconnection of existing rails across jurisdictions. The Innovation Hub's Swiss Centre launched Project Rio, a prototype of a central bank-specific, real-time capable market monitoring platform – its cloud-based stream processing platform will process real-time financial data feeds making use of artificial intelligence and other state-of-the-art technology and compute relevant liquidity and market risk measures. The Swiss Centre also hosted a Secure Coding Competition, an informal and friendly coding training for central banks to develop skills across multiple programming languages (see page 88).

Other ongoing projects in the Innovation Hub's programme include:

- a PoC solution for a regulatory reporting platform employing data analytics and data visualisation to provide supervisors with deeper and more timely insights to address risks;

- a PoC platform using multiple w-CBDCs to explore the feasibility of faster and cheaper cross-border payments;
- a technological research project and associated prototype(s) for tiered retail CBDC distribution architectures;
- a distributed ledger technology prototype for the distribution of tokenised green bonds to retail investors; and
- the continuation of the TechSprint initiative under the Italian G20 Presidency in 2021.

## BIS Innovation Network

In January 2021, the Innovation Hub launched the BIS Innovation Network with BIS member central banks to support the Innovation Hub's mandate, share knowledge about technology projects and discuss innovative answers to practical problems within the financial sector relevant to central banks. The network is composed of experts on innovation representing BIS member central banks. The Innovation Network will enable the Innovation Hub to draw on the significant pools of talent and expertise on innovation that exist throughout the BIS's membership. It will be member-driven and will strive to be agile, creative, collaborative and flexible.

As a starting point, the BIS Innovation Network established topical working groups around the six strategic themes of the Innovation Hub's project portfolio. They are chaired by: Susan Slocum, Reserve Bank of Australia (suptech and regtech); Siritida P Ayudhya, Bank of Thailand (next-generation financial market infrastructures (FMIs)); Marius Jurgilas, Bank of Lithuania (central bank digital currency (CBDC)); Aristides Andrade Cavalcante Neto, Central Bank of Brazil (open finance); Tomer Mizrahi, Bank of Israel (cyber security); and Sharon Donnery, Central Bank of Ireland (green finance). The working groups will initially focus on central bank problems/ prototypes in early stages of development to spur collaboration on practical problem statements and solutions, and facilitate the exchange of views on nascent technologies and experiences.

## BIS Innovation Summit

In March 2021, the Hub hosted its first annual conference, the BIS Innovation Summit, held virtually to reach audiences in Asian, European and American time zones. More than 50 high-profile speakers, including the Chairman of the Board of Governors of the Federal Reserve System Jerome Powell, President of the Deutsche Bundesbank Jens Weidmann, ECB President Christine Lagarde, Bank of England Deputy Governor Sir Jon Cunliffe and Microsoft President Brad Smith, shed light on key issues around cross-border and retail payments, CBDC, banking and the new digital ecosystem, decentralised finance, data analytics, artificial intelligence and cloud technologies, as well as the cultural and organisational changes that may be needed within central banks to meet the challenges of this digital age. In addition,


the heads of the Hub Centres in Hong Kong SAR, Switzerland and Singapore showcased key projects as part of their work to explore the development of public goods.

As part of the summit, a 48-hour virtual hackathon with SWIFT was held to identify ways to use ISO 20022 and application programming interfaces (APIs) to improve cross-border payments. The hackathon was one of the Innovation Hub's contributions to the FSB/CPMI roadmap for improving cross-border payments. It supported two of the "building blocks" identified by the CPMI: adopting a harmonised ISO 20022 version for message formats and harmonising API protocols for data exchange. The three winners were announced at the BIS Innovation Summit.

# Cyber Resilience Coordination Centre

The BIS is firmly committed to promoting cyber resilience within the financial sector and recognises the growing prominence of the BIS's cyber resilience-related work. At the forefront of these initiatives is the Cyber Resilience Coordination Centre (CRCC).

## Mandate and organisation

The CRCC was established in 2019 as part of the Innovation BIS 2025 strategy. Its overall mandate is to provide a structured approach to knowledge-sharing, collaboration and operational readiness among central banks in the areas of cyber resilience. Cyber resilience is the ability of an organisation to continue to carry out its mission by anticipating and adapting to cyber threats and other relevant changes in the environment and by withstanding, containing and rapidly recovering from cyber incidents.

The CRCC carries out its mandate by delivering cyber resilience services in three main activity areas:

- **Knowledge-sharing:**
  providing a platform where central banks can share knowledge on strategic and tactical cyber resilience issues and work together on shared initiatives.

- **Collaboration:**
  building relationships between central banks and within the broader financial sector to ensure coordination and an accurate and swift response to major cyber threats.

- **Operational readiness:**
  strengthening the collective cyber resilience of the central bank community through active collaboration and by organising realistic hands-on cyber response training exercises.

In January 2021, the CRCC became a new BIS business unit, separate from Corporate Security unit, to increase its focus and ability to deliver services that are impactful and add value to its stakeholders.

## The year's highlights

Due to the Covid-19 pandemic, the CRCC rapidly transitioned to deliver a number of planned events in virtual format. In 2020/21, it made significant progress in the areas of knowledge-sharing, collaboration and operational readiness.

## Knowledge-sharing

### Cyber Resilience Assessment pilot project

In recent years, international standards have been developed and adopted by financial industry participants to continuously strengthen their cyber resilience posture. Central banks need to assess the overall effectiveness of cyber resilience measures and to compare their practices with those of others by means of a common benchmark. For this purpose, the Cyber Resilience Assessment (CRA) was developed by Carnegie Mellon University's Software Engineering Institute (CMU/SEI) to help organisations assess the cyber resilience posture of their critical services, in an effort to produce outcomes that will help organisations further improve their cyber resilience.

In 2020, the CRCC launched a pilot with a group of eight central banks, each of which will perform a CRA in 2021. The participants will perform the self-assessments based on the materials of the CRA methodology and are guided by the CRCC and representatives from CMU/SEI, who will use their knowledge and expertise to assist participants. Based on the findings of the pilot group, the CRA methodology will be further enhanced and developed to be used as a benchmarking tool before being made available to the wider central bank community.

### Secure Coding Competition

In recent years, the financial system has grown increasingly dependent on a wide range of technologies in its underlying information and communication technology (ICT) infrastructure and applications. It is essential that the code that runs these applications be secure, which requires central bank software developers to have up-to-date knowledge and skills.

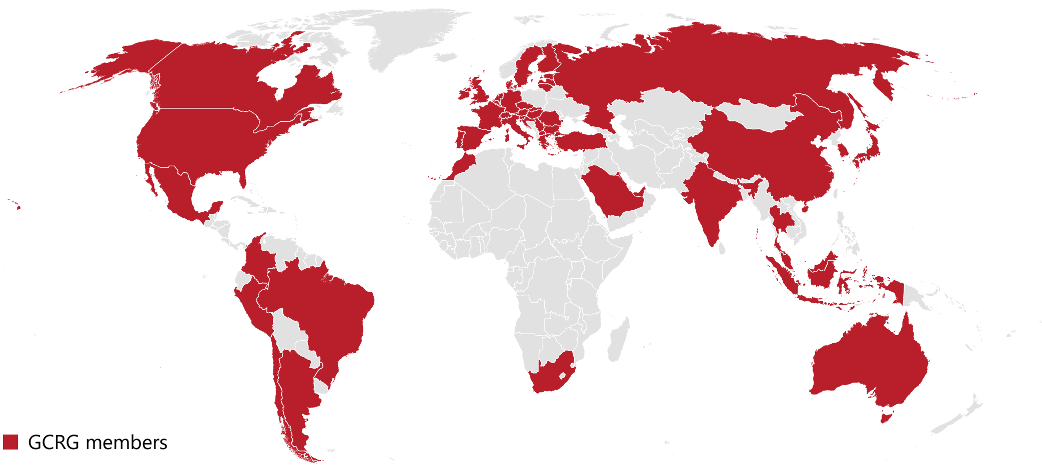
To highlight the importance of secure coding, the CRCC and BIS Innovation Hub Switzerland organised a secure coding competition in November 2020. Sixty-five central bank software developers took part in the friendly event between peers. An industry-leading third-party firm hosted the competition. Following the event, developers were given individual private feedback on their secure coding strengths and weaknesses and where they could improve their secure coding practices. In addition, aggregating performance data were provided to the BIS to identify the lessons learned (eg common areas for improvement to help tailor future BIS cyber events for central banks).

## Collaboration

### Global Cyber Resilience Group

To enhance collaboration among BIS member central banks, the Global Cyber Resilience Group (GCRG) was set up in 2020 as a forum where central bank Chief Information Security Officers can discuss both tactical and strategic cyber resilience topics.

## Global Cyber Resilience Group member countries

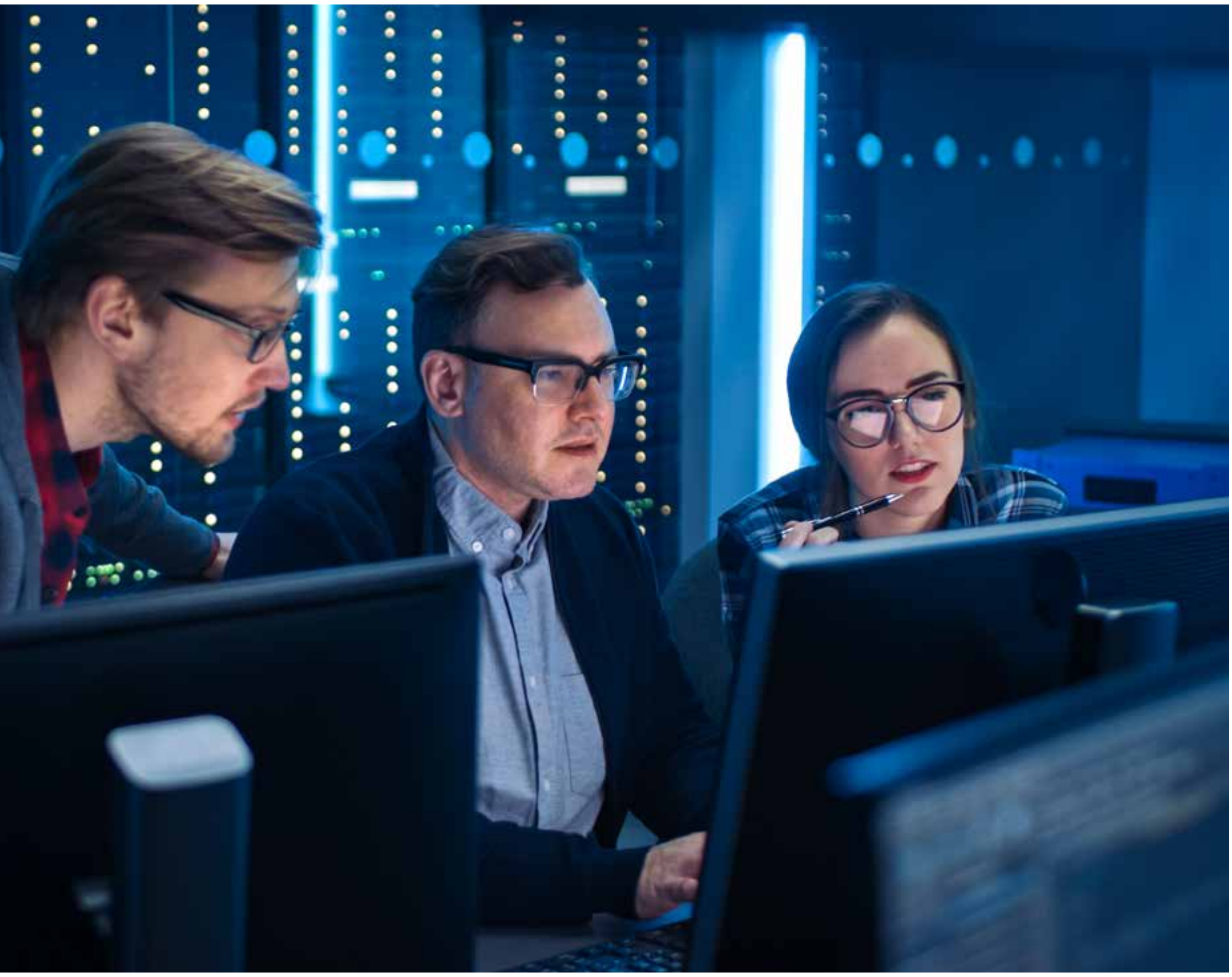



The group currently has 54 members (see map above), and its inaugural meeting was held in May 2021.

The group will focus on analysis of new cyber developments (new technology, resilience approaches), good practices and lessons learned from major cyber threats/incidents, and cyber resilience areas that can benefit from increased coordination. In addition, it will form special focus groups on selected topics of interest to the community. The GCRG will report its findings annually to Governors.

### Locked Shields exercise 2021

Larger-scale international cross-sectoral exercises are organised to give hands-on experience and enable participants to draw key lessons to improve overall resilience. In April 2021, the CRCC participated as a representative from the financial sector in the Locked Shields 2021 cyber exercise (ExLS21). This was the first time that the NATO Cooperative Cyber Defence Centre of Excellence, which administers and executes this annual exercise, invited financial sector participation in what is considered the world’s largest and most advanced international cyber defence exercise. There were 2,000 participants from 30 countries in both the strategic and technical aspects of the event. The primary objective of the ExLS21 was to test the skills of cyber security and IT specialist teams in preventing, detecting, responding to and reporting about full-scale cyber attacks.



## Operational readiness

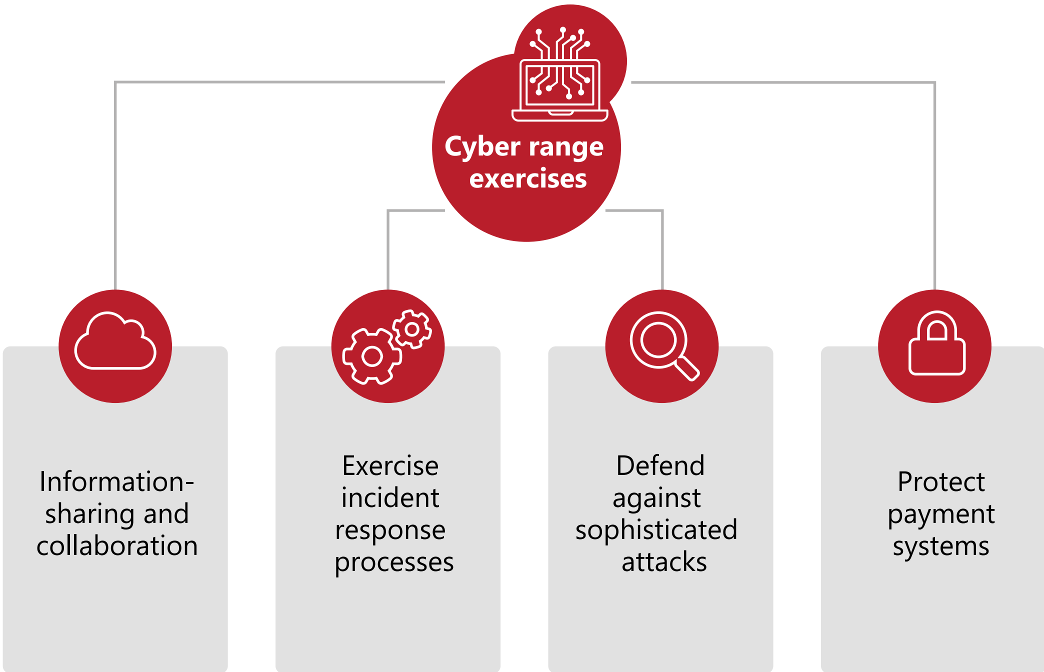
**Virtual table top exercise for the Asia-Pacific region**

In September 2020, the CRCC and the BIS Asian Office hosted a virtual table top exercise attended by 45 participants from 12 central banks. The event focused on the detection and response to a sophisticated cyber security incident at a fictitious central bank in Asia. The aim was to improve cyber resilience across the central bank community, and the event allowed participants to practice incident response in a safe environment, identify communication, operational and/or technological challenges, understand roles and responsibilities during an incident, and test security teams' readiness to handle major incidents.

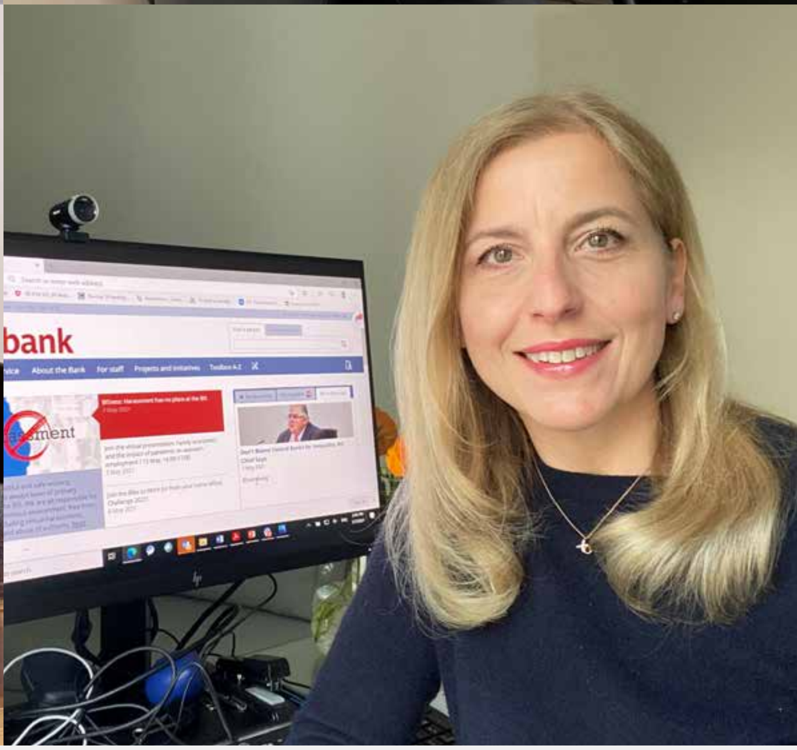
**Cyber range exercise in the Americas**

Also in September 2020, the CRCC and the BIS Americas Office hosted the first fully virtual cyber range exercise. Twenty-seven subject matter experts from 13 central banks in the Americas had to defend their simulated central bank IT environment against a series of sophisticated cyber attacks. The scenario focused on the cyber risks facing payment systems in central banks.

## Cyber range exercises




A dedicated red team carried out live attacks, on banking systems and against physical access control systems, and simulated attacks carried out by insiders. The training and exercise provided a unique environment for central bank security experts to work and collaborate on incident response using a scenario tailored specifically to central banks.


6

# Commitment to our values

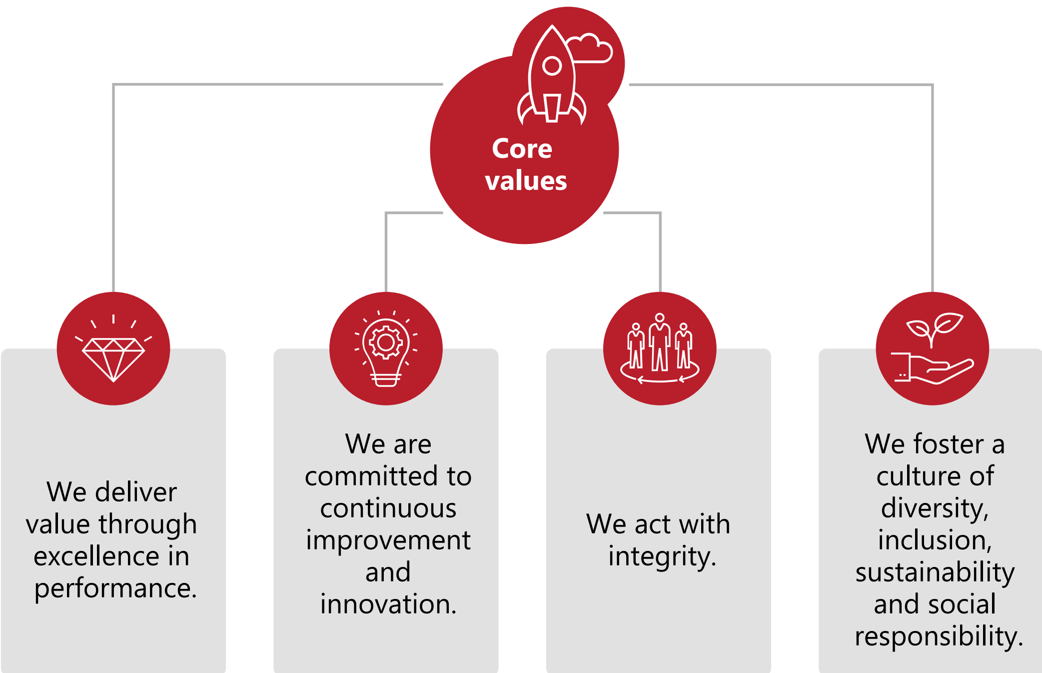
Our work environment is anchored in strong core values that shape the way in which we carry out our work to deliver on the Bank's mission. These values are the shared principles and beliefs that unite our staff and guide our actions, to promote a culture of continued improvement and innovation, not only in what we do, but also in how we think and how we work to meet the needs of our stakeholders.

## The way we work

The BIS continuously adapts its activities to support central banks as they face their current and future challenges, and to adjust to external developments. To this end, the BIS fosters a culture of diverse thought and innovation to create an environment in which our people embrace change and work together to achieve stronger outcomes for the central banking, regulatory and supervisory community. Our culture is built around a team of professionals working with a strong sense of purpose and collaborative spirit. As part of our Innovation BIS 2025 strategy, we have increased investment to boost the speed and agility of our IT environment, and launched our People Strategy to foster a strong performance culture. Both these developments help us respond effectively to our stakeholders' needs.

This culture is reflected in our core values that are exemplified by our people and create a shared mindset that makes the BIS a unique place to work. In the face of the current challenges posed by the Covid-19 pandemic, our common purpose and shared values have kept us together while working apart.

BIS core values



## Excellence in performance

At the BIS we hold ourselves to high standards of performance and deliver value to our customers through outstanding execution. This allows us to build trust and commitment both within and outside the Bank, and to strengthen the relationships we have forged over time.

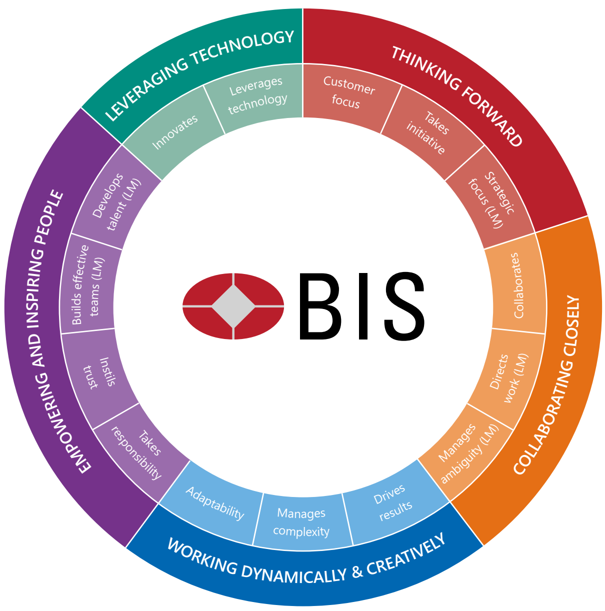
**Performance-driven organisation**

A core goal of our Innovation BIS 2025 strategic agenda is to create a performance culture that matches the increasing agility of the organisation, the faster pace of change and our drive towards continuous improvement.

To support these efforts, a new competency framework was rolled out across the Bank, building on the behaviours that are valued and promoted in the context of Innovation BIS 2025: leveraging technology, thinking forward, working dynamically and creatively, collaborating closely, and empowering and inspiring people. Underpinning these five behaviours are a series of core competencies that we expect our people to demonstrate in addition to excellence in technical expertise, execution and delivery.

The competency framework (see figure below) allows us to set common performance standards across the BIS and establishes a common language for processes, from recruitment to performance management, development and talent management, and staff recognition. This in turn results in greater consistency and transparency in our people-related processes, and a better ability to plan for future talent and skill needs in line with Innovation BIS 2025.

BIS competency framework




LM = line managers.

## Staff flexibility and adaptability in the face of Covid-19

In 2020/21, BIS staff adopted new ways of working and embraced technology as the Covid-19 pandemic made it necessary to work mostly remotely. While the shift in the way we work was abrupt, it also had positive consequences, such as a renewed focus on state-of-the-art technologies and more inclusive meeting participation. We were well placed to react thanks to investments in infrastructure that had been made as part of our Innovation BIS 2025 strategy.

### State-of-the-art meeting technologies

The use of new communication and collaboration technologies proved vital to keep the Bank's staff together while working apart. At the beginning of the Covid-19 crisis, elements of the Innovation BIS 2025 programme were accelerated to ensure that the latest virtual meeting technologies were available to all staff. The Bank completely transformed its meeting services during the year to meet new needs, equipping dozens of meeting rooms for hybrid meetings and events, and training staff on the new technologies. The number of virtual meetings organised at the BIS increased from about 600 per week to 600 per day between March 2020 and March 2021. Some of the largest meetings had over 700 participants while conference attendance peaked at close to 9,000. Overall, total meeting attendance in the period surpassed 490,000 people. As a result of this shift, business units reported having 95–100% of their meetings in virtual format, while previously only a handful were held in this way.

Looking ahead, the Bank will be introducing new technology for hosting larger external virtual conferences, and additional digital tools to support its various collaborative activities.

### Wider and more inclusive participation

Although virtual meetings can never fully substitute for in-person meetings, the pandemic has clearly shown that many meetings could productively be held in virtual or hybrid formats, with significant saving in terms of travel time and costs. These formats can also be more inclusive as they allow wide participation irrespective of distance to the host country and eliminate barriers for participants that could otherwise not join a physical event. This has allowed for broader participation promoting the exchange of diverse perspectives and ideas.

A good example is the BIS Annual Conference, which for 19 years has brought together central bank Governors and leading academics to discuss topical issues in central banking, macroeconomics and finance. For the 2020 edition, the BIS turned the restrictions imposed by the Covid-19 pandemic into an opportunity, by livestreaming the event to the public. Between 30 October and 16 December, we hosted five virtual presentations on "Central banking in the wake of the pandemic", including the Per Jacobsson Lecture, a joint IMF-BIS event. Altogether, about 170 senior central bankers participated in the webinars and Per Jacobsson lecture, and over 9,000 users watched the videos of the events online.

The Financial Stability Institute (FSI) also embraced new virtual formats as it too adapted to the new context. In addition, it offered free FSI Connect licences to support efforts by central banks and other authorities to sustain their training activities during the pandemic. Around 4,000 free licences were made available to authorities from around 100 jurisdictions. In addition, the FSI seized the opportunity to further digitise its capacity-building activities, by launching an ambitious programme to expand its offering of online courses, transform all of its one-off training events into virtual format, and overhaul its e-learning platform.

In March 2021, the BIS hosted its inaugural Innovation Summit, on "How can central banks innovate in the digital age?". Around 8,900 people registered for this virtual summit, where global leaders addressed key issues around cross-border and retail payments, central bank digital currencies, banking and the new digital ecosystem, decentralised finance, data, analytics, artificial intelligence and cloud technologies, as well as cultural and organisational changes that may be needed within central banks to meet the challenges of this digital age.

**Widened regional outreach**

The resilience, nimbleness and creativity of the people who work at the BIS was exemplified by our network of offices and BIS Innovation Hub Centres across the globe, as they adapted quickly to the challenges posed by the pandemic. Our regional offices were already adept in organising virtual meetings and cooperative activities as part of their regional activities and interactions with BIS headquarters. This know-how and expertise facilitated their pivot to a full virtual engagement model.

Our Asian Office in Hong Kong SAR was first to embrace the hybrid working environment necessitated by Covid-19. With the help of new virtual technologies that enhanced connectivity for staff, the lack of mobility became an opportunity for more inclusive outreach to member central banks and a broad group of stakeholders in the region. This included more regular engagement on macroeconomic and emerging issues with think tanks and academics, securities regulators, private sector companies and NGOs. In addition, a virtual presentation of the Annual Economic Report to Asian central banks was organised for the first time.

Our Americas Office in Mexico City also moved fast to respond to the increased interest of BIS member central banks in more frequent meetings, by convening 45 virtual meetings of central bank Governors and senior officials – compared with a total of 17, both in-person and virtual, held the previous year. This allowed the central banks to exchange information and views on the economic and financial developments and policy measures in an effective and timely manner despite the circumstances.

## Continuous improvement and innovation

Our work environment supports and rewards creativity and innovation. We encourage our staff to overcome challenges through innovative solutions. By embracing different perspectives, everyone has the opportunity to grow and expand their horizons and to bring their own ideas. This makes us work in an agile way and allows us to adapt quickly and productively to new demands.

### Adoption of latest cloud technologies

A significant theme in the Bank's overall technology roadmap this past year was investment in innovative cloud technologies to support the specific needs of the BIS Innovation Hub. A dedicated, cloud-based IT environment called the Innovation Zone was created to meet the Hub's needs, and throughout the year this grew in tandem with the business it supports. The Innovation Zone gives Hub staff an integrated virtual environment that lets them collaborate and conduct their research working as distributed teams. New cloud-based platforms have allowed the Hub to access new technological capabilities and accelerate research projects in ways that were not previously possible. This environment will be expanded to encompass all of the Hub's new centres and support its growing project portfolio.

### Building big data capabilities

Big data and advanced analytics technologies, such as machine learning and artificial intelligence, have opened up opportunities to gather new insights from large and diverse volumes of data. These insights help to inform our work on financial stability assessments and surveillance, and support research on vulnerabilities in the corporate and banking sectors. At the same time, the implementation of cutting-edge business intelligence and collaboration tools is transforming the way the BIS analyses and disseminates its unique sets of statistics, while allowing us to make data and research more accessible.


For example, in December 2020 the BIS unveiled a G-SIB scores dashboard (see figure), which attracted 3,000 users in the first four months. In addition, an interactive chart that allows users to visualise banks' bilateral cross-border claims and liabilities in the BIS locational banking statistics by residence was launched in January 2021, with 4,500 users in the first two months. Meanwhile, the Statistics Explorer tool on the BIS website serves an average of 2,500 users per day.

These initiatives are part of the Innovation BIS 2025 strategy to leverage technology and new collaboration channels to serve the central banking community. The main aim is to further strengthen the BIS's role as a leading centre for international financial statistics and to support innovative cutting-edge research (see Chapter 2).

## Sustainability

At the BIS we are committed to adopting sustainable and environmentally responsible work practices and incorporating sustainability considerations into our business decisions. We do so by supporting environmentally responsible finance and investment practices, contributing to analytical work on climate change for the central banking community and facilitating international dialogue and cooperation on climate change-related issues. This is our way to respond to a growing demand for analysis and climate-friendly business decisions that facilitate the transition towards an environmentally sustainable economy.

**BIS efforts to address climate change risks**

Our work over the past year showed the Bank's commitment to sustainability on multiple fronts. These efforts were recognised in October 2020 when the BIS received the Central Banking Fintech and Regtech award, in the category "Sustainability Initiative". The award cited the Bank's early efforts in environmental, social and governance (ESG) and green banking products, and its internal Green Team, which has over the years supported eco-friendly activities, increased staff awareness about of the environmental impact of the workplace and suggested actionable ways to reduce that impact. For example, in 2020/21 the Green Team organised an online Earth Day Quiz, shared suggestions on saving electricity while working from home and organised a webinar on zero waste living.

The Bank actively participated in the work of the Network for Greening the Financial System (NGFS), including the new workstreams on bridging data gaps and on research. It supported the work of the BIS-based committees, most notably the BCBS Task Force on Climate-related Financial Risks. Its work over the past year resulted in two new analytical reports. BIS staff also contributed to the work of hosted associations, such as the FSB report on the financial stability implications of climate change released in November 2020.

BIS banking operations reached new milestones, with the launch of a euro green bond fund in January 2021 and the first impact report on the US dollar green bond fund to the fund's customers in November 2020 (see Chapter 4). Our pension fund also adopted sustainability investment criteria.

Our own analytical work further built upon its earlier studies on green finance, with new research on green bonds and carbon emissions and on managing transition risks while incentivising lower carbon intensities. There are also new projects on assessing the carbon performance of firms and portfolios and on better understanding ESG data.

Sustainability features in the Bank's knowledge-sharing and innovation work as well. The FSI organised a virtual seminar based on *The green swan* for central banks and supervisory authorities in January 2021. It launched a new FSI Connect tutorial for central banks and supervisory authorities in February 2021 based on the NGFS Guide for Supervisors. The BIS Innovation Hub announced its 2021/22 work programme that includes a project to explore tokenising green bonds for retail investors (see Chapter 5).

Finally, in June 2021 the BIS organised a global conference on climate change calling for strengthening coordination among actors in society to address climate-related risks for the financial sector and to showcase initiatives and practical solutions. This virtual conference was developed in collaboration with the Bank of France, International Monetary Fund and NGFS and gathered high-level policymakers and prominent experts and practitioners from the central banking and regulatory community, the financial sector, civil society and academia. The Green Swan conference will be covered in detail in the 2021/22 Annual Report.

## Integrity and social responsibility

Ethical conduct and social responsibility shape the way in which we conduct ourselves and define our responsibilities as an organisation. Both values are intertwined and present in everything we do, allowing us to respond to the external environment and operate in a transparent, open and respectful work environment. Working with the highest ethical standards and in a socially responsible way allows us to build trust with our employees, stakeholders and the wider community.

**Ethics awareness**

As part of the Bank's efforts to raise ethics awareness, Compliance makes available an e-learning programme that addresses the principal physical, psychological and social factors that govern a stress-free and harmonious workplace. Staff who participate in the programme are equipped to identify and prevent bullying and sexual harassment, guard against all forms of discrimination, and promote health and safety throughout the organisation.

**Charitable donations**

The BIS provides financial support to local charities and for selected cultural and social activities within the Basel region, where most of its staff and their families live. In the past year, priority was given to charitable organisations supporting Covid-19 healthcare-related programmes and measures for severely affected groups such as people suffering from mental health issues, addiction or homelessness. Seventeen organisations received donations, including the International Committee of the Red Cross for its global programme focused on Covid-19-related assistance.

Our staff also launched two initiatives to raise funds for charities. The first was in support of UNICEF's Covid-19 relief efforts. The second was to mark International Women's Day and was in support of a local charity, Crescenda, which works with immigrant women moving towards economic independence and social and professional integration.

In addition, the Bank donated used technical equipment to four charities, in Basel, Cameroon, Madagascar and Poland.

## Diversity and inclusion

As an international organisation with a global reach and footprint, embracing diversity and inclusion is part of our organisational DNA. To deliver on our mission centred around international cooperation, we recruit people with diverse backgrounds and thinking styles, from all over the world. Working together, we build a culture in which everyone feels they can contribute and which gives everyone an equal opportunity to do their best and to embrace inclusivity on a daily basis. This diversity makes us stronger by generating better outcomes.

### Launch of diversity and inclusion strategy

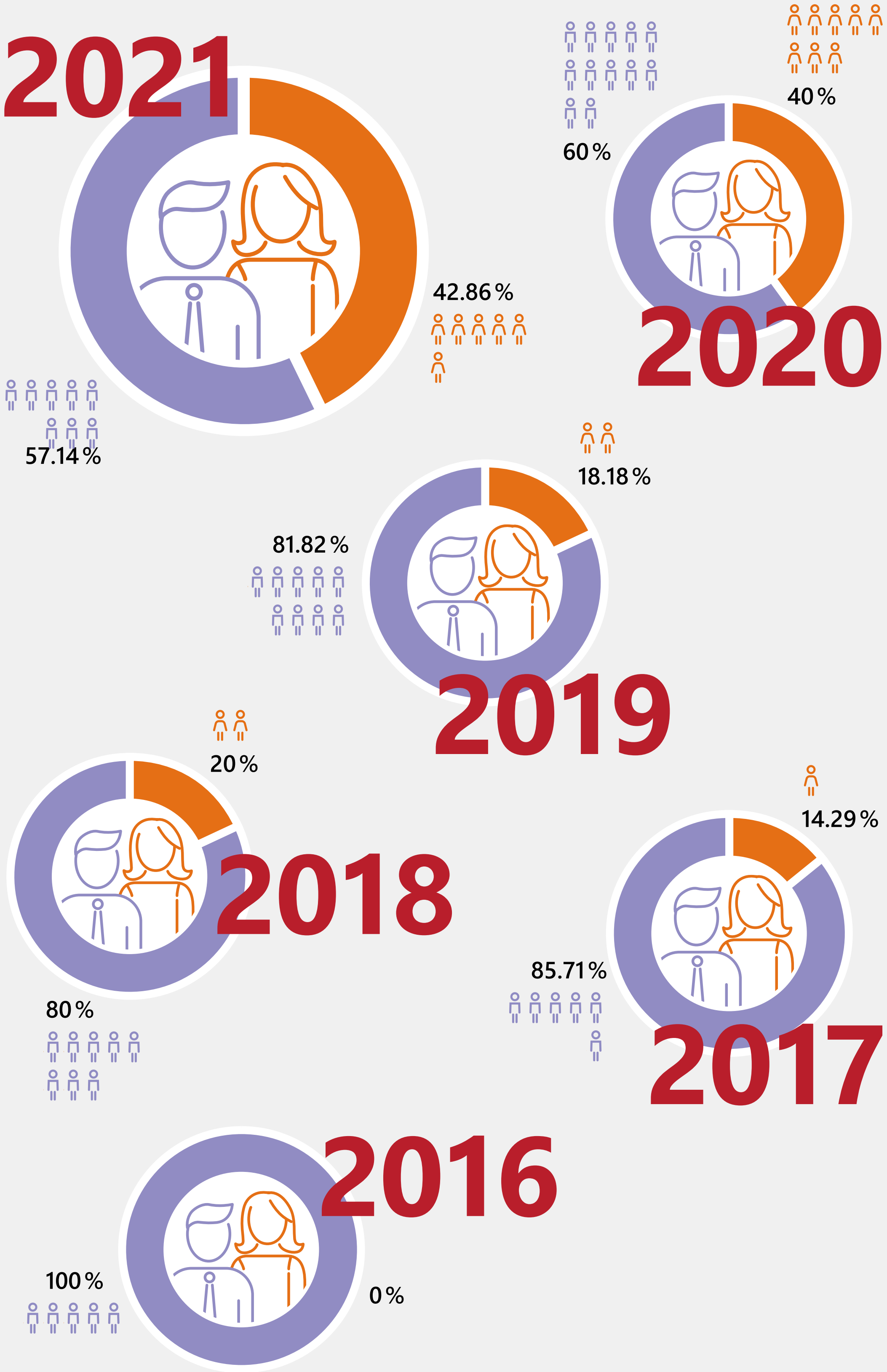
In the context of our efforts to build a work culture that actively promotes diversity and inclusion in its workforce, in October 2020 the Bank launched a comprehensive strategy to promote an inclusive, diverse and open work culture. A Diversity Steering Committee guides the development and implementation of the strategy and provides a link to the business areas. The Steering Committee has established several workstreams involving staff from across the Bank to promote and lead diversity and inclusion initiatives, help review internal policies and practices, and develop proposals. For example, the workstream on affinity networks has kick-started a comprehensive networking initiative by launching an internal women's network and an LGBTQI+ network.

Gender balance, particularly at the managerial and leadership levels, is a key priority within this strategy. The BIS is fully committed to equal opportunity employment and has set a 50/50 gender target to fill vacancies for line managers and senior professionals. Other measures include a review of the Bank's recruitment process to put more emphasis on the creation of diverse candidate pools and balanced interview panels. In addition, the Bank has adopted a diversity charter, which takes a holistic approach to gender diversity by focusing actions on two key drivers: leadership/ownership and gender targets.

Our gender diversity efforts over the past several years have resulted in measurable progress. Since 2015, the percentage of female line managers has doubled to 26%, with an 11% jump in just the last two years. To sustain that progress, gender targets were introduced in October 2020 linked to our strategic workforce planning. In 2020/21, we reached an overall recruitment distribution of 43% for female line managers (29% for senior professionals, which includes line managers). We are also actively monitoring pay equality. A pay gap study conducted by an external agency in 2020 found no statistically significant gap, based on gender, in pay between men and women in the same grades.

# Launch of diversity and inclusion strategy

Female/male percentage of senior staff recruits per year

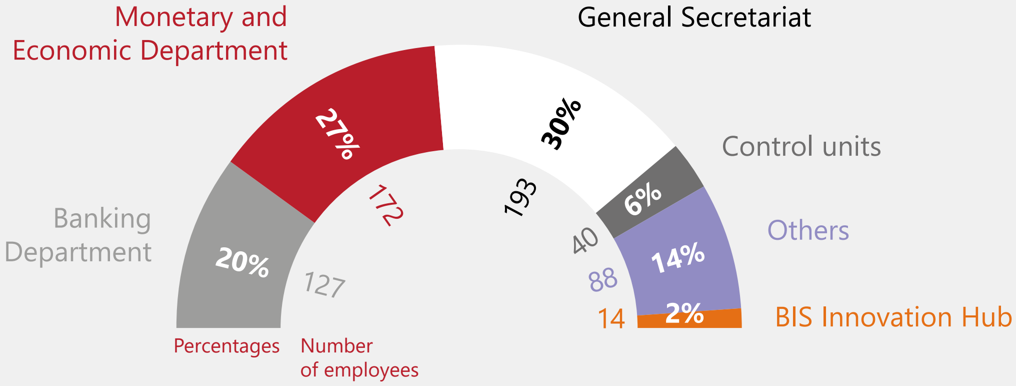


## Staff

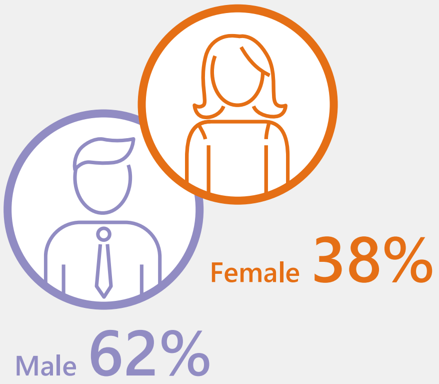
The BIS is a diverse global organisation with a truly international workforce. As of 31 March 2021, the Bank employed 634 staff members from 64 countries, excluding hosted associations. Its modest size encourages collaboration and knowledge-sharing both inside and outside the institution.

> The Bank's employees are its greatest asset. The BIS's efforts to provide an excellent level of service to its customers are mirrored in the high quality of its staff.

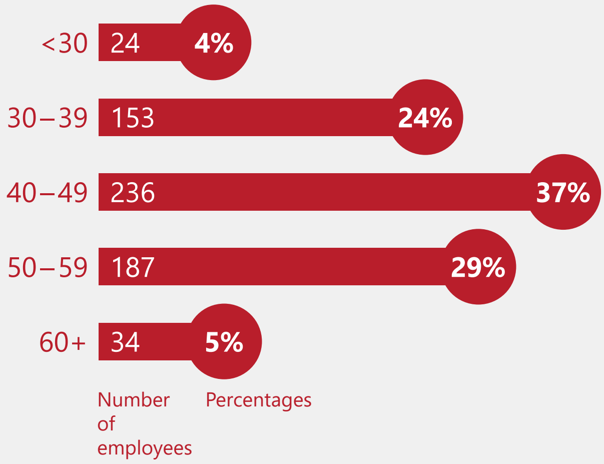
## DEPARTMENT



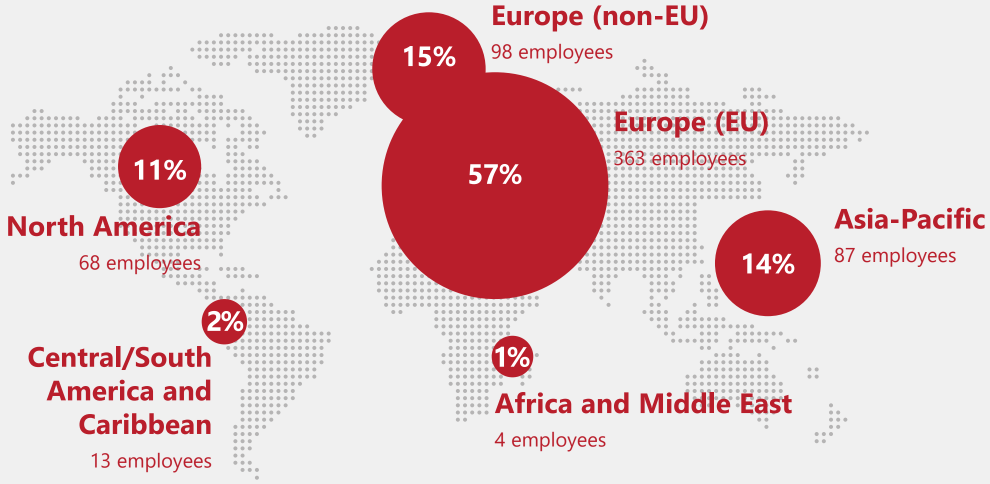

## GENDER




## AGE




## CITIZENSHIP



## Meet our people

**Vanessa**
**Business Continuity Crisis Coordinator, Operational Transformation & Resiliency**

As part of the Business Continuity Management (BCM) team, the past year has brought plenty of challenges but at the same time opportunities.
Our existing procedures were put to the test, which presented us with a chance to further develop our business continuity plans. One such opportunity to improve our resiliency came from our newly found ability for staff to work effectively from home. We are currently adjusting our business continuity plans to build this into our overall response.

A further exciting development has been the move of BCM activities into the new Operational Transformation & Resiliency unit. In this area, the BCM processes and procedures will be updated and brought in line with the three lines of defence risk model, which will further strengthen the Bank's resiliency in the face of potential business disruptions. This is all part of the interesting work involved in keeping the Bank operating during crises.

**Amelia**
**Head of Programme Office, Banking Services, Banking Department**

I lead the Programme Office in the Banking Department, which has recently been created to help deliver the various banking work programmes under Innovation BIS 2025.

This year, we've grown the team and are working on the implementation of a new technology infrastructure to modernise our IT platforms. In addition, we have commenced a number of major projects that will improve our digital offering to customers, deliver new systems to enhance our operations, improve collaboration internally and externally, and leverage advances in data science and analytics.

These change initiatives require collaboration and engagement across Banking and beyond, which has been really challenging during these remote work times. However, we've adapted and embraced new ways of working, for example through agile "story mapping" to really understand – and support – user journeys. We have remained focused and are committed to using this opportunity to create real benefits to both the BIS and its customers.

## Andrea
**Senior Relationship Manager, Americas Office**

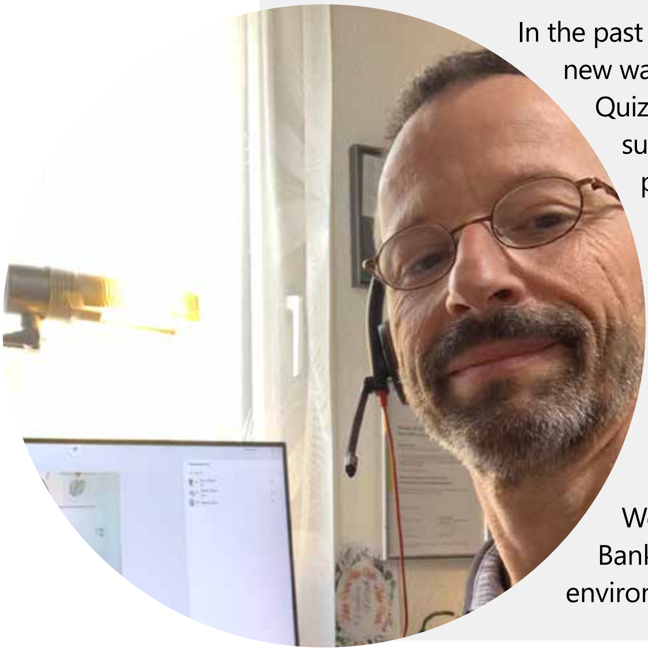
Despite the challenges of the past year, I am proud that we successfully launched the BIS Americas dealing room on time – an essential part of the Innovation BIS 2025 strategy.

As a new relationship manager, promoting the dealing room and getting closer to reserve managers seemed challenging in the middle of a global pandemic. However, video meetings, online webinars and frequent calls have allowed me to meet each of my customers and know them better. In fact, these solutions probably accelerated the process, being more budget-friendly and less time-consuming than travelling. In addition, as a mother, working from home gave me the opportunity to have a healthier work-life balance and be closer to my family.

We are already seeing positive results. Clients in the Americas have increased their investments in BIS products; customers from all regions have taken advantage of the extended hours of operation; and we can respond to customer requests more efficiently with a banking presence covering all time zones. These achievements were only possible thanks to the collaboration between the Americas, Asian and Basel offices.

## Reto
**Head of Building Infrastructure, Corporate Facility Management, and Green Team**

I am part of the Green Team, a group of interested staff from across the Bank who share a deep sense of responsibility towards the environment. Together, we explore actions towards an eco-friendly and sustainable work environment and raise awareness across the Bank about the impact of our activities and how we can reduce it.



In the past year, adapting to remote working, the Green Team found new ways to engage with staff. We organised an online Green Quiz covering both general and BIS-specific facts, shared suggestions on saving electricity while working from home, presented to staff the 2019 estimate of the Bank's per employee environmental footprint, and organised a webinar on zero waste living.

In addition, all building-related facilities and control systems are in the scope of our supervision and will be gradually reviewed and aligned to the current proposed guidelines to improve our total carbon footprint.

We are proud to mobilise energy to contribute to the Bank's efforts to combat climate change and build an environmentally friendly workspace.

## Dessi

**Deputy General Counsel, Legal Service**

I joined the BIS in March 2020, when Innovation BIS 2025 was quickly gaining traction. In June, the Bank announced the opening of four new BIS Innovation Hub Centres in Europe and North America. The Legal Service embraced this exciting development and engaged promptly with the governments of the host countries to establish the immunity framework required for the operations of the new centres.

Through entirely virtual meetings with multiple stakeholders, we concluded host country agreements with Sweden and the United Kingdom for the opening of the two new Hub Centres in 2021, and a memorandum of understanding with the Federal Reserve Bank of New York for strategic cooperation in the fintech area, paving the way for the expansion of Innovation Hub activities. The professionalism and determination of the Legal Service team and colleagues across the Bank made all this happen, despite the pandemic.

The swiftness with which central banks and governments engaged with the BIS to expand the Innovation Hub activities is a testament to their commitment to innovation in central banking and financial systems, and their trust in the BIS's ability to create a global force in fintech innovation.

## Tirupam

**Economist, Monetary and Economic Department**

I recently joined the Emerging Markets group in the Monetary and Economic Department. This meant wrapping up existing projects while climbing a new learning curve and embracing an opportunity to grow professionally.

In one of these projects we looked for evidence that bank regulatory reform has been effective. We leveraged recent advances in "text mining" to canvass banks' annual reports to identify the years in which individual institutions actually responded to phased-in rules. Textual analysis – in contrast with analysis purely based on numbers – also provided insights into how banks perceived regulation.

When Covid-19 struck, the crisis called for a better understanding of the determinants of policy response. We organised several meetings of Governors and senior central bank officials on the determinants of policy space, the use of unconventional tools in EMEs, and how monetary and fiscal interaction may evolve in the future.

Oliver

**Adviser, BIS Innovation Hub Swiss Centre**

The first year of the BIS Innovation Hub Swiss Centre has been full of positive spirit. We have worked like a startup in many ways. While we didn't start in a garage and survive on coffee and sandwiches, we basically started "greenfield", with wide-ranging independence from institutional legacies. For example, we adopted Scrum, an agile methodology, to organise our project work and engaged in design thinking workshops for our ideation process.

Our excellent cloud environment and tools to interact alleviate many of the challenges of the global pandemic and remote working arrangements. We have become a well established team in this year, but technology can't replace the benefits of meeting in person. So I look forward to further strengthening the collaboration within the Swiss Centre and with my colleagues at the Swiss National Bank as soon as circumstances permit – to further push the boundaries of central bank digital currencies in Project Helvetia and beyond.

Liang

**Senior Risk Analyst, Asian Office**

My work focuses on credit analysis of a portfolio of BIS investments in Asia and the Pacific, enabling the Bank to dive deeper into the region with measured risk-taking. I also contribute to initiatives in the Asian Office to promote the Bank's engagement in the region.

Since I joined the BIS in 2019, I have been involved in broader work programmes to identify risks and prospects for the region. As we look beyond the pandemic, we are striving to incorporate emerging trends into our operations, such as ESG and the provision of local currency products to better serve central banks' needs.

In an integrated office in Hong Kong, where representatives from different business areas work in close proximity, we often worked as a "team of teams", which enabled us to network across divisions and leverage diverse expertise. The strong cross-departmental collaboration in the Asian Office and the close interaction with my colleagues in Basel have been particularly helpful and inspiring.

# 7

# Governance and organisation

The BIS is governed at three levels: the General Meetings of member central banks, the Board of Directors and BIS Management. Each of these levels participates in the governance and decision-making related to BIS activities in the areas of international cooperation, policy analysis, banking operations and resource management.

## BIS member central banks and General Meetings

Sixty-three central banks and monetary authorities are currently members of the BIS, each having rights of voting and representation at General Meetings.

The BIS Annual General Meeting (AGM) is held within four months of the end of the financial year on 31 March. The AGM approves the Annual Report and the accounts of the Bank, decides on the distribution of a dividend and elects the Bank's auditor. Each of the BIS member central banks has rights of voting and representation at General Meetings.

| | |
|---|---|
| Bank of Algeria | Algeria |
| Central Bank of Argentina | Argentina |
| Reserve Bank of Australia | Australia |
| Central Bank of the Republic of Austria | Austria |
| National Bank of Belgium | Belgium |
| Central Bank of Bosnia and Herzegovina | Bosnia and Herzegovina |
| Central Bank of Brazil | Brazil |
| Bulgarian National Bank | Bulgaria |
| Bank of Canada | Canada |
| Central Bank of Chile | Chile |
| People's Bank of China | China |
| Central Bank of Colombia | Colombia |
| Croatian National Bank | Croatia |
| Czech National Bank | Czech Republic |
| Danmarks Nationalbank | Denmark |
| Bank of Estonia | Estonia |
| European Central Bank | Euro area |
| Bank of Finland | Finland |
| Bank of France | France |
| Deutsche Bundesbank | Germany |
| Bank of Greece | Greece |
| Hong Kong Monetary Authority | Hong Kong SAR |
| Magyar Nemzeti Bank | Hungary |
| Central Bank of Iceland | Iceland |
| Reserve Bank of India | India |
| Bank Indonesia | Indonesia |
| Central Bank of Ireland | Ireland |
| Bank of Israel | Israel |
| Bank of Italy | Italy |
| Bank of Japan | Japan |
| Bank of Korea | Korea |
| Central Bank of Kuwait | Kuwait |

For our 90th AGM held in June 2020, we overcame the restrictions imposed by the Covid-19 pandemic by transforming all the elements of the AGM to a virtual format. A cross-functional team worked closely together in record time to connect with all BIS central bank stakeholders across the globe and time zones and provide them with a fully interactive and visually appealing experience.

| | |
|---|---|
| Bank of Latvia | Latvia |
| Bank of Lithuania | Lithuania |
| Central Bank of Luxembourg | Luxembourg |
| Central Bank of Malaysia | Malaysia |
| Bank of Mexico | Mexico |
| Bank Al-Maghrib (Central Bank of Morocco) | Morocco |
| Netherlands Bank | Netherlands |
| Reserve Bank of New Zealand | New Zealand |
| National Bank of the Republic of North Macedonia | North Macedonia |
| Central Bank of Norway | Norway |
| Central Reserve Bank of Peru | Peru |
| Bangko Sentral ng Pilipinas | Philippines |
| Narodowy Bank Polski | Poland |
| Banco de Portugal | Portugal |
| National Bank of Romania | Romania |
| Central Bank of the Russian Federation | Russia |
| Saudi Central Bank | Saudi Arabia |
| National Bank of Serbia | Serbia |
| Monetary Authority of Singapore | Singapore |
| National Bank of Slovakia | Slovakia |
| Bank of Slovenia | Slovenia |
| South African Reserve Bank | South Africa |
| Bank of Spain | Spain |
| Sveriges Riksbank | Sweden |
| Swiss National Bank | Switzerland |
| Bank of Thailand | Thailand |
| Central Bank of the Republic of Turkey | Turkey |
| Central Bank of the United Arab Emirates | United Arab Emirates |
| Bank of England | United Kingdom |
| Board of Governors of the Federal Reserve System | United States |
| State Bank of Vietnam | Vietnam |

# Board of Directors

The Board determines the Bank's strategic and policy direction, supervises BIS Management and fulfils specific tasks as set out in the Bank's Statutes. It meets at least six times a year. The Board elects a Chair from among its members for a three-year term and may elect a Vice-Chair. The current Chairman is Jens Weidmann, President of the Deutsche Bundesbank, who has been re-elected for a third three-year term starting in November 2021.

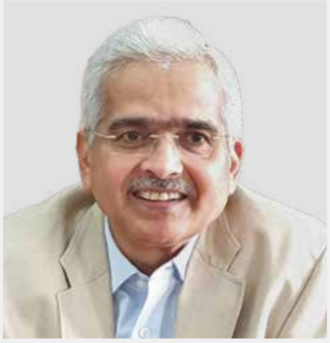
## Changes in the Board

With effect 29 June 2020, the Board elected Tiff Macklem, Governor of the Bank of Canada, as a Board member for a period of three years.

**Jens Weidmann**
Chairman; Deutsche Bundesbank, Frankfurt am Main

**Andrew Bailey**
Bank of England, London

**Roberto Campos Neto**
Central Bank of Brazil, Brasília



**Shaktikanta Das**
Reserve Bank of India, Mumbai

**Alejandro Díaz de León**
Bank of Mexico, Mexico City

**Stefan Ingves**
Sveriges Riksbank, Stockholm

**Thomas Jordan**
Swiss National Bank, Zurich

**Klaas Knot**
Netherlands Bank, Amsterdam

**Haruhiko Kuroda**
Bank of Japan, Tokyo

## Board remuneration

The AGM approves the remuneration of members of the Board of Directors, with adjustments taking place at regular intervals. The total fixed annual remuneration paid to the Board was CHF 1,053,792 as of 1 April 2021. Board members also receive an attendance fee for each Board meeting in which they participate. Assuming that the full Board is represented in all Board meetings, the annual total of these attendance fees amounts to CHF 998,352.

**Christine Lagarde**
European Central Bank,
Frankfurt am Main

**Juyeol Lee**
Bank of Korea, Seoul

**Tiff Macklem**
Bank of Canada, Ottawa

**Jerome H Powell**
Board of Governors of the Federal
Reserve System, Washington DC

**François Villeroy de Galhau**
Bank of France, Paris

**Ignazio Visco**
Bank of Italy, Rome

**John C Williams**
Federal Reserve Bank of New York,
New York

**Pierre Wunsch**
National Bank of Belgium, Brussels

**Yi Gang**
People's Bank of China, Beijing

# BIS Management

The management of the Bank is directed by the General Manager, who is responsible to the Board of Directors for the conduct of the Bank. The General Manager is assisted by the Deputy General Manager and advised by the Executive Committee.

The Executive Committee is chaired by the General Manager and includes the Deputy General Manager, the Heads of the four BIS departments (the Banking Department, the General Secretariat, the BIS Innovation Hub and the Monetary and Economic Department), the Economic Adviser and Head of Research, and the General Counsel.

Other BIS senior officials are the Deputy Heads of the departments, the Chair of the Financial Stability Institute, the Head of Risk Management, the Head of the BIS Representative Office for Asia and the Pacific and the Head of the BIS Representative Office for the Americas.

**Agustín Carstens**
General Manager

**Luiz Awazu Pereira da Silva**
Deputy General Manager

**Monica Ellis**
Secretary General

**Peter Zöllner**
Head of Banking Department

**Claudio Borio**
Head of Monetary and Economic Department

**Hyun Song Shin**
Economic Adviser and Head of Research

**Benoît Cœuré**
Head of BIS Innovation Hub

**Diego Devos**
General Counsel

## Changes in Management

On 1 November 2020, Joachim Nagel became Deputy Head of the Banking Department, and thereby a member of the senior management team of the BIS. He succeeded Jean-François Rigaudy, who retired from the Bank on 31 August.

## Senior management remuneration

The salaries of senior officials are regularly benchmarked against compensation in comparable institutions and market segments. As of 1 July 2020, their annual remuneration, before expatriation and other applicable allowances, is based on the salary structure of CHF 681,413 for the General Manager, CHF 576,580 for the Deputy General Manager and CHF 524,164 for Heads of Department. In addition, the General Manager enjoys enhanced pension rights.

**Joachim Nagel**
Deputy Head of Banking Department

**Bertrand Legros**
Deputy Secretary General

**Stijn Claessens**
Deputy Head of Monetary and Economic Department

**Fernando Restoy**
Chairman of Financial Stability Institute

**Jens Ulrich**
Head of Risk Management

**Alexandre Tombini**
Chief Representative for the Americas

**Siddharth Tiwari**
Chief Representative for Asia and the Pacific

# Organisation

The BIS has four main departments. They encompass economic research, banking activities, support to central bank collaboration on technological developments impacting the financial system, and general internal support.

## Departments and services

The **Monetary and Economic Department** (see Chapter 2) undertakes research and analysis to shape the understanding of policy issues concerning central banks, including innovation and monetary policy frameworks, provides committee support and organises key meetings of senior central bankers and other officials in charge of financial stability.

The **Banking Department** (see Chapter 4) provides a range of financial services to support central banks in the management of their foreign exchange and gold reserves and invests the BIS's own capital.

The **BIS Innovation Hub** (see Chapter 5) identifies and develops in-depth insights into critical trends in financial technology of relevance to central banks, explores the development of public goods to enhance the functioning of the global financial system, and serves as a focal point for a network of central bank experts on innovation.

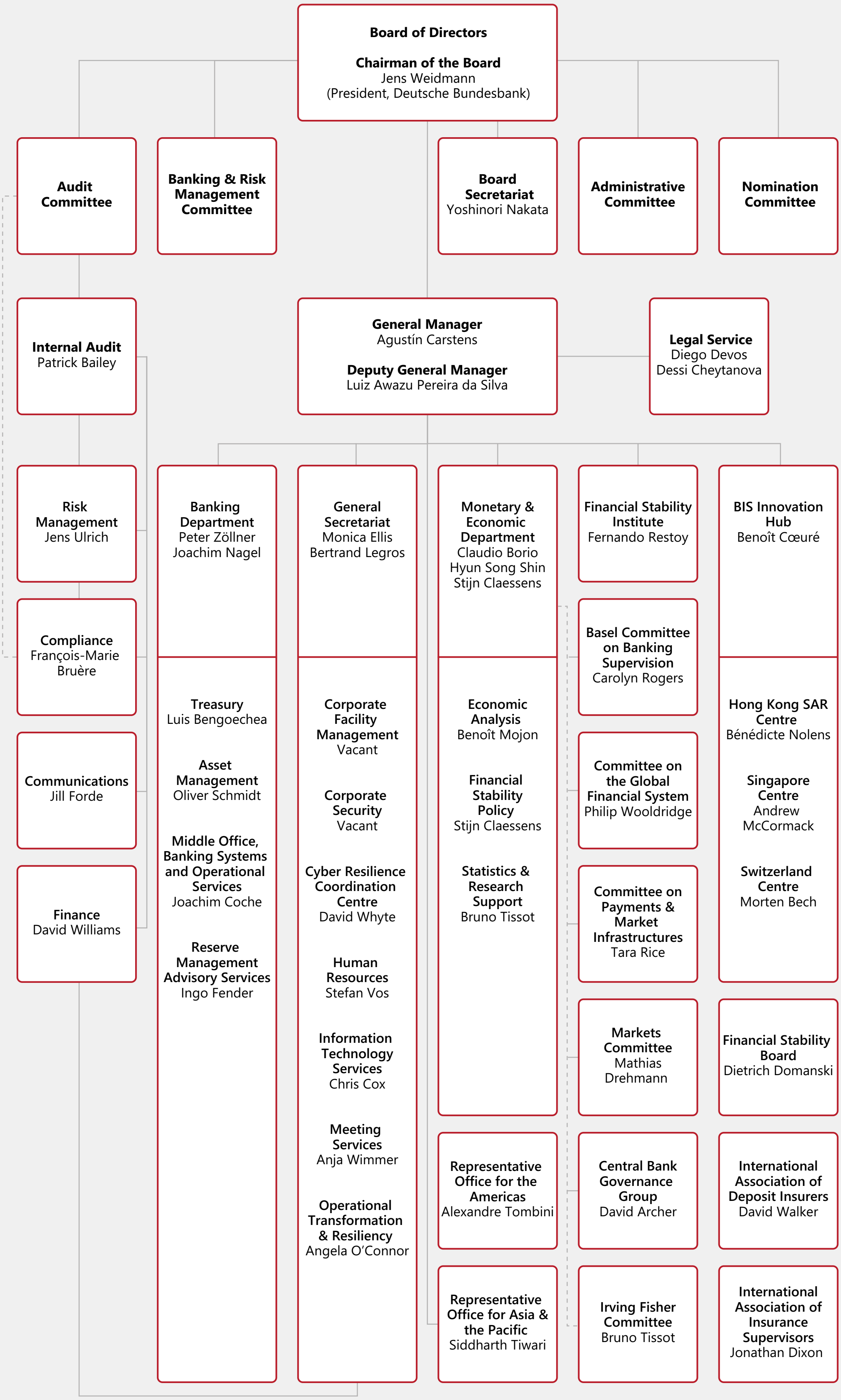
The **General Secretariat** provides the organisation with comprehensive corporate services in the areas of IT, cyber security, operational resiliency, human resources, finance, facilities management, security and meeting services.

> In 2020/21, the BIS announced plans to extend its global reach with new Innovation Hub Centres over the next two years. Regional centres are already established in Hong Kong SAR, Singapore and Switzerland.

The BIS is further supported by the **Legal Service** and the **Risk Management**, **Internal Audit, Compliance** and **Communications** units. The BIS's **Financial Stability Institute** (see Chapter 3) promotes the implementation of global regulatory standards and sound supervisory practices worldwide.

The BIS has **two Representative Offices**: one for Asia and the Pacific, located in Hong Kong SAR, and one for the Americas, located in Mexico City (see Chapter 3). A number of **international groups** engaged in the pursuit of financial stability have their secretariats at the BIS (see Chapter 3).

# Organisation of the BIS, March 2021



## Risk management

The BIS has risk management policies in place to ensure that risks are duly identified, measured, monitored and reported. To achieve these objectives, the Bank has an independent Risk Management function covering financial risks and an Operational Transformation and Resiliency unit covering operational risks. Both develop corresponding policies and proposals, and monitor adherence to defined rules and limits.

As part of its efforts to strengthen the implementation of its three lines of defence approach (see below), the Bank has undertaken a review of roles and responsibilities related to compliance and conduct risks across the organisation. In May 2021, the Bank decided to reallocate responsibilities. As a result, the Risk Management function, jointly with the Legal Service, will provide guidance on and monitor compliance risk related to BIS banking services. In addition, a new Ethics and Conduct unit will be established to underline the strategic importance of ethics for the Bank and its corporate culture (see Chapter 6).

## Financial risks

The management of the Bank's financial risks is conducted by the Risk Management function. The Head of Risk Management is part of the Management of the BIS, reports directly to the Deputy General Manager and acts as his/her deputy in matters related to financial risk management.

The BIS manages its financial risks within a financial risk management (FRM) framework established by the Board. The implementation of the FRM framework is monitored by the Board's Banking and Risk Management Committee. Within this framework, BIS Management has established risk management policies designed to ensure that the Bank's financial risk exposures – credit, market and liquidity risks – are identified, appropriately measured and controlled, and monitored and reported. The unit develops policies and proposals while monitoring adherence to defined rules and limits. It continuously assesses the Bank's capital adequacy, considering both balance sheet leverage and economic capital utilisation.

The FRM framework ensures that the Bank maintains a prudent risk profile, by:

- maintaining an exceptionally strong capital position;
- ensuring a high level of liquidity;
- carefully managing its market risk exposures, which include strategic positions such as the Bank's gold holdings; and
- investing its assets predominantly in high credit quality financial instruments and seeking to diversify its assets across a range of sectors.

The resulting financial strength and liquidity gave the Bank a solid basis to navigate the market volatility of the last year and the flexibility to support central banks in responding to Covid-19-related economic challenges, for example by providing major reserve currencies through liquidity facilities (see Chapter 4). To reinforce its capacity in this regard, the Bank considerably expanded its balance sheet over the past year (see Chapter 8).

## Operational risks

The Bank's Management takes a cautious approach to operational risk management under the guidance of the Board of Directors. As the Bank continues to embrace new ways of working and technology innovation, it is taking steps to refine its approach to risk management. This is to ensure that its control environments evolve in tandem with new practices in order to sustain the Bank's operational excellence and resilience.

**The three lines model**

To ensure the Bank's control activities can adapt effectively to new risks, in 2020/21 the Bank started strengthening the implementation of its three lines of defence approach to risk management to align risk management activities with the Bank's risk appetite. The three lines model is coordinated by the newly established Operational

Transformation and Resiliency unit and guided by a new Operational Risk and Resiliency Framework monitored by the Board's Audit Committee. The three lines model employs a Bank-wide risk strategy, periodic risk and control self-assessments, and key risk indicators to measure and monitor risk conditions relative to risk tolerance levels.

**Response to the Covid-19 pandemic**

Operational resiliency has been key for the Bank's response to the pandemic. Business activities continued uninterrupted, and the BIS did not encounter any material operational risk incident directly caused by Covid-19-related measures.

> The BIS responded swiftly and effectively to the onset of the global health crisis, mobilising remote work arrangements within weeks and adjusting IT support services to ensure that staff could work effectively from home.

The Bank's internal response to the pandemic prioritises the safety of its people. This safety-first approach to manage the internal impact of the pandemic follows the guidance of local authorities and adopts a conservative stance on social distancing to prevent infection and protect the Bank's workforce. This has enabled a smooth transition between virtual and hybrid work arrangements as needed to respond to changing pandemic conditions in our different locations. The increase in remote work arrangements has brought to the forefront new operational risks including cyber security risks, which the Bank continues to address with updated controls, resiliency plans and monitoring tools.

# Audit mechanisms

All BIS operations are audited and examined regularly. The Bank's audit mechanisms include an Internal Audit unit and an independent external audit firm.

## Internal audit

The Internal Audit unit evaluates and improves the effectiveness of risk management, control and governance systems and processes. It aims to promote effective controls at reasonable cost.

Internal Audit operates within a mandate established by the BIS Board of Directors, and its activities are overseen by the Board's Audit Committee. To ensure independence, the Head of Internal Audit is accountable and reports to the Audit Committee of the Board and also reports to the General Manager and the Deputy General Manager. Every activity and entity of the Bank, including outsourced activities, falls within the overall scope of Internal Audit.

> In 2020/21, despite the restrictions related to the Covid-19 pandemic, all the audits initially approved by the Board's Audit Committee at the beginning of the financial year were performed remotely by Internal Audit.

To fulfil its responsibilities, Internal Audit conducts assurance and consulting engagements that lead to recommendations subsequently followed up to ensure that effective remedial actions are being taken by Management. To maintain objectivity, Internal Audit does not have operational responsibility for or authority over any of the activities audited.

## External auditors

In addition, the BIS engages an independent external auditor to confirm that its annual financial statements give a true and fair view of the Bank's financial position, financial performance and cash flows. For the year ended 31 March 2021, PricewaterhouseCoopers was the auditing firm chosen to audit the Bank's financial statements, which can be found in the annex at the end of this report.

# Legal Service

The BIS Legal Service advises the BIS Board, Management and business areas on all legal matters relating to the Bank's activities, to ensure that the Bank acts at all times with due respect for the rule of law. It also assists in internal rule-making and maintains the Bank's central repository of internal policies, procedures and rules. In addition, it facilitates discussion and cooperation among central bank legal experts and other professionals on legal topics of common interest.

In addition to its main advisory role, the Legal Service contributes to the management and control of legal risks, including litigations, across the organisation.

## The year's highlights

In 2020/21, the Legal Service advised and contributed to several BIS strategic initiatives, including the negotiation for the BIS Innovation Hub of cooperation agreements with central banks in six jurisdictions and, where needed, of immunity frameworks by way of host country agreements, the development of new policies and processes related to the People Strategy and supporting the Banking Department as it developed new facilities and adjusted its suite of products, in particular in a post-Libor environment.

The Legal Service also contributed to enhancing the Bank's operational risk and resiliency management framework to reflect leading operational risk management principles and practices.

Following a decision by the Bank in May 2021 in the context of the implementation of its three lines of defence approach (see above), the Legal Service, jointly with Risk Management, will assume responsibilities to provide guidance on and monitor compliance risk regarding banking activities under the applicable BIS banking rules and policies.

# Compliance

The Bank's Management and Board of Directors attach the highest importance to ethics and compliance. Ethical conduct is one of the BIS's core values and therefore a key pillar of its corporate culture (see Chapter 6). The Bank's independent Compliance function provides assurance that the activities of the BIS and its staff are conducted in accordance with the highest ethical standards and the relevant rules. The Chief Compliance Officer reports to the General Manager and the Deputy General Manager and also has a direct reporting line to the Board's Audit Committee.

As part of the Bank's efforts to strengthen the implementation of its three lines of defence (see above), in May 2021 the Bank decided to create a new Ethics and Conduct unit. In addition to promoting ethics and conduct standards among BIS staff and providing training, the new unit will also deal with matters of conduct, to ensure the activities of the Bank and its staff are conducted in accordance with the highest ethical standards and the BIS Code of Conduct.

## Working with integrity

The BIS Code of Conduct requires that all BIS staff members: maintain the highest standards of conduct both at and outside the Bank; devote their working activities to the service of the Bank; avoid possible conflicts of interest; not accept other functions or employment unless explicitly authorised to do so by the Bank; and maintain the utmost discretion with regard to confidential information concerning the Bank.

To ensure that staff adhere to the highest ethical standards, Compliance organises training for all new staff members on the Code of Conduct and fraud awareness. In addition, staff working in the Banking Department receive training against financial crime. Compliance ensures that such training is repeated at regular intervals, using a mix of workshops and e-learning.

> Despite remote working in 2020/21 due to the Covid-19 pandemic, Compliance continued to ensure adherence to the highest ethical standards by running virtual training sessions on the Code of Conduct and other compliance topics.

The Bank does not tolerate any form of harassment. The Code of Conduct encourages staff to report any incidents of harassment that they see or are subject to, and is intended to ensure that the BIS remains a respectful work environment.

# Budget and remuneration

## Budget policy

On an annual basis, Management prepares an overall business plan for the forthcoming financial year consistent with the strategic direction and financial framework agreed with the BIS Board of Directors. Corresponding resource requirements are assessed and plans prioritised to produce a draft budget for discussion with the Board. The agreement of the Board on the Bank's budget and related business plans is required before the start of each financial year.

The budget of the Bank comprises three key components:

- The regular administrative budget, which covers the Bank's ongoing annual expenditure, and its direct contribution to support the secretariats of the FSB, the IAIS and IADI.
- The regular capital budget, which covers annual expenditure on fixed assets (such as buildings, IT hardware and software).
- Special budgets, which are occasionally established to support large multi-year change programmes and include both administrative and capital elements. An example of this is the budget for the Innovation BIS 2025 strategy, which is a multi-year envelope covering all costs related to the programme as well as targeted savings.

The consolidation of these various components represents the overall budget of the Bank. Regular reporting on expenditure relative to the approved budget is provided to Management and the Board throughout the year to support oversight and monitoring.

## Remuneration policy

Jobs at the BIS are classified into grades associated with a structure of salary ranges. The salaries of individual staff members move within the ranges of the structure on the basis of performance.

The BIS regularly carries out comprehensive surveys to benchmark its salaries against compensation in comparable institutions and market segments. In benchmarking, the Bank focuses on the upper half of market compensation in order to attract highly qualified staff. The analysis takes into account the differing rates of taxation on compensation at the surveyed institutions. In years between comprehensive salary surveys, the salary structure is adjusted on the basis of general salary movements in the comparator market.

The salaries of senior officials are also regularly benchmarked against compensation in comparable institutions and market segments (see page 117). The Annual General

Meeting approves the remuneration of members of the Board of Directors, with adjustments taking place at regular intervals (see page 115).

BIS staff members have access to a contributory health insurance plan and a contributory defined benefit pension plan. At the Bank's headquarters, non-Swiss staff members recruited from abroad, including senior officials, are entitled to an expatriation allowance as well as an education allowance for their children, subject to certain conditions.

**Taxation**

The majority of BIS staff employed by the Bank are generally exempt from income tax on Bank salaries and allowances that would otherwise be levied by the relevant host countries, under agreements signed with those countries. However, they remain subject to tax levied in the host countries on income from sources other than the Bank, as well as other taxes (eg wealth or property tax).


3.2

8

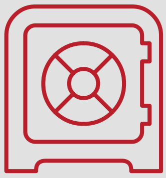
# Financial results and profit allocation

The BIS provides financial services, including taking deposits in currency and gold, as well as asset management, foreign exchange and gold services. Its customers comprise central banks, monetary authorities and international organisations. These banking activities are the main determinants of the Bank's balance sheet and its financial results.

## Portfolio organisation

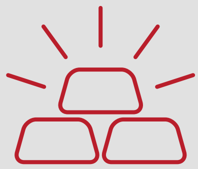
The Bank's portfolios are organised into simple layers, which helps with portfolio management and supports the analysis of profit and risk. The structure of the main portfolios is as follows:

### Own funds



The Bank invests most of its shareholders' equity in fixed income portfolios.

### Own gold



The remainder of the Bank's shareholders' equity is invested in gold and gold loans.

### Borrowed funds

The BIS takes currency and gold deposits from central banks and invests the proceeds, earning a margin.

The **own funds** and the overall **own gold** position relate to the investment of the Bank's shareholders' equity. They are primarily accounted for as fair value through other comprehensive income assets. This means that they are presented in the balance sheet at fair value, while their contribution to the profit reflects the accrual of interest along with realised gains/losses on sales. The Bank's total comprehensive income includes their total change in fair value, including unrealised valuation movements.

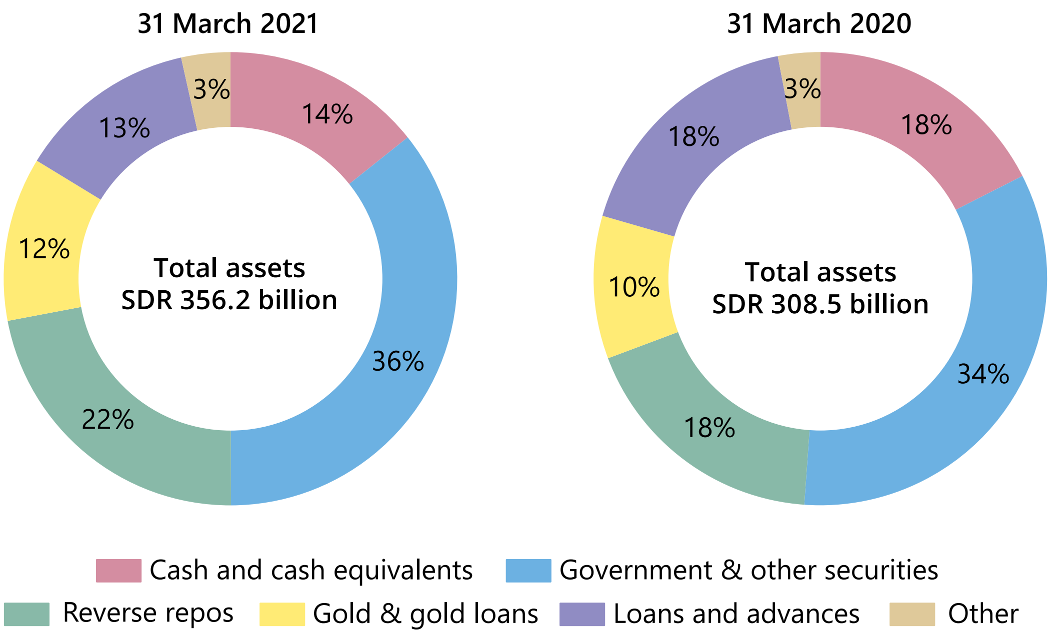
The **borrowed funds** represent deposits from central banks and other official sector customers in currency and gold, and the investment of the proceeds and associated hedging through derivative financial instruments. These portfolios are managed on an overall fair value basis. They are primarily accounted for as fair value through profit and loss. This means that they are presented in the balance sheet at fair value and their contribution to the Bank's profit reflects the total change in value, including interest accruals and realised and unrealised valuation movements.

There are also other portfolios associated with the Bank's operating expenses, and with the provision of asset management services and foreign exchange and gold services.

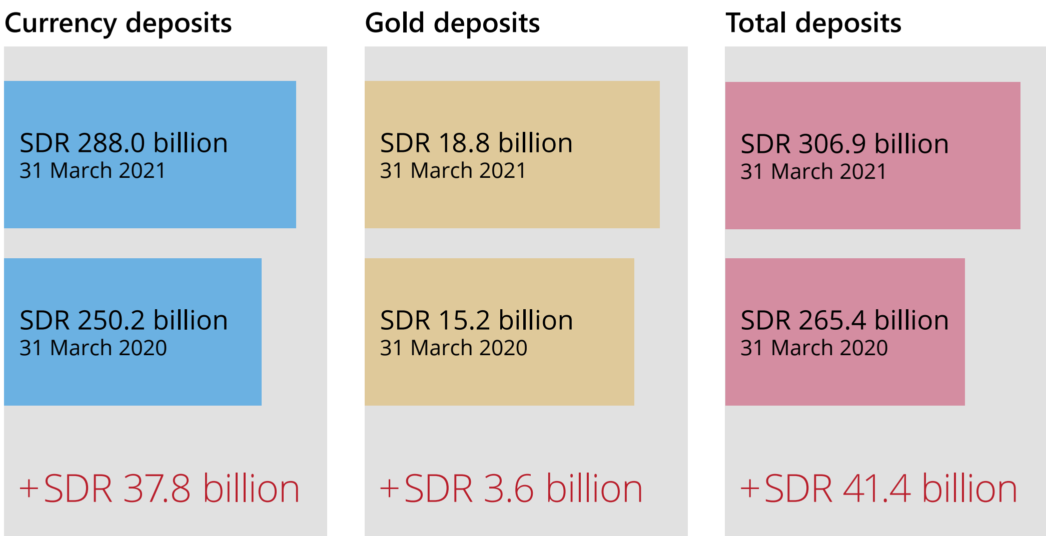
## Balance sheet

The BIS's balance sheet total as of 31 March 2021 was SDR 356.2 billion, representing an increase of SDR 47.7 billion over the year. The composition of the Bank's assets is shown in the graph below.

**Balance sheet asset composition**




The expansion of the balance sheet primarily reflected the investment of the proceeds from a SDR 41.4 billion increase in currency and gold deposits in the borrowed funds, along with total comprehensive income of SDR 1.1 billion. The changes in currency and gold deposits are illustrated in the following table.



# Financial performance

## Net profit

The net profit for 2020/21 was SDR 1,237.3 million, comprising:

| Borrowed funds total income | | Own funds total income | | Income on other business | | Operating expense |
|---|---|---|---|---|---|---|
| SDR 1,174.0 million | + | SDR 328.4 million | + | SDR 51.4 million | – | SDR 316.5 million |
| reflecting a margin of 42.5 basis points on an average currency deposit volume of SDR 276 billion | | reflecting a return through profit of 1.7 %. | | including asset management services, and foreign exchange and gold services | | |

The net profit for 2020/21 was SDR 1,071.8 million higher than in 2019/20 (SDR 165.5 million). There were three main factors to this.

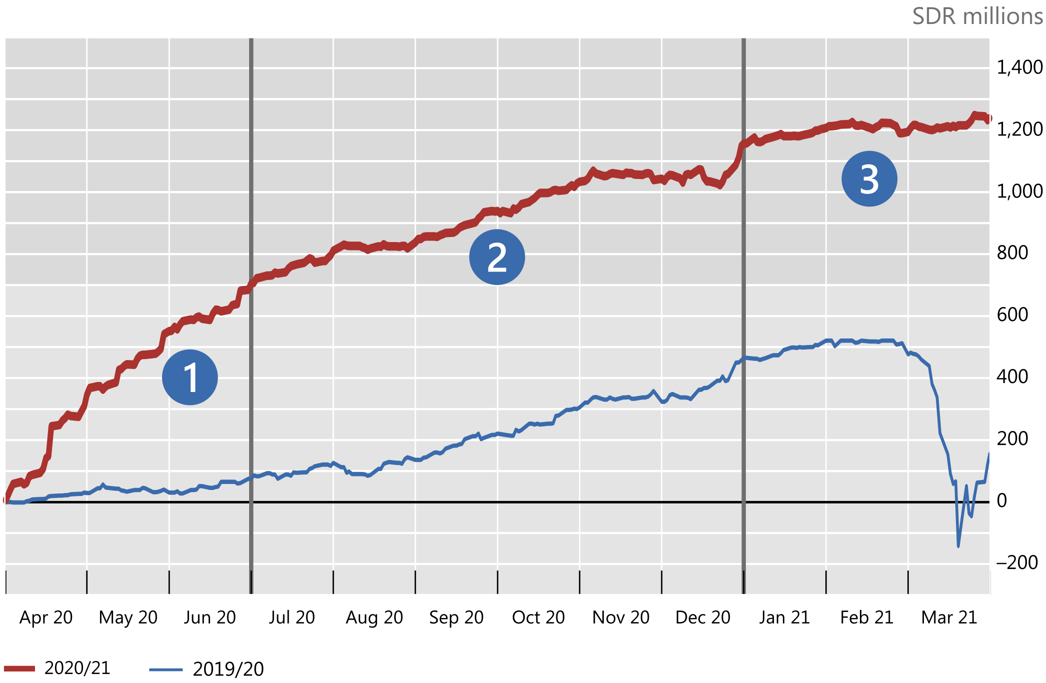
First, both financial years were heavily affected by the Covid-19 pandemic. In February and March 2020, money market and credit bond spreads widened, leading to substantial unrealised valuation losses in the borrowed funds, which reduced profit in 2019/20. Conversely, profit was boosted in 2020/21 when these unrealised losses were recovered in full as valuation spreads tightened and markets stabilised. This pandemic-related market volatility led to a difference in profit between the two years of around SDR 980 million.

Second, the volume of currency deposits was high throughout 2020/21, reflecting a strong demand for BIS liabilities, due to a combination of more favourable market conditions along with more competitive pricing as a result of the Innovation BIS 2025 strategy for banking activities. The average volume of deposits was SDR 55.6 billion higher than in 2019/20, which helped to boost the total income on the borrowed funds by a further SDR 66 million. Overall, the total income on the borrowed funds was SDR 1,046 million higher in 2020/21 than in 2019/20.

Third, operating expense was SDR 24 million lower in 2020/21 than in 2019/20. This reflected a lower expense for pensions, along with a lower office and other expense in the pandemic.

The development of net profit over the year is illustrated in the graph on the next page. The 2020/21 net profit is shown with a red line, while the 2019/20 profit is shown with a blue line.

## Year-to-date net profit




The graph distinguishes three time periods for the development of net profit.

**Period 1** runs from the start of the financial year to the end of June 2020. Profit in 2020/21 was exceptionally high when compared with the 2019/20 profit during this period, due primarily to unrealised valuation gains in the borrowed funds, as money market and credit bond spreads tightened markedly from their ultra-wide levels of 31 March 2020.

**Period 2** covers July 2020 to the end of December 2020, when profit was comparable with that in the corresponding 2019/20 period. There was a further spread tightening, resulting in unrealised valuation gains, and the borrowed funds margin averaged 28 basis points. Profit was also boosted by realised gains in the own funds fixed income portfolios, which arose when securities were sold in order to implement changes under the Innovation BIS 2025 banking strategy.

**Period 3** spans the remainder of the financial year until end-March 2021. Profit was SDR 80 million during this period. Valuation spreads affecting the borrowed funds were low and stable, with no significant unrealised valuation gains or losses. The borrowed funds margin averaged 18 basis points. Own funds profits were also low, with no significant realised gains on sales.

## Total comprehensive income

The Bank's total comprehensive income includes net profit along with three valuation changes which are reflected directly in the shareholders' equity. First, the unrealised valuation gain on own gold of SDR 61 million, which was due to a 1.6% increase in the gold price. Second, an actuarial re-measurement gain on the Bank's post-employment defined benefit obligations of SDR 129 million, reflecting a gain on assets as valuations recovered from the onset of the pandemic in March 2020. Third, the unrealised valuation movement on fair value through other comprehensive income own funds securities of minus SDR 356 million, which reflected a revaluation loss due to the increase in SDR bond yields and a transfer to the profit and loss account when own funds securities were sold during the year.

As a result, the total comprehensive income for 2020/21 was SDR 1,070.9 million.

# Allocation and distribution of profit

## Proposed dividend

In the unique circumstances of the pandemic, the Bank did not pay a dividend in 2020. At the time of the decision, it was noted that net profit could be expected to rebound if the economy stabilised. This would support paying a supplementary dividend in 2021 that would in effect represent a postponement of the 2020 dividend to 2021. This scenario has materialised. The Board therefore proposes to pay a dividend of SDR 520 per share for 2020/21, comprising the normal dividend of SDR 265 and a supplementary dividend of SDR 255 to compensate for the absence of a dividend in 2019/20. With the proposed large allocation to reserves as proposed below, the Bank would continue to maintain its exceptionally strong capital position as mandated in its dividend policy.

The proposed dividend would cost SDR 294.1 million, and the payout ratio would represent 24% of net profit.

## Proposed allocation to reserves

The Bank's profit is projected to be lower and more variable in the coming years. Given this, the Board proposes to allocate SDR 300.0 million to the Special Dividend Reserve Fund to help smooth future dividend payments. It is proposed to allocate the remainder of the annual profit to the General Reserve Fund and the Free Reserve Fund in accordance with Article 51 of the BIS Statutes.

The Board of Directors therefore recommends that the General Meeting allocate the 2020/21 net profit of SDR 1,237.3 million in the following manner:

SDR 294.1 million

to be paid out as dividend

SDR 47.1 million

to be transferred to the General Reserve Fund

SDR 300.0 million

to be transferred to the Special Dividend Reserve Fund

SDR 596.1 million

to be transferred to the Free Reserve Fund

## Independent auditor

**Report of the auditor**

The BIS financial statements for the year ended 31 March 2021 have been audited by PricewaterhouseCoopers, which confirmed that they give a true and fair view of the Bank's financial position and of its financial performance and its cash flows for the year then ended. The audit report can be found on in the annex at the end of this report.

**Auditor rotation**

In accordance with Article 46 of the BIS Statutes, the Annual General Meeting is invited to elect an independent auditor for the ensuing year and to fix the auditor's remuneration. The Board policy is to rotate the auditor on a regular basis. The financial year ended 31 March 2021 was the second year of PricewaterhouseCoopers' term as auditor.

# Annex

## Financial statements

The BIS's financial statements for the financial year ended 31 March 2021 provide an analysis of the Bank's balance sheet and profit and loss account, together with other financial, capital adequacy and risk management disclosures. The financial statements are prepared in accordance with the Statutes and accounting policies of the Bank, and are externally audited.

# Letter to shareholders

*Submitted to the Annual General Meeting of the Bank for International Settlements held by video conference on 29 June 2021*

Ladies and gentlemen

It is our pleasure to submit to you the financial statements of the Bank for International Settlements for the financial year ended 31 March 2021.

Pursuant to Article 49 of the Bank's Statutes, they are presented in a form approved by the Board of Directors on 9 May 2021, and are subject to approval by shareholders at the Annual General Meeting.

The net profit for the year was exceptional at SDR 1,237.3 million. This compares with SDR 165.5 million for the prior year, and reflects the recouping in full of the valuation losses from the start of the pandemic, coupled with strong earnings from a higher average balance sheet. The Board of Directors proposes to allocate this profit as follows. First, SDR 294.1 million to pay a dividend of SDR 520 per share, comprising the normal dividend of SDR 265 and a supplementary dividend of SDR 255 to compensate for the absence of a dividend in 2019/20. Second, SDR 300.0 million to the Special Dividend Reserve Fund. This would be coupled with establishing a work-plan to develop a new dividend policy to use this Fund to smooth future dividend payments. Third, SDR 47.1 million to the general reserve fund. Fourth, SDR 596.1 million to the free reserve fund.

Basel, 17 May 2021

Agustín Carstens
General Manager

Luiz Awazu Pereira da Silva
Deputy General Manager

# Contents

# Balance sheet

As at 31 March

| *SDR millions* | Note | **2021** | 2020 |
|---|---|---|---|
| **Assets** | | | |
| Cash and cash equivalents | 1 | 50,854.6 | 54,021.4 |
| Securities purchased under resale agreements | 2 | 78,572.0 | 56,018.6 |
| Loans and advances | 2 | 45,544.4 | 54,038.9 |
| Government and other securities | 2 | 127,079.5 | 103,706.1 |
| Gold and gold loans | 3 | 41,665.7 | 31,436.8 |
| Derivative financial instruments | 4 | 7,621.8 | 3,521.0 |
| Accounts receivable and other assets | 5 | 4,618.0 | 5,555.2 |
| Land, buildings and equipment | 6 | 198.4 | 199.3 |
| **Total assets** | | **356,154.4** | 308,497.3 |
| **Liabilities** | | | |
| Currency deposits | 7 | 288,014.7 | 250,194.8 |
| Securities sold under repurchase agreements | 8 | – | 148.8 |
| Gold deposits | 9 | 18,848.9 | 15,221.1 |
| Derivative financial instruments | 4 | 2,208.1 | 3,049.2 |
| Accounts payable | 10 | 23,319.7 | 17,212.6 |
| Other liabilities | 11 | 940.0 | 1,030.9 |
| **Total liabilities** | | **333,331.4** | 286,857.4 |
| **Shareholders' equity** | | | |
| Share capital | 13 | 710.2 | 706.4 |
| Less: shares held in treasury | 13 | (1.7) | (1.7) |
| Statutory reserves | 14 | 17,141.8 | 16,867.8 |
| Profit and loss account | | 1,237.3 | 165.5 |
| Other equity accounts | 15 | 3,735.4 | 3,901.9 |
| **Total shareholders' equity** | | **22,823.0** | 21,639.9 |
| **Total liabilities and shareholders' equity** | | **356,154.4** | 308,497.3 |

# Profit and loss account

For the financial year ended 31 March

| *SDR millions* | Note | **2021** | 2020 |
|---|---|---|---|
| Interest income | 16 | 254.9 | 282.3 |
| Interest expense | 17 | (174.2) | (453.3) |
| Change in ECL impairment provision | 18 | 0.8 | (1.8) |
| Net income on financial assets and liabilities at fair value through profit and loss | 19 | 1,310.4 | 554.0 |
| **Net interest and valuation income** | | **1,391.9** | 381.1 |
| Net gain / (loss) on sales of currency assets at fair value through other comprehensive income | 20 | 127.6 | 109.2 |
| Net fee income | 22 | 6.7 | 3.0 |
| Net foreign exchange income | 23 | 27.5 | 13.0 |
| **Total income** | | **1,553.8** | 506.3 |
| Administrative expense | 24 | (288.8) | (315.3) |
| Depreciation and amortisation | 6 | (27.7) | (25.5) |
| **Operating expense** | | **(316.5)** | (340.8) |
| **Net profit** | | **1,237.3** | 165.5 |

# Statement of comprehensive income

For the financial year ended 31 March

| *SDR millions* | Note | **2021** | 2020 |
|---|---|---|---|
| **Net profit** | | **1,237.3** | 165.5 |
| **Other comprehensive income** | | | |
| **Items that are or may be reclassified subsequently to profit and loss** | | | |
| Currency assets at fair value through other comprehensive income | | | |
| Net change in fair value during the year | | (227.8) | 544.7 |
| Net change in expected credit loss impairment provision | | (0.7) | 1.8 |
| Reclassification to profit and loss | 20 | (127.6) | (109.2) |
| Net movement on currency assets at fair value through other comprehensive income | | **(356.1)** | 437.3 |
| Gold at fair value through other comprehensive income | | | |
| Net change in fair value during the year | 15B | 60.9 | 807.4 |
| Reclassification to profit and loss | | – | – |
| Net movement on gold at fair value through other comprehensive income | | **60.9** | 807.4 |
| **Items that will not be reclassified to profit and loss** | | | |
| Re-measurement of defined benefit obligations | 15C | **128.7** | 192.6 |
| **Total comprehensive income** | | **1,070.9** | 1,602.8 |

# Statement of cash flows

For the financial year ended 31 March

| *SDR millions* | Note | **2021** | 2020 |
|---|---|---|---|
| **Cash flow from / (used in) operating activities** | | | |
| Interest income received | | 336.5 | 370.4 |
| Interest expenses paid | | (160.8) | (439.2) |
| Net fee income | 22 | 6.7 | 3.0 |
| Net foreign exchange transaction gain | 23 | 13.5 | 22.2 |
| Administrative expense | 24 | (288.8) | (315.3) |
| ***Adjustments for non-cash flow items*** | | | |
| Net income on financial assets and liabilities at fair value through profit and loss (FVPL) | 19 | 1,310.4 | 554.0 |
| Net change in ECL impairment provision | 18 | 0.8 | (1.8) |
| Net foreign exchange translation gain | 23 | 14.0 | (9.2) |
| Lease interest expense | 17 | (0.1) | (0.2) |
| Change in accruals | | (95.5) | (102.1) |
| ***Change in operating assets and liabilities*** | | | |
| Currency deposits | | 39,033.7 | 9,072.8 |
| Currency banking assets | | (31,916.5) | (9,160.1) |
| Gold deposits | | 3,627.8 | 3,887.7 |
| Gold banking assets | | (10,167.4) | (10,974.2) |
| Change in cash collateral balance on derivatives transactions | | (3.0) | 1.2 |
| Accounts receivable and other assets | | (0.5) | (5.2) |
| Accounts payable and other liabilities | | 41.5 | 126.4 |
| Net derivative financial instruments | | (4,941.9) | 637.7 |
| **Net cash flow used in operating activities** | | **(3,189.6)** | (6,331.9) |
| | | | |
| **Cash flow from / (used in) investment activities** | | | |
| Change in currency investment assets | | 88.6 | (61.9) |
| Change in securities sold under repurchase agreements in investment portfolios | | (148.8) | (400.3) |
| Capital expenditure on land, buildings and equipment | 6 | (26.5) | (26.2) |
| **Net cash flow used in investment activities** | | **(86.7)** | (488.4) |

| *SDR millions* | Note | **2021** | 2020 |
|---|---|---|---|
| **Cash flow from financing activities** | | | |
| Issue of shares | | 112.3 | 224.5 |
| Dividends paid | | – | (136.7) |
| Repayment of principal on lease liabilities | | (2.8) | (2.4) |
| **Net cash flow from financing activities** | | **109.5** | 85.4 |
| | | | |
| **Total net cash flow** | | **(3,166.8)** | (6,735.0) |
| Net effect of exchange rate changes on cash and cash equivalents | | (1,168.8) | 1,254.5 |
| Net movement in cash and cash equivalents | | (1,998.0) | (7,989.5) |
| **Net change in cash and cash equivalents** | | **(3,166.8)** | (6,735.0) |
| **Cash and cash equivalents, beginning of year** | 1 | **54,021.4** | 60,756.4 |
| **Cash and cash equivalents, end of year** | 1 | **50,854.6** | 54,021.4 |

# Movements in shareholders' equity

| SDR millions | Note | Share capital | Shares held in treasury | Statutory reserves | Profit and loss | Other equity accounts: Defined benefit obligations | Other equity accounts: Securities revaluation | Other equity accounts: Gold revaluation | Shareholders' equity |
|---|---|---|---|---|---|---|---|---|---|
| **Balance as at 31 March 2019** | | **698.9** | **(1.7)** | **16,326.3** | **461.1** | **(238.3)** | **135.0** | **2,568.0** | **19,949.3** |
| Payment of 2018/19 dividend | | – | – | – | (136.7) | – | – | – | (136.7) |
| Allocation of 2018/19 profit | | – | – | 324.4 | (324.4) | – | – | – | – |
| Issue of shares | | 7.5 | – | 217.0 | – | – | – | – | 224.5 |
| Total comprehensive income | 15 | – | – | – | 165.5 | 192.6 | 437.3 | 807.4 | 1,602.8 |
| **Balance as at 31 March 2020** | | **706.4** | **(1.7)** | **16,867.8** | **165.5** | **(45.7)** | **572.3** | **3,375.3** | **21,639.9** |
| Allocation of 2019/20 profit | | – | – | 165.5 | (165.5) | – | – | – | – |
| Issue of shares | | 3.8 | – | 108.5 | – | – | – | – | 112.3 |
| Total comprehensive income | 15 | – | – | – | 1,237.3 | 128.7 | (356.1) | 60.9 | 1,070.9 |
| **Balance as at 31 March 2021** | | **710.2** | **(1.7)** | **17,141.8** | **1,237.3** | **83.0** | **216.2** | **3,436.2** | **22,823.0** |

# Introduction

The Bank for International Settlements (BIS, "the Bank") is an international financial institution which was established pursuant to the Hague Agreements of 20 January 1930 as well as the Bank's Constituent Charter and its Statutes. The headquarters of the Bank are at Centralbahnplatz 2, 4002 Basel, Switzerland. The objectives of the BIS, as laid down in Article 3 of its Statutes, are to promote cooperation among central banks, to provide additional facilities for international financial operations and to act as trustee or agent for international financial settlements. The scope of these financial statements is defined in accounting policy 2.

# Accounting policies

The accounting policies set out below have been applied to both of the financial years presented except as described in the following paragraphs.

## 1. Critical judgments and estimates

The preparation of the financial statements requires the Bank's Management to apply judgment and to make estimates.

The judgments which have the most significant effect on the financial statements concern the selection and application of accounting policies to ensure that the financial statements present a true and fair view of the financial position and performance of the Bank. The most critical accounting policies for the Bank's financial reporting are those which concern:

- the scope of the financial statements (see accounting policy 2);
- the functional and presentation currency (see accounting policy 3);
- the classification and measurement of financial instruments, and the application of these policies to the Bank's portfolios (see accounting policies 4–6); and
- accounting for gold assets and liabilities, and for the Bank's overall own gold position (see accounting policies 10 and 14).

The critical estimates having the most significant effect on the amounts recognised in the financial statements are those which concern:

- the valuation of currency deposits classified as fair value through profit and loss; and
- post-employment obligations, the estimation of which is dependent on long-term actuarial assumptions.

There are also judgments involved in making disclosures, including the methodology used to determine the fair value hierarchy disclosures.

When making estimates, Management exercises judgment based on available information. Actual results could differ significantly from these estimates.

## 2. Scope of the financial statements

These financial statements recognise all assets and liabilities that are controlled by the Bank and in respect of which the economic benefits, as well as any rights and obligations, lie with the Bank.

As part of its activities, the Bank undertakes financial transactions in its own name but for the economic benefit of other parties, including transactions on a custodial or agency basis. These include transactions undertaken on behalf of the staff pension fund and the BIS Investment Pools ("BISIPs"). These are reporting entities with their own financial statements, but which do not have separate legal personality from the Bank. The Bank also undertakes transactions in its name on behalf of dedicated mandates, where the Bank is the investment manager of a customer investment portfolio. Unless otherwise stated, such transactions are not included in these financial statements. Note 27 provides further information on the BISIPs and dedicated mandates. Note 12 provides further information on the staff pension fund.

The Bank hosts the secretariats of three independent associations – the Financial Stability Board (FSB), the International Association of Deposit Insurers (IADI) and the International Association for Insurance Supervisors (IAIS) and supports the activities of the BIS Sports club. It also acts in an administrative capacity for the International Journal of Central Banking (IJCB). These five associations each have their own legal personality and financial statements, and are therefore independent of the Bank. Unless otherwise stated, the activities of these five independent associations are not included in these financial statements.

## 3. Functional and presentation currency

The functional and presentation currency of the Bank is the Special Drawing Right (SDR) as defined by the International Monetary Fund (IMF). The composition of the SDR is subject to periodic review. As currently calculated, one SDR is equivalent to the sum of USD 0.58252, EUR 0.38671, Renminbi 1.0174, JPY 11.9 and GBP 0.085946.

Monetary assets and liabilities are translated into SDR at the exchange rates ruling at the balance sheet date. Other assets and liabilities and profits and losses are translated into SDR at the exchange rates ruling at the date of the transaction. Exchange differences arising from the retranslation of monetary assets and liabilities and from the settlement of transactions are included as net foreign exchange income in the profit and loss account.

All figures in these financial statements are presented in SDR millions unless otherwise stated. Amounts are rounded to the nearest SDR 0.1 million, and consequently there may be small differences both within and between disclosures.

## 4. Recognition, de-recognition, classification and measurement of financial assets

The Bank recognises financial assets on the trade date, being the date on which the Bank commits to purchase the assets. Financial assets are de-recognised on the trade date of a sale (when the Bank commits to transfer substantially all the risks and rewards of ownership), or when the contractual cash flows from the assets have expired. On initial recognition, financial assets are classified as either:

- amortised cost;
- fair value through other comprehensive income ("FVOCI"); or
- fair value through profit and loss ("FVPL").

The classification determines the measurement of financial assets, and how this is reflected in the Bank's financial statements. The classification depends on the business model for managing the assets and on the cash flow characteristics of the assets, as described below.

### Amortised cost

Financial assets can be classified as amortised cost if two criteria are met:

1. the financial assets are held within a business model with the objective of holding the assets to collect the contractual cash flows; and
2. the contractual terms on the financial assets give rise to cash flows that are solely payments of principal or interest.

Amortised cost financial assets are measured in the balance sheet using the effective interest rate method, with the carrying value adjusted by the expected credit loss (ECL) for each asset. Interest is included in the profit and loss account under “Interest income” or “Interest expense” (negative interest) on an accruals basis. The movement in the ECL impairment provision on these assets is recognised in the profit and loss account under “Change in ECL impairment provision”.

### Fair value through other comprehensive income (FVOCI)

Financial assets can be classified as FVOCI if two criteria are met:

1. the financial assets are held within a business model with the objective of collecting the contractual cash flows or potentially selling the assets; and
2. the contractual terms on the financial assets give rise to cash flows that are solely payments of principal or interest.

FVOCI financial assets are measured in the balance sheet at fair value. In addition, an amortised cost book value is calculated using the effective interest rate method, including an adjustment for the ECL impairment provision of each asset. Changes in the book value (due to the accrual of interest) are included as “Interest income” or “Interest expense” (negative interest) in the profit and loss account. Unrealised valuation movements, adjusted by the ECL impairment provision, are recognised through the “Securities revaluation account” in other comprehensive income (OCI). Interest revenue, the movement in ECL impairment provision and foreign exchange gains or losses are recognised in the profit and loss account. Upon disposal of the assets, gains or losses are recognised in the profit and loss account as “Net gain on sales of financial assets at fair value through other comprehensive income”.

### Fair value through profit and loss (FVPL)

All other financial assets are classified as FVPL. These include:

- derivative financial assets,
- assets that are held for trading, or that are held within a business model that is managed on a fair value basis; and
- assets which contain contractual terms that give rise to cash flows that are not solely payments of principal or interest.

In addition, the Bank chooses to classify financial assets as FVPL if the use of the classification removes or significantly reduces an accounting mismatch. Any such classification is made on the date of initial recognition, and is irrevocable.

FVPL financial assets are measured in the balance sheet at fair value. The accrual of interest and all realised and unrealised movements in fair value are included within “Net income on financial assets and liabilities at fair value through profit and loss”.

### Reclassification

Groups of financial assets are reclassified if there is a fundamental change to the way they are managed. Reclassifications are applied prospectively from the date of change, with no restatement of previously recognised gains, losses or interest. Financial assets which are classified as FVPL in order to remove or significantly reduce an accounting mismatch cannot be reclassified.

### Impairment of financial assets

The Bank assesses impairment on financial assets which are classified as either FVOCI or amortised cost, and also for loan commitments. Impairment is assessed from the date of initial recognition using a three-stage model.

Stage 1 applies to financial assets on which there has not been a significant increase in credit risk since initial recognition. The ECL impairment provision is calculated on a 12-month forward-looking basis.

Stage 2 applies to financial assets on which there has been a significant increase in credit risk since initial recognition. The ECL impairment provision is calculated taking into account the full expected life of the financial asset.

Stage 3 applies to financial assets which are considered to be credit impaired. The ECL impairment provision is calculated on a lifetime basis, but the effective interest rate on the financial asset is recalculated based on the amortised cost (including the ECL).

The key inputs into the measurement of the ECL impairment provision are:

- The probability of default (PD), which represents the estimated likelihood of a borrower defaulting on its financial obligation over a specific time period. PDs are regularly re-estimated using a combination of internal and external data, along with judgment.
- Loss-given-default (LGD) is the proportion of an exposure that is lost as a result of a counterparty default. LGD estimates are informed by observed external LGD data.
- Exposure at default (EAD) is the magnitude of the exposures in the event of a default and is determined based on the future expected cash flows discounted at the effective interest rate. The EAD reflects the offsetting effects of any collateral received.

The ECL impairment provision is presented in the balance sheet as follows:

- for financial assets measured at amortised cost: as a deduction from the gross carrying amount of the asset;
- for financial assets measured at FVOCI: within the "Securities revaluation account" in other equity; and
- for loan commitments: as a provision within "Loans and advances".

## 5. Recognition, de-recognition, classification and measurement of financial liabilities

The Bank recognises financial liabilities on the trade date, being the date on which the Bank commits to issue the liabilities. Financial liabilities are de-recognised on the trade date of a repurchase (when the Bank commits to buy back the financial liability), or when the contractual cash flows from the financial liabilities have expired. On initial recognition, financial liabilities are classified as either:

- fair value through profit and loss; or
- amortised cost.

The classification determines the measurement of financial liabilities, and how this is reflected in the Bank's financial reporting. The classification depends on the characteristics of the liabilities, as described below.

#### Fair value through profit and loss (FVPL)

Financial liabilities are classified as FVPL if they are derivative financial liabilities, or are held for trading. In addition, the Bank chooses to classify financial liabilities as FVPL if the use of the classification removes or significantly reduces an accounting mismatch. Any such classification is made on the date of initial recognition, and is irrevocable.

FVPL financial liabilities are measured in the balance sheet at fair value. The accrual of interest and all realised and unrealised movements in fair value are included within "Net income on financial assets and liabilities at fair value through profit and loss".

#### Amortised cost

All other financial liabilities are classified as amortised cost.

Amortised cost financial liabilities are measured in the balance sheet using the effective interest rate method. Interest is included in the profit and loss account under "Interest expense" or "Interest income" (negative interest) on an accruals basis. Any gains or losses on redemption are recognised in the profit and loss account.

### 6. The application of the classification and measurement approach to the Bank's portfolios

All very short-dated financial assets (cash and cash equivalents) and liabilities (sight and notice deposit accounts) are classified as amortised cost. The classification of other financial assets and liabilities is determined by the Bank's asset and liability portfolio structure. The Bank's assets and liabilities are organised into four sets of portfolios.

#### A. Currency banking portfolios ("borrowed funds")

The Bank operates a currency banking book (comprising currency deposit liabilities, and related assets and derivatives). The Bank acts as a market-maker in its currency deposit liabilities. As a result of this activity, the Bank incurs realised profits or losses when these liabilities are repurchased from customers. Under the Bank's accounting policies, some of these financial instruments would be classified as FVPL, while others would be classified as FVOCI or amortised cost. In accordance with the Bank's risk management policies, the market risk inherent in this activity is managed on an overall fair value basis. As such, the realised and unrealised profits or losses on currency deposit liabilities are largely offset by realised and unrealised losses or profits on the related assets and derivatives. To reduce the accounting inconsistency that would otherwise arise from recognising realised and unrealised gains and losses on different bases, the Bank chooses to classify all financial assets and liabilities (other than those which are very short-dated) in its currency banking portfolios as FVPL.

#### B. Gold banking portfolio ("borrowed gold")

The Bank operates a gold banking book (comprising gold deposit liabilities and related gold loan assets). All gold loan and deposit financial assets and liabilities in this portfolio are classified as amortised cost. All derivatives are classified as FVPL.

### C. Currency investment portfolios (“own funds”)

The Bank’s investment portfolios comprise assets, liabilities and derivatives relating principally to the investment of the Bank’s shareholders’ equity.

The Bank invests most of its shareholders’ equity in financial instruments. Most of the currency financial assets in investment portfolios (other than those which are very short-dated) are classified as FVOCI. Any related currency financial liabilities (including securities sold under repurchase agreements) are classified as amortised cost.

In addition, the Bank invests some of its shareholders’ equity in portfolios that are managed with a mandate which permits active trading. The financial instruments in these portfolios (other than those which are very short-dated) are classified as FVPL currency assets and liabilities.

### D. Gold investment portfolio (“own gold”)

The Bank invests some of its shareholders’ equity in gold and gold loans. These assets are classified as amortised cost. The Bank’s overall own gold position is treated as an FVOCI asset (as further described in accounting policy 10 below).

Accounting policies 7 to 14 below describe the application of these accounting policies to individual items in the balance sheet.

## 7. Cash and cash equivalents

Cash and cash equivalents consist of cash and sight and notice accounts with banks, which are very short-term financial assets that typically have notice periods of three days or less. Notice accounts include balances at futures clearing brokers. Cash and cash equivalents are classified as amortised cost.

## 8. Securities purchased under resale agreements

Securities purchased under resale agreements (“reverse repurchase agreements”) are collateralised loan transactions through which the Bank lends cash and receives an irrevocable commitment from the counterparty to return the cash, plus interest, at a specified date in the future. As part of these agreements, the Bank receives collateral in the form of securities to which it has full legal title, but must return equivalent securities to the counterparty at the end of the agreement, subject to the counterparty’s repayment of the cash. As the Bank does not acquire the risks or rewards associated with ownership of these collateral securities, they are not recognised as assets in the Bank’s balance sheet. The collateralised loans relating to securities purchased under resale agreements are recognised as assets, and are classified as either FVPL (currency banking portfolios) or FVOCI (currency investment portfolios).

## 9. Loans and advances, and government and other securities

Loans and advances comprise fixed-term loans to commercial banks, and advances under committed and uncommitted standby facilities which the Bank provides for its customers. Government and other securities are debt securities issued by governments, international institutions, other public sector institutions, commercial banks and corporates. They include treasury bills, commercial paper, certificates of deposit, fixed and floating rate bonds, covered bonds and asset-backed securities.

These financial assets are classified as either FVPL (banking portfolios) or FVOCI (investment portfolios).

## 10. Gold and gold loans

Gold comprises gold bar assets held in custody at central banks and sight accounts denominated in gold. Gold loans comprise fixed-term gold loans. Gold and gold loans are classified as amortised cost, and are included in the balance sheet at their weight in gold (translated at the gold market price and USD exchange rate into SDR) plus accrued interest.

Gold loans are recognised on a trade date basis. Purchases and sales of gold bar assets are recognised on a settlement date basis, with forward purchases or sales treated as derivatives prior to settlement date.

The Bank trades most of its gold swaps under its derivative ISDA contracts, and accounts for them in a similar manner to currency swaps. As such, gold balances in the balance sheet include gold received (and exclude gold paid) in respect of gold swap contracts.

The treatment of realised gains or losses on gold transactions, and unrealised gains or losses on the retranslation of the net gold position, depends on the management objective for which the gold is held, as described below:

### A. Gold banking portfolio ("borrowed gold")

Gains or losses on the retranslation of the net position in gold in the banking portfolio are included under "Net foreign exchange income" as net translation gains or losses.

### B. Gold investment portfolio ("own gold")

The Bank's overall own gold position is treated as an FVOCI asset.

Unrealised gains or losses on the Bank's gold investment assets over their deemed cost are included in the "Gold revaluation account", which is reported under the balance sheet heading "Other equity accounts". The movement in fair value is included in the statement of comprehensive income under the heading "Gold at fair value through other comprehensive income – net change in fair value during the year".

All of the Bank's gold investment assets were held on 31 March 2003 (when the Bank changed its functional and presentation currency from the gold franc to the SDR). The deemed cost of these assets is approximately SDR 151 per ounce, based on the value of USD 208 per ounce that was applied from 1979 to 2003 following a decision by the Bank's Board of Directors, translated at the 31 March 2003 exchange rate.

Realised gains or losses on disposal of gold investment assets are included in the profit and loss account as "Net gain on sales of gold investment assets".

## 11. Derivative financial instruments

Derivatives are used either to manage the Bank's market risk or for trading purposes. The Bank trades most of its gold swaps under its derivative ISDA contracts, and accounts for them in a similar manner to currency swaps. Derivatives are classified as FVPL, and are included in the balance sheet as either assets or liabilities, depending on whether the contract has a positive or a negative fair value for the Bank.

## 12. Currency deposits

Currency deposits comprise sight and notice deposit accounts along with BIS deposit instruments.

Sight and notice deposit accounts are very short-term monetary liabilities that typically have notice periods of three days or less. They are classified as amortised cost.

BIS deposit instruments comprise currency deposit products offered by the Bank to its customers. They are classified as FVPL.

Some BIS deposit instruments contain embedded derivative financial instruments, such as currency or call options. These embedded derivatives are also classified as FVPL, and are included within the currency deposits balance sheet value.

## 13. Securities sold under repurchase agreements

Securities sold under repurchase agreements ("repurchase agreements") are collateralised deposit transactions through which the Bank receives cash and provides an irrevocable commitment to return the cash, plus interest, at a specified date in the future. As part of these agreements, the Bank transfers legal title of collateral securities to the counterparty. At the end of the contract, the counterparty must return equivalent securities to the Bank, subject to the Bank's repayment of the cash. As the Bank retains the risks and rewards associated with ownership of these securities, they continue to be recognised as assets in the Bank's balance sheet. The collateralised deposits are recognised as liabilities and are classified as either FVPL (currency banking portfolios) or amortised cost (currency investment portfolios).

## 14. Gold deposits

Gold deposits comprise unallocated sight and fixed-term deposits of gold from central banks.

Unallocated gold deposits provide customers with a general claim on the Bank for delivery of gold of the same weight and quality as that delivered by the customer to the Bank, but do not provide the right to specific gold bars. All unallocated gold deposits (whether sight or fixed-term) are classified as amortised cost. Unallocated gold sight account deposits are included in the balance sheet on a settlement date basis at their weight in gold (translated at the gold market price and USD exchange rate into SDR). Unallocated fixed-term deposits of gold are included in the balance sheet on a trade date basis at their weight in gold (translated at the gold market price and USD exchange rate into SDR) plus accrued interest.

Allocated (or "earmarked") gold deposits provide depositors with a claim for delivery of the specific gold bars deposited by the customer with the Bank on a custody basis. Beneficial ownership and risk remain with the customer. As such, allocated gold deposit liabilities and the related gold bar assets are not included in the Bank's balance sheet and are disclosed as off-balance sheet items.

## 15. Securities lending

The Bank participates in securities lending transactions in which it lends debt securities in exchange for a fee. The transactions are conducted under standard agreements employed by financial market participants. The securities which have been transferred are not de-recognised from the balance sheet since the risks and rewards of ownership are not transferred, even if the borrower has the right to sell or re-pledge the securities. Such Bank-owned securities transferred to a borrower are presented in the balance sheet as part of "Government and other securities".

## 16. Determination of fair value of financial instruments

The majority of the Bank's financial instruments are classified as either FVPL or FVOCI, and hence are included in the balance sheet at fair value. The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal market (or, in its absence, the most advantageous market to which the Bank has access at that date).

The Bank considers published price quotations in active markets as the best evidence of fair value. Where no reliable price quotations exist, the Bank determines fair values using a valuation technique appropriate to the particular financial instrument. Such valuation techniques may involve using market prices of recent arm's length market transactions in similar instruments or may make use of financial models such as discounted cash flow analyses and option pricing models. Where financial models are used, the Bank aims to make maximum use of observable market inputs as appropriate, and relies as little as possible on its own estimates. The Bank values its positions at their exit price, so that assets are valued at the bid price and liabilities at the offer price. Derivative financial instruments are valued on a bid-offer basis, with valuation reserves, where necessary, included in derivative financial assets and liabilities.

## 17. Interest income and expense

Interest income and interest expense relate to financial instruments which are classified as either FVOCI or amortised cost. Interest income includes "negative" interest on liabilities, while interest expense includes "negative" interest on assets and interest on lease liabilities.

Interest income and interest expense are recognised in the profit and loss account using the effective interest rate method. Interest income is calculated by applying the effective interest rate to the gross carrying amount of an asset, except for assets which are purchased (or subsequently become) credit impaired (impairment stage 3). For financial assets purchased as credit impaired, the original credit adjusted effective interest rate is applied to the amortised cost of the financial asset. For financial assets which subsequently become credit impaired, interest income is calculated by applying the effective interest rate to the amortised cost value of the asset.

## 18. Accounts receivable and accounts payable

Accounts receivable and accounts payable are principally very short-term amounts relating to the settlement of financial transactions. They are recognised on a trade date basis and subsequently accounted for at amortised cost until their settlement.

## 19. Land, buildings and equipment

Expenditure on land, buildings and equipment is recognised as an asset in the balance sheet where it is probable that the Bank will obtain future economic benefits. Buildings and equipment assets are depreciated on a straight line basis over the estimated useful lives of the assets concerned, as follows:

- buildings – 50 years;
- building installations and machinery – 15 years;
- information technology equipment – 4 years;
- other equipment – 4 to 10 years; and
- computer software intangible assets – 4 years.

The Bank's land is not depreciated. Right-of-use assets are depreciated on a straight line basis over the lease term. The Bank undertakes an annual review of impairment of land, buildings and equipment. Where the carrying amount of an asset is greater than its estimated recoverable amount, the asset is written down to the lower value.

## 20. Leases

In the course of its business, the Bank enters into lease contracts, and contracts that contain lease components. On initial recognition of such contracts, the Bank calculates a "right of use asset" and a lease liability, both of which are based on the present value of lease payments. The Bank's incremental borrowing rate (or, if applicable, the interest rate implicit in the lease) is used as the discount rate for determining the present value. The right-of-use asset is included under "Land, buildings and equipment", and is depreciated on a straight line basis over the term of the lease. It is reviewed for impairment annually. The lease liability is included under "Other liabilities", and is reduced when the Bank makes payments under the lease. Interest expense is calculated based on the outstanding lease liability and the discount rate.

The Bank leases certain premises under contracts that can contain non-lease components (such as maintenance). The Bank does not separate such components from the lease payments, and therefore the right-of-use asset and lease liability are based on the total lease payment.

## 21. Provisions

Provisions are recognised when the Bank has a present legal or constructive obligation as a result of events arising before the balance sheet date and it is probable that economic resources will be required to settle the obligation, provided that a reliable estimate can be made of the amount of the obligation. Best estimates and assumptions are used when determining the amount to be recognised as a provision.

## 22. Taxation

The Bank's special legal status in Switzerland is set out principally in its Headquarters Agreement with the Swiss Federal Council. Under the terms of this document, the Bank is exempted from virtually all direct and indirect taxes at both federal and local government level in Switzerland. Similar agreements exist with the government of the People's Republic of China for the Asian Office in Hong Kong SAR, with the Mexican government for the Americas Office, and with the Singapore government for the BIS Innovation Hub Centre in Singapore. Income and gains received by the Bank may be subject to tax imposed in other countries. Such income and gains are recognised on a gross basis, with the corresponding tax recognised as an expense.

## 23. Post-employment benefit obligations

The Bank operates three post-employment benefit arrangements, respectively, for staff pensions, Directors' pensions and staff medical benefits. An independent actuarial valuation is performed annually for each arrangement. The staff pensions arrangement is funded (ie it has specifically allocated assets); the other two arrangements are unfunded.

### A. Staff pensions

The liability in respect of the staff pension arrangement is based on the present value of the defined benefit obligation less the fair value of the pension fund assets (see note 12), both at the balance sheet date. The defined benefit obligation is calculated using the projected unit credit method. The present value of the defined benefit obligation is determined from the estimated future cash outflows. The rate used to discount the cash flows is determined by the Bank based on the market yield of highly rated corporate debt securities in Swiss francs which have a duration approximating that of the related liability.

The amount charged to the profit and loss account represents the sum of the current service cost of the benefits accruing for the year under the scheme, and interest at the discount rate on the net of the defined benefit obligation less the fair value of the pension fund assets. Past service costs from plan amendments are immediately recognised through profit and loss. Gains and losses arising from re-measurement of the obligations, such as experience adjustments (where the actual outcome is different from the actuarial assumptions previously made) and changes in actuarial assumptions, are charged to other comprehensive income in the year in which the re-measurement is applied. They are not included in profit and loss in future years.

### B. Directors' pensions and staff post-employment medical benefits

The liability, the defined benefit obligation, the amount charged to the profit and loss account, and the gains and losses arising from re-measurement in respect of the Bank's other post-employment benefit arrangements are calculated on a similar basis to that used for the staff pension arrangement.

## 24. Statement of cash flows

The Bank's statement of cash flows is prepared using an indirect method. It is based on the movements in the Bank's balance sheet, adjusted for changes in financial transactions awaiting settlement.

# Notes to the financial statements

## 1. Cash and cash equivalents

Cash and cash equivalents comprise sight accounts at central and commercial banks, as well as notice accounts at commercial banks and international financial institutions. Included within the cash balances is collateral received from counterparties in relation to derivatives transactions. More detail on this collateral is included in the "Risk management" section of these financial statements, note 3C, "Credit risk mitigation". Cash balances are analysed in the table below:

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Balance at central banks | 50,151.0 | 53,147.7 |
| Balance at commercial banks | 48.7 | 288.5 |
| **Total cash and sight accounts** | **50,199.7** | 53,436.2 |
| Notice accounts | 654.9 | 585.2 |
| **Total cash and cash equivalents** | **50,854.6** | 54,021.4 |

## 2. Currency assets

Currency assets comprise the following products:

*Securities purchased under resale agreements* are collateralised loan transactions. During the term of the agreement, the Bank monitors the fair value of the loan and related collateral securities, and may call for additional collateral (or be required to return collateral) based on movements in their market value.

*Loans and advances* comprise fixed-term loans to commercial banks and advances. Advances are drawings of committed and uncommitted standby facilities which the Bank provides for its customers.

*Government and other securities* are debt securities issued by governments, international institutions, other public sector institutions, commercial banks and corporates. They include treasury bills, commercial paper, certificates of deposit, fixed and floating rate bonds, covered bonds and asset-backed securities.

The tables below analyse the Bank's holdings of currency assets in accordance with their classification.

As at 31 March 2021

| *SDR millions* | FVPL | FVOCI | **Total** |
|---|---|---|---|
| **Securities purchased under resale agreements** | **78,572.0** | **–** | **78,572.0** |
| **Loans and advances** | **45,544.4** | **–** | **45,544.4** |
| **Government and other securities** | | | |
| Sovereigns and central banks | 80,014.9 | 13,944.6 | 93,959.5 |
| Other | 31,274.1 | 1,845.9 | 33,120.0 |
| **Total government and other securities** | **111,289.0** | **15,790.5** | **127,079.5** |
| **Total currency assets** | **235,405.4** | **15,790.5** | **251,195.9** |

As at 31 March 2020

| *SDR millions* | FVPL | FVOCI | **Total** |
|---|---|---|---|
| **Securities purchased under resale agreements** | 55,869.8 | 148.8 | 56,018.6 |
| **Loans and advances** | 54,038.9 | – | 54,038.9 |
| **Government and other securities** | | | |
| Sovereigns and central banks | 59,093.8 | 14,469.5 | 73,563.3 |
| Other | 28,407.2 | 1,735.6 | 30,142.8 |
| **Total government and other securities** | 87,501.0 | 16,205.1 | 103,706.1 |
| **Total currency assets** | 197,409.7 | 16,353.9 | 213,763.6 |

Government and other securities classified as FVPL as at 31 March 2021 include SDR 1,460.9 million (2020: SDR 908.7 million) of securities that are part of the currency investment portfolios (own funds) that have been classified as FVPL because the portfolio mandate permits active trading.

The Bank lends some of its securities in exchange for a fee. Government and other securities which are transferred in securities lending transactions (and were not subject to de-recognition from the balance sheet to the extent of the Bank's continuing involvement) represented SDR 104.4 million as at 31 March 2021 (2020: SDR 100.9 million).

The Bank gives or pledges as collateral some of its debt securities in certain derivative and repurchase agreements transactions. For more detail, see the "Risk management" section, note 3C, "Credit risk mitigation".

## 3. Gold and gold loans

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Gold investment assets | 3,939.6 | 3,878.1 |
| Gold banking assets | 37,726.1 | 27,558.7 |
| **Total gold and gold loan assets** | **41,665.7** | 31,436.8 |
| Comprising: | | |
| Gold bars | 40,992.2 | 31,145.5 |
| Sight accounts denominated in gold | 194.1 | 67.2 |
| Gold loans | 479.4 | 224.1 |

The Bank's gold investment assets are included in the balance sheet at their weight in gold (translated at the gold market price and USD exchange rate into SDR) plus accrued interest on gold loans. The excess of this value over the deemed cost value is included in the gold revaluation account, which is reported under the balance sheet heading "Other equity accounts".

Included in "Gold banking assets" is SDR 18,873.2 million (490 tonnes) of gold (2020: SDR 12,334.4 million; 326 tonnes) that the Bank holds in connection with its gold swap contracts.

## 4. Derivative financial instruments

The main types of derivative instruments used by the Bank are as follows:

*Currency and gold options* are contractual agreements under which the seller grants the purchaser the right, but not the obligation, to either buy (call option) or sell (put option), by or on a set date, a specific amount of a currency or gold at a predetermined price. In consideration, the seller receives a premium from the purchaser.

*Currency and gold swaps, cross-currency swaps and interest rate swaps* are contractual agreements to exchange cash flows related to currencies, gold or interest rates (for example, fixed rate for floating rate). Cross-currency interest rate swaps involve the exchange of cash flows related to a combination of interest rates and foreign exchange rates. Except for certain currency and gold swaps and cross-currency interest rate swaps, no exchange of principal takes place.

*Currency and gold forwards* are contractual agreements involving the exchange of foreign currencies or gold at a future date.

*Forward rate agreements* are interest rate forward contracts that result in cash settlement at a future date for the difference between a contracted rate of interest and the prevailing market rate.

*Futures contracts* include bond and interest rate futures, which represent contractual agreements to receive or pay a net amount based on changes in bond prices or interest rates at a future date. Futures contracts are settled daily with the exchange. Associated margin payments are settled by cash or marketable securities.

*Swaptions* are contractual agreements under which the seller grants the purchaser the right, without imposing the obligation, to enter into a currency or interest rate swap at a predetermined price by or on a set date. In consideration, the seller receives a premium from the purchaser.

*TBAs ("to be announced")* are forward contracts for investment in mortgage-backed securities, whereby the investor acquires a portion of a pool of as yet unspecified mortgages, which will be announced on a given delivery date. The Bank classifies these financial instruments as derivatives because it typically opens and closes the positions before the delivery date.

*Exchange traded equity futures and equity options* represent contractual agreements to receive or pay a net amount based on changes in equity index levels at a future date. Those instruments are traded for the management of the BIS pension fund only.

The Bank enters into derivatives transactions for its own benefit, and also on behalf of customers, investment entities operated by the Bank, and the staff pension fund. Over-the-counter (OTC) derivatives transactions are legally documented under the Bank's derivative master contracts, and are subject to its collateralisation processes (and netting rules in the event of default of one of the parties). The Bank recognises all derivatives transacted in its name. Where the economic benefit lies with a customer, an investment entity or the staff pension fund, the Bank recognises both the original derivative contract and an exactly offsetting derivative contract with the beneficial party.

| As at 31 March | **2021** | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Notional | Fair values | | Notional | Fair values | |
| *SDR millions* | amounts | Assets | Liabilities | amounts | Assets | Liabilities |
| Cross-currency swaps | 2,766.2 | 75.1 | (33.4) | 2,613.8 | 9.1 | (37.3) |
| Currency and gold forwards | 10,013.7 | 66.9 | (64.4) | 7,407.0 | 41.2 | (32.4) |
| Currency, gold and equity options | 1,388.1 | 0.2 | (9.4) | 857.4 | 0.1 | (9.8) |
| Currency and gold swaps | 288,514.4 | 7,002.8 | (1,403.3) | 214,708.8 | 2,153.2 | (1,504.4) |
| Forward rate agreements | 467.2 | – | (0.5) | 2,689.0 | 0.7 | (0.9) |
| Futures contracts | 2,171.0 | 1.0 | (0.3) | 2,005.3 | 1.0 | (1.2) |
| Interest rate swaps | 262,293.4 | 475.2 | (694.9) | 214,341.2 | 1,313.4 | (1,461.5) |
| TBAs | 578.7 | 0.6 | (1.9) | 220.5 | 2.3 | (1.7) |
| **Total derivative financial instruments** | **568,192.7** | **7,621.8** | **(2,208.1)** | 444,843.0 | 3,521.0 | (3,049.2) |

## 5. Accounts receivable and other assets

| As at 31 March | | |
|---|---|---|
| *SDR millions* | **2021** | 2020 |
| Financial transactions awaiting settlement | 4,596.5 | 5,536.1 |
| Other assets | 21.5 | 19.1 |
| **Total accounts receivable and other assets** | **4,618.0** | 5,555.2 |

"Financial transactions awaiting settlement" relate to short-term receivables, typically due in three business days or less, where transactions have been effected but cash has not yet been received.

## 6. Land, buildings and equipment, and depreciation and amortisation

| For the financial year ended 31 March | | | | | | | **2021** | 2020 |
|---|---|---|---|---|---|---|---|---|
| *SDR millions* | Land | Buildings and Installations | IT and other equipment | Computer software Intangible assets | Assets under construction | Right-of-use assets | Total | Total |
| **Historical cost** | | | | | | | | |
| Balance at beginning of year | **46.4** | **293.6** | **23.4** | **59.0** | **16.1** | **13.2** | **451.7** | 420.0 |
| Change in accounting policy | – | | | | | – | – | 12.0 |
| Capital expenditure | – | | | | 26.5 | – | 26.5 | 23.3 |
| Transfers | – | 7.5 | 1.7 | 13.3 | (22.5) | – | – | – |
| Change in right-of-use assets | – | – | – | – | – | 0.2 | 0.2 | 1.2 |
| Disposals and retirements | – | (0.2) | (0.8) | (3.6) | – | – | (4.6) | (4.8) |
| **Balance at end of year** | **46.4** | **301.0** | **24.4** | **68.6** | **20.1** | **13.4** | **473.9** | 451.7 |
| **Accumulated depreciation and amortisation** | | | | | | | | |
| Balance at beginning of year | **–** | **197.9** | **15.1** | **36.7** | **–** | **2.7** | **252.4** | 231.7 |
| Depreciation and amortisation | – | 11.4 | 2.2 | 11.4 | – | 2.7 | 27.7 | 25.5 |
| Disposals and retirements | – | (0.2) | (0.8) | (3.6) | – | – | (4.6) | (4.8) |
| **Balance at end of year** | **–** | **209.1** | **16.6** | **44.5** | **–** | **5.3** | **275.5** | 252.4 |
| **Net book value at end of year** | **46.4** | **91.9** | **7.8** | **24.1** | **20.1** | **8.1** | **198.4** | 199.3 |

Changes in right-of-use assets include new lease transactions, along with extensions and amendments of existing leases. Assets under construction are not subject to depreciation until they are completed and put into service.

The Bank's practice is to retire assets from the fixed asset register at the latest when their age reaches twice their estimated useful life. Due to retirement of assets, SDR 4.6 million has been removed from the historical cost and from accumulated depreciation for the year ended 31 March 2021 (2020: SDR 4.8 million).

## 7. Currency deposits

Currency deposits comprise the following products:

*Sight and notice deposit accounts* are very short-term financial liabilities, typically having a notice period of three days or less.

*Medium-Term Instruments (MTIs)* are fixed rate investments at the Bank issued with initial maturities of between one and five years.

*Callable MTIs (CMTIs)* are MTIs that are callable at the option of the Bank at an exercise price of par. As at 31 March 2021, the call date of all callable MTIs had expired.

*FIXBIS* are fixed rate investments at the BIS for any maturities between one week and one year.

*FRIBIS* are floating rate investments at the BIS with maturities of one year or longer for which the interest rate is reset in line with prevailing market conditions.

*Fixed-term deposits* are fixed rate investments at the BIS, typically with an initial maturity of less than one year.

*Dual Currency Deposits (DCDs)* are fixed-term deposits that are repayable on the maturity date either in the original currency or at a fixed amount in a different currency at the option of the Bank. The balance sheet total for Dual Currency Deposits includes the fair value of the embedded foreign exchange option. These deposits all mature between April and June 2021 (2020: between April and September 2020).

The Bank acts as the sole market-maker in certain of its currency deposit liabilities and has undertaken to repay some of these financial instruments at fair value, in whole or in part, at one to three business days' notice.

The amount the Bank is contractually obliged to pay at maturity in respect of its FVPL currency deposits that were outstanding at 31 March 2021 (including total future interest payments) is SDR 255,066.9 million (2020: SDR 196,806.2 million).

Sight and notice deposit accounts are classified as amortised cost, while all other deposits are classified as FVPL.

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| **Repayable at one to three days' notice** | | |
| Sight and notice deposit accounts | 29,993.3 | 49,355.2 |
| Medium-Term Instruments | 19,346.8 | 28,756.5 |
| Callable MTIs | 718.5 | 4,649.8 |
| Fixed Rate Investments at the BIS | 115,441.7 | 63,990.9 |
| | **165,500.2** | 146,752.4 |
| **Other currency deposits** | | |
| Floating Rate Investments of the BIS | 1,244.0 | 1,039.5 |
| Fixed-term deposits | 120,331.2 | 101,560.3 |
| Dual Currency Deposits | 939.3 | 842.6 |
| | **122,514.5** | 103,442.4 |
| **Total currency deposits** | **288,014.7** | 250,194.8 |

## 8. Securities sold under repurchase agreements

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Amortised cost | – | 148.8 |
| Fair value through profit and loss | – | – |
| **Total securities sold under repurchase agreements** | **–** | 148.8 |

Further information on the collateral related to repurchase agreements is provided in the "Risk management" section, note 3C, "Credit risk mitigation".

## 9. Gold deposits

Gold deposit liabilities placed with the Bank originate entirely from central banks.

## 10. Accounts payable

"Accounts payable" consists of financial transactions awaiting settlement, relating to short-term payables where transactions have been effected but cash has not yet been transferred.

## 11. Other liabilities

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Post-employment benefit obligations (see note 12) | | |
| Staff pensions | 334.7 | 477.0 |
| Directors' pensions | 11.0 | 10.8 |
| Medical benefits | 536.0 | 493.7 |
| Lease liabilities | 8.3 | 11.0 |
| Other liabilities | 50.0 | 38.4 |
| **Total other liabilities** | **940.0** | 1,030.9 |

## 12. Post-employment benefit obligations

The Bank operates three post-employment arrangements:

1. A defined benefit pension arrangement for its staff in the event of retirement, disability or death. The arrangement also applies to the staff of the three independent associations hosted by the Bank (the FSB, IADI and the IAIS). Under this arrangement, benefits accrue according to years of participation and pensionable remuneration. These benefits are paid out of a pension fund without separate legal personality.  Contributions are made to this fund by the Bank and by staff. The fund is the beneficial owner of assets on which it receives a return. These assets are administered by the Bank for the sole benefit of the participants in the arrangement. Except as shown in this note, and as described in note 4, "Derivative financial instruments", these assets are not recognised as assets of the Bank. The Bank remains ultimately liable for all benefits due under the arrangement. The defined benefit obligation and the related expense for the staff pension plan includes amounts related to an unfunded legacy arrangement for cleaning staff. The disbursements for this arrangement are not paid out of the assets in the fund, as described above.
2. An unfunded defined benefit arrangement for its Directors, whose entitlement is based on a minimum service period of 49 months.
3. An unfunded post-employment medical benefit arrangement for its staff and their dependents. Employees who leave the Bank after becoming eligible for early retirement benefits from the pension arrangement are eligible for post-employment medical benefits. The arrangement also applies to the staff of the three independent associations hosted by the Bank (the FSB, IADI and the IAIS).

All three arrangements operate in Swiss francs and are valued annually by an independent actuary. During 2021/22, the Bank expects to make contributions of CHF 48.8 million (2020/21: CHF 49.9 million of actual contribution) to its post-employment arrangements.

All matters of a general policy nature arising in connection with the management of the assets of the pension fund are dealt with by the Pension Fund Committee. The committee is chaired by the Deputy General Manager, and includes members of Senior Management, along with staff representatives and external pension experts. The Pension Fund Committee determines the investment policies of the fund, sets its risk tolerance, and establishes the long-term strategic allocation policy on the basis of regular asset and liability management studies. It also supervises the arrangements made by the Bank in this regard, including selecting external investment managers. The Pension Fund Committee assesses the funding position of the pension fund using a through-the-cycle discount rate and, if necessary, makes recommendations on changes to the contribution rate of the Bank to ensure the long-term actuarial equilibrium of the Pensions System, including a sufficient safety margin.

### A. Amounts recognised in the balance sheet

| As at 31 March | Staff pensions | | Directors' pensions | | Post-employment medical benefits | |
|---|---|---|---|---|---|---|
| *SDR millions* | **2021** | 2020 | **2021** | 2020 | **2021** | 2020 |
| Present value of obligations | (1,620.8) | (1,586.6) | (11.0) | (10.8) | (536.0) | (493.7) |
| Fair value of fund assets | 1,286.1 | 1,109.6 | – | – | – | – |
| **Liability at end of year** | **(334.7)** | (477.0) | **(11.0)** | (10.8) | **(536.0)** | (493.7) |

### B. Present value of defined benefit obligations

The reconciliation of the opening and closing amounts of the present value of the benefit obligations is as follows:

| As at 31 March | Staff pensions | | Directors' pensions | | Post-employment medical benefits | |
|---|---|---|---|---|---|---|
| *SDR millions* | **2021** | 2020 | **2021** | 2020 | **2021** | 2020 |
| Present value of obligations at beginning of year | (1,586.6) | (1,617.3) | (10.8) | (11.4) | (493.7) | (597.9) |
| Employee contributions | (8.9) | (7.2) | – | – | – | – |
| Benefit payments | 68.6 | 64.7 | 0.5 | 0.5 | 4.3 | 3.9 |
| Service cost, incl. past service cost | (54.4) | (70.5) | (0.5) | (0.6) | (20.6) | (25.1) |
| Interest cost | (7.9) | (11.3) | (0.1) | (0.1) | (2.5) | (4.6) |
| Actuarial gain / (loss) arising from experience adjustments | 2.7 | 17.1 | – | 0.8 | (0.5) | 69.8 |
| Actuarial gain / (loss) arising from changes in demographic assumptions | 30.2 | 22.3 | 0.1 | 0.1 | 7.4 | 9.3 |
| Actuarial gain / (loss) arising from changes in financial assumptions | (84.9) | 96.9 | (0.4) | 0.6 | (37.1) | 81.3 |
| Foreign exchange differences | 20.4 | (81.3) | 0.2 | (0.7) | 6.7 | (30.4) |
| **Present value of obligations at end of year** | **(1,620.8)** | (1,586.6) | **(11.0)** | (10.8) | **(536.0)** | (493.7) |

The following table shows the weighted average duration of the defined benefit obligations for the Bank's three post-employment benefit arrangements:

| As at 31 March | Staff pensions | | Directors' pensions | | Post-employment medical benefits | |
|---|---|---|---|---|---|---|
| *Years* | **2021** | 2020 | **2021** | 2020 | **2021** | 2020 |
| **Weighted average duration** | **17.1** | 16.7 | **13.9** | 13.5 | **26.1** | 24.3 |

## C. Amounts recognised in the profit and loss account

| For the financial year ended 31 March | Staff pensions | | Directors' pensions | | Post-employment medical benefits | |
|---|---|---|---|---|---|---|
| *SDR millions* | **2021** | 2020 | **2021** | 2020 | **2021** | 2020 |
| Service cost | (54.4) | (70.5) | (0.5) | (0.6) | (20.6) | (25.1) |
| Interest cost on net liability | (2.3) | (3.1) | (0.1) | (0.1) | (2.5) | (4.6) |
| **Amounts recognised in operating expense** | **(56.7)** | (73.6) | **(0.6)** | (0.7) | **(23.1)** | (29.7) |

## D. Re-measurement of defined benefit obligations recognised in other comprehensive income

| For the financial year ended 31 March | Staff pensions | | Directors' pensions | | Post-employment medical benefits | |
|---|---|---|---|---|---|---|
| *SDR millions* | **2021** | 2020 | **2021** | 2020 | **2021** | 2020 |
| Return on plan assets in excess of opening discount rate | 210.6 | (93.8) | – | – | – | – |
| Actuarial gain / (loss) loss arising from experience adjustments | 2.7 | 17.1 | – | 0.8 | (0.5) | 69.8 |
| Actuarial gain / (loss) arising from changes in demographic assumptions | 30.2 | 22.3 | 0.1 | 0.1 | 7.4 | 9.3 |
| Actuarial gain / (loss) arising from changes in financial assumptions | (84.9) | 96.9 | (0.4) | 0.6 | (37.1) | 81.3 |
| Foreign exchange gain / (loss) on items in other comprehensive income | 0.8 | (4.7) | – | (0.3) | (0.3) | (6.8) |
| **Amounts recognised in other comprehensive income** | **159.4** | 37.8 | **(0.3)** | 1.2 | **(30.5)** | 153.6 |

### E. Analysis of movement on fair value of fund assets for staff pensions

The reconciliation of the opening and closing amounts of the fair value of fund assets for the staff pension arrangement is as follows:

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Fair value of fund assets at beginning of year | 1,109.6 | 1,164.3 |
| Employer contributions | 33.6 | 30.9 |
| Employee contributions | 8.9 | 7.2 |
| Benefit payments | (68.6) | (64.7) |
| Interest income on plan assets | 5.6 | 8.2 |
| Return on plan assets in excess of opening discount rate | 210.6 | (93.8) |
| Foreign exchange differences | (13.6) | 57.5 |
| **Fair value of fund assets at end of year** | **1,286.1** | 1,109.6 |

### F. Composition and fair value of assets for the pension fund

The table below analyses the assets of the pension fund and the extent to which the fair values of those assets have been calculated using quoted prices in active markets. The pension fund does not invest in financial instruments issued by the Bank.

| As at 31 March | **2021** | | | 2020 | | |
|---|---|---|---|---|---|---|
| *SDR millions* | Quoted in active market | Unquoted | Total | Quoted in active market | Unquoted | Total |
| Cash (including margin accounts) | 47.5 | – | 47.5 | 59.5 | – | 59.5 |
| Debt securities | 312.8 | – | 312.8 | 285.1 | – | 285.1 |
| Fixed income funds | 208.2 | – | 208.2 | 194.6 | – | 194.6 |
| Equity funds | 465.1 | 30.7 | 495.8 | 374.2 | 24.3 | 398.5 |
| Real estate funds | – | 151.0 | 151.0 | – | 123.6 | 123.6 |
| Commodity-linked notes | – | 74.5 | 74.5 | – | 48.8 | 48.8 |
| Derivative financial instruments | 0.6 | (4.3) | (3.7) | (1.3) | 0.8 | (0.5) |
| **Total** | **1,034.2** | **251.9** | **1,286.1** | 912.1 | 197.5 | 1,109.6 |

## G. Principal actuarial assumptions used in these financial statements

| As at 31 March | 2021 | 2020 |
|---|---|---|
| **Applicable to staff pension arrangement** | | |
| Discount rate | 0.20% | 0.50% |
| Assumed average salary increase rate | 1.70% | 1.70% |
| **Applicable to post-employment medical benefit arrangement** | | |
| Discount rate | 0.20% | 0.50% |
| Long-term medical cost inflation assumption | 3.00% | 3.00% |
| **Applicable to Directors' pension arrangement** | | |
| Discount rate | 0.20% | 0.50% |
| Assumed Directors' pensionable remuneration increase rate | 0.50% | 0.50% |
| **Applicable to staff and Directors' pension arrangements** | | |
| Assumed increase in pensions payable | 0.50% | 0.50% |
| **Mortality table applicable to all three arrangements:** | **Swiss table BVG2020 with generational projection CMI 2019 and long-term improvement rate of 1.25%** | **Swiss table BVG2015 with generational projection CMI 2016 and long-term improvement rate of 1.25%** |

The assumed increases in staff salaries, Directors' pensionable remuneration and pensions payable incorporate an inflation assumption of 0.50% at 31 March 2021 (2020: 0.50%).

## H. Life expectancies

The life expectancies, at age 65, used in the actuarial calculations for the staff pension arrangement are:

As at 31 March

| *Years* | 2021 | 2020 |
|---|---|---|
| **Current life expectancy of members aged 65** | | |
| Male | 21.7 | 21.6 |
| Female | 23.4 | 23.6 |
| **Life expectancy of members aged 65 projected forward in 10 years' time** | | |
| Male | 22.4 | 22.4 |
| Female | 24.2 | 24.4 |

## I. Sensitivity analysis of significant actuarial assumptions

The Bank is exposed to risks from these obligations and arrangements, including investment risk, interest rate risk, foreign exchange risk, longevity risk and salary risk.

*Investment risk* is the risk that plan assets will not generate returns at the expected level.

*Interest rate risk* is the exposure of the post-employment benefit obligations to adverse movements in interest rates, including credit spreads. A decrease in interest rates will increase the present value of these obligations. However, in the case of the staff pension arrangement this may be offset, either fully or partly, by an increase in value of the interest bearing securities held by the fund.

*Foreign exchange risk* is the exposure of the post-employment benefit obligations to adverse movements in exchange rates between the Swiss franc, which is the operating currency of the post-employment benefit arrangements, and the SDR, which is the functional currency of the Bank.

*Longevity risk* is the risk that actual outcomes differ from actuarial estimates of life expectancy.

*Salary risk* is the risk that higher than expected salary rises increase the cost of providing a salary-related pension.

The table below shows the estimated impact on the defined benefit obligations resulting from a change in key actuarial assumptions:

| As at 31 March | **Staff pensions** Increase / (decrease) in defined benefit obligation | |
|---|---|---|
| *SDR millions* | **2021** | 2020 |
| ***Discount rate*** | | |
| Increase by 0.5% | (129.7) | (123.8) |
| Decrease by 0.5% | 147.5 | 141.2 |
| ***Rate of salary increase*** | | |
| Increase by 0.5% | 35.7 | 34.9 |
| Decrease by 0.5% | (34.0) | (33.3) |
| ***Rate of pension payable increase*** | | |
| Increase by 0.5% | 107.0 | 103.1 |
| Decrease by 0.5% | (97.2) | (92.0) |
| ***Life expectancy*** | | |
| Increase by 1 year | 60.0 | 53.9 |
| Decrease by 1 year | (60.0) | (55.5) |

| As at 31 March | **Directors' pensions** Increase / (decrease) in defined benefit obligation | |
|---|---|---|
| *SDR millions* | **2021** | 2020 |
| ***Discount rate*** | | |
| Increase by 0.5% | (0.7) | (0.7) |
| Decrease by 0.5% | 0.8 | 0.8 |
| ***Rate of pension payable increase*** | | |
| Increase by 0.5% | 0.7 | 0.7 |
| Decrease by 0.5% | (0.6) | (0.6) |
| ***Life expectancy*** | | |
| Increase by 1 year | 0.6 | 0.5 |
| Decrease by 1 year | (0.6) | (0.5) |

| As at 31 March | Post-employment medical benefits<br>Increase / (decrease)<br>in defined benefit obligation | |
|---|---|---|
| *SDR millions* | **2021** | 2020 |
| ***Discount rate*** | | |
| Increase by 0.5% | (64.3) | (58.3) |
| Decrease by 0.5% | 76.6 | 68.6 |
| ***Medical cost inflation rate*** | | |
| Increase by 1.0% | 129.5 | 118.3 |
| Decrease by 1.0% | (95.1) | (87.0) |
| ***Life expectancy*** | | |
| Increase by 1 year | 51.5 | 42.5 |
| Decrease by 1 year | (47.7) | (40.5) |

The above estimates were arrived at by changing each assumption individually, holding other variables constant. They do not include any correlation effects that may exist between variables.

## 13. Share capital

### The Bank's share capital consists of:

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Authorised capital: 600,000 shares, each of SDR 5,000 par value, of which SDR 1,250 is paid up | 3,000.0 | 3,000.0 |
| Issued capital: 568,125 shares (2020: 565,125) | 2,840.6 | 2,825.6 |
| **Paid-up capital (25%)** | **710.2** | 706.4 |

During the financial year ended 31 March 2021, the Bank issued 3,000 shares to the central bank of Vietnam (2020: 3,000 shares each to the central banks of Kuwait and Morocco). As at 31 March 2021 the number of member central banks was 63 (2020: 62).

The number of shares eligible for dividend is:

| As at 31 March | **2021** | 2020 |
|---|---|---|
| Issued shares | 568,125 | 565,125 |
| Shares held in treasury | (1,000) | (1,000) |
| **Outstanding shares eligible for dividend** | **567,125** | 564,125 |
| Of which: | | |
| Eligible for full dividend | 564,125 | 558,125 |
| New shares eligible for dividend pro rata from the value date of subscription | 3,000 | 6,000 |

Shares held in treasury consist of 1,000 shares of the Albanian issue which were suspended in 1977.

## 14. Statutory reserves

The Bank's Statutes provide for application of the Bank's annual net profit, by the Annual General Meeting at the proposal of the Board of Directors, to three specific reserve funds: the legal reserve fund, the general reserve fund and the special dividend reserve fund; the remainder of the net profit after payment of any dividend is generally allocated to the free reserve fund.

*Legal reserve fund.* This fund is currently fully funded at 10% of the Bank's paid-up capital.

*General reserve fund.* After payment of any dividend, 5% of the remainder of the Bank's annual net profit currently must be allocated to the general reserve fund.

*Special dividend reserve fund.* A portion of the remainder of the annual net profit may be allocated to the special dividend reserve fund, which shall be available, in case of need, for paying the whole or any part of a declared dividend. Dividends are normally paid out of the Bank's net profit.

*Free reserve fund.* After the above allocations have been made, any remaining unallocated net profit is generally transferred to the free reserve fund.

Receipts from the subscription of the Bank's shares are allocated to the legal reserve fund as necessary to keep it fully funded, with the remainder being credited to the general reserve fund.

The free reserve fund, general reserve fund and legal reserve fund are available, in that order, to meet any losses incurred by the Bank. In the event of liquidation of the Bank, the balances of the reserve funds (after the discharge of the liabilities of the Bank and the costs of liquidation) would be divided among the Bank's shareholders.

The table below analyses the movements in the Bank's statutory reserves over the last two years:

| *SDR millions* | Legal reserve fund | General reserve fund | Special dividend reserve fund | Free reserve fund | Total statutory reserves |
|---|---|---|---|---|---|
| **Balance at 31 March 2019** | **69.8** | **3,708.3** | **184.0** | **12,364.2** | **16,326.3** |
| Allocation of 2018/19 profit | – | 16.2 | – | 308.2 | 324.4 |
| New shares issued | 0.8 | 216.2 | – | – | 217.0 |
| **Balance at 31 March 2020** | **70.6** | **3,940.7** | **184.0** | **12,672.4** | **16,867.8** |
| Allocation of 2019/20 profit | – | 8.3 | – | 157.2 | 165.5 |
| New shares issued | 0.4 | 108.1 | – | – | 108.5 |
| **Balance at 31 March 2021** | **71.0** | **4,057.2** | **184.0** | **12,829.6** | **17,141.8** |

At 31 March 2021, statutory reserves included share premiums of SDR 1,385.1 million (2020: SDR 1,276.6 million).

In accordance with Article 51 of the Bank's Statutes, the following profit allocation will be proposed at the Bank's Annual General Meeting for the 2021 profit:

| *SDR millions* | 2021 |
|---|---|
| **Net profit** | **1,237.3** |
| **Proposed dividend:** | |
| Proposed dividend | (294.1) |
| **Profit available for allocation** | **943.2** |
| **Proposed transfers to reserves:** | |
| General reserve fund | (47.1) |
| Special dividend reserve fund | (300.0) |
| Free reserve fund | (596.1) |
| **Balance after allocation to reserves** | **–** |

The proposed transfer to the special dividend reserve fund would provide capacity to help smooth future dividend payments.

## 15. Other equity accounts

Other equity accounts comprise the revaluation accounts for FVOCI assets (gold and currency investment assets) as well as the re-measurement gains or losses on defined benefit obligations.

As at 31 March

| *SDR millions* | 2021 | 2020 |
|---|---|---|
| Securities revaluation account | 216.2 | 572.3 |
| Gold revaluation account | 3,436.2 | 3,375.3 |
| Re-measurement of defined benefit obligations | 83.0 | (45.7) |
| **Total other equity accounts** | **3,735.4** | 3,901.9 |

### A. Securities revaluation account

This account contains the difference between the fair value and the amortised cost of the Bank's currency investment assets classified as FVOCI.

| *SDR millions* | Fair value of assets | Historical cost | Securities revaluation account | Gross gains | Gross losses |
|---|---|---|---|---|---|
| **As at 31 March 2021** | 15,790.5 | 15,576.2 | **214.3** | 237.1 | (22.8) |
| As at 31 March 2020 | 16,353.9 | 15,784.2 | 569.7 | 582.7 | (13.0) |

The securities revaluation account at 31 March 2021 includes an ECL impairment provision of SDR –1.9 million (31 March 2020: SDR –2.6 million).

### B. Gold revaluation account

This account contains the difference between the book value and the deemed cost of the Bank's gold investment assets. All of the Bank's gold investment assets were held on 31 March 2003 (when the Bank changed its functional and presentation currency from the gold franc to the SDR). The deemed cost of these assets is approximately SDR 151 per ounce, based on the value of USD 208 per ounce that was applied from 1979 to 2003 following a decision by the Bank's Board of Directors, translated at the 31 March 2003 exchange rate. The movement in the gold revaluation account was as follows:

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Balance at beginning of year | 3,375.3 | 2,568.0 |
| Gold price movement | 60.9 | 807.4 |
| **Balance at end of year** | **3,436.2** | 3,375.3 |

### C. Re-measurement of defined benefit obligations

This account contains the gains and losses from re-measurement of the Bank's post-employment benefit obligations.

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Balance at beginning of year | (45.7) | (238.3) |
| Staff pensions | 159.4 | 37.8 |
| Directors' pensions | (0.3) | 1.2 |
| Post-employment medical benefits | (30.5) | 153.6 |
| **Net movement on the re-measurement of defined benefit obligations** | **128.7** | 192.6 |
| **Balance at end of year** | **83.0** | (45.7) |

Note 12D provides further analysis of the re-measurement of the Bank's post-employment benefit obligations.

## 16. Interest income

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| **Assets classified as amortised cost** | | |
| Cash and cash equivalents | 0.7 | 5.3 |
| Gold loan and sight accounts denominated in gold | 0.9 | 0.7 |
| | **1.6** | 6.0 |
| **Financial assets classified as FVOCI** | | |
| Securities purchased under resale agreements | – | 0.6 |
| Government and other securities | 198.1 | 237.5 |
| | **198.1** | 238.1 |
| **Interest income on liabilities classified as amortised cost** | **55.2** | 38.2 |
| **Total interest income** | **254.9** | 282.3 |

Total interest income is net of "negative" interest income on assets of SDR 160.4 million (2020: SDR 131.2 million).

## 17. Interest expense

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| **Liabilities classified as amortised cost** | | |
| Currency deposits: sight and notice deposit accounts | (13.7) | (321.3) |
| Gold deposits | – | – |
| Securities sold under repurchase agreements | – | (0.6) |
| Interest on lease liabilities | (0.1) | (0.2) |
| | **(13.8)** | (322.1) |
| **Interest expense on assets classified as amortised cost or FVOCI** | **(160.4)** | (131.2) |
| **Total interest expense** | **(174.2)** | (453.3) |

Total interest expense is net of "negative" interest expense on liabilities classified as amortised cost of SDR 55.2 million (2020: SDR 38.2 million).

## 18. Change in ECL impairment provision

The Bank assesses impairment of financial assets which are classified as either FVOCI or amortised cost, and also in relation to loan commitments. The Bank takes a prudent stance on investments and managing its credit exposures. It monitors its exposures on an ongoing basis. It uses its standard credit risk methodology for assessing ECL and related key inputs for its ECL calculation, including estimates for probability-of-default (PDs), loss-given-default (LGDs) and exposure-at-default (EADs) for individual exposures. No significant changes in estimation techniques were made during the reporting period.

Estimating ECL involves judgment. At the start of the financial year, financial markets responded with substantial volatility to concerns regarding the increased uncertainty in economic outlook. However, significant support from governments and central banks, together with progress in managing the health and economic impact of the Covid pandemic, resulted in an improvement in economic outlook and market environment. While there were a limited number of internal rating downgrades over the last financial year, the overall credit quality of the portfolio has remained robust. The review of credit exposures in scope of the ECL calculation, notwithstanding these modest internal rating changes, concluded that all credit exposures were assessed to be in stage 1 during the financial years ended 31 March 2021, unchanged from 31 March 2020.

All credit exposures were assessed to be in stage 1 during the financial years ended 31 March 2021 and 31 March 2020.

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Financial assets classified as amortised cost | – | – |
| Financial assets classified as FVOCI | 0.8 | (1.8) |
| Loan commitments | – | – |
| **Net change in ECL impairment provision** | **0.8** | (1.8) |

## 19. Net income on financial assets and liabilities at fair value through profit and loss

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| **Financial assets** | | |
| Securities purchased under resale agreements | (127.6) | 223.0 |
| Loans and advances | 204.3 | 632.0 |
| Government and other securities | 514.8 | 1,040.5 |
| | **591.5** | 1,895.5 |
| **Financial liabilities** | | |
| Currency deposits | (658.2) | (4,419.2) |
| | **(658.2)** | (4,419.2) |
| **Derivative financial instruments** | **1,377.1** | 3,077.7 |
| **Net income on financial assets and liabilities at FVPL** | **1,310.4** | 554.0 |

The net income on financial assets and liabilities at fair value through profit and loss comprises the accrual of effective interest, along with realised and unrealised valuation movements, as further analysed in the following table:

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| **Financial assets** | | |
| Interest | 636.5 | 1,519.8 |
| Realised and unrealised valuation movements | (45.1) | 375.7 |
| | **591.4** | 1,895.5 |
| **Financial liabilities** | | |
| Interest | (1,176.9) | (3,471.6) |
| Realised and unrealised valuation movements | 518.7 | (947.6) |
| | **(658.2)** | (4,419.2) |
| **Derivative financial instruments** | | |
| Interest | 1,479.6 | 2,934.0 |
| Realised and unrealised valuation movements | (102.4) | 143.7 |
| | **1,377.2** | 3,077.7 |
| **Net income on financial assets and liabilities at FVPL** | **1,310.4** | 554.0 |

## 20. Net gain on sales of currency assets at FVOCI

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Disposal proceeds | 5,704.5 | 5,445.0 |
| Amortised cost | (5,576.9) | (5,335.8) |
| **Net gain on sales of currency assets at FVOCI** | **127.6** | 109.2 |
| Comprising: | | |
| Gross realised gains | 163.3 | 110.3 |
| Gross realised losses | (35.7) | (1.1) |

## 21. Net gain on sales of gold investment assets

The Bank did not sell any own gold during the financial years ended 31 March 2021 and 31 March 2020.

## 22. Net fee income

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Third-party asset management net fee income | 16.9 | 14.6 |
| Other income | 5.5 | 4.4 |
| Withholding taxes | (5.3) | (8.6) |
| Other fees and expenses | (10.4) | (7.4) |
| **Net fee income** | **6.7** | 3.0 |

## 23. Net foreign exchange income

For the financial year ended 31 March

| *SDR millions* | 2021 | 2020 |
|---|---|---|
| Net transaction gain | 13.5 | 22.2 |
| Net translation movement | 14.0 | (9.2) |
| **Net foreign exchange income** | **27.5** | 13.0 |

## 24. Administrative expense

The following table analyses the Bank's administrative expense in Swiss francs (CHF), the currency in which most expenditure is incurred:

For the financial year ended 31 March

| *CHF millions* | 2021 | 2020 |
|---|---|---|
| **Board of Directors** | | |
| Directors' fees | 2.1 | 2.0 |
| Pensions to former Directors | 0.7 | 1.0 |
| Travel and other costs | - | 1.2 |
| | **2.8** | 4.2 |
| **Management and staff** | | |
| Remuneration | 154.1 | 156.6 |
| Pensions | 71.6 | 97.4 |
| Other personnel-related expense | 60.1 | 64.2 |
| | **285.8** | 318.2 |
| **Office and other expense** | **72.1** | 89.7 |
| **BIS administrative expense** | **360.7** | 412.1 |
| Direct contributions to hosted international organisations | 15.2 | 15.7 |
| **Total administrative expenses in CHF millions** | **375.9** | 427.8 |
| **Total administrative expense in SDR millions** | **288.8** | 315.3 |

The average number of full-time equivalent senior officials and officials employed on behalf of the Bank during the financial year ended 31 March 2021 was 612 (2020: 595). In addition to the above regular BIS staff, the Bank accommodates up to 12 graduates a year and supports secondments from other organisations. The Bank also employs a small number of cleaners (currently five). The cost of all employees employed on behalf of the Bank is included within management and staff expense.

The Bank hosts the secretariats of three independent associations – the FSB, the IADI and the IAIS. The Bank makes a financial contribution to support these international associations including paying some salaries and other post-employment costs. These amounts are shown under "Direct contributions to hosted organisations". The staff employed on behalf of the independent associations are not included within the average number of employees quoted above. The Bank also provides indirect support for these organisations, in the form of logistical, administrative and staffing-related support. The cost of this support is included within the Bank's regular administrative expense categories.

## 25. Dividend per share

| For the financial year ended 31 March | 2021 | 2020 |
|---|---|---|
| Net profit for the financial year (SDR millions) | 1,237.3 | 165.5 |
| Weighted average number of shares eligible for dividend | 565,522.3 | 558,764.3 |
| Dividend per share (SDR per share) | 520.0 | – |
| **Total dividend (SDR millions)** | **294.1** | – |

Due to the exceptional circumstances of the Covid-19 pandemic, the Bank did not pay a dividend for the financial year ended 31 March 2020.

## 26. Exchange rates

The following table shows the principal exchange rates and prices used to translate balances in foreign currency and gold into SDR:

| | Spot rate as at 31 March | | Average rate for the financial year | |
|---|---|---|---|---|
| | **2021** | 2020 | **2021** | 2020 |
| USD | 0.705 | 0.731 | 0.710 | 0.726 |
| EUR | 0.828 | 0.802 | 0.828 | 0.807 |
| JPY | 0.0064 | 0.0068 | 0.0067 | 0.0067 |
| GBP | 0.973 | 0.910 | 0.928 | 0.923 |
| Renminbi | 0.108 | 0.103 | 0.105 | 0.104 |
| CHF | 0.749 | 0.759 | 0.769 | 0.736 |
| Gold (per ounce) | 1,196.8 | 1,178.3 | 1,294.3 | 1,062.4 |

## 27. Off-balance sheet items

The following items are not included in the Bank’s balance sheet:

| As at 31 March<br>*SDR millions* | 2021 | 2020 |
|---|---|---|
| Gold bars held under earmark arrangements | 15,015.1 | 14,386.1 |
| Nominal value of securities: | | |
| Securities held under safe custody arrangements | 2,065.3 | 2,164.3 |
| Securities held under collateral pledge agreements | – | 39.3 |
| Net asset value of portfolio management mandates: | | |
| BISIPs | 18,091.1 | 16,030.6 |
| Dedicated mandates | 4,238.5 | 4,145.5 |

Gold bars held under earmark arrangements comprise specific gold bars which have been deposited with the Bank on a custody basis. They are included at their weight in gold (translated at the gold market price and the USD exchange rate into SDR). At 31 March 2021, gold bars held under earmark amounted to 390 tonnes of gold (2020: 380 tonnes).

Portfolio management mandates include BIS Investment Pools and dedicated mandates.

The BISIPs are a range of open-ended investment funds created by the Bank. The BISIPs do not have a separate legal personality from the Bank, but are a series of separate reporting entities, each with its own financial statements. The Bank has an agency relationship with the BISIPs. Transactions are conducted in the name of the BIS, and investments are held by a custodian appointed by the BIS, but all of the economic benefit lies with the BISIP customers. The Bank does not invest for its own account in the BISIPs. Because the Bank does not participate in the risks or rewards of the BISIPs, the financial instruments transacted on behalf of the BISIPs are excluded from the BIS balance sheet, and are reported as off-balance sheet items.

Dedicated mandates are portfolios which are managed by the Bank in accordance with investment guidelines set by the customer. Transactions are conducted in the name of the customer, investments are held by a custodian appointed by the customer, and all of the economic benefit lies with the customer. Because the Bank does not participate in the risks or rewards of the dedicated mandates, the financial instruments transacted on behalf of the dedicated mandates are excluded from the BIS balance sheet, and are reported as off-balance sheet items.

The Bank transacts derivative financial instruments on behalf of the BISIPs and dedicated mandates. Such derivatives are governed by the Bank's ISDA contracts, and are subject to the netting and offsetting arrangements specified in those contracts. In certain circumstances, derivatives transacted on behalf of BISIPs and dedicated mandates could be offset against other derivatives transacted by the BIS on behalf of the Bank, the staff pension fund, other BISIPs or other dedicated mandates. For this reason, all derivatives transacted by the Bank are included in the Bank's balance sheet. Such derivatives transacted on behalf of BISIPs and dedicated mandates are represented in the BIS balance sheet along with an equal and offsetting transaction between the Bank and the BISIP or dedicated mandate.

For both the BISIPs and the dedicated mandates, the Bank is remunerated by a management fee which is included under "Net fee income" in the profit and loss account.

## 28. Commitments

The Bank provides a number of committed standby facilities for its customers on a collateralised or uncollateralised basis. At 31 March 2021, there were no outstanding commitments that were collateralised (2020: nil), and SDR 211.6 million of uncollateralised commitments (2020: SDR 219.4 million).

The BIS is committed to supporting the operations of the three independent associations – the FSB, IADI and the IAIS. In each case, the Bank has a separate agreement specifying the terms of support and the length of the commitment. In accordance with these agreements, the Bank was the legal employer of 75 staff members (2020: 73) working in the secretariats of the hosted international organisations.

## 29. Fair value hierarchy

The Bank categorises its financial instrument fair value measurements using a hierarchy that reflects the observability of inputs used in measuring that value. A valuation level is assigned according to the least observable input that is significant to the fair value measurement in its entirety. An input is determined to be significant if its contribution to the value of the financial instrument is greater than 5%. Market liquidity is a consideration in determining whether an input is observable, and hence its fair value hierarchy level. The fair value hierarchy used by the Bank comprises the following levels:

Level 1 – Instruments valued using unadjusted quoted prices in active markets for identical financial instruments.

Level 2 – Instruments valued with valuation techniques using inputs which are observable for the financial instrument either directly (ie as a price) or indirectly (ie derived from prices for similar financial instruments). This includes observable interest and foreign exchange rates, spreads and volatilities.

Level 3 – Instruments valued using valuation techniques where the significant inputs are not observable in financial markets. This includes illiquid prices and spreads derived from illiquid prices.

**As at 31 March 2021**

| *SDR millions* | Level 1 | Level 2 | Level 3 | **Total** |
|---|---|---|---|---|
| **Financial assets classified as FVPL** | | | | |
| Securities purchased under resale agreements | – | 78,572.0 | – | 78,572.0 |
| Loans and advances | – | 45,544.4 | – | 45,544.4 |
| Government and other securities | 84,782.3 | 25,956.9 | 549.8 | 111,289.0 |
| Derivative financial instruments | 2.4 | 7,619.4 | – | 7,621.8 |
| **Financial assets classified as FVOCI** | | | | |
| Government and other securities | 14,816.4 | 830.0 | 144.1 | 15,790.5 |
| **Total financial assets accounted for at fair value** | **99,601.1** | **158,522.7** | **693.9** | **258,817.7** |
| **Financial liabilities classified as FVPL** | | | | |
| Currency deposits | – | (258,021.4) | – | (258,021.4) |
| Securities sold under repurchase agreements | – | – | – | – |
| Derivative financial instruments | (2.8) | (2,205.3) | – | (2,208.1) |
| **Total financial liabilities accounted for at fair value** | **(2.8)** | **(260,226.7)** | **–** | **(260,229.5)** |

As at 31 March 2020

| *SDR millions* | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| **Financial assets classified as FVPL** | | | | |
| Securities purchased under resale agreements | – | 55,869.8 | – | 55,869.8 |
| Loans and advances | – | 54,038.9 | – | 54,038.9 |
| Government and other securities | 60,479.7 | 26,767.0 | 254.3 | 87,501.0 |
| Derivative financial instruments | 4.2 | 3,516.8 | – | 3,521.0 |
| **Financial assets classified as FVOCI** | | | | |
| Securities purchased under resale agreements | – | 148.8 | – | 148.8 |
| Government and other securities | 15,096.1 | 1,109.0 | – | 16,205.1 |
| **Total financial assets accounted for at fair value** | 75,580.0 | 141,450.3 | 254.3 | 217,284.6 |
| **Financial liabilities classified as FVPL** | | | | |
| Currency deposits | – | (200,839.6) | – | (200,839.6) |
| Derivative financial instruments | (4.1) | (3,045.1) | – | (3,049.2) |
| **Total financial liabilities accounted for at fair value** | (4.1) | (203,884.7) | – | (203,888.8) |

### A. Transfers between levels in the fair value hierarchy

Of the debt securities categorised as level 1 as at 31 March 2021, SDR 8,684.9 million related to assets that were categorised as level 2 as at 31 March 2020. Of the debt securities categorised as level 2 as at 31 March 2021, SDR 1,528.2 million related to assets that were categorised as level 1 as at 31 March 2020. Of the debt securities categorised as level 3 as at 31 March 2021, SDR 91.7 million related to debt securities that were categorised as level 1 and SDR 52.4 million related to assets that were categorised as level 2 as at 31 March 2020.

The transfer of assets between levels 1, 2 and 3 reflected specific market conditions existing at the reporting dates that affected the observability of the market prices as defined above. No liabilities or other types of assets were transferred between the fair value hierarchy levels.

### B. Assets and liabilities categorised at fair value level 3

The accuracy of the Bank's valuations is ensured through an independent price verification exercise performed by the valuation control function within the Finance unit.

As at 31 March 2021, a small percentage of the Bank's financial instrument valuations were produced using valuation techniques that utilised significant unobservable inputs. These financial instruments are categorised as level 3. For these instruments, the determination of fair value requires subjective assessment and judgment depending on liquidity, pricing assumptions, the current economic and competitive environment and the risks affecting the specific instrument. In such circumstances, valuation is determined based on Management's own judgments about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk). Both observable and unobservable inputs may be used to determine the fair value of positions that have been classified within level 3. As a result, the unrealised gains and losses for assets and liabilities within level 3 presented in the table below may include changes in fair value that were attributable to both observable and unobservable inputs.

The financial instruments categorised as level 3 comprise illiquid bonds. During the financial period ended 31 March 2021, the Bank categorised SDR 693.9 million of securities as level 3 in the fair value hierarchy.

Of these securities, SDR 435.9 million were valued using illiquid prices, and SDR 258.0 million were valued using illiquid spreads.

**As at 31 March 2021**

| *SDR millions* | FVPL | FVOCI | **Total** |
|---|---|---|---|
| **Balance at the beginning of the year** | **254.3** | **–** | **254.3** |
| Purchases | 390.3 | – | 390.3 |
| Sales | (121.7) | – | (121.7) |
| Transfers in | 101.4 | 144.1 | 245.5 |
| Transfers out | (76.5) | – | (76.5) |
| **Amount recognised in net profit** | **2.0** | **–** | **2.0** |
| **Balance at end of the year** | **549.8** | **144.1** | **693.9** |
| **Unrealised gains relating to assets still held as at the reporting date** | **0.4** | **0.5** | **0.9** |

## C. Quantitative disclosures of valuation techniques

The following table provides the representative range of minimum and maximum values and the associated weighted averages of each significant unobservable input for level 3 assets by the related valuation technique most significant to the related financial instrument.

**As at 31 March 2021**

| | Fair value *(SDR millions)* | Valuation technique | Unobservable input | Minimum value of input | Maximum value of input | Weighted average of input | Unit | Relationship of unobservable input to fair value |
|---|---|---|---|---|---|---|---|---|
| Debt securities | 258.0 | Price | Bond prices | 99.8 | 102.7 | 101.7 | Points | A change in the prices of 1 point would increase / decrease the fair value by SDR 2.6 million |
| Debt securities | 435.9 | Discounted cash flow based on spread to yield curve | Bond spreads | (6.9) | 30.0 | 13.8 | Basis-points | A change in the spreads of 100 basis-points would increase / decrease the fair value by SDR 3.0 million |
| **Total level 3 assets at fair value** | **693.9** | | | | | | | |

## D. Financial instruments not measured at fair value

In accordance with its accounting policies, the Bank accounts for certain financial instruments at amortised cost. Using the same valuation techniques as used for fair valued financial instruments, Management estimates that the fair values of these financial instruments would be materially the same as the carrying values shown in these financial statements for both 31 March 2021 and 31 March 2020. If the valuation of these instruments were categorised using the fair value hierarchy, the valuation of “gold loans” and “securities sold under repurchase agreements” would be considered level 2. All other amortised cost financial instruments would be considered level 1.

### E. Impact of changes in the Bank's creditworthiness

The fair value of the Bank's liabilities may be affected by any change in its creditworthiness. If the Bank's creditworthiness deteriorated, the value of its liabilities would decrease, and the change in value would be reflected as a movement in other comprehensive income. The Bank regularly assesses its creditworthiness as part of its risk management processes. The Bank's assessment of its creditworthiness did not indicate a change which could have had an impact on the fair value of the Bank's liabilities during the period under review.

### F. Valuation of financial assets and liabilities

The Bank is the sole market maker in certain of its currency deposit products, while in other currency deposit products there is no active market. As such, judgment is involved in determining the appropriate assumptions to derive the fair value of currency deposits. The Bank uses valuation techniques to estimate the fair value of its currency deposits. These valuation techniques comprise discounted cash flow models and option pricing models. The discounted cash flow models value the expected cash flows of financial instruments using discount factors that are partly derived from quoted interest rates (eg rates on derivatives) and partly based on assumptions about spreads at which each product would be repurchased from customers. For short-term products, repurchase spreads are based on recent market transactions. For MTIs, repurchase spreads are based on those used when the deposit was sold to the customer. If a deposit was sold with an enhanced rate, the enhancement is reflected in the valuation spread as it would be applied if the Bank were to buy-back the deposit from the customer. The option pricing models include assumptions about volatilities that are derived from market quotes. The valuation of OTC derivatives is also subject to judgment, in particular as a result of the Libor reform.

Stressed market conditions can increase the degree of judgment involved in the valuation of the Bank's financial assets and liabilities. In such circumstances, the Bank reconsiders some of its valuation processes, and applies judgment in determining the appropriate valuation methods and inputs for each financial instrument. Reflecting generally lower market liquidity, level 1 observable prices may not be available for some financial assets, and these may instead be valued using a discounted cash flow model based on a spread to a standard market yield curve. Such valuations are level 2 or level 3, and require estimation of appropriate valuation parameters. Changes in estimates of these parameters could significantly affect the reported fair values. The valuation impact is opposite for a one basis point parallel downward change in the underlying yield curve. Management uses a move of 200 basis points as a stress test. The valuation impact of a 1 basis point parallel upward change in the underlying yield curve assumptions of key financial instruments is shown in the table below:

For the financial year ended 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Securities purchased under resale agreements | (0.4) | (0.2) |
| Loans and advances | (1.2) | (2.0) |
| Government and other securities | (12.1) | (13.1) |
| Currency deposits | 9.7 | 9.2 |
| Derivative financial instruments | 1.0 | 0.7 |

## 30. Geographical analysis

### A. Total liabilities

As at 31 March

| *SDR millions* | **2021** | 2020 |
|---|---|---|
| Africa and Europe | 106,379.6 | 89,916.5 |
| Asia-Pacific | 189,040.5 | 162,483.9 |
| Americas | 31,335.7 | 26,262.0 |
| International organisations | 6,575.6 | 8,195.0 |
| **Balance at end of year** | **333,331.4** | 286,857.4 |

### B. Off-balance sheet items

As at 31 March

| *SDR millions* | **2021** | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Gold bars held under earmark | Nominal value of securities | Net asset value of portfolio management mandates | Gold bars held under earmark | Nominal value of securities | Net asset value of portfolio management mandates |
| Africa and Europe | 6,463.0 | – | 3,993.3 | 6,249.5 | – | 3,598.7 |
| Asia-Pacific | 4,116.8 | 2,065.3 | 11,011.4 | 4,053.1 | 2,164.3 | 10,584.8 |
| Americas | 4,435.3 | – | 7,324.9 | 4,083.5 | 39.3 | 5,992.6 |
| **Total** | **15,015.1** | **2,065.3** | **22,329.6** | 14,386.1 | 2,203.6 | 20,176.1 |

The geographical distribution in the above table reflects the geographical origin of the underlying investors in the above off-balance sheet items, and not the geographical location of the investment assets.

### C. Credit commitments

| As at 31 March<br>*SDR millions* | **2021** | 2020 |
|---|---|---|
| Asia-Pacific | 211.6 | 219.4 |
| **Total** | **211.6** | 219.4 |

## 31. Related parties

The Bank considers the following to be its related parties:

- the members of the Board of Directors;
- the senior officials of the Bank;
- close family members of the above individuals;
- the Bank's post-employment benefit arrangements; and
- central banks whose Governor is a member of the Board of Directors and institutions that are connected with these central banks.

A listing of the members of the Board of Directors and senior officials is shown in the sections of the Annual Report entitled "Board of Directors" and "BIS Management". The Bank provides services to the pension fund on a free-of-charge basis, including investment management, accounting, reporting, valuation and monitoring. Note 12 provides further details of the Bank's post-employment benefit arrangements.

### A. Related party individuals

Note 24 provides details of the total compensation of the Board of Directors.

The total compensation of the senior officials recognised in the profit and loss account amounted to:

| For the financial year ended 31 March<br>*CHF millions* | **2021** | 2020 |
|---|---|---|
| Salaries, allowances and medical cover | 8.6 | 8.0 |
| Post-employment benefits | 2.8 | 2.6 |
| **Total compensation** | **11.4** | 10.6 |
| SDR equivalent in millions | 8.8 | 7.8 |

The Bank offers personal deposit accounts for staff members and Directors. The accounts bear interest at a rate determined by the Bank based on the rate offered by the Swiss National Bank on its staff accounts. The movements and total balance on personal deposit accounts relating to members of the Board of Directors and the senior officials of the Bank were as follows:

For the financial year ended 31 March

| *CHF millions* | **2021** | 2020 |
|---|---|---|
| Balance at beginning of year | 14.9 | 13.2 |
| Deposits taken and other inflows | 2.0 | 2.5 |
| Withdrawals and other outflows | (4.7) | (0.8) |
| **Balance at end of year** | **12.2** | 14.9 |
| SDR equivalent in millions | 9.1 | 11.3 |
| **Interest expense on deposits in CHF millions** | **–** | – |

Balances related to individuals who are appointed as members of the Board of Directors or as senior officials of the Bank during the financial year are included in the table above as other inflows. Balances related to individuals who ceased to be members of the Board of Directors or senior officials of the Bank during the financial year are included in the table above as other outflows.

In addition, the Bank operates a blocked personal deposit account for certain staff members who were previously members of the Bank's savings fund, which closed on 1 April 2003. The terms of these blocked accounts are such that staff members cannot make further deposits or withdrawals and the balances are paid out when they leave the Bank. The accounts bear interest at a rate determined by the Bank based on the rate offered by the Swiss National Bank on its staff accounts plus 1%. The total balance of blocked accounts at 31 March 2021 was SDR 4.8 million (2020: SDR 7.2 million). They are reported under the balance sheet heading "Currency deposits".

### B. Related party institutions

The Bank pays a dividend to its shareholders, as described in note 25. The dividends paid to related party shareholders in the financial year ended 31 March 2020 (for the financial year 2018/19) was SDR 136.7 million. No dividend was paid in the financial year ended 31 March 2021 (for the financial year 2019/20).

The BIS provides banking services to its customers, which are predominantly central banks, monetary authorities and international financial institutions. In fulfilling this role, the Bank, in the normal course of business, enters into transactions with customers which are related parties (as defined above). These transactions include making advances, and taking currency and gold deposits. It is the Bank's policy to enter into transactions with related party customers on similar terms and conditions to transactions with other, non-related party customers. The following tables show balances relating to these transactions, which the Bank believes are representative of the general level of business undertaken with related party customers during the year.

### Balances with related party customers

| As at 31 March | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Balance sheet total | Balance with related parties | | Balance sheet total | Balance with related parties | |
| | *SDR millions* | *SDR millions* | *%* | *SDR millions* | *SDR millions* | *%* |
| **Assets** | | | | | | |
| Cash and cash equivalents | 50,854.6 | **49,160.9** | 96.7 | 54,021.4 | 53,142.0 | 98.4 |
| Securities purchased under resale agreements | 78,572.0 | **2,515.2** | 3.2 | 56,018.6 | 7,012.4 | 12.5 |
| Loans and advances | 45,544.4 | **8,030.3** | 17.6 | 54,038.9 | 227.4 | 0.4 |
| Government and other securities | 127,079.5 | **3,810.4** | 3.0 | 103,706.1 | 3,444.7 | 3.3 |
| Gold and gold loans | 41,665.7 | **41,471.6** | 99.5 | 31,436.8 | 31,369.6 | 99.8 |
| Derivative financial instruments | 7,621.8 | **51.8** | 0.7 | 3,521.0 | 80.8 | 2.3 |
| Other assets | 21.5 | **1.1** | 5.1 | 19.1 | 1.2 | 6.3 |
| **Liabilities** | | | | | | |
| Currency deposits | (288,014.7) | **(135,952.7)** | 47.2 | (250,194.8) | (138,725.3) | 55.4 |
| Gold deposits | (18,848.9) | **(11,480.6)** | 60.9 | (15,221.1) | (11,302.8) | 74.3 |
| Derivative financial instruments | (2,208.1) | **(41.6)** | 1.9 | (3,049.2) | (66.8) | 2.2 |

### Main profit and loss items arising from transactions with related party customers

| For the financial year ended 31 March | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Profit and loss total | Balance with related parties | | Profit and loss total | Balance with related parties | |
| | *SDR millions* | *SDR millions* | *%* | *SDR millions* | *SDR millions* | *%* |
| Interest income | 254.9 | **49.6** | 19.5 | 282.3 | 37.0 | 13.1 |
| Interest expense | (174.2) | **(151.6)** | 87.0 | (453.3) | (329.2) | 72.6 |
| Net change in ECL impairment provision | 0.8 | **–** | – | (1.8) | – | – |
| Net income on financial assets and liabilities at FVPL | | | | | | |
| Financial assets | 591.5 | **27.7** | 4.7 | 1,895.6 | 119.5 | 6.3 |
| Financial liabilities | (658.2) | **(244.6)** | 37.2 | (4,419.2) | (1,796.9) | 40.7 |
| Derivative financial instruments | 1,377.1 | **(1.2)** | (0.1) | 3,077.6 | 73.0 | 2.4 |

## 32. Contingent liabilities

In the opinion of the Bank's Management, there were no significant contingent liabilities at 31 March 2021 (31 March 2020: nil).

# Capital adequacy

## 1. Capital adequacy framework

As an international financial institution that is overseen by a Board composed of Governors of major central banks and that has no national supervisor, the Bank is committed to maintaining its superior credit quality and financial strength, in particular in situations of financial stress.

The Bank assesses its capital adequacy on a continuous basis. Its capital planning process focuses on two elements: an economic capital framework and a financial leverage framework. The disclosures in this section relating to credit, market, operational and liquidity risk are based on the Bank's own assessment of capital adequacy derived in accordance with these two BIS frameworks.

Regulatory capital ratios are not used as indicators of BIS capital adequacy because key aspects of the business model for the BIS banking activities are not adequately captured. In the main, these relate to the high level of solvency targeted by the Bank as well as the way regulatory capital ratios reflect portfolio concentrations and interest rate risk in the banking book.

To facilitate comparability, the Bank has implemented a framework that is consistent with guidance issued by the Basel Committee on Banking Supervision (BCBS). Following this, the Bank discloses a Common Equity Tier 1 capital ratio (Pillar 1), risk-weighted assets and more detailed related information. In addition, the Bank calculates for reference a Liquidity Coverage Ratio.

The Bank maintains a capital position substantially in excess of the regulatory minimum requirement in order to ensure its superior credit quality.

## 2. Economic capital

The Bank's economic capital methodology relates its risk-bearing capacity to the amount of economic capital needed to absorb potential losses arising from its exposures. Consistent with guidance from the BCBS, the risk-bearing capacity is defined as Common Equity Tier 1 capital which is based on components of the Bank's shareholders' equity (as reduced by prudential adjustments) as set out in the following table.

Common Equity Tier 1 capital includes the profit and loss account. It is adjusted by the Bank's current estimate of the amount of the profit and loss account that will be paid as a dividend (the "dividend adjustment"), to ensure that Common Equity Tier 1 capital includes only the component of the profit and loss account that is expected to be allocated to statutory reserves.

As at 31 March

| *SDR millions* | **2021** | 2020 |
| --- | --- | --- |
| Share capital | 710.2 | 706.4 |
| Statutory reserves per balance sheet | 17,141.8 | 16,867.8 |
| Less: shares held in treasury | (1.7) | (1.7) |
| **Share capital and reserves** | **17,850.2** | 17,572.5 |
| Securities revaluation account | 216.2 | 572.3 |
| Gold revaluation account | 3,436.2 | 3,375.3 |
| Re-measurement of defined benefit obligations | 83.0 | (45.7) |
| **Other equity accounts** | **3,735.4** | 3,901.9 |
| Expected loss | (151.8) | (59.4) |
| Intangible assets | (29.4) | (24.3) |
| **Prudential adjustments** | **(181.1)** | (83.7) |
| **Profit and loss account** | **1,237.3** | 165.5 |
| **Dividend adjustment** | **(294.1)** | – |
| **Common Equity Tier 1 capital** | **22,347.8** | 21,556.2 |

As part of the capital planning process, Management allocates economic capital to risk categories within its risk-bearing capacity. Allocations are made to each category of financial risk (ie credit and market risk) as well as operational risk. Capital is also assigned to a minimum cushion of capital that is not utilised by risk categories (“minimum capital cushion”) providing an additional margin of safety. The difference between its risk-bearing capacity and the total economic capital utilisation, the "available economic capital", is available for further risk-taking.

Reflecting the high level of solvency targeted by the Bank, the economic capital framework measures economic capital to a 99.99% confidence level assuming a one-year horizon, except for FX settlement risk. The amount of economic capital set aside for FX settlement risk is based on an assessment by Management. The Bank’s economic capital framework is subject to regular review and calibration.

The following table summarises the Bank’s economic capital allocation and utilisation as well as the resulting available economic capital:

| As at 31 March | 2021 | | 2020 | |
|---|---|---|---|---|
| *SDR millions* | Allocation | Utilisation | Allocation | Utilisation |
| Insolvency and transfer risk | 7,700.0 | 6,050.4 | 7,400.0 | 5,931.4 |
| FX settlement risk | 400.0 | 400.0 | 300.0 | 300.0 |
| Credit risk | 8,100.0 | 6,450.4 | 7,700.0 | 6,231.4 |
| Market risk | 5,300.0 | 3,987.6 | 4,200.0 | 3,807.0 |
| Operational risk | 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 |
| Minimum capital cushion | 3,352.2 | 3,352.2 | 3,233.4 | 3,233.4 |
| **Total economic capital (A)** | **17,852.2** | **14,890.2** | 16,233.4 | 14,371.8 |
| **Common Equity Tier 1 capital (B)** | | **22,347.8** | | 21,556.2 |
| **Available economic capital (B) – (A)** | | **7,457.6** | | 7,184.4 |

## 3. Financial leverage

The Bank complements its capital adequacy assessment with a financial leverage framework using a ratio that compares the Bank's Common Equity Tier 1 capital with its total exposure. The exposure measure is supplemented by the pension fund asset value as well as regulatory exposure adjustments relating to committed and uncommitted facilities, repurchase agreements and derivatives.

The following table shows the calculation of the Bank's financial leverage ratio:

| As at 31 March<br>*SDR millions* | 2021 | 2020 |
|---|---|---|
| **Common Equity Tier 1 capital (A)** | **22,347.8** | 21,556.2 |
| **Total balance sheet assets** | **356,154.4** | 308,497.3 |
| Derivatives | 7,346.0 | 2,775.8 |
| Securities purchased under resale agreements | 25.4 | 10.1 |
| Committed and uncommitted facilities | 4,979.1 | 3,745.2 |
| Pension fund assets | 1,286.1 | 1,109.6 |
| **Exposure adjustments** | **13,636.6** | 7,640.7 |
| **Total BIS exposure (B)** | **369,791.0** | 316,138.0 |
| **BIS leverage ratio (A) / (B)** | **6.0%** | 6.8% |

## 4. Common Equity Tier 1 capital ratio

The economic capital framework and the financial leverage framework described above are the main tools used for assessing the Bank's capital adequacy. Risk-weighted assets, minimum capital requirements and the Common Equity Tier 1 capital ratio are disclosed to facilitate comparability. Guidance issued by the BCBS includes several approaches for calculating risk-weighted assets and the corresponding minimum capital requirements. In principle, the minimum capital requirements are determined by taking 8% of the risk-weighted assets.

For credit risk, the Bank has adopted the advanced internal ratings-based approach for the majority of its exposures. Under this approach, the risk weighting for a transaction is determined by the relevant Basel risk weight function using the Bank's own estimates for key inputs. Expected loss is calculated for credit risk exposures subject to the advanced internal ratings-based approach and is calculated at the balance sheet date. In accordance with the requirements of the Basel Framework, the expected loss is compared with write-offs, if applicable, and any shortfall is deducted from the Bank's Common Equity Tier 1 capital. For securitisation exposures and relevant other assets, the Bank has adopted the standardised approach. Under this approach, risk weightings are mapped to exposure types.

Risk-weighted assets for market risk are derived following an internal models approach based on a value-at-risk (VaR) methodology calibrated to stressed and non-stressed market conditions. For operational risk, the advanced measurement approach is used. This approach also relies on VaR.

More details on the assumptions underlying the calculations are provided in the sections on credit risk, market risk and operational risk.

The following table provides information on risk-weighted assets and related minimum capital requirements:

| As at 31 March | | **2021** | | | 2020 | | |
|---|---|---|---|---|---|---|---|
| | Approach used | Amount of exposure | Risk-weighted assets | Minimum capital requirement | Amount of exposure | Risk-weighted assets | Minimum capital requirement |
| *SDR millions* | | | (A) | (B) | | (A) | (B) |
| **Credit risk** | | | | | | | |
| Exposure to sovereigns, banks and corporates | Advanced internal ratings-based approach, where (B) is derived as (A) x 8% | 227,562.6 | 30,400.6 | 2,432.0 | 218,276.3 | 31,124.7 | 2,490.0 |
| Securitisation exposures and other assets | Standardised approach, where (B) is derived as (A) x 8% | 413.1 | 1,423.0 | 113.8 | 642.7 | 1,287.1 | 103.0 |
| **Market risk** | | | | | | | |
| Exposure to foreign exchange risk and gold price risk | Internal models approach, where (A) is derived as (B) / 8% | – | 37,453.7 | 2,996.3 | – | 27,562.9 | 2,205.0 |
| **Operational risk** | | | | | | | |
| | Advanced measurement approach, where (A) is derived as (B) / 8% | – | 8,957.5 | 716.6 | – | 8,909.2 | 712.7 |
| **Total** | | | **78,234.7** | **6,258.8** | | 68,883.9 | 5,510.7 |

The Common Equity Tier 1 capital ratio is set out in the following table:

| As at 31 March | | |
|---|---|---|
| *SDR millions* | **2021** | 2020 |
| **Total Common Equity Tier 1 capital (A)** | **22,347.8** | 21,556.2 |
| **Total risk-weighted assets (B)** | **78,234.7** | 68,883.9 |
| **Common Equity Tier 1 capital ratio (A) / (B)** | **28.6%** | 31.3% |

# Risk management

## 1. Risks faced by the Bank

The Bank supports its customers, predominantly central banks, monetary authorities and international financial institutions, in the management of their reserves and related financial activities.

Banking activities form an essential element of meeting the Bank's objectives and ensure its financial strength and independence. The BIS engages in banking activities that are customer-related as well as activities that are related to the investment of its shareholders' equity, each of which may give rise to financial risk comprising credit risk, market risk and liquidity risk. The Bank is also exposed to operational risk.

Within the risk frameworks defined by the Board of Directors, the Management of the Bank has established risk management policies designed to ensure that risks are identified, appropriately measured and controlled as well as monitored and reported.

## 2. Risk management approach and organisation

The Bank maintains superior credit quality and adopts a prudent approach to financial risk-taking, by:

- maintaining an exceptionally strong capital position;
- investing its assets predominantly in high credit quality financial instruments;
- seeking to diversify its assets across a range of sectors;
- adopting a conservative approach to its tactical market risk-taking and carefully managing market risk associated with the Bank's strategic positions, which include its gold holdings; and
- maintaining a high level of liquidity.

### A. Organisation

Under Article 39 of the Bank's Statutes, the General Manager is responsible to the Board for the management of the Bank, and is assisted by the Deputy General Manager. The Deputy General Manager is responsible for the Bank's independent risk management and compliance functions. The General Manager and the Deputy General Manager are supported by senior management advisory committees.

The key advisory committees are the Executive Committee and the Finance Committee. Both committees are chaired by the General Manager, and include other senior members of the Bank's Management. The Executive Committee advises the General Manager primarily on the Bank's strategic planning and the allocation of resources, as well as on decisions related to the broad financial objectives for the banking activities and strategic operational risk management issues. The Finance Committee advises the General Manager on the financial management and policy issues related to the banking business, including the allocation of economic capital to risk categories.

The independent risk management function for financial risks is performed by the Risk Management unit. The Head of Risk Management reports to the Deputy General Manager. The independent risk management function for operational risk is performed by the Operational Transformation and Resiliency unit. The Head of Operational Transformation and Resiliency reports to the Deputy Secretary General.

The Bank's independent compliance function is performed by the Compliance unit. The objective of this function is to assist Management in ensuring that all activities of the BIS and its staff are conducted in accordance with compliance, rules and standards. The Chief Compliance Officer reports to the Deputy General Manager and also has a direct access to the Audit Committee, which is an advisory committee to the Board of Directors.

As part of its efforts to strengthen the implementation of its three lines of defence approach, the Bank has undertaken a review of roles and responsibilities related to compliance and conduct risks across the organisation. In May 2021, the Bank decided to reallocate responsibilities. As a result, the Risk Management function, jointly with the Legal Service, will provide guidance on and monitor compliance risk related to BIS banking services. In addition, a new Conduct and Ethics unit will be established to underline the strategic importance of ethics for the Bank and its corporate culture.

The Finance unit and the Legal Service complement the Bank's risk management. The Finance unit operates a valuation control function, produces the Bank's financial statements and controls the Bank's expenditure by setting and monitoring the annual budget. The objective of the valuation control function is to ensure that the Bank's valuations comply with its valuation policy and procedures. The Finance unit reports to the Deputy General Manager and the Secretary General.

The Legal Service provides legal advice and support covering a wide range of issues relating to the Bank's activities. The Legal Service reports to the General Manager.

The Internal Audit function evaluates and improves the effectiveness of risk management, control, and governance systems and processes. Internal Audit provides an independent, objective assurance function, and advises on best practice. Internal Audit has reporting lines to the General Manager and the Deputy General Manager, and to the Audit Committee.

### B. Risk monitoring and reporting

The Bank's financial and operational risk profile, position and performance are monitored on an ongoing basis by the relevant units. Financial risk, operational risk and compliance reports aimed at various management levels are provided regularly to enable Management to adequately assess the Bank's risk profile and financial condition.

Management reports financial and risk information to the Board of Directors on a monthly and a quarterly basis. Furthermore, the Audit Committee receives regular reports from Internal Audit, and the Compliance, Finance and Operational Transformation and Resiliency units. The Banking and Risk Management Committee, another advisory committee to the Board, receives regular reports from the Risk Management unit. The preparation of reports is subject to comprehensive policies and procedures, thus ensuring strong controls.

### C. Risk methodologies

The Bank revalues virtually all of its financial instruments to fair value on a daily basis and reviews its valuations monthly, taking into account necessary adjustments for impairment. It uses a comprehensive range of quantitative methodologies for valuing financial instruments and for measuring risk to its net profit and equity. The Bank reassesses its quantitative methodologies in the light of its changing risk environment and evolving best practice.

The Bank's model validation policy defines the roles and responsibilities and processes related to the implementation of new or materially changed risk and valuation models.

A key methodology used by the Bank to measure and manage risk is the calculation of economic capital based on value-at-risk (VaR) techniques. VaR expresses the statistical estimate of the maximum potential loss on the current positions of the Bank measured to a specified level of confidence and a specified time horizon. VaR models depend on statistical assumptions and the quality of available market data and, while forward-looking, they extrapolate from past events. VaR models may underestimate potential losses if changes in risk factors fail to align with the distribution assumptions. VaR figures do not provide any information on losses that may occur beyond the assumed confidence level.

The Bank's economic capital framework covers credit risk, market risk and operational risk. As part of the capital planning process, the Bank allocates economic capital to the above risk categories commensurate with principles set by the Board and taking account of the business strategy. Reflecting the high level of solvency targeted by the Bank, the economic capital framework measures economic capital to a 99.99% confidence level assuming a one-year time horizon. An additional amount of economic capital is allocated for FX settlement risk based on Management's risk assessment. Moreover, capital is set aside for a "minimum capital cushion" which provides an additional margin of safety.

The management of the Bank's capital adequacy is complemented by a comprehensive stress testing framework, and a financial leverage framework. The stress testing framework supplements the Bank's risk assessment, including its VaR and economic capital calculations for financial risk. The Bank's key market risk factors and credit exposures are stress-tested. The stress testing includes the analysis of severe historical and adverse hypothetical macroeconomic scenarios, as well as sensitivity tests of extreme but still plausible movements of the key risk factors identified. The Bank also performs stress tests related to liquidity risk. The financial leverage framework focuses on a ratio that sets the Common Equity Tier 1 capital in relation to its total balance sheet exposure.

## 3. Credit risk

Credit risk arises because a counterparty may fail to meet its obligations in accordance with the agreed contractual terms and conditions. A financial asset is considered past due when a counterparty fails to make a payment on the contractual due date.

The Bank manages credit risk within a framework and policies set by the Board of Directors and Management. These are complemented by more detailed guidelines and procedures at the level of the independent risk management function.

### A. Credit risk assessment

Credit risk is continuously controlled at both a counterparty and an aggregated level. The independent risk management function performs individual counterparty credit assessments following a well-defined internal rating process. As part of this process, counterparty financial statements and market information are analysed. The rating methodologies depend on the nature of the counterparty. Based on the internal rating and specific counterparty features, the Bank sets a series of credit limits covering individual counterparties and countries. Internal ratings are assigned to all counterparties. The ratings and related limits are reviewed at least annually for counterparties with internal ratings (expressed as equivalent external ratings) of 'A' or below. The main assessment criterion in these reviews is the ability of the counterparties to meet interest and principal repayment obligations in a timely manner.

Credit risk limits at the counterparty level are approved by the Bank's Management and fit within a framework set by the Board of Directors.

On an aggregated level, credit risk, including default and country transfer risk, is measured, monitored and controlled based on the Bank's economic capital calculation for credit risk. To calculate economic capital for credit risk, the Bank uses a portfolio VaR model. Management limits the Bank's overall exposure to credit risk by allocating an amount of economic capital to credit risk.

## B. Default risk

The tables in this section show the exposure of the Bank to default risk, without taking into account any impairment allowance, collateral held or other credit enhancements available to the Bank. Credit risk is mitigated through the use of collateral and legally enforceable netting or setoff agreements. The corresponding assets and liabilities are not offset on the balance sheet.

The exposures set out in the tables below are based on the gross carrying value of the assets in the balance sheet as categorised by sector, geographical region and credit quality. The gross carrying value is the fair value of the financial instruments, except in the case of very short-term financial instruments (sight and notice accounts) and gold. Provisions for estimated credit losses on instruments valued at amortised cost are not included in the exposure amounts. Commitments are reported at their notional amounts. Gold and gold loans exclude gold bar assets held in custody at central banks, and accounts receivable and other assets do not include unsettled liabilities issued because these items do not represent credit exposures of the Bank.

The substantial majority of the Bank's assets are placed in local currency central bank cash, or in securities issued by governments and financial institutions rated A– or above by at least one of the major external credit assessment institutions. Limitations on the number of high-quality counterparties in these sectors mean that the Bank is exposed to single-name concentration risk. As at 31 March 2021, excluding local currency cash at central banks and exposures largely mitigated by collateral arrangements, there was one advanced economy sovereign comprising more than 5% of the total on-balance sheet exposure reported in the tables below. This exposure was between 10% and 15% of the total on-balance sheet exposure (31 March 2020: one exposure between 10% and 15%).

### Default risk by asset class and issuer type

The following tables show the exposure of the Bank to default risk by asset class and issuer type, without taking into account any impairment loss allowance, collateral held or other credit enhancements available to the Bank. "Public sector" includes international and other public sector institutions.

**As at 31 March 2021**

| *SDR millions* | Sovereign and central banks | Public sector | Banks | Corporate | Securitisation | Total |
|---|---|---|---|---|---|---|
| **On-balance sheet exposure** | | | | | | |
| Cash and cash equivalents | 50,151.0 | 635.3 | 68.3 | – | – | 50,854.6 |
| Gold and gold loans | 479.4 | – | 194.1 | – | – | 673.5 |
| Securities purchased under resale agreements | 5,074.4 | – | 58,832.5 | 14,665.1 | – | 78,572.0 |
| Loans and advances | 12,120.3 | 82.7 | 33,341.4 | – | – | 45,544.4 |
| Government and other securities | 93,959.5 | 15,632.3 | 8,350.8 | 8,945.3 | 191.6 | 127,079.5 |
| Derivative financial instruments | 345.9 | 15.2 | 7,260.1 | 0.6 | – | 7,621.8 |
| Accounts receivable and other assets | 8.1 | 31.7 | 1,437.9 | 5.9 | – | 1,483.6 |
| **Total on-balance sheet exposure** | **162,138.6** | **16,397.2** | **109,485.1** | **23,616.9** | **191.6** | **311,829.4** |
| **Commitments** | | | | | | |
| Undrawn unsecured facilities | 211.6 | – | – | – | – | 211.6 |
| **Total commitments** | **211.6** | **–** | **–** | **–** | **–** | **211.6** |
| **Total exposure** | **162,350.2** | **16,397.2** | **109,485.1** | **23,616.9** | **191.6** | **312,041.0** |

As at 31 March 2020

| SDR millions | Sovereign and central banks | Public sector | Banks | Corporate | Securitisation | Total |
|---|---|---|---|---|---|---|
| **On-balance sheet exposure** | | | | | | |
| Cash and cash equivalents | 53,137.3 | 577.3 | 306.8 | – | – | 54,021.4 |
| Gold and gold loans | 224.1 | – | 67.2 | – | – | 291.3 |
| Securities purchased under resale agreements | 7,012.4 | – | 36,120.9 | 12,885.3 | – | 56,018.6 |
| Loans and advances | 5,072.8 | 40.0 | 48,926.1 | – | – | 54,038.9 |
| Government and other securities | 73,563.3 | 11,328.9 | 9,138.7 | 9,258.1 | 417.1 | 103,706.1 |
| Derivative financial instruments | 251.4 | 7.4 | 3,261.8 | 0.4 | – | 3,521.0 |
| Accounts receivable and other assets | 5.9 | 4.5 | 193.4 | 5.8 | – | 209.6 |
| **Total on-balance sheet exposure** | 139,267.2 | 11,958.1 | 98,014.9 | 22,149.6 | 417.1 | 271,806.9 |
| **Commitments** | | | | | | |
| Undrawn unsecured facilities | 219.4 | – | – | – | – | 219.4 |
| **Total commitments** | 219.4 | – | – | – | – | 219.4 |
| **Total exposure** | 139,486.6 | 11,958.1 | 98,014.9 | 22,149.6 | 417.1 | 272,026.3 |

## Default risk by geographical region

The following tables represent the exposure of the Bank to default risk by asset class and geographical region, without taking into account any impairment loss allowance, collateral held or other credit enhancements available to the Bank. Exposures are allocated to regions based on the country of incorporation of each legal entity.

**As at 31 March 2021**

| SDR millions | Africa and Europe | Asia-Pacific | Americas | International institutions | Total |
|---|---|---|---|---|---|
| **On-balance sheet exposure** | | | | | |
| Cash and cash equivalents | 38,665.6 | 11,524.9 | 28.8 | 635.3 | 50,854.6 |
| Gold and gold loans | 673.5 | – | – | – | 673.5 |
| Securities purchased under resale agreements | 65,081.8 | 10,516.6 | 2,973.6 | – | 78,572.0 |
| Loans and advances | 38,813.9 | 4,614.4 | 2,116.1 | – | 45,544.4 |
| Government and other securities | 38,569.1 | 56,996.1 | 27,334.4 | 4,179.9 | 127,079.5 |
| Derivative financial instruments | 5,917.7 | 456.5 | 1,238.2 | 9.4 | 7,621.8 |
| Accounts receivable and other assets | 1,410.3 | 3.7 | 69.5 | 0.1 | 1,483.6 |
| **Total on-balance sheet exposure** | **189,131.9** | **84,112.2** | **33,760.6** | **4,824.7** | **311,829.4** |
| **Commitments** | | | | | |
| Undrawn unsecured facilities | – | 211.6 | – | – | 211.6 |
| **Total commitments** | **–** | **211.6** | **–** | **–** | **211.6** |
| **Total exposure** | **189,131.9** | **84,323.8** | **33,760.6** | **4,824.7** | **312,041.0** |

As at 31 March 2020

| SDR millions | Africa and Europe | Asia-Pacific | Americas | International institutions | Total |
|---|---|---|---|---|---|
| **On-balance sheet exposure** | | | | | |
| Cash and cash equivalents | 27,224.9 | 26,178.2 | 41.0 | 577.3 | 54,021.4 |
| Gold and gold loans | 291.3 | – | – | – | 291.3 |
| Securities purchased under resale agreements | 40,385.1 | 8,621.1 | 7,012.4 | – | 56,018.6 |
| Loans and advances | 37,533.2 | 9,272.8 | 7,232.9 | – | 54,038.9 |
| Government and other securities | 33,636.1 | 41,652.4 | 23,961.5 | 4,456.1 | 103,706.1 |
| Derivative financial instruments | 2,861.5 | 376.0 | 280.3 | 3.2 | 3,521.0 |
| Accounts receivable and other assets | 11.1 | 2.6 | 194.6 | 1.3 | 209.6 |
| **Total on-balance sheet exposure** | 141,943.2 | 86,103.1 | 38,722.7 | 5,037.9 | 271,806.9 |
| **Commitments** | | | | | |
| Undrawn unsecured facilities | – | 219.4 | – | – | 219.4 |
| **Total commitments** | – | 219.4 | – | – | 219.4 |
| **Total exposure** | 141,943.2 | 86,322.5 | 38,722.7 | 5,037.9 | 272,026.3 |

## Default risk by counterparty / issuer rating

The following tables show the exposure of the Bank to default risk by class of financial asset and counterparty /issuer rating, without taking into account any impairment allowance, collateral held or other credit enhancements available to the Bank. The ratings shown reflect the Bank's internal ratings expressed as equivalent external ratings.

**As at 31 March 2021**

| SDR millions | AAA | AA | A | BBB | BB and below | Unrated | Total |
|---|---|---|---|---|---|---|---|
| **On-balance sheet exposure** | | | | | | | |
| Cash and cash equivalents | 34,478.9 | 5,681.7 | 10,560.8 | 132.6 | 0.6 | – | 50,854.6 |
| Gold and gold loans | – | 479.4 | 194.1 | – | – | – | 673.5 |
| Securities purchased under resale agreements | – | 17,180.2 | 39,948.6 | 21,443.2 | – | – | 78,572.0 |
| Loans and advances | 1,409.4 | 9,889.3 | 31,151.1 | 413.9 | 2,680.7 | – | 45,544.4 |
| Government and other securities | 6,065.0 | 46,484.2 | 61,695.8 | 12,834.5 | – | – | 127,079.5 |
| Derivative financial instruments | 0.3 | 647.4 | 6,367.0 | 461.6 | 0.5 | 145.0 | 7,621.8 |
| Accounts receivable and other assets | 185.4 | 25.8 | 447.7 | 809.5 | 1.2 | 14.0 | 1,483.6 |
| **Total on-balance sheet exposure** | **42,139.0** | **80,388.0** | **150,365.1** | **36,095.3** | **2,683.0** | **159.0** | **311,829.4** |
| **Commitments** | | | | | | | |
| Undrawn unsecured facilities | – | – | – | 211.6 | – | – | 211.6 |
| **Total commitments** | **–** | **–** | **–** | **211.6** | **–** | **–** | **211.6** |
| **Total exposure** | **42,139.0** | **80,388.0** | **150,365.1** | **36,306.9** | **2,683.0** | **159.0** | **312,041.0** |

As at 31 March 2020

| *SDR millions* | AAA | AA | A | BBB | BB and below | Unrated | Total |
|---|---|---|---|---|---|---|---|
| **On-balance sheet exposure** | | | | | | | |
| Cash and cash equivalents | 25,771.2 | 1,897.8 | 26,227.3 | 125.0 | 0.1 | – | 54,021.4 |
| Gold and gold loans | – | 224.1 | 67.2 | – | – | – | 291.3 |
| Securities purchased under resale agreements | – | 19,897.7 | 27,508.8 | 8,612.1 | – | – | 56,018.6 |
| Loans and advances | 2,208.1 | 1,478.5 | 47,076.6 | 638.5 | 2,637.2 | – | 54,038.9 |
| Government and other securities | 6,541.8 | 40,029.8 | 48,165.6 | 8,968.9 | – | – | 103,706.1 |
| Derivative financial instruments | – | 155.9 | 3,175.7 | 169.8 | 16.1 | 3.5 | 3,521.0 |
| Accounts receivable and other assets | – | 0.8 | 2.6 | 191.5 | 2.1 | 12.6 | 209.6 |
| **Total on-balance sheet exposure** | 34,521.1 | 63,684.6 | 152,223.8 | 18,705.8 | 2,655.5 | 16.1 | 271,806.9 |
| **Commitments** | | | | | | | |
| Undrawn unsecured facilities | – | – | – | 219.4 | – | – | 219.4 |
| **Total commitments** | – | – | – | 219.4 | – | – | 219.4 |
| **Total exposure** | 34,521.1 | 63,684.6 | 152,223.8 | 18,925.2 | 2,655.5 | 16.1 | 272,026.3 |

## C. Credit risk mitigation

### Netting

Netting agreements give the Bank a legally enforceable right to net transactions with counterparties under potential future conditions, notably an event of default. Such master netting or similar agreements apply to counterparties with which the Bank conducts most of its derivatives transactions, as well as to counterparties used for repurchase and reverse repurchase agreement transactions. Where required, netting is applied when determining the amount of collateral to be requested or provided, but the Bank does not typically settle assets and liabilities on a net basis during the normal course of business. As such, the amounts shown in the Bank's balance sheet are the gross amounts.

### Collateral

The Bank mitigates credit risk by requiring counterparties to provide collateral. The Bank receives collateral in respect of most derivative contracts and reverse repurchase agreements and for advances made under collateralised facility agreements. During the term of these transactions, further collateral may be called or collateral may be released based on the movements in value of both the underlying instrument and the collateral that has been received. The Bank is required to provide collateral in respect of repurchase agreements and some derivative contracts.

For derivative contracts and reverse repurchase agreements, the Bank accepts as collateral high-quality sovereign, state agency and supranational securities and, in a limited number of cases, cash. For advances made under collateralised facility agreements, collateral accepted includes currency deposits with the Bank, units in the BIS Investment Pools and gold.

Under the terms of its collateral arrangements, the Bank is permitted to sell or reuse collateral received on derivative contracts and reverse repurchase agreements, but upon expiry of the transaction must return equivalent financial instruments to the counterparty. At 31 March 2021, the Bank had not sold, lent or reused any of the collateral it held (31 March 2020: nil).

The fair value of collateral held which the Bank had the right to sell was:

| As at 31 March<br>*SDR millions* | **2021** | 2020 |
|---|---|---|
| Collateral held in respect of: | | |
| Derivatives | 5,245.7 | 1,095.2 |
| Securities purchased under resale agreements | 56,072.8 | 38,088.2 |
| **Total** | **61,318.5** | 39,183.4 |

### Financial assets and liabilities subject to netting or collateralisation

The tables below show the categories of assets and liabilities which are either subject to collateralisation, or for which netting agreements would apply under potential future conditions such as the event of default of a counterparty.

The amount of collateral required is usually based on valuations performed on the previous business day, whereas the Bank's balance sheet reflects the valuations of the reporting date. Due to this timing difference, the valuation of collateral can be higher than the valuation of the underlying contract in the Bank's balance sheet. The amount of the collateral obtained is also impacted by thresholds, minimum transfer amounts and valuation adjustments ("haircuts") specified in the contracts. In these tables, the mitigating effect of collateral has been limited to the balance sheet value of the underlying net asset.

Some of the securities purchased under resale agreements presented in the table below relate to the utilisation of uncommitted credit lines by the Bank's central bank customers.

The Bank also receives collateral in respect of advances under certain committed and uncommitted facilities. Such collateral can be in the form of currency deposits with the BIS, or units in BIS investment pools.

In certain derivatives transactions, the Bank has provided or received collateral in the form of cash and cash equivalents, with the corresponding balance recorded as part of other assets or other liabilities, respectively, in the balance sheet. For some dedicated mandates the Bank receives collateral from the mandate customer in respect of derivative financial instruments transacted on their behalf. This collateral is in the form of currency deposits with the BIS, and is recorded as such in the balance sheet.

| **As at 31 March 2021** | | Effect of risk mitigation | | | | Analysed as: | |
|---|---|---|---|---|---|---|---|
| *SDR millions* | Gross carrying amount as per balance sheet | Adjustments for settlement date effects | Enforceable netting agreements | Collateral (received) / provided (limited to balance sheet value) | Exposure after risk mitigation | Amounts not subject to risk mitigation agreements | Amounts subject to risk mitigation agreements |
| **Financial assets** | | | | | | | |
| Securities purchased under resale agreements | 78,572.0 | (20,437.3) | – | (58,109.5) | 25.2 | – | 25.2 |
| Advances | 2,680.7 | – | – | (2,680.7) | – | – | – |
| Derivative financial instruments | 7,621.8 | – | (1,090.7) | (5,246.3) | 1,284.8 | 140.3 | 1,144.5 |
| **Financial liabilities** | | | | | | | |
| Securities sold under repurchase agreements | – | – | – | – | – | – | – |
| Derivative financial instruments | (2,208.1) | – | 1,090.7 | 15.7 | – | – | – |

| As at 31 March 2020 | Effect of risk mitigation | | | | | Analysed as: | |
|---|---|---|---|---|---|---|---|
| *SDR millions* | Gross carrying amount as per balance sheet | Adjustments for settlement date effects | Enforceable netting agreements | Collateral (received) / provided (limited to balance sheet value) | Exposure after risk mitigation | Amounts not subject to risk mitigation agreements | Amounts subject to risk mitigation agreements |
| **Financial assets** | | | | | | | |
| Securities purchased under resale agreements | 56,018.6 | (11,324.5) | – | (44,684.1) | 10.0 | – | 10.0 |
| Advances | 2,637.3 | – | – | (2,637.3) | – | – | – |
| Derivative financial instruments | 3,521.0 | – | (2,057.8) | (822.6) | 640.6 | 116.5 | 524.1 |
| **Financial liabilities** | | | | | | | |
| Securities sold under repurchase agreements | (148.8) | – | – | 148.7 | – | – | – |
| Derivative financial instruments | (3,049.2) | – | 2,057.8 | 171.8 | – | – | – |

As at 31 March 2021, the Bank pledged SDR 13.0 million (31 March 2020: SDR 315.1 million) of debt securities as collateral under its obligations related to derivative financial instrument contracts. The counterparties have an obligation to return these securities to the Bank.

### D. Economic capital for credit risk

The Bank determines economic capital for credit risk (except for FX settlement risk, which is included in the utilisation for credit risk) using a VaR methodology on the basis of a portfolio VaR model, assuming a one-year time horizon and a 99.99% confidence level. The amount of economic capital set aside for FX settlement risk reflected in the Bank's economic capital calculations is based on an assessment by Management.

| For the financial year | 2021 | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| *SDR millions* | Average | High | Low | At 31 March | Average | High | Low | At 31 March |
| Economic capital utilisation for credit risk | 6,622.3 | 7,298.5 | 5,912.5 | 6,450.4 | 5,919.6 | 6,321.1 | 5,493.9 | 6,231.4 |

### E. Minimum capital requirements for credit risk

#### Exposure to sovereigns, banks and corporates

For the calculation of risk-weighted assets for exposures to sovereigns, banks and corporates, the Bank has adopted an approach that is consistent with the advanced internal ratings-based approach.

As a general rule, under this approach risk-weighted assets are determined by multiplying the credit risk exposures with risk weights derived from the relevant BCBS regulatory risk weight function using the Bank's own estimates for key inputs. These estimates for key inputs are also relevant to the Bank's economic capital calculation for credit risk.

The credit risk exposure for a transaction or position is referred to as the exposure at default (EAD). The Bank determines the EAD as the notional amount of on- and off-balance sheet credit exposures, except for securities and derivative contracts. The EAD for securities is based on market value, the EAD for derivatives is calculated using an approach consistent with the internal models method. In line with the EAD methodology for derivatives, the Bank calculates effective expected positive exposures that are then multiplied by a factor alpha as set out in the framework.

Key inputs to the risk weight function are a counterparty's estimated one-year probability of default (PD) as well as the estimated loss-given-default (LGD) and maturity for each transaction.

Due to the high credit quality of the Bank's investments and the conservative credit risk management process at the BIS, the Bank is not in a position to estimate PDs and LGDs based on its own default experience. The Bank calibrates each counterparty PD estimate through a mapping of internal rating grades to external credit assessments taking external default data into account. Similarly, LGD estimates are derived from external data. Where appropriate, these estimates are adjusted to reflect the risk-reducing effects of collateral obtained giving consideration to market price volatility, re-margining and revaluation frequency. The recognition of the risk-reducing effects of collateral obtained for derivative contracts, reverse repurchase agreements and collateralised advances is accounted for in calculating the EAD.

The table below details the calculation of risk-weighted assets. The exposures are measured taking netting and collateral benefits into account. The total amount of exposures reported in the table as at 31 March 2021 includes SDR 50.7 million for interest rate contracts (2020: SDR 98.1 million) and SDR 1,194.4 million for FX and gold contracts (2020: SDR 635.4 million). In line with the Basel Framework, the minimum capital requirement is determined as 8% of risk-weighted assets.

**As at 31 March 2021**

| **Internal rating grades expressed as equivalent external rating grades** | Amount of exposure | Exposure-weighted PD | Exposure-weighted average LGD | Exposure-weighted average risk weight | Risk-weighted assets |
|---|---|---|---|---|---|
| *SDR millions / percentages* | *SDR millions* | *%* | *%* | *%* | *SDR millions* |
| AAA | 41,488.3 | 0.01 | 6.8 | 0.7 | 300.7 |
| AA | 66,471.8 | 0.03 | 42.2 | 11.3 | 7,504.1 |
| A | 105,490.0 | 0.06 | 49.3 | 15.8 | 16,651.5 |
| BBB | 13,911.3 | 0.20 | 55.4 | 37.3 | 5,193.2 |
| BB and below | 201.2 | 79.54 | 58.8 | 136.2 | 274.1 |
| **Total** | **227,562.6** | | | | **29,923.6** |

As at 31 March 2020

| Internal rating grades expressed as equivalent external rating grades | Amount of exposure | Exposure-weighted PD | Exposure-weighted average LGD | Exposure-weighted average risk weight | Risk-weighted assets |
|---|---|---|---|---|---|
| *SDR millions / percentages* | *SDR millions* | *%* | *%* | *%* | *SDR millions* |
| AAA | 33,883.0 | 0.01 | 9.5 | 1.2 | 408.1 |
| AA | 50,726.8 | 0.03 | 40.0 | 13.7 | 6,967.0 |
| A | 123,510.3 | 0.06 | 45.0 | 16.1 | 19,868.6 |
| BBB | 10,147.4 | 0.20 | 55.6 | 37.1 | 3,760.7 |
| BB and below | 8.8 | 59.63 | 58.4 | 53.7 | 4.7 |
| Total | 218,276.3 | | | | 31,009.1 |

At 31 March 2021, the minimum capital requirement for credit risk related to exposures to sovereigns, banks and corporates was SDR 2,393.9 million (2020: SDR 2,480.7 million).

The following table summarises the impact of collateral arrangements on the amount of credit exposure after taking netting into account:

| *SDR millions* | Amount of exposure after taking netting into account | Benefits from collateral arrangements | Amount of exposure after taking into account netting and collateral arrangements |
|---|---|---|---|
| **As at 31 March 2021** | 312,777.4 | 85,214.8 | **227,562.6** |
| As at 31 March 2020 | 269,732.1 | 51,455.8 | 218,276.3 |

### Securitisation exposures

The Bank invests in securitisation exposures based on traditional, ie non-synthetic, securitisation structures. Given the scope of the Bank's activities, risk-weighted assets are determined according to the standardised approach for securitisation. Under this approach, external credit assessments of the securities are used to determine the relevant risk weights. External credit assessment institutions used for this purpose are Moody's Investors Service, Standard & Poor's and Fitch Ratings. Risk-weighted assets are then derived as the product of the market values of the exposures and the associated risk weights. In line with the BCBS framework, the minimum capital requirement is determined as 8% of risk-weighted assets.

The following table shows the Bank's investments in securitisation analysed by type of securitised assets:

**As at 31 March 2021**

| *SDR millions* | External rating | Amount of exposures | Risk weight | Risk-weighted assets |
|---|---|---|---|---|
| Securities backed by other receivables (government-sponsored) | AAA | 97.0 | 20% | 19.4 |
| Securities backed by mortgages | | 94.6 | 1250% | 1,182.1 |
| **Total** | | **191.6** | | **1,201.5** |

As at 31 March 2020

| *SDR millions* | External rating | Amount of exposures | Risk weight | Risk-weighted assets |
|---|---|---|---|---|
| Securities backed by other receivables (government-sponsored) | AAA | 337.6 | 20% | 67.5 |
| Securities backed by mortgages | | 79.5 | 1250% | 994.1 |
| **Total** | | 417.1 | | 1,061.6 |

At 31 March 2021, the minimum capital requirement for securitisation exposures was SDR 96.1 million (2020: SDR 84.9 million).

## 4. Market risk

The Bank is exposed to market risk through adverse movements in market prices. The main components of the Bank's market risk are gold price risk, interest rate risk and foreign exchange risk. The Bank measures market risk and calculates economic capital based on a VaR methodology using a Monte Carlo simulation technique. Risk factor volatilities and correlations are estimated, subject to an exponential weighting scheme, over a six-year observation period. Furthermore, the Bank computes sensitivities to certain market risk factors.

In line with the Bank's objective of maintaining its superior credit quality, economic capital is measured at the 99.99% confidence level assuming a one-year holding period. The Bank calculates the economic capital utilisation for market risk on the basis of a stressed market data set. The Bank's Management manages market risk economic capital usage within a framework set by the Board of Directors. VaR limits are supplemented by operating limits.

To ensure that models provide a reliable measure of potential losses over the one-year time horizon, the Bank has established a comprehensive regular backtesting framework, comparing daily performance with corresponding VaR estimates. The results are analysed and reported to Management.

The Bank also supplements its market risk measurement based on VaR modelling and related economic capital calculations with a series of stress tests. These include severe historical scenarios, adverse hypothetical macroeconomic scenarios and sensitivity tests of gold price, interest rate and foreign exchange rate movements.

### A. Gold price risk

Gold price risk is the exposure of the Bank's financial condition to adverse movements in the price of gold.

The Bank is exposed to gold price risk principally through its holdings of gold investment assets. These gold investment assets are held in custody or placed on deposit with commercial banks. At 31 March 2021, the Bank's net gold investment assets were 102 tonnes with a value of SDR 3,939.6 million, approximately 17% of shareholders' equity (31 March 2020: 102 tonnes, SDR 3,878.1 million, representing 18% of shareholders' equity). The Bank sometimes also has small exposures to gold price risk arising from its banking activities with central and commercial banks. Gold price risk is measured within the Bank's VaR methodology, including its economic capital framework and stress tests.

### B. Interest rate risk

Interest rate risk is the exposure of the Bank's financial condition to adverse movements in interest rates, including credit spreads. The Bank is exposed to interest rate risk through the interest-bearing assets relating to the management of its equity held in its investment portfolios and investments relating to its banking portfolios. The investment portfolios are managed using a fixed-duration benchmark of bonds.

The Bank measures and monitors interest rate risk using a VaR methodology and sensitivity analyses taking into account movements in relevant money market rates, government bond yields, swap rates and credit spreads.

The following tables show the impact on the Bank's equity of a 1% upward shift in the relevant yield curve per time band:

**As at 31 March 2021**

| *SDR millions* | Up to 6 months | 6 to 12 months | 1 to 2 years | 2 to 3 years | 3 to 4 years | 4 to 5 years | Over 5 years | Total |
|---|---|---|---|---|---|---|---|---|
| Euro | (5.0) | (14.9) | (30.5) | (29.0) | (28.2) | (6.7) | (9.8) | (124.2) |
| Japanese yen | 18.2 | 0.5 | (0.1) | – | (0.2) | 0.1 | 0.1 | 18.7 |
| Pound sterling | 0.3 | (3.5) | (8.7) | (11.8) | (5.3) | (0.6) | (2.4) | (31.9) |
| Renminbi | (0.8) | (3.5) | (6.8) | (7.3) | (8.2) | (15.6) | (20.9) | (63.1) |
| Swiss franc | 12.5 | (0.1) | (0.2) | (0.2) | (0.1) | (1.7) | (1.1) | 9.1 |
| US dollar | (12.4) | (12.1) | (38.3) | (25.9) | (29.1) | (36.3) | (83.1) | (237.3) |
| Other currencies | (0.5) | (0.1) | (0.7) | (0.8) | (0.9) | (0.5) | (0.5) | (4.1) |
| **Total** | **12.4** | **(33.6)** | **(85.3)** | **(74.9)** | **(72.1)** | **(61.3)** | **(117.9)** | **(432.8)** |

As at 31 March 2020

| *SDR millions* | Up to 6 months | 6 to 12 months | 1 to 2 years | 2 to 3 years | 3 to 4 years | 4 to 5 years | Over 5 years | Total |
|---|---|---|---|---|---|---|---|---|
| Euro | (6.0) | (13.8) | (27.3) | (38.9) | (39.8) | (28.5) | (16.5) | (170.8) |
| Japanese yen | 19.5 | 0.8 | 0.1 | – | (0.1) | – | 0.1 | 20.4 |
| Pound sterling | (0.9) | (1.6) | (7.4) | (10.2) | (17.8) | (5.9) | – | (43.8) |
| Renminbi | (0.2) | (4.6) | (5.3) | (3.3) | (9.4) | (17.8) | (38.1) | (78.7) |
| Swiss franc | 4.4 | (0.3) | (0.3) | (0.2) | (0.3) | (0.8) | (2.7) | (0.2) |
| US dollar | (19.6) | (15.9) | (20.5) | (31.9) | (16.2) | (50.7) | (155.1) | (309.9) |
| Other currencies | (0.3) | 0.3 | (0.4) | (1.0) | (0.9) | (0.4) | (0.1) | (2.8) |
| **Total** | (3.1) | (35.1) | (61.1) | (85.5) | (84.5) | (104.1) | (212.4) | (585.8) |

### C. Foreign exchange risk

The Bank's functional currency, the SDR, is a composite currency comprising fixed amounts of USD, EUR, JPY, GBP and Renminbi. Currency risk is the exposure of the Bank's financial condition to adverse movements in exchange rates. The Bank is exposed to foreign exchange risk primarily through the assets relating to the management of its equity. The Bank is also exposed to foreign exchange risk through managing its customer deposits and through acting as an intermediary in foreign exchange transactions. The Bank reduces its foreign exchange exposures by matching the relevant assets to the constituent currencies of the SDR on a regular basis, and by limiting currency exposures arising from customer deposits and foreign exchange transaction intermediation.

The following tables show the Bank's assets and liabilities by currency and gold exposure. The net foreign exchange and gold position in these tables therefore includes the Bank's gold investments. To determine the Bank's net foreign exchange exposure, the gold amounts need to be removed. The SDR-neutral position is then deducted from the net foreign exchange position excluding gold to arrive at the net currency exposure of the Bank on an SDR-neutral basis.

**As at 31 March 2021**

| *SDR millions* | SDR | USD | EUR | GBP | JPY | RMB | CHF | Gold | Other currencies | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Assets** | | | | | | | | | | |
| Cash and cash equivalents | 635.3 | 18.7 | 24,178.2 | 681.6 | 10,106.2 | 414.9 | 13,787.7 | – | 1,032.0 | 50,854.6 |
| Securities purchased under resale agreements | – | 4,701.1 | 25,154.8 | 29,180.3 | 19,535.8 | – | – | – | – | 78,572.0 |
| Loans and advances | – | 19,937.9 | 13,461.7 | 8,468.5 | – | – | 1,918.9 | – | 1,757.4 | 45,544.4 |
| Government and other securities | – | 32,200.4 | 32,169.1 | 5,275.7 | 42,352.9 | 3,914.4 | 933.7 | – | 10,233.3 | 127,079.5 |
| Gold and gold loans | – | 0.7 | – | – | – | – | – | 41,665.0 | – | 41,665.7 |
| Derivative financial instruments | 3,185.3 | 199,764.9 | (52,567.6) | (29,569.5) | (78,214.0) | 3,351.4 | (16,286.1) | (19,547.6) | (2,495.0) | 7,621.8 |
| Accounts receivable and other assets | – | 3,859.9 | 188.0 | 423.0 | – | 124.4 | 7.8 | – | 14.9 | 4,618.0 |
| Land, buildings and equipment | 138.6 | 6.7 | 4.2 | 2.1 | – | – | 46.7 | – | 0.1 | 198.4 |
| **Total assets** | **3,959.2** | **260,490.3** | **42,588.4** | **14,461.7** | **(6,219.1)** | **7,805.1** | **408.7** | **22,117.4** | **10,542.7** | **356,154.4** |
| **Liabilities** | | | | | | | | | | |
| Currency deposits | (2,167.2) | (244,517.3) | (16,290.9) | (8,853.3) | (277.7) | (10,319.2) | (351.7) | – | (5,237.4) | (288,014.7) |
| Securities sold under repurchase agreements | – | – | – | – | – | – | – | – | – | – |
| Gold deposits | – | – | – | – | – | – | – | (18,848.9) | – | (18,848.9) |
| Derivative financial instruments | (57.1) | (7,526.8) | (7,364.1) | (2,462.3) | 13,592.0 | 4,815.6 | 781.2 | 670.9 | (4,657.5) | (2,208.1) |
| Accounts payable | – | (1,344.0) | (13,474.0) | (1,717.0) | (5,864.5) | (413.6) | – | – | (506.6) | (23,319.7) |
| Other liabilities | – | (3.5) | (1.9) | (0.4) | – | – | (927.8) | – | (6.4) | (940.0) |
| **Total liabilities** | **(2,224.3)** | **(253,391.6)** | **(37,130.9)** | **(13,033.0)** | **7,449.8** | **(5,917.2)** | **(498.3)** | **(18,178.0)** | **(10,407.9)** | **(333,331.4)** |
| **Net currency and gold position** | **1,734.9** | **7,098.7** | **5,457.5** | **1,428.7** | **1,230.7** | **1,887.9** | **(89.6)** | **3,939.4** | **134.8** | **22,823.0** |
| Adjustment for gold | – | – | – | – | – | – | – | (3,939.4) | – | (3,939.4) |
| **Net currency position** | **1,734.9** | **7,098.7** | **5,457.5** | **1,428.7** | **1,230.7** | **1,887.9** | **(89.6)** | **–** | **134.8** | **18,883.6** |
| SDR-neutral position | (1,734.9) | (7,044.4) | (5,492.5) | (1,434.6) | (1,300.8) | (1,876.4) | – | – | – | (18,883.6) |
| **Net currency exposure on SDR-neutral basis** | **–** | **54.3** | **(35.0)** | **(5.9)** | **(70.1)** | **11.5** | **(89.6)** | **–** | **134.8** | **–** |

| As at 31 March 2020<br>*SDR millions* | SDR | USD | EUR | GBP | JPY | RMB | CHF | Gold | Other currencies | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Assets** | | | | | | | | | | |
| Cash and cash equivalents | 577.2 | 22.0 | 14,589.9 | 7.2 | 25,942.1 | 217.5 | 12,589.8 | - | 75.7 | 54,021.4 |
| Securities purchased under resale agreements | - | 10,230.6 | 23,466.9 | 11,332.5 | 10,819.2 | 169.4 | - | - | - | 56,018.6 |
| Loans and advances | - | 32,499.1 | 18,047.1 | 1,033.3 | - | 103.3 | 605.4 | - | 1,750.7 | 54,038.9 |
| Government and other securities | - | 33,847.1 | 25,086.5 | 4,788.2 | 30,670.7 | 2,952.2 | 266.2 | - | 6,095.2 | 103,706.1 |
| Gold and gold loans | - | 0.2 | - | - | - | - | - | 31,436.6 | - | 31,436.8 |
| Derivative financial instruments | 1,542.8 | 86,023.6 | (41,629.5) | (1,776.7) | (27,527.2) | (1,460.0) | (5,036.7) | (874.5) | (5,740.8) | 3,521.0 |
| Accounts receivable and other assets | - | 5,059.5 | 0.7 | 464.3 | - | 2.7 | 9.7 | - | 18.3 | 5,555.2 |
| Land, buildings and equipment | 166.0 | 2.3 | 1.6 | 0.7 | - | - | 28.6 | - | 0.1 | 199.3 |
| **Total assets** | 2,286.0 | 167,684.4 | 39,563.2 | 15,849.5 | 39,904.8 | 1,985.1 | 8,463.0 | 30,562.1 | 2,199.2 | 308,497.3 |
| **Liabilities** | | | | | | | | | | |
| Currency deposits | (2,522.2) | (204,184.1) | (20,595.5) | (13,204.3) | (399.1) | (3,283.4) | (376.5) | - | (5,629.7) | (250,194.8) |
| Securities sold under repurchase agreements | - | - | - | (148.8) | - | - | - | - | - | (148.8) |
| Gold deposits | - | - | - | - | - | - | - | (15,221.1) | - | (15,221.1) |
| Derivative financial instruments | 854.4 | 48,958.7 | (4,474.5) | (513.8) | (35,707.0) | 3,161.5 | (7,339.9) | (11,475.6) | 3,487.0 | (3,049.2) |
| Accounts payable | - | (4,851.4) | (9,189.8) | (617.8) | (2,536.1) | - | - | - | (17.5) | (17,212.6) |
| Other liabilities | - | (4.4) | (1.5) | (0.2) | - | - | (1,016.3) | - | (8.5) | (1,030.9) |
| **Total liabilities** | (1,667.8) | (160,081.2) | (34,261.3) | (14,484.9) | (38,642.2) | (121.9) | (8,732.7) | (26,696.7) | (2,168.7) | (286,857.4) |
| **Net currency and gold position** | 618.2 | 7,603.2 | 5,301.9 | 1,364.6 | 1,262.6 | 1,863.2 | (269.7) | 3,865.4 | 30.5 | 21,639.9 |
| Adjustment for gold | - | - | - | - | - | - | - | (3,865.4) | - | (3,865.4) |
| **Net currency position** | 618.2 | 7,603.2 | 5,301.9 | 1,364.6 | 1,262.6 | 1,863.2 | (269.7) | - | 30.5 | 17,774.5 |
| SDR-neutral position | (618.2) | (7,309.6) | (5,323.0) | (1,341.7) | (1,380.9) | (1,801.1) | - | - | - | (17,774.5) |
| **Net currency exposure on SDR-neutral basis** | - | 293.6 | (21.1) | 22.9 | (118.3) | 62.1 | (269.7) | - | 30.5 | - |

### D. Economic capital for market risk

The Bank measures market risk based on a VaR methodology using a Monte Carlo simulation technique taking correlations between risk factors into account. Economic capital for market risk is also calculated following this methodology measured to the 99.99% confidence level and assuming a one-year holding period. The Bank calculates the economic capital utilisation for market risk on the basis of a stressed market data set. The stressed data set is subject to regular review and calibrated to take account of the Bank's key market risk exposures and market risk drivers.

The Bank measures its gold price risk relative to changes in the USD value of gold. The foreign exchange risk component, resulting from changes in the USD exchange rate versus the SDR, is included in the measurement of foreign exchange risk. The following table shows the key figures of the Bank's exposure to market risk in terms of economic capital utilisation over the past two financial years:

| For the financial year | **2021** | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| *SDR millions* | Average | High | Low | At 31 March | Average | High | Low | At 31 March |
| **Economic capital utilisation for market risk** | 4,357.6 | 4,722.8 | 3,853.4 | **3,987.6** | 3,664.9 | 3,977.9 | 3,415.2 | 3,807.0 |

The following table provides a further analysis of the Bank's economic capital utilisation for market risk by category of risk:

| For the financial year | **2021** | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| *SDR millions* | Average | High | Low | At 31 March | Average | High | Low | At 31 March |
| Gold price risk | 3,088.8 | 3,484.9 | 2,779.7 | **2,870.2** | 2,536.5 | 2,898.6 | 2,186.4 | 2,752.9 |
| Interest rate risk | 2,586.5 | 2,693.0 | 2,194.9 | **2,194.9** | 2,345.8 | 2,479.5 | 2,198.0 | 2,346.8 |
| Foreign exchange risk | 905.5 | 1,037.6 | 765.4 | **832.9** | 764.4 | 924.2 | 610.5 | 836.9 |
| Diversification effects | (2,223.2) | (2,478.2) | (1,910.3) | **(1,910.3)** | (1,981.8) | (2,267.7) | (1,758.9) | (2,129.6) |
| **Total** | | | | **3,987.6** | | | | 3,807.0 |

### E. Minimum capital requirements for market risk

For the calculation of minimum capital requirements for market risk under the Basel Framework, the Bank has adopted a banking book approach consistent with the scope and nature of its business activities. Consequently, market risk-weighted assets are determined for gold price risk and foreign exchange risk, but not for interest rate risk. The related minimum capital requirement is derived using the VaR-based internal models method. Under this method, VaR calculations are performed using the Bank's VaR methodology, assuming a 99% confidence level and a 10-day holding period for both a stressed and non-stressed market data sets.

The actual minimum capital requirement is derived as the sum of the minimum capital requirements based on the VaR calculated for both the stressed and non-stressed market data sets. For each data set, the higher of the VaR on the calculation date and the average of the daily VaR measures on each of the preceding 60 business days (including the calculation date) is used subject to a multiplication factor of three plus a potential add-on depending on backtesting results. For the period under consideration, six backtesting outliers were reported, resulting in a backtesting add-on of 0.5. The following table summarises the market risk development relevant to the calculation of minimum capital requirements and the related risk-weighted assets over the reporting period:

| As at 31 March | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | VaR | Risk-weighted assets | Minimum capital requirement | VaR | Risk-weighted assets | Minimum capital requirement |
| *SDR millions* | | (A) | (B) | | (A) | (B) |
| **Market risk, where (A) is derived as (B) / 8%** | 538.0 | 37,453.7 | **2,996.3** | 500.2 | 27,562.9 | 2,205.0 |

### F. Economic capital for operational risk

Consistent with the parameters used in the calculation of economic capital for financial risk, the Bank measures economic capital for operational risk to the 99.99% confidence level assuming a one-year holding period. The following table shows the key figures of the Bank's exposure to operational risk in terms of economic capital utilisation over the past two financial years:

| For the financial year | 2021 | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| *SDR millions* | Average | High | Low | At 31 March | Average | High | Low | At 31 March |
| **Economic capital utilisation for operational risk** | 1,100.0 | 1,100.0 | 1,100.0 | **1,100.0** | 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 |

## 5. Operational risk

Operational risk is defined by the Bank as the risk of financial loss, or damage to the Bank's reputation, or both, resulting from one or more risk causes, as outlined below:

- Human factors: insufficient personnel, lack of requisite knowledge, skills or experience, inadequate training and development, inadequate supervision, loss of key personnel, inadequate succession planning, or lack of integrity or ethical standards.
- Failed or inadequate processes: a process is poorly designed or unsuitable, or is not properly documented, understood, implemented, followed or enforced.
- Failed or inadequate systems: a system is poorly designed, unsuitable or unavailable, or does not operate as intended.
- External events: the occurrence of an event having an adverse impact on the Bank but outside its control.

Operational risk includes legal risk, but excludes strategic risk.

The Bank's operational risk management framework, policies and procedures comprise the management and measurement of operational risk, including the determination of the relevant key parameters and inputs, business continuity planning and the monitoring of key risk indicators.

The Bank has established a procedure of immediate reporting for operational risk-related incidents. The Operational Transformation and Resiliency unit develops action plans with the respective units and follows up on their implementation on a regular basis.

For the measurement of operational risk economic capital and operational risk-weighted assets, the Bank has adopted a VaR approach using a VaR-based Monte Carlo simulation technique that is consistent with the advanced measurement approach. Consistent with the BCBS recommendations, the quantification of operational risk does not take into account reputational risk. Internal and external loss data as well as scenario estimates are key inputs in the calculations.

### Minimum capital requirements for operational risk

The calculation of the minimum capital requirement for operational risk is determined assuming a 99.9% confidence level and a one-year time horizon. The following table shows the minimum capital requirements for operational risk, and the related risk-weighted assets:

| As at 31 March | **2021** | | | 2020 | | |
|---|---|---|---|---|---|---|
| | VaR | Risk-weighted assets | Minimum capital requirement | VaR | Risk-weighted assets | Minimum capital requirement |
| *SDR millions* | | (A) | (B) | | (A) | (B) |
| **Operational risk, where (A) is derived as (B) / 8%** | 716.6 | 8,957.5 | **716.6** | 712.7 | 8,909.2 | 712.7 |

## 6. Liquidity risk

Liquidity risk arises when the Bank may not be able to meet expected or unexpected current or future cash flows and collateral needs without affecting its daily operations or its financial condition.

The Bank's currency and gold deposits, principally from central banks and international institutions, comprise 92% (2020: 93%) of its total liabilities. At 31 March 2021, currency and gold deposits originated from 174 depositors (2020: 175 depositors). Within these deposits, there are significant individual customer concentrations, with three customers each contributing in excess of 5% of the total on a settlement date basis (2020: five customers).

Outstanding balances in the currency and gold deposits from central banks, international organisations and other public institutions are the key drivers of the size of the Bank's balance sheet. The Bank is exposed to funding liquidity risk mainly because of the short-term nature of its deposits and because it undertakes to repurchase at fair value certain of its currency deposit instruments at one or two business days' notice. In line with the Bank's objective to maintain a high level of liquidity, it has developed a liquidity management framework, including a ratio, based on conservative assumptions for estimating the liquidity available and the liquidity required.

### A. Maturity profile of cash flows

The following tables show the maturity profile of cash flows for assets and liabilities. The amounts disclosed are the undiscounted cash flows to which the Bank is committed. Options are included in the table at fair value and are shown in the "Up to 1 month" category.

**As at 31 March 2021**

| *SDR millions* | Up to 1 month | 1 to 3 months | 3 to 6 months | 6 to 12 months | 1 to 2 years | 2 to 5 years | 5 to 10 years | Over 10 years | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Assets** | | | | | | | | | |
| Cash and cash equivalents | 50,854.6 | – | – | – | – | – | – | – | 50,854.6 |
| Securities purchased under resale agreements | 44,430.4 | 13,698.8 | – | – | – | – | – | – | 58,129.2 |
| Loans and advances | 20,061.9 | 10,621.5 | 5,776.4 | 8,659.8 | 176.9 | – | – | – | 45,296.5 |
| Government and other securities | 12,801.3 | 19,285.4 | 25,235.9 | 37,573.6 | 12,685.2 | 15,410.9 | 2,634.9 | 1,505.2 | 127,132.4 |
| Gold and gold loans | 41,665.7 | – | – | – | – | – | – | – | 41,665.7 |
| **Total assets** | **169,813.9** | **43,605.7** | **31,012.3** | **46,233.4** | **12,862.1** | **15,410.9** | **2,634.9** | **1,505.2** | **323,078.4** |
| **Liabilities** | | | | | | | | | |
| Currency deposits | | | | | | | | | |
| Deposit instruments repayable at 1–3 days' notice | (47,775.7) | (27,325.8) | (40,248.2) | (36,717.2) | (6,528.3) | (4,432.6) | (93.8) | – | (163,121.6) |
| Other currency deposits | (62,501.4) | (27,388.1) | (21,124.9) | (10,891.0) | (33.2) | – | – | – | (121,938.6) |
| Gold deposits | (18,848.9) | – | – | – | – | – | – | – | (18,848.9) |
| **Total liabilities** | **(129,126.0)** | **(54,713.9)** | **(61,373.1)** | **(47,608.2)** | **(6,561.5)** | **(4,432.6)** | **(93.8)** | **–** | **(303,909.1)** |
| **Derivatives** | | | | | | | | | |
| *Net settled cash flows* | | | | | | | | | |
| Options and interest rate contracts | (13.1) | (68.4) | (18.2) | (29.1) | (74.2) | (18.1) | 4.6 | – | (216.5) |
| *Gross settled cash flows* | | | | | | | | | |
| Interest rate contracts | | | | | | | | | |
| Inflows | 22.5 | 105.4 | 1,176.2 | 635.3 | 318.3 | 531.2 | – | – | 2,788.9 |
| Outflows | (20.1) | (96.7) | (1,147.1) | (638.3) | (292.2) | (506.8) | – | – | (2,701.2) |
| Subtotal | 2.4 | 8.7 | 29.1 | (3.0) | 26.1 | 24.4 | – | – | 87.7 |
| Currency and gold contracts | | | | | | | | | |
| Inflows | 168,878.6 | 57,100.7 | 39,414.9 | 40,393.9 | 526.9 | – | – | – | 306,315.0 |
| Outflows | (166,606.0) | (55,805.0) | (38,321.2) | (39,160.6) | (524.9) | – | – | – | (300,417.7) |
| Subtotal | 2,272.6 | 1,295.7 | 1,093.7 | 1,233.3 | 2.0 | – | – | – | 5,897.3 |
| **Total derivatives** | **2,261.9** | **1,236.0** | **1,104.6** | **1,201.2** | **(46.1)** | **6.3** | **4.6** | **–** | **5,768.5** |
| **Total future undiscounted cash flows** | **42,949.8** | **(9,872.2)** | **(29,256.2)** | **(173.6)** | **6,254.5** | **10,984.6** | **2,545.7** | **1,505.2** | **24,937.8** |

As at 31 March 2020

| *SDR millions* | Up to 1 month | 1 to 3 months | 3 to 6 months | 6 to 12 months | 1 to 2 years | 2 to 5 years | 5 to 10 years | Over 10 years | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Assets** | | | | | | | | | |
| Cash and cash equivalents | 54,021.4 | – | – | – | – | – | – | – | 54,021.4 |
| Securities purchased under resale agreements | 39,608.7 | 5,079.5 | – | – | – | – | – | – | 44,688.2 |
| Loans and advances | 11,120.7 | 13,147.0 | 10,771.8 | 16,878.2 | 298.2 | – | – | – | 52,215.9 |
| Government and other securities | 8,213.2 | 17,993.8 | 15,444.4 | 17,423.3 | 18,803.4 | 18,856.8 | 4,484.9 | 1,447.5 | 102,667.3 |
| Gold and gold loans | 31,248.1 | 188.8 | – | – | – | – | – | – | 31,436.9 |
| **Total assets** | 144,212.1 | 36,409.1 | 26,216.2 | 34,301.5 | 19,101.6 | 18,856.8 | 4,484.9 | 1,447.5 | 285,029.6 |
| **Liabilities** | | | | | | | | | |
| Currency deposits | | | | | | | | | |
| Deposit instruments repayable at 1–3 days' notice | (56,957.3) | (21,970.9) | (18,030.0) | (27,901.7) | (12,542.3) | (7,987.1) | (74.3) | – | (145,463.6) |
| Other currency deposits | (52,527.9) | (24,918.4) | (16,890.1) | (6,361.3) | – | – | – | – | (100,697.7) |
| Securities sold under repurchase agreements | (148.8) | – | – | – | – | – | – | – | (148.8) |
| Gold deposits | (15,221.1) | – | – | – | – | – | – | – | (15,221.1) |
| **Total liabilities** | (124,855.1) | (46,889.3) | (34,920.1) | (34,263.0) | (12,542.3) | (7,987.1) | (74.3) | – | (261,531.2) |
| **Derivatives** | | | | | | | | | |
| *Net settled cash flows* | | | | | | | | | |
| Options and interest rate contracts | (59.0) | 10.7 | 80.5 | 30.6 | (119.4) | (88.2) | 0.2 | – | (144.6) |
| *Gross settled cash flows* | | | | | | | | | |
| Interest rate contracts | | | | | | | | | |
| Inflows | 34.0 | 37.9 | 57.9 | 164.4 | 1,925.4 | 440.7 | – | – | 2,660.3 |
| Outflows | (34.4) | (33.6) | (55.5) | (158.5) | (1,917.8) | (436.9) | – | – | (2,636.7) |
| Subtotal | (0.4) | 4.3 | 2.4 | 5.9 | 7.6 | 3.8 | – | – | 23.6 |
| Currency and gold contracts | | | | | | | | | |
| Inflows | 131,694.3 | 47,663.1 | 24,577.4 | 22,546.8 | – | – | – | – | 226,481.6 |
| Outflows | (131,303.1) | (47,546.0) | (24,391.8) | (22,221.2) | – | – | – | – | (225,462.1) |
| Subtotal | 391.2 | 117.1 | 185.6 | 325.6 | – | – | – | – | 1,019.5 |
| **Total derivatives** | 331.8 | 132.1 | 268.5 | 362.1 | (111.8) | (84.4) | 0.2 | – | 898.5 |
| **Total future undiscounted cash flows** | 19,688.8 | (10,348.1) | (8,435.4) | 400.6 | 6,447.5 | 10,785.3 | 4,410.8 | 1,447.5 | 24,396.9 |

In the above table, the cash flows for government and other securities (along with the related total lines) have been amended since they were originally published in the 2019/20 financial statements.

The following table shows the contractual expiry date of the credit commitments as at the balance sheet date:

| **Contractual expiry date**<br>*SDR millions* | Up to 1 month | 1 to 3 months | 3 to 6 months | 6 to 12 months | 1 to 2 years | 2 to 5 years | 5 to 10 years | Maturity undefined | Total |
|---|---|---|---|---|---|---|---|---|---|
| **As at 31 March 2021** | – | – | – | 211.6 | – | – | – | – | **211.6** |
| As at 31 March 2020 | – | – | – | 219.4 | – | – | – | – | 219.4 |

The following table shows the contractual undiscounted cash flows under lease contracts at the balance sheet date:

| **Contractual expiry date**<br>*SDR millions* | Up to 1 month | 1 to 3 months | 3 to 6 months | 6 to 12 months | 1 to 2 years | 2 to 5 years | 5 to 10 years | Maturity undefined | Total |
|---|---|---|---|---|---|---|---|---|---|
| **As at 31 March 2021** | (0.3) | (0.7) | (0.3) | (1.5) | (2.8) | (2.2) | (0.6) | – | **(8.4)** |
| As at 31 March 2020 | (0.3) | (0.7) | (0.3) | (1.5) | (2.8) | (4.9) | (0.9) | – | (11.4) |

### B. Liquidity ratio

The Bank has adopted a liquidity risk framework taking into account regulatory guidance issued by the BCBS related to the Liquidity Coverage Ratio (LCR). The framework is based on a liquidity ratio that compares the Bank's available liquidity with a liquidity requirement over a one-month time horizon assuming a stress scenario. In line with the BCBS liquidity risk framework, the underlying stress scenario combines an idiosyncratic and a market crisis. However, the liquidity ratio differs in construction from the LCR to reflect the nature and scope of the BIS banking activities – in particular, the short-term nature of the Bank's assets and liabilities. Within the Bank's liquidity framework, the Board of Directors has set a limit for the Bank's liquidity ratio which requires the liquidity available to be at least 100% of the potential liquidity requirement.

The following table provides information on the development of the Bank's liquidity ratio for the last two years:

| For the financial year | **2021** | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| *Percentages* | Average | High | Low | At 31 March | Average | High | Low | At 31 March |
| **Liquidity ratio** | 131.3% | 154.8% | 118.8% | **129.0%** | 134.2% | 157.5% | 118.9% | 127.7% |

The liquidity available is determined as the cash inflow from financial instruments over a one-month horizon, along with potential additional liquidity which could be generated from the disposal of highly liquid securities, or by entering into sale and repurchase agreements for a part of the Bank's remaining unencumbered high-quality liquid securities. In calculating the amount of potential additional liquidity, an assessment is performed to identify securities which are of high credit quality and highly liquid. This is followed by a projection of the amounts that could reasonably be generated through selling these securities or entering into repurchase transactions.

The Bank determines the liquidity required as the sum of the cash outflow from financial instruments over a one-month horizon, the estimated early withdrawal of currency deposits, and the estimated drawings of undrawn facilities. As regards currency deposits, it is assumed that all deposits that mature within the time horizon are not rolled over and that a proportion of non-maturing currency deposits is withdrawn from the Bank prior to contractual maturity. At 31 March 2021, the estimated outflow of currency deposits in response to the stress scenario amounted to 49.0% (2020: 50.7%) of the total stock of currency deposits. Moreover, it is assumed that undrawn facilities committed by the Bank would be fully drawn by customers, along with a proportion of undrawn uncommitted facilities.

The following table shows the Bank's estimated liquidity available, the liquidity required and the resulting liquidity ratio:

As at 31 March

| *SDR billions* | **2021** | 2020 |
|---|---|---|
| **Liquidity available** | | |
| Estimated cash inflows | 130.9 | 118.8 |
| Estimated liquidity from sales of highly liquid securities | 43.2 | 35.1 |
| Estimated sale and repurchase agreements | 9.6 | 8.6 |
| **Total liquidity available (A)** | **183.7** | 162.5 |
| **Liquidity required** | | |
| Estimated withdrawal of currency deposits | 138.3 | 123.8 |
| Estimated drawings of facilities | 2.7 | 2.1 |
| Estimated other outflows | 1.3 | 1.4 |
| **Total liquidity required (B)** | **142.4** | 127.3 |
| **Liquidity ratio (A) / (B)** | **129.0%** | 127.7% |

For reference, the Bank also calculates an LCR following the principles set out in the guidance issued by the BCBS. At 31 March 2021, the Bank's LCR stood at 184.8% (2020: 177.9%).

# Independent auditor's report

To the Board of Directors and to the General Meeting of the
Bank for International Settlements, Basel

## Report on the audit of the financial statements

### Opinion

We have audited the financial statements of the Bank for International Settlements, which comprise the balance sheet as at 31 March 2021, the profit and loss account, the statement of comprehensive income, the statement of cash flows, movements in shareholders' equity and notes, as well as capital adequacy and risk management disclosures for the year then ended, including a summary of significant accounting policies.

In our opinion, the financial statements as at 31 March 2021 give a true and fair view of the financial position of the Bank for International Settlements and of its financial performance and its cash flows for the year then ended in accordance with the accounting policies described in the financial statements and the Statutes of the Bank.

### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those provisions and standards are further described in the "Auditor's responsibilities for the audit of the financial statements" section of our report.

We are independent of the Bank for International Settlements in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Other information

Management is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of Management and the Board of Directors for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the accounting policies described in the financial statements and the Statutes of the Bank, and for such internal control as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the Bank for International Settlement's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless Management either intends to liquidate the Bank for International Settlements or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the Bank for International Settlement's financial reporting process.

### Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank for International Settlement's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.
- Conclude on the appropriateness of the Managements' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank for International Settlement's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Bank for International Settlements to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PricewaterhouseCoopers AG

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|---|---|---|
| Andrin Bernet | Natalia Dmitrieva | |
| Audit expert | Audit expert | Zürich, 17 May 2021 |

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*Promoting global monetary and financial stability*

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