BIS

Annual Report

2021/22

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BIS

Annual Report

2021/22

Promoting global monetary and financial stability

Foreword by the General Manager

I am pleased to present the BIS's Annual Report for 2021/22. The report highlights the progress we have made to support central banks' pursuit of monetary and financial stability, and the steps we have taken to live our values, to deliver on our Innovation BIS 2025 strategy and to respond to the new challenges we face.

Over the past financial year, member central banks confronted a number of additional challenges in an already highly complex policy environment. In most countries, the acute phase of the Covid-19 pandemic appears to have passed; however, its effects still reverberate. The relaxation of containment measures in much of the world, in conjunction with substantial monetary and fiscal policy stimulus, has resulted in a rapid growth rebound. At the same time, the demand rotation from services to goods that occurred early in the pandemic has not fully reversed and aggregate supply has proven less responsive than pre-pandemic. This combination has led to significant bottlenecks in global supply chains and resulted in higher than expected inflation. The war in Ukraine has not only created unimaginable hardship for its people, but has further exacerbated uncertainty and strained production networks, especially in the energy and agriculture sectors.

For the first time in years, many central banks now face the challenge of taming high inflation. While some inflationary pressures should ease as demand patterns normalise and new supply comes on line, the timing and path to that correction is uncertain, and central banks face difficult choices in the period ahead. Restoring low inflation must be the priority.

At the same time, central banks need to be attuned to changes in the financial and economic landscape post-pandemic, not least from emerging financial stability risks and payment system innovations. Our economic analysis over the year looked in-depth at the implications of these challenges for the global economy and the central bank community.

The continuing need for international dialogue and cooperation underscores our role as the global forum for central banks. Regular meetings held in the context of the Basel Process fostered exchanges of views and experiences on topics including the uneven post-pandemic recovery, the impact of war, the interactions of monetary policy and fiscal policy, and building cyber resilience.

The BIS-hosted committees made major inroads on macro-financial stability policy frameworks, sustainable finance and cross-border payments.

In addition to the regular meetings, our Representative Offices broadened their engagement across their respective regions, publishing targeted research, shaping policy debates in Asia and the Americas, and bringing insights from central banks back to the BIS. The relevance of our outreach to central banks and supervisory authorities is further supported by the Financial Stability Institute, which completed projects this year to advance international cooperation in financial technology and crisis management.

From a banking perspective, 2021/22 was challenging but successful. Despite ongoing Covid-19-related constraints and market volatility, net profits reached SDR 341.0 million by end-March – lower than the previous year’s exceptional SDR 1,237.3 million, but a good performance under the circumstances. Meanwhile, total comprehensive income was SDR 918.1 million. Development of new customer products helped us to maintain a high level of customer placements and third-party assets, including adding another green bond fund to our suite of products.

In 2021/22, we passed the halfway point in the overall timeline of our Innovation BIS 2025 strategy and have now delivered on around 60% of its goals. In 2022, the BIS Innovation Hub saw a new phase of expansion, with the opening of its London and Nordic Hub Centres, and made excellent progress on projects that address priority areas in central banks’ innovation agendas. We also leveraged technology to use data more effectively and enhance our customer services. And beyond these outward-facing efforts, we improved processes to facilitate our operations and enhance the day-to-day experience of our staff.

I was particularly pleased that in 2021/22, we were finally able to mark the Bank's 90th anniversary with our *BIS 90 Years* exhibition and open our doors to the public. It represented an opportunity for us to welcome the local community in order to reflect on where we have been, showcase our role in the global financial system and, most importantly, look to the future.

In December 2021, we bid farewell to the Chair of our Board of Directors, Jens Weidmann, as he concluded his time at the Deutsche Bundesbank, and extended our thanks to him for his excellent service to the BIS. In January 2022, we welcomed our new Board Chair, François Villeroy de Galhau, Governor of the Bank of France.

Looking back at these achievements over the past year, I must warmly thank our people, without whom none of this would have been possible and who consistently go the extra mile to anticipate and respond to the needs of central banks during these challenging times.

Agustín Carstens

The year in numbers

2021/22

Financials

Total deposits (SDR)
292.2 billion in currency
18.9 billion in gold

Net profit (SDR)
341.0 million

Total comprehensive income (SDR)
918.1 million

Operating expense (SDR)
315.6 million

Shareholders' equity (SDR)
23.4 billion

Balance sheet (SDR)
347.6 billion

~180 clients

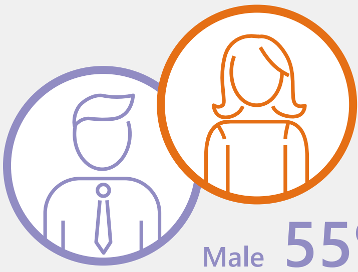
Customer asset management holdings
(SDR, market value)
25.4 billion

Recruitment

127
Staff members
(internal and external)

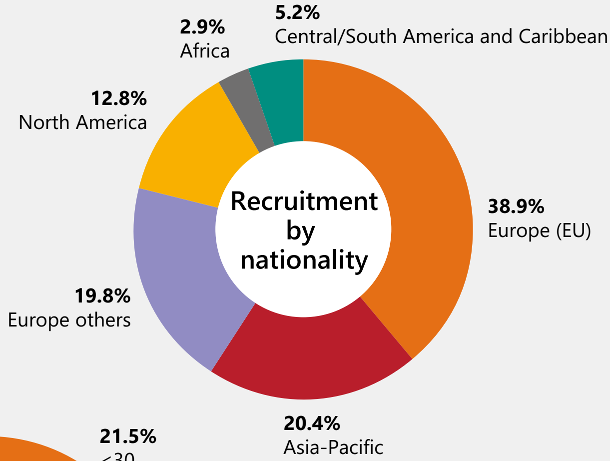
23
Graduate Programme

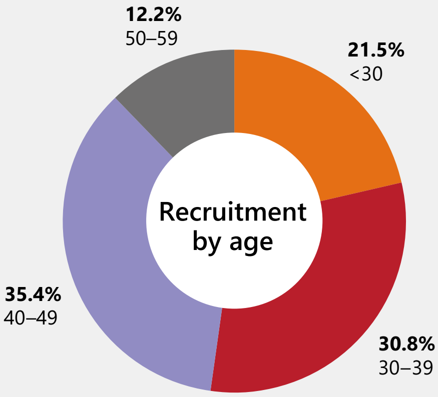
22
Secondees, fellows and assignees



Female 45%

Male 55%





High-level hosted meetings

388
virtual and hybrid meetings

27,035+
participants

Research seminars and meetings

137 speakers

84 external speakers

53 BIS speakers

Total downloads of BIS publications

968,450 downloads

Visiting economic researchers

56

10	BIS Research Fellows
2	Central Bank Research Fellows
25	Technical Advisers
8	Senior Associates
8	Graduates
3	Lamfalussy Fellows

Digital engagement

17.1 million unique website visitors (+23% from 2020/21)

86k LinkedIn followers (+26% from 2020/21)

123.3k Twitter followers (+25% from 2020/21)

12.1k YouTube followers

BIS global presence

3 dealing rooms
Basel, Hong Kong SAR and Mexico City

7 Innovation Hub Centres
Basel/Zurich, Frankfurt/Paris, Hong Kong SAR, London, Singapore, Stockholm and Toronto

2 Representative Offices
Hong Kong SAR and Mexico City

Contents

1

Promoting global monetary and financial stability

The global financial system is increasingly complex and interdependent, which makes the policymaking environment in which central banks operate ever more multifaceted. Against this backdrop, the work of the BIS in supporting central banks and promoting global financial stability has never been more relevant. The Bank achieves this by focusing on developments in financial markets, monetary policy and technological innovation.

Promoting global monetary and financial stability

In pursuing our mission, we strive to help our member central banks navigate their way through the challenges they currently face, as well as anticipate those they may face in the future.

Our mission, values and activities

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

Our work is anchored in – and informed by – our strong core values that shape the way in which we work. They unite our staff and guide all our actions, promoting a cohesive, purpose-driven culture to support central banks through their current and future challenges.

Our core values are:

- We deliver value through excellence in performance.
- We are committed to continuous improvement and innovation.
- We act with integrity.
- We foster a culture of diversity, inclusion, sustainability and social responsibility.

Mission

Our mission is to support central banks' pursuit of monetary and financial stability by fostering international cooperation, and to act as a bank for central banks

Strategy

Innovation BIS2025
Shaping the Bank for tomorrow

Key roles

- Responsible innovation and knowledge-sharing
- A platform for broad international cooperation
- Safe and competitive financial services
- In-depth analysis and insights on core policy issues

Core values

- We deliver value through excellence in performance
- We are committed to continuous improvement and innovation
- We act with integrity
- We foster a culture of diversity, inclusion, sustainability and social responsibility.

Business goals

- Preferred service provider to central banks and financial authorities
- Networks among central banks and other partners
- Common understanding of policy issues affecting central banks and financial authorities
- International statistical activities
- Dissemination of analyses and information to policymakers
- Financial products and services to central banks and international financial institutions
- Prime risk quality and attractive return to shareholders
- Sound corporate governance
- Best practices in risk management
- Prudent and efficient use of resources
- Develop and attract high-calibre, skilled and experienced staff

Innovation BIS 2025

Innovation BIS2025

Shaping the Bank for tomorrow

Embracing continuous innovation is the means by which the BIS continues to deliver added value. Our ambitious Innovation BIS 2025 strategy, which was launched in financial year 2019/20, is helping us to meet the needs of our central bank stakeholders in a period of rapid economic and technological change.

The Innovation BIS 2025 strategy sets out the Bank's medium-term set of initiatives to shape continuous innovation on the analytical and business fronts. In the past financial year, we marked the successful delivery of 60% of the strategy (see next page).

As part of the strategy, the Bank adopted innovative tools to make more effective use of data and enhance customer support. The use of big data technology continues to expand the economic analyses which the organisation carries out, including enhanced metadata on global economic trends. The BIS launched a new SDMX-based public data dissemination tool, and Risk Management and Banking are leveraging technology to provide high-speed analysis related to financial risk management.

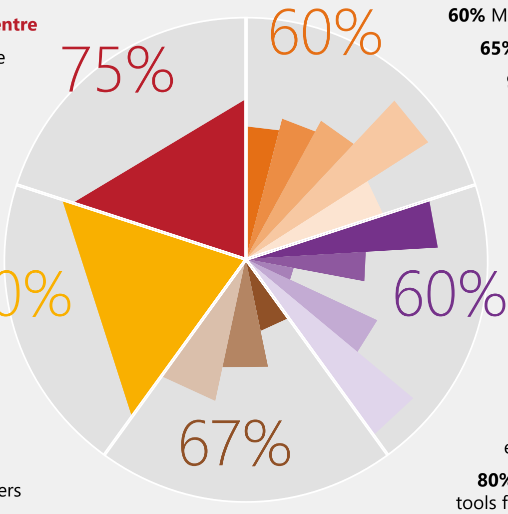
The BIS Innovation Hub continued to make significant progress in 2021/22 on a number of key themes, including the exploration of central bank digital currencies and improvements in payment systems. In March 2022, the second BIS Innovation Summit, "Money, technology and innovation", brought senior leaders together to discuss issues and developments in the field.

The organisation has made progress in implementing the three lines of defence strategy to ensure that, as the operations undertaken by the BIS expand, our approach to operational risk remains robust. Moreover, greater emphasis has been placed on training and staff development – the Bank is committed to empowering our people to grow and adapt to the changing needs of our members and stakeholders and to the changing world around us.

Innovation BIS 2025: where do we stand?

Estimated completion percentage

Cooperative activities



Cyber Resilience Coordination Centre

75% Establish Cyber Resilience Coordination Centre

See Chapter 5

Multidisciplinary BIS Innovation Hub

80% Establish regional Innovation Hub Centres

See Chapter 5

FSI support for capacity-building

80% Capacity-building/ online courses

70% Fintech repository and technology-related papers

58% Crisis management papers and simulation exercises

See Chapter 3

Economic research and analysis

55% Impact of technological innovation

60% Macro-financial stability frameworks

65% Monetary policy frameworks

90% Lessons from crisis management

60% Monitoring and spillovers

See Chapter 2

Advanced analytics and collaboration

80% Big data/advanced analytics platform

50% MED data lake / factory for research and statistics

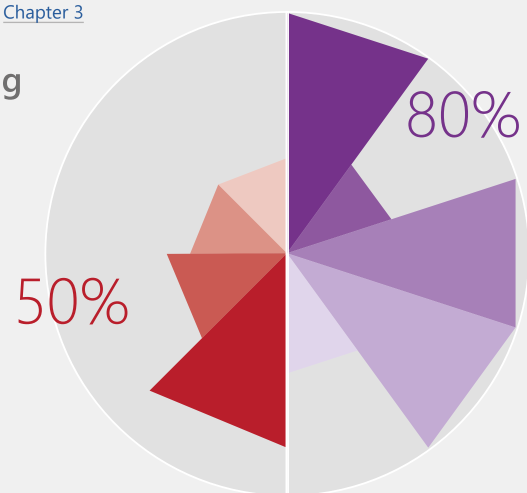
20% New digital services gateway/platform

60% New data dissemination for external and internal clients

80% Next-generation external collaboration tools for the BIS

See Chapter 2

Banking



Implementing outcome of strategic review of Banking IT

80% Foundational infrastructure

50% Customer-facing systems

40% Front office systems

40% Risk management, operations and compliance systems

See Chapter 4

Supporting investment strategy and strategic review of Banking IT

100% Technology review

55% Accelerate creation of new products

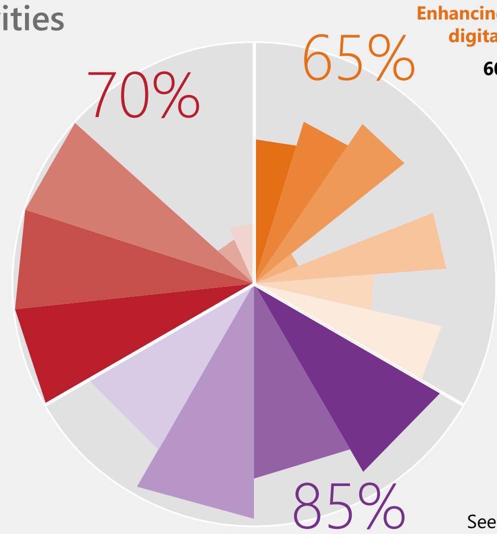
100% Adopt new technologies

100% Globalise Banking

50% Enhance internal and external cooperation

See Chapter 4

Organisation-wide activities



Improving the way we work

25% Reinforce the three lines of defence

20% Make the BIS a more inclusive and "greener" workplace

100% Streamline key Bank-wide processes

100% Make internal meetings and gatherings more effective

100% Redesign internal committees and approval procedures

See Chapter 7

Enhancing cyber and operational resilience and digitalisation of the workplace

60% Enhanced Data Centre services

70% Communication and collaboration

80% BIS Innovation Hub infrastructure

20% Extended Innovation Zone

80% Extranet

50% Security services

80% Software development

People Strategy

90% Performance and recognition

80% Mobility and strategic workforce planning

95% Career transition

80% Shared mindset and behaviours

See Chapter 6

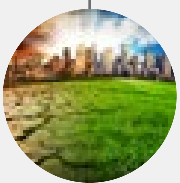
Highlights 2021/22

Overall, the financial year 2021/22 was a busy period with a number of considerable accomplishments and milestones achieved. This timeline highlights some of them.

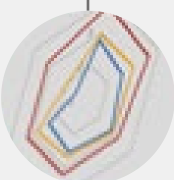
2019 2020 **2021**

June 2021
Green Swan Conference: "Coordinating finance on climate"

June 2021
BIS and Bank of England launch Innovation Hub London Centre

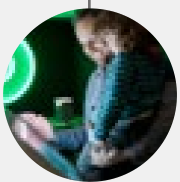


July 2021
BIS and other international financial organisations launch Central Banks' and Supervisors' Climate Training Alliance (CTA) ahead of COP26



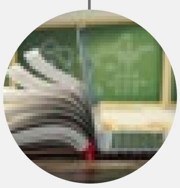
July 2021
BIS Committee on Payments and Market Infrastructures, BIS Innovation Hub, IMF and World Bank issue joint report on the potential of central bank digital currencies to enhance the efficiency of cross-border payments

July 2021
BIS Innovation Hub and Monetary Authority of Singapore publish Project Nexus, a proposal for enhancing global real-time retail payment network connectivity



October 2021
BIS 90 Years exhibition opens to the public

October 2021
11th BIS Research Network conference: "Regulating big tech: between financial regulation, anti-trust and data privacy"

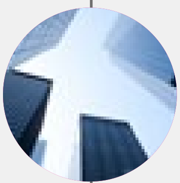


October 2021
Launch of new BIS staff e-learning platform

Innovation BIS2025

Shaping the Bank for tomorrow

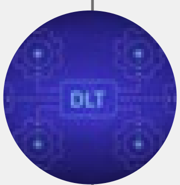
2022 2023 2024 2025



November 2021
BIS appoints Innovation Hub heads for London, Nordic and Toronto Centres

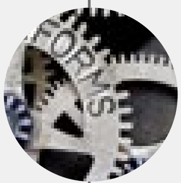
December 2021
BIS, Bank of France and Swiss National Bank conclude Project Jura, successful cross-border wholesale CBDC experiment

January 2022
BIS Board elects François Villeroy de Galhau as its new Chair

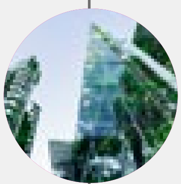


January 2022
BIS, Swiss National Bank and SIX successfully test integration of wholesale CBDC settlement with commercial banks

January 2022
BIS appoints Innovation Hub Eurosystem Centre Head



February 2022
Governors and Heads of Supervision reaffirm commitment to implementing Basel III framework



February 2022
Launch of Asian green bond fund

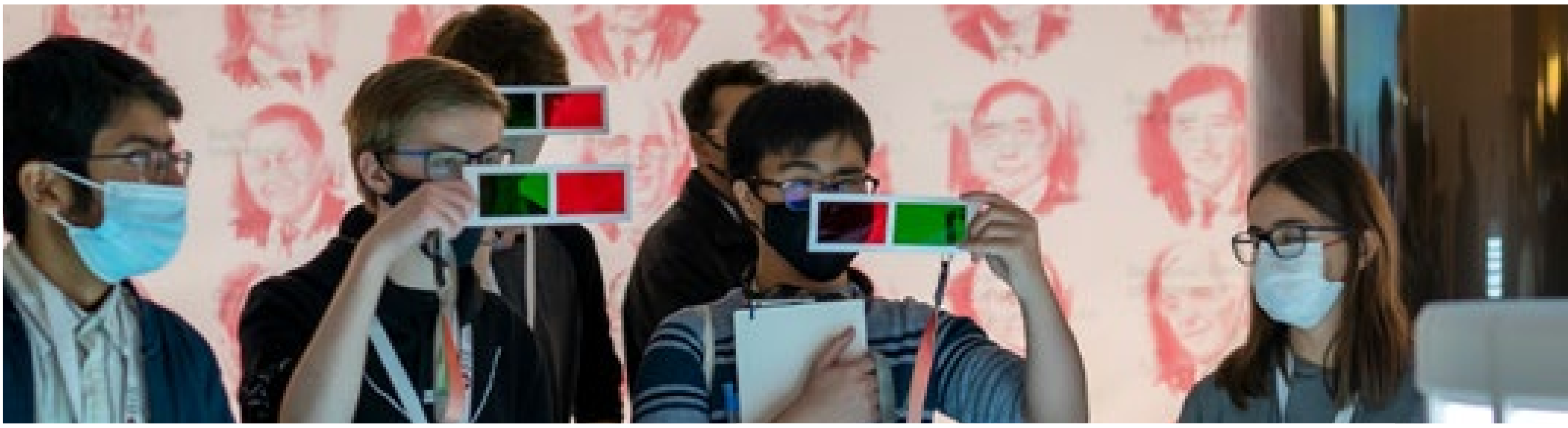
March 2022
BIS Innovation Summit 2022

March 2022
FSI launches online repository on fintech regulation

March 2022
BIS Innovation Hub publishes Project Dunbar, which explores how a common platform for multiple central bank digital currencies could enable cheaper, faster and safer cross-border payments

Our 90th anniversary

The *BIS 90 Years* exhibition gave us the perfect opportunity to reflect on our mission, look back at our rich history and achievements, and look forward to our future. The Bank opened the doors of its Basel headquarters to the public over two weeks in October and November 2021. The response was tremendous – more than 8,000 people took the opportunity to visit. They learnt about monetary and financial stability, why it matters, as well as the role of the BIS and how our role has expanded over the years. The exhibition also considered the future of finance and explained what central banks and the BIS are doing to prepare for the challenges ahead. See Chapter 6 for more details about *BIS 90 Years*.



Overview: key roles of the BIS

Promoting international cooperation

The BIS fosters cooperation among central banks and financial supervisory authorities globally. By offering a forum for discussion and facilitating and encouraging dialogue, it supports stakeholders' work to promote monetary and financial stability. This part of our core work enables knowledge-sharing and common actions as part of the Basel Process. In the past year, regular high-level meetings were held virtually and in Basel, attended by central bank Governors and supervisory authorities from around the world. In addition, the Bank's Representative Offices continued their important roles as recognised forums for regional meetings.

The BIS assists financial supervisors around the world to improve and strengthen their financial systems. The Bank's Financial Stability Institute has continued to support the implementation of global regulatory standards and sound supervisory practices by central banks and financial sector regulatory and supervisory authorities. This has mainly been achieved through publications, outreach events and FSI Connect – the BIS's web-based learning tool for central banks and other stakeholders. For more information about these topics, see Chapter 3.

A platform for responsible innovation and knowledge-sharing

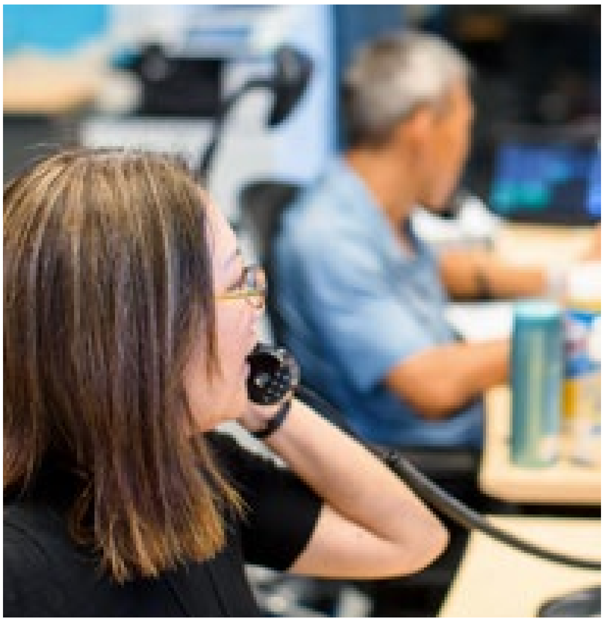
Technology and technology-driven innovation are rapidly changing the financial sector. The ability to reap the benefits and mitigate risks is a priority among the central banking community. In the second year of its operations, the BIS Innovation Hub explored a number of key areas of innovation in the sector and positioned the BIS as a thought leader in the field.

Reflecting the priorities of member central banks, the Innovation Hub made significant strides in understanding central bank digital currencies, the use of technology for their regulation and supervision (regtech and suptech), next-generation financial market infrastructures and green finance. It partnered with central banks around the world to explore the possibilities and implications of technological change. To find out more about the BIS's work in the area of innovation, see Chapter 5.

In-depth analysis and insights

BIS research draws on the unique position of the Bank at the intersection of conceptual advances and policymaking. Our economic analysis and insights are topical and of direct relevance for policy but also identify and address longer-term issues of strategic importance to stakeholders. Our research forms the basis for sound policymaking and supports cooperation between central banks and regulatory authorities.

In the past year we shared our research and insights on the emergence of supply bottlenecks and rising inflation in the wake of the pandemic. Other significant areas probed by BIS research include issues relating to the future of the monetary system, as well as climate change and green finance. For more on our research and statistics, see Chapter 2.



Banking

The BIS offers a full array of banking services to its central bank, monetary authority and international organisation customers. All products are designed with clients' key reserve management needs in mind – in particular the requirements for safety, liquidity and return. Further, the Banking Department is located across our Basel, Hong Kong SAR and Mexico City bases and offers round-the-clock services as a result.

The BIS's banking activities are priced competitively and conducted in accordance with relevant industry standards and the highest ethical principles. The Banking Department strives to promote green finance, including by channelling investments into environmentally focused projects. In addition to providing services to clients, Banking staff also manage the Bank's own capital and promote knowledge-sharing with other institutions. To find out more about our Banking Department, see Chapter 4.

2

In-depth analysis and insights

BIS research supports central banks in their pursuit of monetary and financial stability. The BIS aims to provide 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

Our research and analysis are the result of the joint effort between various areas of the BIS.

BIS research and analysis combine conceptual and empirical advances, on the one hand, and policymaking, on the other. Our researchers examine data on the macroeconomy and the financial system to provide insights that are topical and of direct relevance for policy.

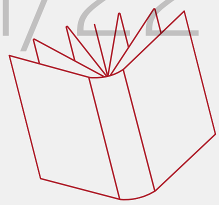
The bulk of our analytical work is carried out in the Monetary and Economic Department (MED), in both the Bank's headquarters in Basel and its Representative Offices. The Representative Offices also lead programmes of research activities in their own right, in collaboration with the central banks in 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.

In performing this role, BIS staff also collaborate with external researchers, including those from member central banks. The BIS also convenes conferences and organises 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 background 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 also published in a timely way in the BIS Annual Economic Report, Quarterly Review, Bulletin 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.

BIS publications

2021/22



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

75 Working Papers
209,500
Offer insights into key economic and financial developments

12 BIS Bulletins
78,300
Provide insights on current events in banking, markets and the larger economy

26 Committee publications
276,000
Provide background analysis and policy recommendations

8 BIS Innovation Hub publications 91,000
Deal with critical trends in technology-driven innovation in financial services

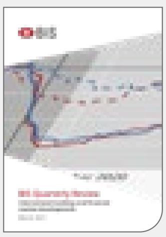
4 FSI Briefs
11,000
Focus on regulatory and supervisory subjects of topical interest

9 FSI Insights
81,500
Outline range of regulatory and supervisory approaches

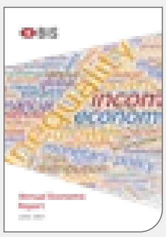
7 BIS Papers
107,800
Facilitate discussions of senior officials from central banks held at the BIS

8 FSI Executive Summaries
30,500
Provide brief synopses of new and revised global financial regulatory standards

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

The year's highlights

The highlights of BIS research and analysis reflect key events in the financial year up to end-March 2022, not least the rise in inflation in the wake of the Covid-19 pandemic and its implications for monetary policy. BIS research also looked at digital innovation and the fundamental principles around the future of the monetary system, as well as climate change and green finance.

Bottlenecks, labour markets and inflation

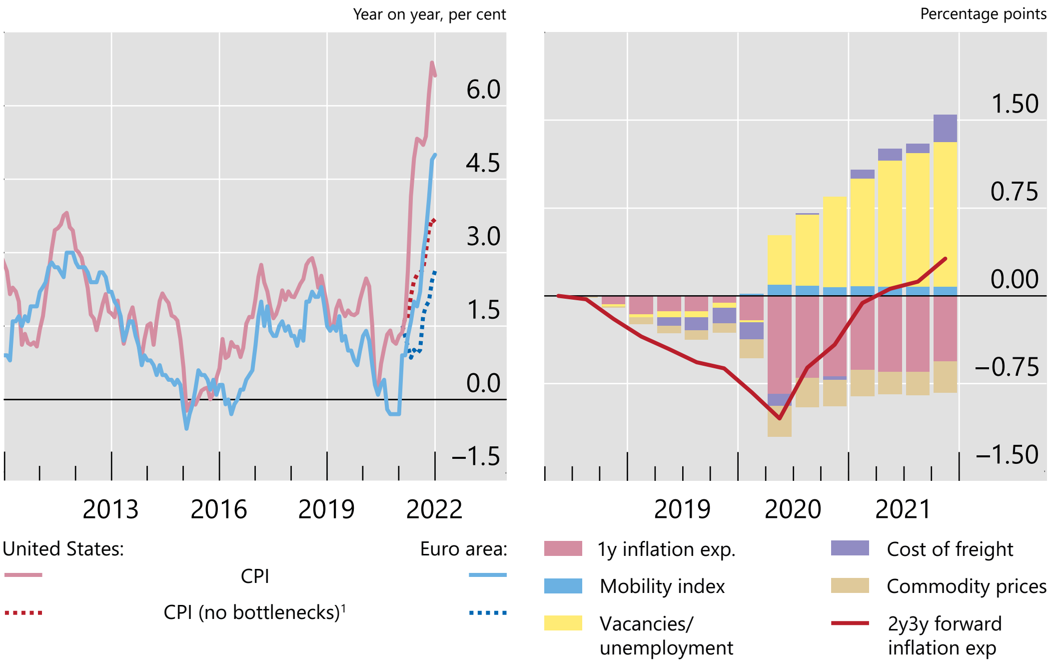
A unique and rapid rebound followed the sharp recession caused by the Covid-19 pandemic, at least until the onset of the Russia-Ukraine war. Thanks to the unprecedented support for businesses and households from governments and central banks, a much-feared wave of defaults and bankruptcies did not materialise, while private demand bounced back faster than it did after previous global recessions.

Towards the end of 2021 and in the early part of 2022, the faster recovery in combination with supply chain disruptions and supply bottlenecks unleashed inflation, which in most advanced economies had been all but absent for decades.

Bottlenecks, inflation and expectations

Bottlenecks have driven recent inflation increases

Contributions to markets' medium-term US inflation expectations[2]



[1] Excludes contributions from energy and vehicles. [2] Cumulated contributions to the change in markets' inflation expectations at the two- to five-year horizon (2y3y forward) since Q2 2018. Calculations using estimates from rolling-window regressions for a sample of seven advanced economies: $F2y3y_{it-1} = \alpha_{iT} + \beta_{1T}InflationSwap1y_{it} + \beta_{2T}Mobility_{it} + \beta_{3T}CostFreight_{t} + \beta_{4T}CommodityPriceInflation_{t} + \beta_{5T}Vacancies/Unemployment_{it} + \varepsilon_{it}$ for t=T-60 days,…, T with T=15jun2018,…,15jun2021.

Sources: www.bis.org/publ/bisbull47.pdf; www.bis.org/publ/bisbull48.htm.

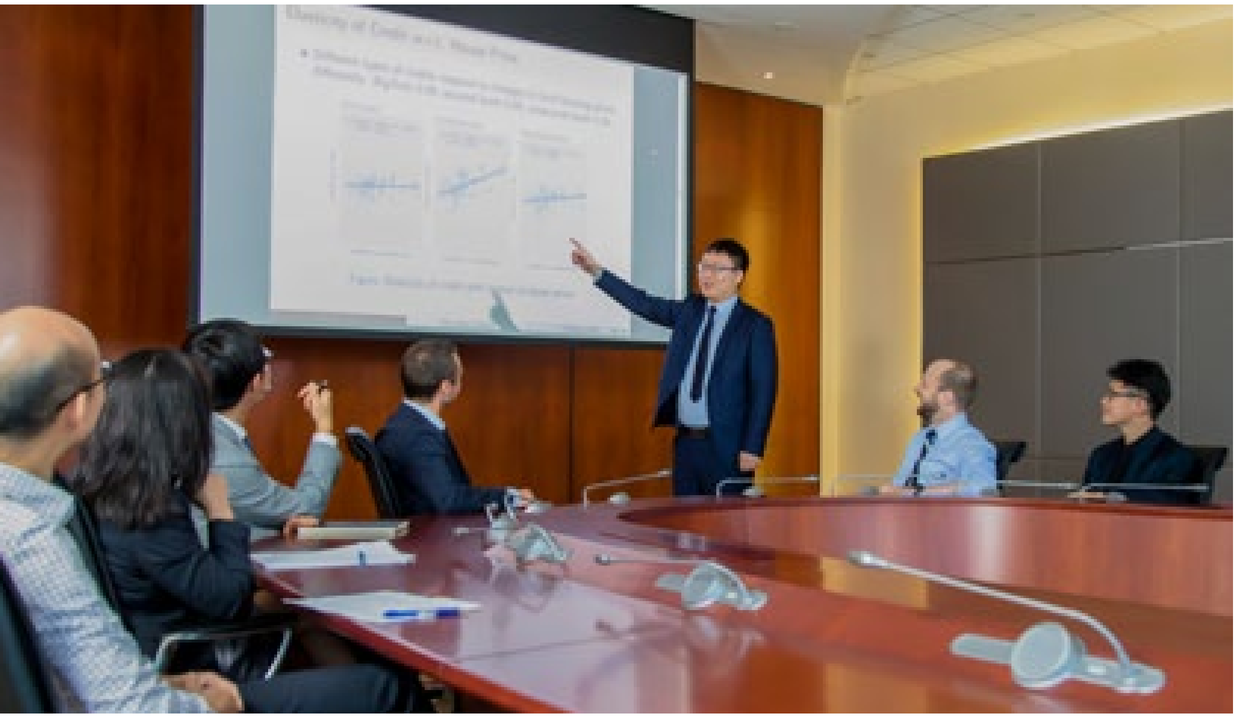
Deciphering the drivers has been challenging, yet a few factors appear to have played an important role. First, the unusually strong rebound in demand, following its artificial suppression through pandemic containment measures and underpinned by ample policy support. Second, a surprisingly persistent pandemic-induced rotation of demand away from services towards goods. The surge in the prices of goods was not offset by slower growth or declines in the prices of services. Third, an unusually weak response of supply to soaring demand. The clearest manifestation of these supply constraints was the emergence of bottlenecks, amplified by precautionary behaviour along global value chains. These bottlenecks have been a major driver of recent inflation dynamics, including in the United States and euro area (see left-hand panel in graph on previous page). The war in Ukraine has disrupted the global supply of commodities, adding to the supply side woes and pushing inflation higher.

> The faster recovery unleashed inflation, which in most advanced economies had been all but absent for decades. The key to where global inflation is headed is in how firms and households adjust their expectations and behaviour.

A key factor in where global inflation is headed is whether wage-price spirals will take hold, as workers seek to recoup the loss in purchasing power and firms seek to overcome profit squeezes. Further negative supply shocks, not least those linked to the war, could heighten the risk. So far, central banks have sought to anchor inflation expectations – an important predictor of CPI inflation.

But expectations could become unanchored if prices continue to rise at their current rapid pace. What happens in labour markets could be a game changer. Job vacancies and unemployment are important drivers of inflation expectations (see right-hand panel in graph on previous page), and could push services inflation up and amplify second-round effects. By the end of the first quarter of 2022, however, any pickup in wage growth has been limited to sectors such as leisure and hospitality and transportation. But the rise in prices has become increasingly broad-based, breaking the standard pattern whereby, when inflation settles at a low level, fluctuations in aggregate price indices tend to be accounted for mainly by sector-specific price changes. As highlighted in a speech by the General Manager, the risk of a transition from a low- to a high-inflation regime should not be underestimated.

A persistent rise in inflation could prove challenging. There is evidence that the responsiveness of inflation to pressures on spare capacity has declined over the past couple of decades – the flattening of the Phillips curve (which posits an inverse relationship between inflation and unemployment). This suggests that central banks would need to tighten by more in order to have the same effect on inflation. Second, nominal and inflation-adjusted (real) interest rates have been hovering at historically low levels. As recent BIS research indicates, this may in part be due to a weaker impact of monetary policy on aggregate demand following the prolonged period of unusually low interest rates. The corresponding increase in debt and risk-taking in financial markets complicates the task ahead. Finally, research found that,



in the period that preceded the flare-up in inflation, changes in the monetary policy stance operated through a remarkably narrow set of sectors, which could continue to be the case going forward.

> For central banks, a persistent rise in inflation could prove challenging, since bringing it back under control could be costly.

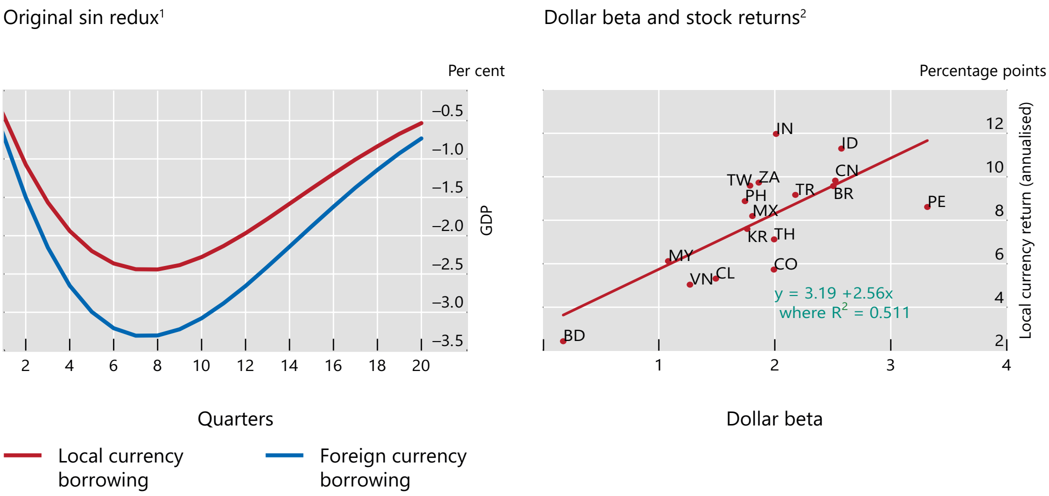
Growing inflation risks and rising interest rates in advanced economies may also present renewed challenges for emerging market economies (EMEs) owing to capital flow and exchange rate fluctuations. These enduring challenges have already shaped the nature of EME macro-financial stability policy frameworks, which have come to rely increasingly on a combination of inflation targeting with FX intervention, macroprudential tools and capital flow management measures. Many EMEs now routinely borrow from abroad in their local currency and have overcome so-called "original sin", which is the proposition that emerging market borrowers can borrow abroad only in foreign currency. Nevertheless, emerging market borrowers remain vulnerable to changes in global financial conditions (see left-hand panel in graph on next page). This is in part because, operating through changes in market participants' risk capacity, exchange rates continue to affect domestic financial conditions in EMEs. In this vein, the 1,000th BIS Working Paper,[1] published in February, finds that the broad dollar index has attributes of a cross-sectional asset pricing factor in EME stock prices, just as the broad dollar index serves as an indicator of the financial channel of exchange rate in other contexts (right-hand panel).

[1] The first BIS Working Paper was published in April 1980.

> Rising inflation risks and rising interest rates in advanced economies may also raise renewed challenges for emerging market economies from capital flow and exchange rate fluctuations.

At the request of the 2022 Indonesian G20 Presidency, the BIS started working on a report on macro-financial stability policy frameworks. The report draws upon the Bank's long-standing analytical expertise in the area and on more recent BIS work, in particular Chapter II of the 2019 Annual Economic Report, as well as reports by a working group of the Asian Consultative Council of the BIS and by a group of central banks including members of the Consultative Council for the Americas and the central banks of South Africa and Turkey. In March 2022, the BIS presented the report's key points to the G20 International Financial Architecture (IFA) Working Group (see also Chapter 3). The BIS report on macro-financial stability policy frameworks will be delivered to the G20 Finance Ministers and Central Bank Governors later in 2022.

Challenges for EMEs from swings in global financial conditions



[1] Dynamic effects of a 100 basis point tightening shock to advanced economy risk-free interest rates. [2] "Dollar beta" is the sensitivity of stock returns to swings in the broad dollar index.

Sources: www.bis.org/publ/work1000.htm; www.bis.org/publ/work1004.htm.

Financial innovation and the future of the monetary system

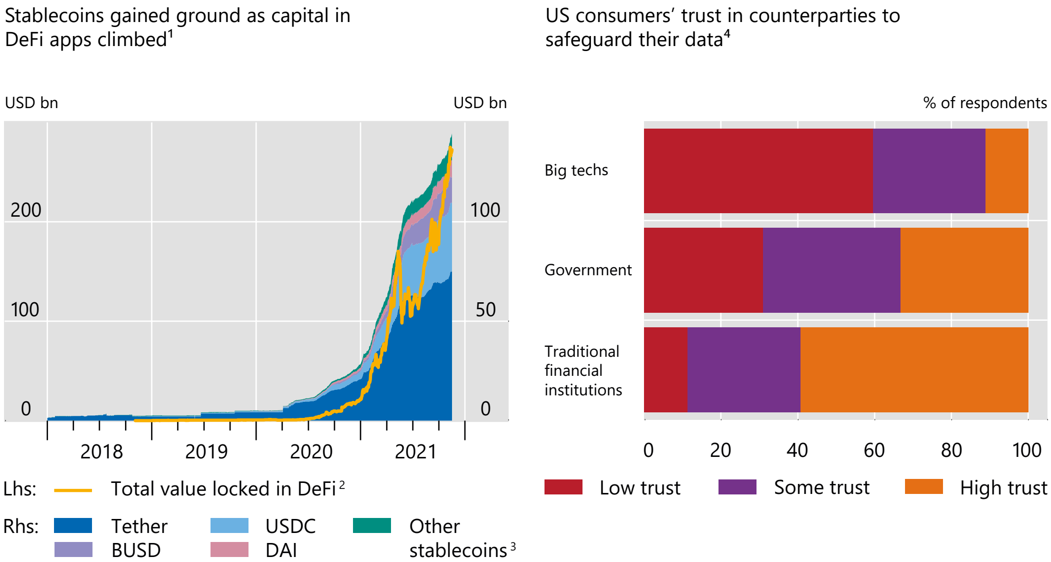
A key focus of central banks is the digitisation of finance and money. The 2021 Annual Economic Report featured a special analysis on central bank digital currencies (CBDCs), which laid out how CBDCs present an opportunity for the monetary system. CBDCs, grounded on trust in the central bank, offer the unique advantages of central bank money to the general public. CBDCs should be based on digital identification, with institutional and technological safeguards to ensure privacy. This way, money can continue to fulfil its function as a public good and promote an open, two-tiered system featuring public and private innovation, resulting in greater access, lower costs and better services.

> Central bank digital currencies present an opportunity for the monetary system. Building on society's trust in the currency, they can offer the general public the unique advantages of central bank money in digital form.

In a speech at Goethe University in early 2022, the General Manager cautioned that current developments in the hinterland of finance could undermine the nature of money as a public good. In particular, decentralised finance (DeFi), which has seen rapid growth (see left-hand panel of graph on next page) and purports to provide financial services free of intermediaries, may not deliver on its vision. Meanwhile, the rise of big techs and global stablecoins could pose new risks for the monetary and financial system.

According to BIS research, DeFi's key feature of decentralisation struggles to live up to its promise. Just as it is impossible for firms in the real world to devise contracts that cover all possible business needs, DeFi platforms need some centralisation to ensure they can adapt to unforeseen events. Underpinned by blockchains, DeFi must incentivise validators through high fees to ensure integrity. BIS researchers conclude that this has concentrated wealth and power in the hands of a few and kept transaction volumes low. It could explain why the DeFi ecosystem is geared predominantly towards speculation, arbitrage and investment in cryptoassets. There are also questions about whether DeFi's governance and security can scale as the high rewards required to entice validators may dissipate as user growth slows. From a financial stability perspective, DeFi poses risks related to investors' high leverage, liquidity mismatches, the lack of shock-absorbing capacity and the built-in connectedness of the ecosystem.

DeFi, stablecoins and consumers' trust in counterparties



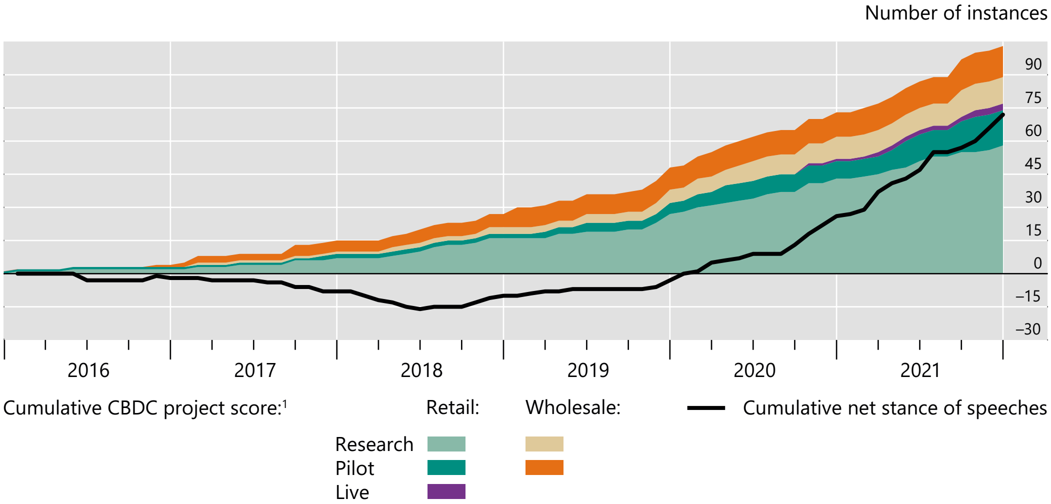
[1] Stacked areas plot stablecoins' value in circulation. The selected stablecoins are those ranked as the top four by market capitalisation as of 15 November 2021. [2] Refers to the size of capital pools underpinning DeFi protocols. The sample includes 679 protocols. [3] Includes 57 other stablecoins. [4] Based on a representative sample of 1,361 US households, September 2020. Based on responses to the question, "How much do you trust the following entities to safely store your personal data (that is, your bank transaction history, geolocation or social media data)? For each of them, please indicate your trust level on a scale from 1 (no trust at all in ability to safely store personal data) to 7 (complete trust)". "Low trust" = values 1 and 2; "some trust" = 3 and 4; "high trust" = 5 or higher.

Sources: www.bis.org/publ/qtrpdf/r_qt2112b.htm; www.bis.org/publ/bisbull42.htm; www.bis.org/publ/bisbull45.pdf.

Further examining new trends, BIS research indicates that the entry of big tech into finance has broadened access to financial services but poses challenges to data governance. Big techs have bolstered financial inclusion by leveraging big data and machine learning to provide cheaper and more targeted products. However, companies collect and analyse potentially sensitive personal data often without consumers' explicit consent or full understanding. This unrestrained collection of personal data erodes consumer privacy, raising important concerns around data abuse and even personal safety. The degree of these concerns varies across counterparties (see the right-hand panel of the graph above), as well as across segments of society and countries, and illustrates the principle that the technology that can be harnessed to enhance financial inclusion and lower costs could also give rise to closed ecosystems and "walled gardens". Technological developments also entail greater onus on policymakers to ensure fairness in the use of technology – for instance, artificial intelligence.

Beyond concerns about data privacy, the issuance of a global stablecoin by a big tech could entrench market power and fragment the monetary system. Stablecoins are cryptocurrencies that base their value on collateral and thus ultimately on the credibility of sovereign currencies. In case of rapid adoption, the emergence of a closed ecosystem around a global stablecoin would reinforce the loop between data, network externalities and activities (DNA) that underpins big techs' growth. The same economic forces of the DNA that foster financial inclusion could also cause discrimination, privacy violations and market concentration. In addition, stablecoins could disintermediate incumbent banks and lead to digital currency areas, which could have a negative impact on financial stability and fragment national and global monetary systems.[2]

Ever more central banks have CBDC projects



[1] Based on publicly communicated reports. Cumulative count of scores in each bucket. The score is 0 when there is no announced project, 1 in case of research studies, 2 in the case of an ongoing or completed pilot and 3 for a live CBDC. For more information, see Auer et al (2020).

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

Harnessing the benefits of financial innovation and creating an open and global monetary system requires new approaches for public policy. The BIS believes that a regulatory approach that incorporates entity-based elements could help address the risks stemming from the rise of big techs, such as their provision of critical services to the financial sector. It is already being pursued in some jurisdictions. Central banks' increasing use of big data from non-traditional sources could enhance such regulation. Regulators also need to ensure that big techs' dominance does not discourage investment in nascent competitors. In the DeFi space, it is important to contain the identified vulnerabilities before DeFi attains systemic importance. As

[2] The regulation of big techs was also the focus of the 2021 BIS Research Network meeting.

DeFi applications are borderless and prone to regulatory arbitrage, cooperation among central banks and other public authorities is required. Such cooperation could also help to ensure the integrity and stability of money and payments more generally and prevent the abuse of data.

Providing digital central bank money to the public, be it in the form of CBDCs or as improvements to existing systems, could further help to ensure a level playing field and promote competition. CBDCs are already being issued or piloted in several countries (see graph on previous page). These initiatives have reflected a variety of motives, including financial inclusion. Ensuring the interoperability of payment systems, especially across borders, could be a decisive move in bringing down the stubbornly high costs of cross-border payments. One way to achieve this is by interlinking CBDCs across borders in so-called multi-CBDC arrangements, a step many central banks are considering.

Project Syndicate op ed pubished 18 April 2022

> Central banks could work with one another, and with the private sector, to ensure that domestic CBDCs are interoperable across borders. Such a network could lower the cost of cross-border payments, increase their speed and transparency, and broaden access.

Technological advances are also reshaping the process of financial intermediation at large. By fundamentally changing the way information is collected, analysed and transmitted, the growing adoption of information technology in the financial sector has led to the emergence of new, specialised providers of financial services. It has further improved banks' ability to lend to startups, thereby spurring entrepreneurship. Better digital capabilities in general have also mitigated the effects of the Covid-19 pandemic on smaller firms and facilitated a swifter recovery. The pandemic has also spurred the use of suptech tools by regulators.

Climate change and green finance

The 26th United Nations Climate Change Conference of the Parties (COP26) in 2021 put a spotlight on the role of finance in the Paris Agreement's objective of low greenhouse gas emissions and climate-resilient development.

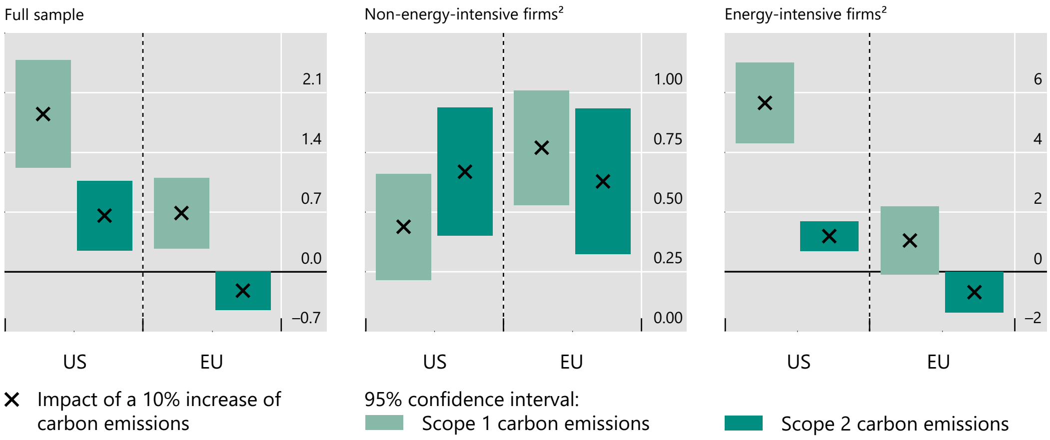
Building on earlier BIS work on green bonds and the Bank's own experience with sustainable investment products (see Chapter 4), BIS research investigated different aspects of sustainable finance in the broader sense.

One fundamental aspect is determining whether a financial asset can be considered "green" or "sustainable". Although multiple classification schemes, or taxonomies, already exist, many of them have shortcomings, such as limited granularity, no reference to the use of measurable performance indicators and a lack of verification of the promised benefits. BIS research proposed key principles for designing effective taxonomies for sustainable finance. This research also served as input to the G20 Sustainable Finance Working Group (SFWG) in 2021 and as a reference for the April 2022 report on market transparency by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS).

Differentiating firms' environmental performance or riskiness is another key topic. The environmental, social and governance (ESG) ratings that have proliferated in recent years do not always provide consistent guidance. Firms' carbon emission intensity is increasingly being associated with climate transition risk, ie the policy, regulatory, technological, market or legal risk that firms may face as society responds to climate change. BIS research found evidence of a carbon risk premium in the corporate bond market: all else being the same, debt securities issued by firms with a larger carbon footprint tend to trade at slightly higher yields (see graph on next page). Similar results were documented in syndicated loan markets.

Polluting firms face marginally higher risk-adjusted debt financing costs[1]

Option-adjusted spread change, in basis points



[1] The impact is calculated through a panel regression of option-adjusted bond spreads on carbon emissions, controlling for the five-year probability of default, other bond-specific characteristics and time, firm and currency fixed effects. Monthly sample from 2016 to 2020. Standard errors are clustered at the bond level. [2] Firms classified as energy-intensive are those from the energy, materials and utilities sectors. The rest are non-energy-intensive firms.

Source: www.bis.org/publ/qtrpdf/r_qt2112f.htm.

In this context, the carbon footprint of asset portfolios – and how to reduce this footprint in an orderly way – is an issue of practical interest to investors and asset managers. BIS research finds that simple asset allocation rules could be applied to build alternative benchmark portfolios with a progressively decreasing carbon footprint while keeping risk-adjusted returns at levels similar to those of conventional benchmarks.

> Firms' carbon emission intensity is increasingly being associated with climate transition risk. The carbon footprint of asset portfolios – and how to reduce it in an orderly way – is an issue of practical interest to investors and asset managers.

Although finance was in the spotlight, it is only one aspect in the broader discussion on climate change (see box in Chapter 3). BIS research in the past year also addressed the topic from other angles, such as the relationship between economies' energy mix, carbon emissions and macroeconomic outcomes. It was further complemented by other analytical works with a supervisory or policy practice perspective, addressing topics such as the drivers and transmission channels of climate-related financial risks, the measurement methodologies for such risks, the experience so far with climate stress test exercises in the financial sector and the prudential treatment of climate-related financial risks.

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 since the Great Financial Crisis (GFC), 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, with the aim of developing capabilities in advanced analytics to make better sense of the information collected. Ongoing projects show how 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.

BIS statistics track the impact of the pandemic

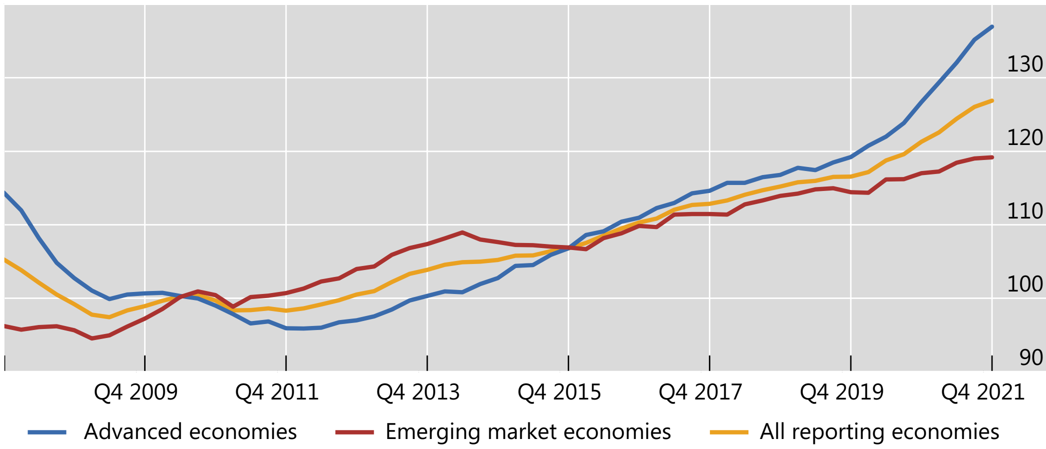
BIS statistics have been an essential tool for tracking developments in international credit flows throughout the Covid-19 pandemic. Internationally active banks, flush with greater deposits on the back of fiscal support programmes in major advanced economies, markedly expanded their holdings of government bonds and reserves at central banks. At the same time, non-bank borrowers of foreign currency – mainly US dollar – credit increasingly turned to bond markets for financing. For instance, financing through the bond market now accounts for as much dollar credit to emerging market and developing economies as do loans from internationally active banks.

Other macroeconomic series compiled at the BIS also helped to document various global phenomena in the course of 2021. These include the major increase in public debt, as documented in a new data set on long-term debt securities issued by central and general governments in domestic and foreign currencies. The new data reveal that the issuance of government bonds accelerated over the past decade and surged with the onset of the pandemic in 2020. The foreign currency share of government bonds issued by EMEs has continued to decline as major EMEs have been tapping bond markets in their domestic currencies.

Another notable development was the further acceleration in global house prices, mainly in advanced economies. The BIS residential property price data set, which includes time series for some 60 countries, shows that global house prices exceeded their immediate post-GFC average levels by more than 25% in real terms at the end of 2021 (see graph below).

Aggregate developments in real residential property prices[1]

Year-on-year changes, in per cent

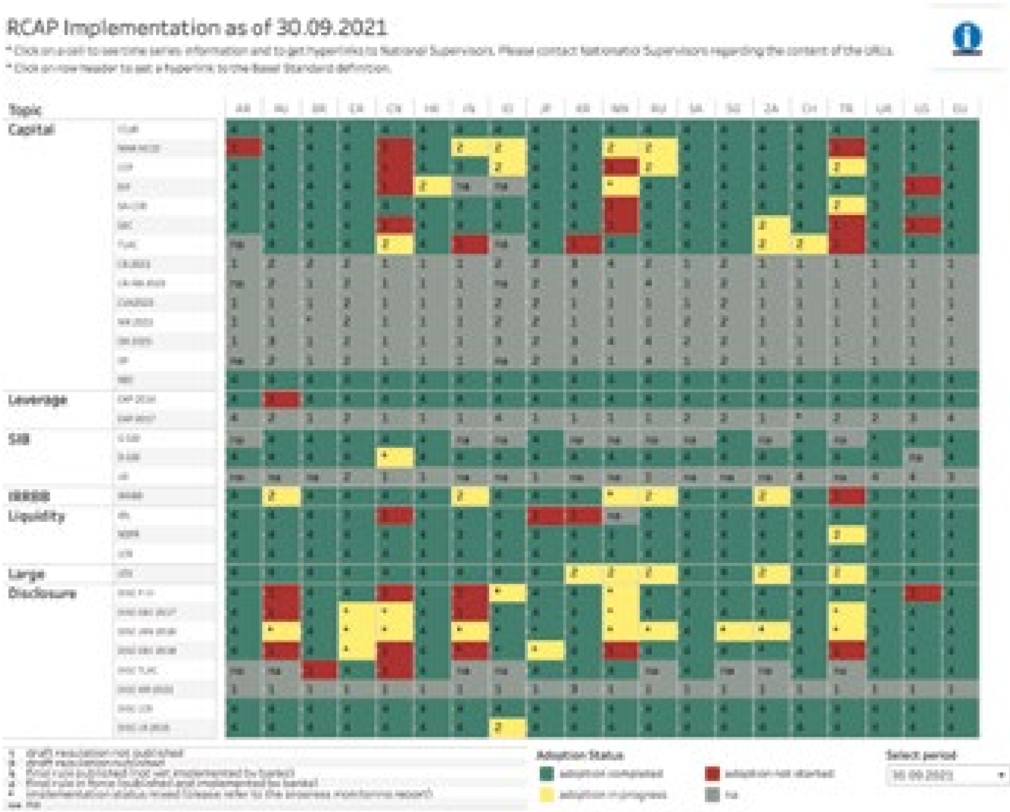


[1] Based on quarterly averages; CPI-deflated.

Source: BIS calculations based on selected residential property price series.

The BIS also collects more granular data to better monitor the behaviour of individual financial institutions in response to global regulatory initiatives. This includes institution-level data collected to support the Quantitative Impact Studies organised by Basel-based regulatory groups, especially those conducted by the Basel Committee on Banking Supervision to monitor the impact of Basel III, and to assess ongoing policy initiatives. The data have also helped track the progress of Basel III adoption by jurisdiction (see page 67).

The RCAP implementation dashboard shows views by standard and jurisdiction



Despite the disruptions resulting from Covid-19 and the required shift in regulatory and supervisory priorities, further progress has been made in the implementation of the Basel III standards.

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 global macroeconomic and market developments, including the Covid-19 pandemic, on the largest institutions' credit exposures and funding profiles.

Closing economic and financial data gaps

The post-Covid-19 outlook underscores the importance of international statistical cooperation to close economic and financial data gaps. The BIS has traditionally played an active role in this area through its involvement in the Inter-Agency Group on Economic and Financial Statistics (IAG), which comprises the BIS, the ECB, Eurostat, the IMF (Chair), the OECD, the United Nations and the World Bank. In particular, the IAG had been tasked with coordinating and monitoring the implementation of the recommendations of the G20-endorsed Data Gaps Initiative developed after the GFC to enhance existing core official statistics in terms of timeliness, frequency and international comparability. Three key factors contributed to the success of the second phase of the DGI completed during the financial year 2021/22: structured collaboration between international organisations and national statistical systems; close connection with current official priorities, with effective reporting to policymakers; and an effective peer pressure mechanism for spurring the active involvement of G20 national authorities as well as other interested jurisdictions.

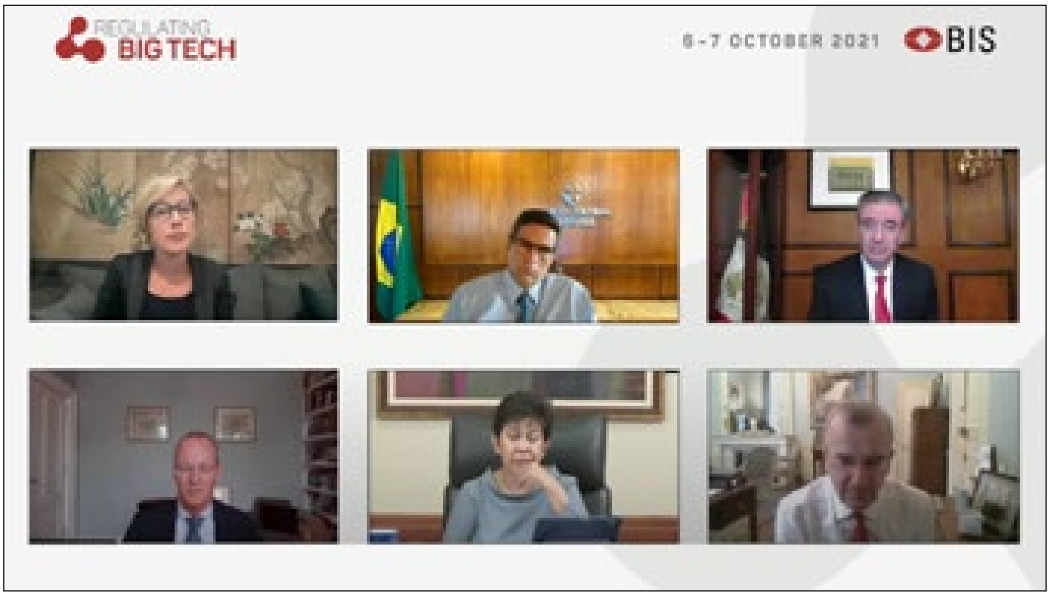
Looking ahead, the BIS statistics team is updating the Data Gaps Initiative web portal, which will help to monitor progress on the key data collections relevant to the central banking statistical community. Of particular interest is further development of statistics on sectoral/financial accounts, property prices, banking and debt securities, cross-border exposures, securities financing transactions and derivatives, as well as more general aspects related to the global statistical infrastructure (eg registers, identifiers and statistical standards).

Launch of the new SDMX 3.0 standard

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 streamline the transmission of data and strengthen their dissemination through the design of appropriate Data Structure Definitions. The BIS has recently deployed an SDMX web service which facilitates dissemination of BIS statistics. In addition, the Bank successfully coordinated the publication of the SDMX version 3.0, developed in 2021, which makes it easier to handle large micro data sets and new "alternative" types of data. To further widen the adoption of this standard, the BIS, in coordination with other IAG members, will lead activities to promote and further develop reference implementations of the latest SDMX version and publish them as open source software goods.

Collaboration with central bank and academic researchers around the world

Collaboration with central bank and academic researchers around the world stimulates broad dialogue on key policy questions. During the past year, the BIS welcomed 56 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 2021 to Enrique Mendoza. During the year, Robert Townsend and Fernando Alvarez also took up their postponed Lamfalussy Fellowship with visits to Basel.



Annual meeting of the BIS Research Network, 2021

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.

Conferences and workshops are organised at frequent intervals to bring together participants from policymaking, academia and business. The 20th BIS Annual Conference, held in virtual format in June 2021 as a series of public webinars, focused on post-pandemic challenges for central banks. Also in June, the BIS collaborated with the London School of Economics and Political Science's Paul Woolley Centre, discussing the workings of capital markets and the social efficiency allocations these markets achieve. The annual meeting of the BIS Research Network, held virtually in early October, discussed how best to regulate big tech in finance to promote the public interest. Later that month, the BIS teamed up with the Georgetown University Institute of International Economic Law on DC Fintech Week. This was an opportunity to explore cutting-edge developments in fintech policy, payment infrastructures, innovation, inclusion and integrity.

The Americas Office hosted the 11th CCA Research Conference in virtual format on "The economics of the Covid-19 pandemic" on 16–18 November 2021 (see Chapter 3).

The Asian Office hosted the Asian Monetary Policy Forum 2021 and MAS-BIS conference on "Macro-financial stability policy in a globalised world: lessons from international experience" in virtual format on 26–28 May 2021 (see Chapter 3).

The BIS also collaborates closely with international research groups, 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.

In addition, the BIS facilitates cooperation and fosters discussion between standard-setting bodies and the financial inclusion community. To this aim, it conducts an annual workshop on financial inclusion, produces online tutorials via the Financial Stability Institute and publishes papers on this subject.

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

3

Promoting international cooperation

The BIS acts as a global forum for dialogue and cooperation among central banks and financial supervisory authorities from around the world. In the aftermath of the Covid-19 pandemic, central banks are assessing how robust growth is while addressing inflation which has been unleashed in most of the world. In addition to an exacting macroeconomic environment, digitisation is changing the structure of the financial and monetary system globally and demanding central banks' attention.

A global forum for dialogue and cooperation

The BIS is committed to fostering international cooperation among central banks[3] 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 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.

In addition, the Advisory Committee of the BIS Innovation Hub meets on a regular basis to provide strategic guidance to BIS Management on the Innovation Hub's work (see Chapter 5).

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

[3] The access of the Central Bank of the Russian Federation to all BIS services, meetings and other BIS activities has been suspended since end-February 2022.

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, in the light of the Covid-19 pandemic, almost all these meetings took place in virtual format.

The three principal bimonthly global meetings are the Global Economy Meeting (GEM), the Economic Consultative Committee (ECC) 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 (ACC) (see page 54) and the Consultative Council for the Americas (CCA) (see page 57).

The Financial Stability Institute (FSI) gathers senior financial sector authorities in high-level and policy implementation meetings (see page 48). Its advisory board typically meets once per year.

Global Economy Meeting

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

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

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 oversight for three Basel-based central bank committees: the Committee on the Global Financial System (CGFS), the BIS Committee on Payments and Market Infrastructures (CPMI) and the Markets Committee. It also oversees the work of the BIS Innovation Hub (see Chapter 5).

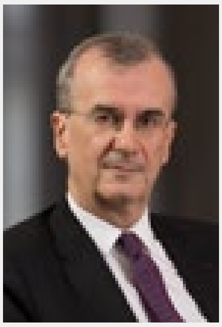
In 2021/22, the GEM's economic discussion focused on current macroeconomic and financial developments in major advanced and emerging market economies. Topics discussed included monetary policy and fiscal policy interactions, the uneven global recovery, implications for spillovers, labour markets in the wake of the pandemic, monetary policy normalisation, house prices post-pandemic and climate change, the business cycle and monetary policy. Many of the topics were motivated by their relationship with inflation and inflation dynamics.

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 of the three committees mentioned above and prepares proposals for the GEM's consideration. In addition, the ECC Chair makes recommendations to the GEM on the composition and organisation of the CGFS, the BIS CPMI and the Markets Committee and the appointment of their chairs. It is also the body to which the Advisory Committee of the BIS Innovation Hub, led by the Chair of the ECC, is accountable.

In addition to the guidance provided to the work of the three GEM committees, in 2021/22 the ECC discussed the following topics: regulating big techs in finance, inflation concerns and bottlenecks, the entry of big tech and stablecoins into the payment system, and conjunctural issues relating to economic and financial market developments and central banks' policy responses. Members also exchanged views on the implications of the war in Ukraine.

All Governors' Meeting



François Villeroy de Galhau
Chair of the BIS Board of Directors

The All Governors' Meeting is comprised of the Governors of the 63 BIS member central banks and was chaired until December 2021 by the then Chair of the BIS Board, Jens Weidmann, former President of the Deutsche Bundesbank. Since January 2022, it is chaired by the new Board Chair François Villeroy de Galhau, Governor of the Bank of France. It convenes to discuss selected topics of general interest to its members. In 2021/22, topics discussed included central banks and climate change, macro-financial stability frameworks for EMEs, central banks' post-pandemic ways of working, the three lines of defence in central banks, interoperability between payment systems, cyber risk priorities for central banks and decentralised finance.

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 76) and the Irving Fisher Committee on Central Bank Statistics (see page 77).

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 66). Chaired by François Villeroy de Galhau, Governor of the Bank of France until January 2022 and since April 2022 by Tiff Macklem, Governor of the Bank of Canada, the GHOS is the highest-level forum responsible for international collaboration on banking regulation and 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 past year included global financial conditions, corporate sector vulnerabilities, and drivers and patterns of EMEs' growth post-pandemic.

The BIS also holds regular meetings for the Governors of central banks from small open economies. Discussion themes during the past year included the pandemic and risks to central banks, the global inflation outlook and monetary policy, forward guidance, policy tightening and real sector fragilities, and exit from accommodative monetary policy.

In November 2021, the BIS held the roundtable of Governors from African central banks on "Covid-19 and the monetary-fiscal policy nexus in Africa".

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 an important role in supporting the BIS's goals to promote international cooperation in the area of financial stability. In particular, the FSI is mandated to support the implementation by central banks and other financial authorities of global regulatory standards and sound supervisory practices.

FSI activities cover three main areas: policy work, policy events and training. This work is complemented by specific initiatives in the areas assigned to the FSI in the Bank's Innovation BIS 2025 strategy: 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 2021/22, the FSI completed various projects to further international cooperation and collaboration in financial technology and crisis management, and launched new initiatives. In particular, the FSI:

- undertook the organisation of the Crisis Simulation Exercise (CSE) in Asia. The preparation work was completed in June 2022. The exercise draws on the experience gained in conducting a similar CSE in Latin America in 2021. The Asian exercise covers six countries in the Asia-Pacific region. Like in the Latin American case, the aim of the CSE is to identify relevant enhancements to the domestic crisis management frameworks and possible improvements to cross-border cooperation arrangements. A CSE for Africa was launched in February 2022 and will be completed in 2023.

- released the first version of a fintech repository (FinRep 1.0). The repository contains information on regulation and other policy material related to fintech. It aims to provide BIS stakeholders with an easy-to-use reference to support policymaking and benchmarking. In comparison with the pilot version that was released September 2020, FinRep 1.0 incorporates new features and improved processes for content tracking and data classification. The FinRep technical group composed of key central bank stakeholders was created to ensure that the tool responds to their needs and accurately reflects their fintech frameworks.

- launched two new, annual e-learning courses. The first one, the BIS Financial Innovation and Technology course (BIS-FIT), covers regulatory responses to fintech, cyber resilience and digital currencies (see also Chapter 6). The second, the FSI-IMF Bank Resolution Online Course (BROC), covers issues relating to crisis management and bank resolution. They complement the three other online courses offered by the FSI on fundamentals of banking regulation and supervision together with the IMF; core aspects of insurance regulation and supervision, jointly with the International Association of Insurance Supervisors (IAIS); and insurance capital standards, also with the IAIS.

Policy work

FSI policy work aims to support the design, dissemination and implementation of sound regulatory and supervisory policies worldwide (see Chapter 2). The related publications are available on the FSI section of the BIS website.

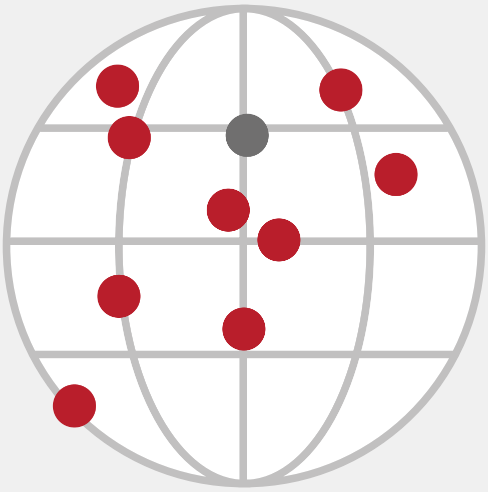
In 2021/22, the FSI published papers covering a range of topics. These included technology-related issues (such as regulation of digital payment services, artificial intelligence and big tech), supervisory practices (such as supervising cryptoassets for anti-money laundering, suptech tools for prudential supervision, redefining insurance supervision, banking supervisors' accountability regime and capital requirements for pandemic risk), bank resolution (such as relevant institutional arrangements, managing banking crises in EMEs) and climate change (stress testing approaches for banks and reflections on regulatory challenges and policy options). The FSI also published an occasional paper on the Latin American Crisis Simulation Exercise, setting out general findings and recommendations. Chapter 2 discusses some of the FSI publications.

The FSI launched a joint project in 2021 with the International Institute for the Unification of Private Law (UniDroit) on banks' liquidation frameworks to capture and publish best practices.

FSI online training 2021/22

FSI Connect

11k subscribers



BIS-IMF Bank Resolution Online Course (BROC)

261 participants

90 institutions

75 countries

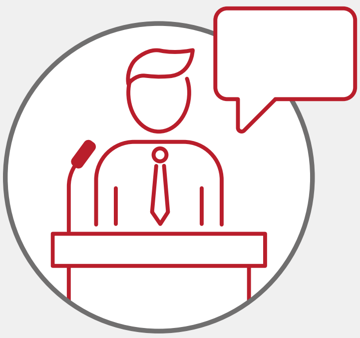
BIS Financial Innovation and Technology online course (BIS-FIT)

215 participants

40 countries

54 institutions

FSI policy events 2021/22



8 high-level meetings

8 policy implementation meetings

3 conferences

"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

The FSI regularly organises high-level meetings, typically in cooperation with the relevant standard-setting body, eg the Basel Committee and the IAIS and regional partners, as applicable. These meetings aim to offer the most senior officials from financial authorities the opportunity to discuss the latest regulatory developments and supervisory priorities. The FSI also organises policy implementation meetings, which are targeted at mid-level officials and are devoted to discussing key prudential policy topics. These events were complemented by three regular annual conferences, on financial inclusion (co-hosted with the Financial Action Task Force), securities markets (co-hosted with the International Organization of Securities Commissions) and deposit insurance and bank resolution (co-hosted with the International Association of Deposit Insurers).

The FSI also organises webinars under the Informal Suptech Network (ISN), a group created to give members access to information on countries' practices. In 2021/22, the frequency of ISN webinars was increased to offer members regular opportunities for engagement and knowledge-sharing. In a similar vein, and as the outcome of an FSI virtual meeting on supervisory capacity-building and e-learning in the "new normal", an Informal Supervisory Capacity (Supcap) Network was created in 2021. This network will serve as a platform for learning professionals in selected central banks and financial authorities to exchange views on learning and development practices.

In 2021/22, almost 2,700 participants from more than 160 jurisdictions, from 590 institutions, attended FSI policy events. Topics covered included financial technology, crisis management, climate change and financial inclusion.

Training

The FSI offers training which comprises FSI Connect (the FSI's online learning platform), virtual seminars and online courses. In 2021/22, FSI virtual seminars covered topics such as risk-based supervision, Basel III implementation, insurance standards, crisis management, artificial intelligence and climate risk.

FSI Connect contains tutorials on a broad range of regulatory and supervisory topics mostly relating to global regulatory standards. In 2021/22, the FSI Connect library was expanded, with 17 new tutorials and six major updates, as well as eight Executive Summaries. These tutorials covered topics such as financial technology, financial inclusion, climate change, and regular regulatory and supervisory issues. As of March 2022, 292 institutions from 161 countries subscribed to FSI Connect.

In April 2022, the FSI launched a new FSI Connect platform in order to better support the expanded offering of online courses and virtual training activities.

In November, the Climate Training Alliance portal was launched as part of a joint initiative by the BIS, the Central Banks and Supervisors Network for Greening the Financial System, the IAIS and the Sustainable Insurance Forum. This initiative aims to enhance the availability of training resources to central banks and supervisory authorities in the area of climate-related financial risks. The portal includes e-learning material such as FSI Connect tutorials and webinars on the fundamentals of climate risk regulation and supervision. More than 600 officials from 86 jurisdictions currently have access to the portal. The FSI is undertaking preparatory work for a training course in this area.

Representative Office for Asia and the Pacific

In its implementation of the Innovation BIS 2025 strategy and its repositioning under the overarching principle of bringing more of the BIS to Asia and more of Asia to the BIS, the Asian Office had a milestone year in 2021/22. Amidst uncertainties stemming from continued spread of Covid-19 infections in the region and the path of policy normalisation in advanced economies, the Asian Office focused its efforts on three broad areas: providing more targeted research and analytical support to member central banks in the region, participating actively in informing and shaping policy debates in Asia, and – working closely with colleagues in Basel and Mexico City – offering more innovative banking products to clients.

The Asian Office continued to deepen its work on integrated policy frameworks, conducted and contributed to cutting-edge research in exploring how technology shapes the financial system, and developed and launched the first Asia-focused green bond fund to help green the Asian economies. Leveraging its regional expertise, the Asian Office also partnered with the Americas Office and BIS headquarters in Basel to lead the organisation of the major emerging markets Governors and Deputy Governors meetings, focusing on corporate vulnerabilities, post-Covid-19 policy exits and central bank digital currencies, respectively. Working as an integrated office and collaborating closely with Basel, the Asian Office has been able to do all this with agility, creativity and resilience in spite of the challenges posed by the ever shifting Covid-19 situation in Hong Kong SAR.

The year's highlights

A more strategic Asian Consultative Council for the benefit of the BIS and the region

Building on ongoing efforts to make the Asian Consultative Council (ACC), the advisory body for the BIS in the region, more strategic and forward-looking, the Asian Office further stepped up its engagement with stakeholders when setting the priority areas for BIS activities in Asia and the Pacific. This involves actively listening to and soliciting views and feedback from all ACC members throughout the year, as well as ensuring that the twice-yearly ACC meetings are a venue where participating Governors can have more in-depth and timely discussions on conjunctural issues, including the impact of the Ukraine war on Asian economies, keeping the Bank ahead of the curve. ACC members also bid farewell to Ravi Menon, Managing Director of the Monetary Authority of Singapore, who stepped down as ACC chair in September 2021, and welcomed Governor Perry Warjiyo of Bank Indonesia to serve as the new chair for two years.

Managing Director Ravi Menon, Monetary Authority of Singapore

Governor Perry Warjiyo, Bank Indonesia

Sharing the Asian experience with integrated policy frameworks beyond Asia

Following up on the November 2020 publication of the report *Capital flows, exchange rates and policy frameworks in emerging Asia*, global discussions at the All Governors' Meeting and a high-level conference in May 2021 in collaboration with the Monetary Authority of Singapore on macro-financial stability policy, the Asian Office has redoubled its efforts in this area, aiming to bridge the gap between policy frameworks for macro-financial stability and practice in Asia. Work is also under way to submit a report to the G20 Finance Ministers and Central Bank Governors Indonesian Presidency 2022 on macro-financial stability policy frameworks that will inform and shape policy discussions beyond the Asia-Pacific region (see Chapter 2).

Greening Asia for the long haul

Recognising the tremendous need for green investments in Asia and the Pacific, and the vulnerabilities the region faces from climate change if urgent actions are not taken, the Asian Office consulted ACC members and central banks in Europe and the Americas in the design, development and launch of the first Asia-focused green bond fund, which was initiated by the Bank in February 2022. Leveraging the Banking Department's experience with its two existing green bond funds, the new partnership between the central banks and the development finance community, with the BIS at the nexus, has produced concrete results in the form of a new vehicle for green investments in Asia (see Chapter 4).

Increasing voice and presence in Asia

Leveraging its location in the Asia-Pacific region – which has some of the largest economies in the world and is on the frontline of digital financial innovation – the Asian Office has also stepped up its efforts to engage with member central banks and a wide range of stakeholders to inform and shape policy debates in the region. In a BIS paper, the Asian Office examined how technologies are shaping

"The BIS is increasingly being seen as a trusted adviser and provider of public goods in the Asia-Pacific region, particularly on central banking, digital innovation and in the green space."

Siddharth Tiwari
Chief Representative,
Asian Office

the banking sector, drew lessons for regulatory dimensions and pointed to the importance and need for a new architecture of data governance in the digital age. The General Manager's participation and thought leadership in the region's premier platforms, ranging from the Singapore Fintech Festival to Hong Kong Fintech Week, the Boao Forum for Asia, China Development Forum and the Board of Governors Meeting of SEACEN, significantly added to the BIS's reach and influence in the region. This is particularly true in the areas of digital financial innovation and how EMEs in the region can better prepare themselves for the impact of policy normalisation in advanced economies. The Asian Office has also arranged for BIS senior management engagement with other prominent institutions in the region, including the State Administration of Foreign Exchange, the Asian Development Bank Institute, the Asia School of Business, the Asia Global Institute and the Hong Kong Academy of Finance.

Responding to Covid-19 with agility and resilience

Moving beyond the challenges of Covid-19 has proven more difficult and challenging than expected in the Asia-Pacific region, particularly in Hong Kong, largely due to the spread of the Omicron variant in early 2022. Faced with uncertainties and stringent quarantine measures in the city, colleagues in the Asian Office demonstrated remarkable resilience and agility in adapting to the constantly evolving situation and continued to deliver quality services for the institution, including BIS customers and shareholders. This included cutting-edge research work, substantive contributions to BIS publications, inputs to the G20 process, close cooperation on new and innovative banking product offerings, and enhanced and expanded outreach and engagement. The Asian Office became more integrated in its operations and productive in its output, thanks to strong staff ownership of projects and activities and a shared vision for contributing to the Bank's mission in meaningful and concrete ways.

Representative Office for the Americas

The Americas Office fosters cooperation among the central banks of the Americas. It provides forums where senior central bank officials can share their views and information on the challenges their institutions face. It coordinates task forces of economists and technical specialists aimed at deepening knowledge of specific topics, especially in the areas of financial stability, financial technology and risk management. And it conducts research and economic analysis on issues of interest to the region's central banks. In close collaboration with staff from Basel and Hong Kong SAR, the Americas Office also provides banking services to central banks and international financial institutions in the region and beyond. Two years after its establishment, the Americas Office dealing room currently serves 32 central banks in the region, 11 representative offices of central banks from other regions and four supranational institutions (see Chapter 4).

The year's highlights

In line with Innovation BIS 2025, the Americas Office continued in 2021/22 to strengthen the BIS's footprint in the region. The pandemic period has offered the Americas Office an opportunity to better align its activities and economic analysis with the needs of the region's central banks as they face the challenges of withdrawing their stimulus measures, higher and more persistent inflation and greater dynamism in the digital payments landscape. These efforts have made the regular meetings it organises an effective and timely means for senior officials to exchange information and views. As the office prepares to celebrate its 20th anniversary later in 2022, it has gone from strength to strength, consolidating existing activities and adding new ones.

Focused policy discussions fostered greater engagement among senior policymakers

John C Williams
Federal Reserve Bank of New York

The most important forum where central banks of the Americas can exchange views on relevant economic and financial developments is the Consultative Council for the Americas (CCA). As an advisory committee to the BIS Board of Directors, the CCA comprises the Governors of the eight BIS member central banks in the region. It is currently chaired by John Williams, President and Chief Executive Officer of the Federal Reserve Bank of New York, who was re-appointed at the end of 2021 for another term until January 2023.

In 2021/22, the CCA continued to meet frequently. Aided by briefing notes prepared by Americas Office staff, members discussed the latest news and perspectives on the economic recovery, and shared their views on topics as diverse as: the evolution of inflation and the monetary policy stance;

pandemic-related challenges to central bank policy frameworks; the risk of large spillovers from US monetary policy to Latin America; the motivations for CBDCs and their state of development; and the fiscal outlook and its implications for monetary policy. Some of the background notes – for instance, on the issuance of CBDCs – benefited from research projects that culminated in published research (see Chapter 2). Analysis conducted with disaggregated data on inflation have been employed in other projects and publications, including the BIS Annual Economic Report.

The CCA additionally held outreach meetings with private sector stakeholders: the fifth CCA meeting of CEOs of major financial institutions in Latin America and the Caribbean, and the second meeting of US-based chief economists and strategists for Latin America.

"Two decades since its creation, the Americas Office is now at the forefront of central banks' cooperation. It is the main forum for senior central bank officials in the region to exchange views on topical economic and financial developments."

Alexandre Tombini
Chief Representative,
Americas Office

Strong support for member central banks

Besides the meetings of CCA Governors, the office supports a number of other forums in which central bankers in the Americas can exchange information. The Consultative Group of Directors of Operations met six times to discuss financial market developments and market operations in the region. The Consultative Group of Directors of Financial Stability met twice to discuss the resilience of financial systems in the face of rising interest rates, more frequent cyber attacks and fast-rising investment in cryptoassets. It also established a working group to analyse the financial stability risks that arise from the issuance of cryptoassets. The Scientific Committee, which comprises the CCA Heads of Research, oversees research activities in macroeconomics and monetary policy, including the annual research conference held in November 2021 on the economics of the pandemic.

Development of digital infrastructure remains a key area of cooperation in the Americas

Making retail payments and banking more efficient, less costly and more inclusive is a key goal for the region's central banks. The Consultative Group on Innovation and the Digital Economy (CGIDE) provides a forum for the exchange of the necessary know-how. In September 2021, work by a task force was published that looked at how application programming interfaces (APIs) can be used to initiate payments in an open finance ecosystem. These results complement the analysis of API schemes for identification and authentication published in December 2020. The task force is currently working on a third report on APIs for sharing customers' information among financial institutions and fintech firms.

The CGIDE has also embarked on an ambitious agenda on CBDCs: several meetings discussed policy goals, use cases, their role in financial inclusion, data privacy concerns and their use in cross-border payments. A new technical task force has been established to study a specific CBDC architecture that encompasses the use cases and functionalities most central banks are interested in.

The Chair of the CGIDE, Miguel Díaz, is also the Head of the BIS Innovation Hub Toronto Centre. This ensures close coordination between the CGIDE and the Innovation Hub work programme. Projects by different Innovation Hub Centres were presented to CGIDE members in meetings held over the past year.

Expanding cooperation to risk management

A key initiative during the financial year was the 2021 launch of the Consultative Group on Risk Management (CGRM), to give central banks in the Americas a forum to share experiences and knowledge of monitoring, assessing and mitigating financial, operational and cyber security risks. The need for stronger cooperation in this area reflects the growing importance of risk management activities in the region's central banks and the emergence of new risks, especially since the onset of Covid-19. Market and credit risks have increased with the creation of new credit facilities and asset purchase programmes. Remote operations and a shift in ways of working that may prove more permanent have increased cyber security and operational risks. And, even pre-pandemic, new asset classes were being considered in the investment decisions of several central banks, including environmental, social and governance (ESG) assets.

Since its creation, the CGRM has met regularly to discuss measures undertaken to minimise health and safety risks to staff during the pandemic, governance of risk management and various operational risks arising from remote operations, among other topics. The group has also supervised the work of two task forces, which led to the publication of one report on how the pandemic has changed business continuity planning at central banks and another, forthcoming, report on the challenges central banks face in incorporating climate-related risks into the management of their international reserves, focusing in particular on the limits of existing methodologies and the paucity of data. The group has since set up a task force to examine risks related to CBDC issuance, focusing primarily on technological, cyber security and reputational risks.

Continued outreach

In 2021/22, the Americas Office ramped up its outreach to non-BIS member central banks in the Americas – a key Innovation BIS 2025 objective. The Americas Office hosted a virtual high-level conference on "Climate change and central bank policy in Central America and the Caribbean", which saw the participation of several central bank Governors from non-CCA countries and more than 80 other participants from 15 countries. In addition, the Chief Representative and other staff gave speeches and presentations at regional conferences, workshops and non-BIS policy meetings, including at seminars hosted by the Association of Supervisors of Banks of the Americas (ASBA). Most of these interventions were on the digital economy, reflecting the growing interest in this topic in the region. The Americas Office also organised a series of webinars open to both CCA and non-CCA central banks in the region to present analysis or research on a wide range of topics, including inflation risks, decentralised finance, CBDCs and the implications of the transition to clean energy as well as various reserve management topics (see Chapter 4).

Working for and with central banks and supervisors on climate change

Central banks and supervisory authorities have become increasingly engaged in addressing the economic and financial implications of climate change and other environmental challenges. The BIS's work for them and with them in this area has evolved accordingly.

In 2021/22, the BIS supported the Basel Committee's ongoing climate risk-related work (see page 68) and the Irving Fisher Committee's initiatives on sustainable finance statistics (see page 78), and prepared a Global Economy Meeting discussion on the macroeconomic implications of climate change. The BIS contributed to external international forums such as the G20 Sustainable Finance Working Group and the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), playing leading roles as well in some projects.

New BIS research and analytical publications during the year covered a broader set of climate change-related financial market topics (eg taxonomies, ESG markets, portfolios' carbon footprint) and explored other subjects such as the prudential view on climate-related financial risks, climate stress testing and the link between economies' energy mix and macroeconomic outcomes (see Chapter 2). Some of this work served as input to the international forums mentioned above.

BIS collaboration with central banks reached new milestones in 2021/22 with the launch of a US dollar-denominated green bond fund that targets investment in the Asia-Pacific region (see Chapter 4) and the completion of two innovation initiatives: the first phase of Project Genesis, which resulted in two prototypes for green bond tokenisation, and a sustainable finance-focused edition of the G20 TechSprint (see Chapter 5).

There were also new efforts to facilitate knowledge-sharing among central banks and supervisory authorities, including a conference on climate change and central bank policy in Central America and the Caribbean (see page 60), and the launch of the Climate Training Alliance (see page 53).

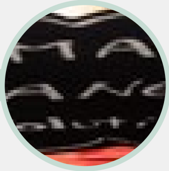
Focus on the BIS's work on climate

2015

29 September 2015
Mark Carney delivers his seminal speech "Breaking the tragedy of the horizon", highlighting the risks that climate change poses for financial stability.

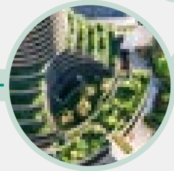
2016

2016
BIS contributes an input paper to G20 Green Finance Working Group.



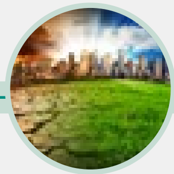
2017

September 2017
BIS publishes its first climate-related research.



12 December 2017
The Network of Central Banks and Supervisors for Greening the Financial System (NGFS) is launched.

2017
The BIS introduces a corporate bond fund for central banks, investing only in assets that comply with a minimum ESG rating threshold.



2018

2018
The BIS joins the NGFS and its Steering Committee.

2018
The BIS adopts a sustainable investment policy for its pension fund.

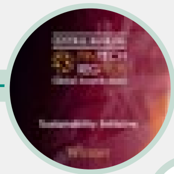
2019

26 September 2019
BIS launches its first green bond fund for central banks, denominated in US dollars.

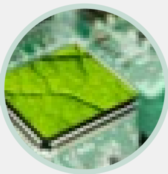
2020

20 January 2020
The BIS and Bank of France publish *The green swan: central banking and financial stability in the age of climate change*.

October 2020
The BIS is awarded Central Banking's 2020 FinTech and RegTech Global Award in the Sustainability category.



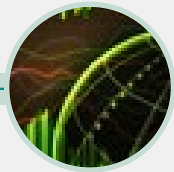
2021



22 January 2021
The BIS Innovation Hub announces its inaugural work programme, with green finance as one of its core themes.

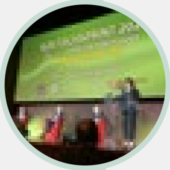
25 January 2021
The BIS launches its second green bond fund for central banks, denominated in euros.

2–4 June 2021
The BIS, together with Bank of France, IMF and NGFS, holds the first Green Swan conference.

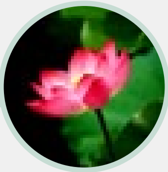


22 June 2021
The BIS rolls out an interactive dashboard with key statistics on green, social and sustainability bonds to NGFS members.

9 July 2021
The BIS, IAIS, NGFS and Sustainable Insurance Forum launch the Climate Training Alliance (CTA) to enhance supervisory training resources for climate risk management.



25 October 2021
The BIS Innovation Hub and Bank of Italy announce the winners of the G20 TechSprint 2021, aimed at finding innovative solutions in the field of green and sustainable finance.



4 November 2021
The BIS Innovation Hub and Hong Kong Monetary Authority present two prototype digital platforms for green bond tokenisation (Project Genesis).

2022

24 February 2022
The BIS launches its third green bond fund, focusing on the Asia-Pacific region.

31 May–1 June 2022
The BIS, ECB, NGFS and People's Bank of China organise the second Green Swan conference.

The Green Swan Conference in June 2021 was a landmark call to strengthen coordination among all actors in society to address climate-related risks for the financial sector and to showcase initiatives and practical solutions. Developed in collaboration with the Bank of France, IMF and NGFS, this virtual event brought together over 100 speakers – policymakers, experts and practitioners from different fields, including three Nobel laureates – and thousands of invited participants and public livestream viewers worldwide. Notable themes from the discussions included:

- The unprecedented scale and scope of the climate challenge and the testing task of navigating between a too-late transition and a premature, uncoordinated one
- The centrality of consistent disclosure by firms for climate risk management and capital allocation for the transition
- The necessity and ingenuity of private sector-led initiatives, but also their limitations
- The crucial role of directives and incentives that only governments can provide in driving behavioural change at all levels – and in addressing the distributional consequences
- The duty of central banks and supervisors to uphold monetary and financial stability in the context of the climate challenge and to manage their own exposure to climate risk
- The interconnection between environmental, animal and human health

The conference was named after the 2020 publication *The green swan – central banking and financial stability in the age of climate change*, which seeks to raise awareness about climate change as a new type of systemic risk – one that is almost certain to materialise if the world fails to act and change course collectively, but the consequences of which are highly uncertain and hard to quantify. *The green swan* is among the most widely disseminated publications to date on the BIS website, accessed by over 141,000 unique readers (as of end-March 2022) since its debut. The 2022 edition of the conference was held on 31 May–1 June 2022.

More information about publications, events and international cooperation relating to climate change at www.bis.org/topic/green_finance.htm.

International groups at the BIS

The BIS hosts nine international groups engaged in standard setting and the pursuit of financial and monetary 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 committees and three associations. Co-location on BIS premises facilitates communication, knowledge-sharing 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.

Committees

The BIS supports six 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 **BIS 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 supervision matters. Its mandate is to strengthen the regulation, supervision and practices of banks worldwide with the purpose of enhancing financial stability. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions. 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 Chair of the BCBS is Pablo Hernández de Cos, Governor of the Bank of Spain. He was reappointed as Chair for an additional three-year term in February 2022.

The work of the BCBS is overseen by the Group of Central Bank Governors and Heads of Supervision (GHOS). It approves the BCBS's work programme and key policy decisions, and provides overall strategic direction to the BCBS. Chaired by Governor of the Bank of France François Villeroy de Galhau until January 2022, and since April 2022 by Tiff Macklem, Governor of the Bank of Canada, the GHOS comprises central bank Governors and heads of non-central bank supervisory agencies from BCBS member jurisdictions.

Cushioning the impact of Covid-19 shocks on banks

The BCBS continued to closely monitor risks to the global banking system as the Covid-19 pandemic environment evolved. Banks have been able to absorb the shock caused by the pandemic and have continued to provide credit and other critical services to their customers.

In July 2021, the BCBS published a preliminary assessment of the impact of the Basel III reforms during the pandemic. The report highlighted that the banking system would have faced greater stress during this period had the Basel III reforms not been adopted, and in the absence of extraordinary support measures taken by public authorities. The increased quality and higher levels of capital and liquidity in the global banking system since the adoption of the Basel III reforms helped banks absorb the significant Covid-19 shock, suggesting that the reforms have achieved their broad objective of strengthening the resilience of the banking system.

> A Basel Committee report on the impact of the Basel III reforms during the pandemic highlighted that the banking system would have faced greater stress had the reforms not been adopted.

The report forms part of the BCBS's broader work programme to evaluate its post-crisis reforms. The Basel Committee will continue to monitor the effectiveness of the framework and will update its analyses as additional data regarding the impact of the pandemic become available.

Towards full implementation of the Basel III reforms

The Covid-19 pandemic highlighted the importance of a resilient banking system underpinned by prudent global standards. With the remaining Basel III standards due to take effect from 1 January 2023, the consistent and timely implementation by all BCBS members will continue to be closely monitored by the BCBS.

In October 2021, the Basel Committee reported on the adoption status of Basel III standards in member jurisdictions. Despite the disruptions caused by Covid-19, members made further progress in adopting the Basel III standards. The report was complemented by a new dashboard that reflects the full history of Basel III implementation and gives an overview of the progress to date.

Mitigating emerging risks

In addition to ensuring full implementation of the Basel III standards, the BCBS continues to focus on new and emerging risks.

Climate-related risks

The BCBS conducted analytical work to better understand the risk features of climate change and its potential implications for individual banks and the broader banking system. This led to the April 2021 publication of reports on climate-related risk drivers and their transmission channels and ways to measure climate-related financial risks. Drawing on the analytical work, the Basel Committee is continuing to assess and develop a suite of potential measures – spanning disclosure, supervisory and regulatory measures – to address climate-related financial risks to the global banking system. In November 2021, it consulted on a set of principles for the effective management and supervision of climate-related financial risks at internationally active banks. On disclosure measures, the BCBS welcomed the establishment of the International Sustainability Standards Board, and is exploring the use of the Pillar 3 framework to promote a common disclosure baseline for climate-related financial risks. The BCBS will also continue to explore the relative merits of potential regulatory measures.

Cryptoassets

The Basel Committee continued its work on the prudential treatment of banks' cryptoasset exposures by consulting on preliminary proposals in June 2021. The proposals divide cryptoassets into two broad groups based on a set of classification conditions and aim to develop a conservative risk-based global minimum standard to mitigate prospective risks to the banking system posed by cryptoassets. The BCBS is assessing stakeholder feedback and intends to issue a further consultative document by mid-2022.

Sharing supervisory insights

An important element of the Basel Committee's work is facilitating supervisory exchange on current and emerging risks and vulnerabilities across the banking system. In the first quarter of 2022, the BCBS published a series of supervisory newsletters that highlighted its recent work on banks':

- credit risk policies and practices in the pandemic environment;
- use of artificial intelligence and machine learning, and their potential risks and challenges; and
- operational resilience and approach to third- and fourth-party risk management and concentration risk.

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

BIS Committee on Payments and Market Infrastructures

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

The BIS Committee on Payments and Market Infrastructures (BIS 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 BIS 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 BIS CPMI comprises senior officials from 28 central banks.

Advancing G20 roadmap for enhancing cross-border payments

In close coordination with the Financial Stability Board (FSB) and other international bodies, the BIS CPMI contributed to the development of an ambitious multi-year programme on enhancing cross-border payments, which resulted in the publication of the October 2020 G20 roadmap, consisting of 19 building blocks. The first full year of the BIS CPMI's work under the G20 roadmap consisted of extensive stocktakes, with the BIS CPMI completing reports for seven of its assigned 11 building blocks. In July 2021, the BIS CPMI published, together with the BIS Innovation Hub, the IMF and the World Bank, a report on CBDCs for cross-border payments, emphasising the vital importance of international cooperation. In November 2021 the BIS CPMI sought industry's input on extending and aligning payment system operating hours for cross-border payments and in May 2022 set out the desired end-state of operating hours. It also published a report on a framework for self-assessment to help authorities and payment system operators which are considering expanding access to payment systems.

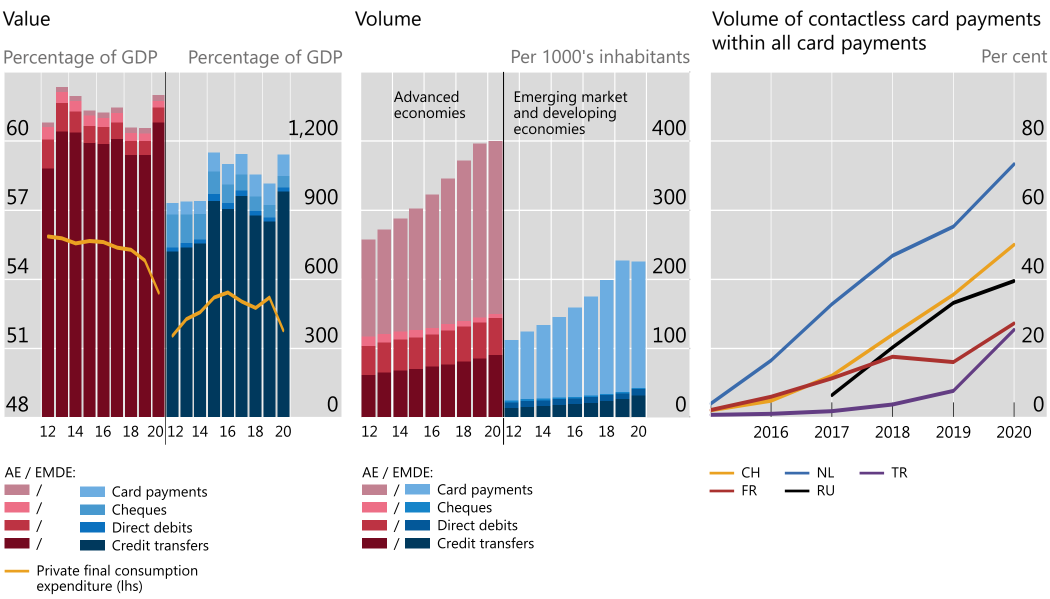
As fostering commitment by public and private sector stakeholders is central to achieving meaningful progress in the roadmap, the BIS CPMI continued its extensive stakeholder engagement throughout 2021/22. In 2021, the BIS CPMI publicly released its annual work programme for the first time as part of its commitment to increased transparency.

Addressing policy issues arising from digital innovations in payments

Stablecoin arrangements (SAs) are developing very rapidly, often adjusting their business models and potentially exploiting regulatory gaps and inconsistencies. Addressing policy issues associated with SAs, the BIS CPMI, together with the International Organization of Securities Commissions (IOSCO), developed a consultative report which confirmed that the [Principles for Financial Market Infrastructures (PFMI) apply to systemically important SAs] and proposed additional guidance on how the PFMI apply to the novel features of SAs, such as the use of stablecoins as settlement assets. In the latter half of 2021/22, the BIS CPMI and IOSCO continued their work to finalise the guidance, and to consider areas for further work on regulatory, supervisory and oversight issues associated with SAs, including cross-sectoral issues, together with other standard-setting bodies.

The BIS CPMI continued monitoring developments in payments. It collected, analysed and published the 2020 data for the Red Book statistics on payments and financial market infrastructures in member jurisdictions. These data highlight the [acceleration of digitalisation of payments during the pandemic].

Credit transfer and contactless card usage strongly increased in 2020



Sources: CPMI Red Book statistics; OECD main economic indicators and national accounts.

Contributing to international work to strengthen the resilience of non-bank financial intermediaries

The BIS CPMI contributed to the analysis and policy discussion by the FSB regarding broader financial stability issues, in particular to strengthen the resilience of non-bank financial intermediaries (NBFIs). Together with the Basel Committee and IOSCO, the BIS CPMI analysed margin calls in the March 2020 market turmoil, margin practice transparency, predictability and volatility across various jurisdictions and markets, and market participants' liquidity management preparedness. A consultative report was published in October 2021, setting out the findings of the analysis and areas for further policy work.

Evaluating and addressing risks in FMIs

The periods of market turmoil over the last several years – including the one in March 2020 – have demonstrated the benefits that central clearing brings for global financial stability and the importance of the resilience of central counterparties (CCPs). As part of its standard-setting work, the BIS CPMI has continued its work to strengthen CCPs' resilience. To this end, together with IOSCO the BIS CPMI published a consultative report on CCP clients' access to CCPs and portability of clients' positions in November 2021, and continued to work on default management auctions of CCPs and their resilience to non-default losses. Further, the BIS CPMI conducted, together with the FSB and IOSCO, evidence gathering and analysis on existing financial resources and tools for CCP recovery and resolution.

A decade after the Principles for Financial Market Infrastructures (PFMI) were developed jointly by the BIS CPMI and IOSCO, they remain committed to timely, full and consistent implementation of the PFMI in member jurisdictions, and they continued their PFMI implementation monitoring programme. In 2021, CPMI-IOSCO published a report on assessment of FMIs' business continuity planning. CPMI-IOSCO continued implementation monitoring at the jurisdiction level and an assessment of FMIs' efforts to strengthen cyber resilience.

More information about the BIS 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.

Global financial vulnerabilities

In 2021/22, rising inflationary pressures and shifting investor expectations about the pace of monetary tightening focused attention on the risk of a snapback in long-term yields and its potential consequences for financial stability. The CGFS held a series of virtual meetings where members shared their perspectives about the drivers of long-term yields and the impact of monetary tightening on financial stability. Members attributed the high correlation in yield moves across countries in part to global factors behind the rise in inflation. In addition, members exchanged views on the financial stability implications of the war in Ukraine and ensuing volatility in commodity markets.

The CGFS assessed developments that might test the future resilience of banks, including the uncertain outlook for corporate insolvencies and the rise in leverage among non-bank financial institutions. Members expressed confidence in the banking system's continued resilience but emphasised that some banks and countries faced greater challenges.

Another development that received attention was the rapid rise in house prices since the outbreak of Covid-19. In the near term, soaring house prices can bolster consumption and are an important channel for transmitting looser monetary policy. However, in the medium term, they raise downside risks to financial stability and macroeconomic performance, particularly if accompanied by a pickup in credit growth.

Private sector debt and financial stability

The combined debt of households and businesses rose to an all-time high of around 170% of world GDP in 2020. This borrowing helped to moderate the economic downturn during the Covid-19 crisis. Yet it came on top of a large increase in private sector debt in the years prior to the crisis and thus added to concerns about the risks that high debt can pose to financial stability and macroeconomic performance. In a report published in May 2022, the CGFS found that these risks differed substantially across countries and sectors, depending on factors such as the strength of the economic recovery, the health of the financial system and the distribution of debt and liquid assets across households and businesses.

The report examines policy options for mitigating the risks arising from high levels of private sector debt. In economies where debt-related risks are already high, it is important to maintain the resilience of the financial system by ensuring that capital buffers are sufficient. In economies where debt-related risks are mounting but not yet material, borrower-based macroprudential instruments, such as limits on debt service-to-income ratios, can help to stem the build-up. The report highlights that policymakers need to guard against the misperceptions about the prospects for exceptional support that might cause debt to be underpriced in the furture, such as occurred before the GFC when implicit guarantees led to the too-big-to-fail problem and excessive risk-taking by banks.

Resilience of liquidity in government bond markets

The market turmoil experienced at the onset of the pandemic was an extreme example of how market liquidity has become more fragile in recent years. The CGFS brought together central banks, market participants and academics to draw lessons from the turmoil about the impact that the growing presence of non-bank financial intermediaries (NBFIs) has had on the functioning of government bond markets. Some attributed the fragility of liquidity conditions to a mismatch between the intermediation capacity of bank dealers and the growing size of government bond markets. Others emphasised how market volatility was amplified by the procyclical behaviour of some NBFIs and their use of leverage. Several proposals for improving the resilience of liquidity aimed to enhance NBFIs' ability to withstand stressed conditions. Other proposals sought to improve the efficiency of intermediation through more central clearing and all-to-all trading. The CGFS shared a summary of the discussions with the FSB as input to its work on enhancing the resilience of non-bank financial intermediation.

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

Covid-19 policy measures to support bank lending

Many countries implemented exceptional policy measures to support bank lending during the Covid-19 crisis. Some measures aimed at strengthening banks' lending capacity, for example by releasing capital buffers and restricting capital payouts. Others sought to incentivise banks to use their available capacity, for example by transferring credit risk to the government through guarantees or providing low-cost funding for certain types of lending. The CGFS perceived that both types of measures helped to sustain the flow of bank credit to households and businesses. The effectiveness of the measures was examined at a research conference in early 2022, co-hosted with the BCBS. The papers presented at the conference will help to inform future policy decisions if the case for such exceptional measures arises again.

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 Markets Committee comprises senior officials from 27 central banks.

In 2021/22, the Markets Committee held regular meetings to analyse market developments and share experiences on ongoing monetary policy operations. Members also exchanged views on the repercussions of the war in Ukraine and its implications for the work of the Markets Committee.

The Markets Committee also reviewed the tools available to central banks to address market dysfunction, as episodes of severe financial market dysfunction requiring large central bank responses have become more frequent and have occurred across a wider range of markets in recent decades (the events in March 2020 when the Covid-19 pandemic first hit global financial markets were one recent example). The objective of this work was not to promote intervention methods, but rather to identify the potential range of possible tools available to provide official sector liquidity provision in events that threaten systemic stability, in ways that do not exacerbate moral hazard. The work aimed to develop a framework for assessing interventions and the associated tools that central banks can use to address market dysfunction and for evaluating the related trade-offs.

The Markets Committee also held a workshop on FX interventions, recognising their important role in central banks' policy toolkits, in particular in EMEs. The workshop explored the intervention goals and objectives and reviewed their benefits and costs. Participants also discussed the operational intricacies of FX interventions in the light of the changing nature of global FX markets, including communication issues.

In 2021/22, the Markets Committee continued its long-term agenda on assessing the implications of rapid financial innovation. It cooperated with the BIS Innovation Hub Swiss Centre to discuss how to monitor fast-paced electronic FX markets.

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 through the Central Bank Governance Group (CBGG), 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.

Central Bank Governance Network

The Network is an informal mechanism to facilitate the flow of information on central bank institutional design. Responding to requests from central banks for such information about other central banks, it improves the efficiency of information-gathering. Specialised surveys are conducted, as needed, to help this information flow, and to inform CBGG deliberations.

Central bank mandates

In its recent discussions, the CBGG considered the evolution of central bank roles and mandates from several angles. One concerned the challenges of constructing a new regulatory framework for digital finance that aims for stable and effective financial intermediation. Central banks are not the only public sector agencies involved, but their policy interests will be much affected. The more general question of evolving mandates was also discussed. Keeping central bank functions attuned to the times while ensuring legality and legitimacy are high priorities. Relevant to these concerns, Governors also discussed staying aware of changing societal attitudes, as well as public perceptions of the central bank's roles and performance.

Running the central bank

The other major theme in the CBGG's discussions over 2021/22 concerned the internal governance of the central bank. Governors considered change in their own roles, concluding that while a long-term trend towards group decision-making remained intact, their own responsibilities had grown. This is largely because of the demands of crisis management, but also because of the wider range of responsibilities now shouldered by their institutions. Within this theme, Governors also considered their use of the three lines of defence model for risk management. The model is now in wide usage across central banking, helping organise risk management roles and responsibilities.

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), and is a member of the International Association for Official Statistics. The IFC has 97 members, including 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's activities continued to be significantly affected by the impact of the pandemic during 2021/22, making it more difficult for its members to network and exchange experiences. Despite these challenges, the IFC furthered its work in several key areas, thanks to the support of its member central banks, the ISI and a number of international organisations. These activities centred in particular on the outlook for central banking statistics after Covid-19, and the IFC sponsored several related sessions in 2021's 63rd ISI World Statistics Congress. In 2021/22 the IFC also updated a dedicated web page for Covid-19 statistical resources highlighting relevant official projects and documenting the experience of central banks as well as facilitating bilateral methodological exchange between IFC members on statistical issues.

Making the most of the information revolution

Central banks have increasingly been working with big data, which has become a significant focus even at the senior policy level. To further work in this area, the IFC developed a series of workshops on data science in central banking. It also identified a number of recommendations to facilitate the integration of micro data in macroeconomic aggregates and/or the linkage between micro- and macro-level statistics. In addition, it reviewed the need for strong governance standards for collecting, managing, disseminating and using data.

Sustainable finance

The IFC has launched a number of initiatives on sustainable finance data issues, including a survey on central banks' data needs/availability in the environmental, social and governance (ESG) area, organised in close coordination with other international bodies including the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). The aim was to take stock of the related data needs of public financial authorities, analyse international statistics available in the area of sustainable finance from both a supply and a demand side perspective, identify data gaps and develop ideas on the way forward. This work has led to a list of the key ESG metrics considered of particular relevance by central banks, a stocktake of core documentation references and the identification of key recommendations to guide work on sustainable finance statistics.

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.

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 consistent implementation of these policies across sectors and jurisdictions. The FSB is chaired by Klaas Knot, President of the Netherlands Bank, who succeeded Randal K Quarles, Vice Chair of the US Federal Reserve, in December 2021.

In 2021/22, the FSB continued its efforts to address the strains to the financial system resulting from the Covid-19 pandemic. The FSB set out key lessons for financial stability made apparent by the pandemic, which require further attention from policymakers, including work to enhance the resilience of non-bank financial intermediation. These lessons define a path forward on financial stability policy and lay the foundation for a more efficient and resilient financial system in the future. Looking beyond the pandemic, the FSB also coordinated international work on addressing the financial stability implications of key structural changes, including climate change and digital innovation. To this end, the FSB took forward the roadmap to address climate-related financial risks and the roadmap to enhance cross-border payments.

In the light of the war in Ukraine, the FSB stepped up its surveillance of market developments, with a focus on the resilience of critical nodes in the global financial system. The FSB is also conducting in-depth analysis and assessment of specific potential vulnerabilities, with a particular focus on commodity markets, margining and leverage. In addition, ensuring that cryptoasset markets are properly regulated is a key priority for the FSB.

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. The Acting President and Chair of IADI’s Executive Council is Alejandro López, Chief Executive Officer of Seguro de Depósitos Sociedad Anónima, Argentina.

In November 2021, the new IADI Strategic Plan, for 2022–26, was approved at the Annual General Meeting, which set the goals to promote the Core Principles for Effective Deposit Insurance Systems (Core Principles) and deposit insurance compliance; advance deposit insurance research and policy development; provide Members with technical support to modernise and upgrade their systems; and enhance IADI's governance by improving efficiency and transparency.

In 2021/22, IADI produced research, guidance and briefing papers on topics including deposit insurance coverage, the resolution of financial cooperatives and emerging issues such as fintech and climate change. It also initiated a new programme for conducting thematic assessments of compliance with the Core Principles and began a process to review and update the Core Principles. On capacity-building efforts, IADI conducted numerous international conferences, webinars and training and technical assistance activities virtually. It worked closely with the FSB, the FSI, the IMF, the World Bank and other international financial organisations in conducting conferences and meetings on deposit insurance and bank resolution issues.

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 Association is chaired by Victoria (Vicky) Saporta, Executive Director of Prudential Policy Directorate at the Bank of England. During the past year, the IAIS's key focus areas included:

Risk assessment: 2021 was the first year of full implementation of the IAIS's annual Global Monitoring Exercise, which covers over 90% of the worldwide insurance sector and monitors key trends and the possible build-up of systemic risk. Results published in the 2021 Global Insurance Market Report focused on the low-yield environment and the related growth in private equity ownership of insurers, increased credit risk and heightened cyber risk.

Finalising and implementing key reforms: the IAIS's global Insurance Capital Standard entered the third year of a five-year monitoring period ahead of its adoption in 2024, marked by strong participation by volunteer insurance groups across all regions. The IAIS also began in-depth assessment of implementation of supervisory measures related to its Holistic Framework for the assessment and mitigation of systemic risk in the insurance sector in 10 jurisdictions, covering the major global insurance markets.

Promoting peer exchange and guidance on supervisory approaches to key accelerating trends and risks, such as climate change, digital transformation and cyber risk. On climate risk, the IAIS undertook a global assessment of the impact of climate change on insurers' investment exposures and published a guide to supervisory practices in addressing climate risk in the insurance sector.

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

Other areas of international cooperation

The BIS participates in international forums such as the G20 and collaborates with key international financial institutions. 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)
- Asian Forum of Insurance Regulators (AFIR)
- Association of Insurance Supervisors of Latin America (ASSAL)
- Association of Supervisors of Banks of the Americas (ASBA)
- Center for Latin American Monetary Studies (CEMLA)
- European Banking Authority (EBA)
- European Commission
- European Money and Finance Forum (SUERF)
- European Stability Mechanism (ESM)
- Eurostat
- 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)
- International Journal of Central Banking (IJCB)
- International Monetary Fund (IMF)
- International Organization of Securities Commissions (IOSCO)
- Joint Vienna Institute (JVI)
- Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI)
- Network of Central Banks and Supervisors for Greening the Financial System (NGFS)
- Organisation for Economic Co-operation and Development (OECD)
- South East Asian Central Banks (SEACEN)
- World Bank Group

4

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, gold and foreign exchange trading services, and the management of collective investment vehicles and dedicated investment mandates for fixed income instruments. Banking staff also manage the Bank's own funds and support knowledge-sharing with other institutions.

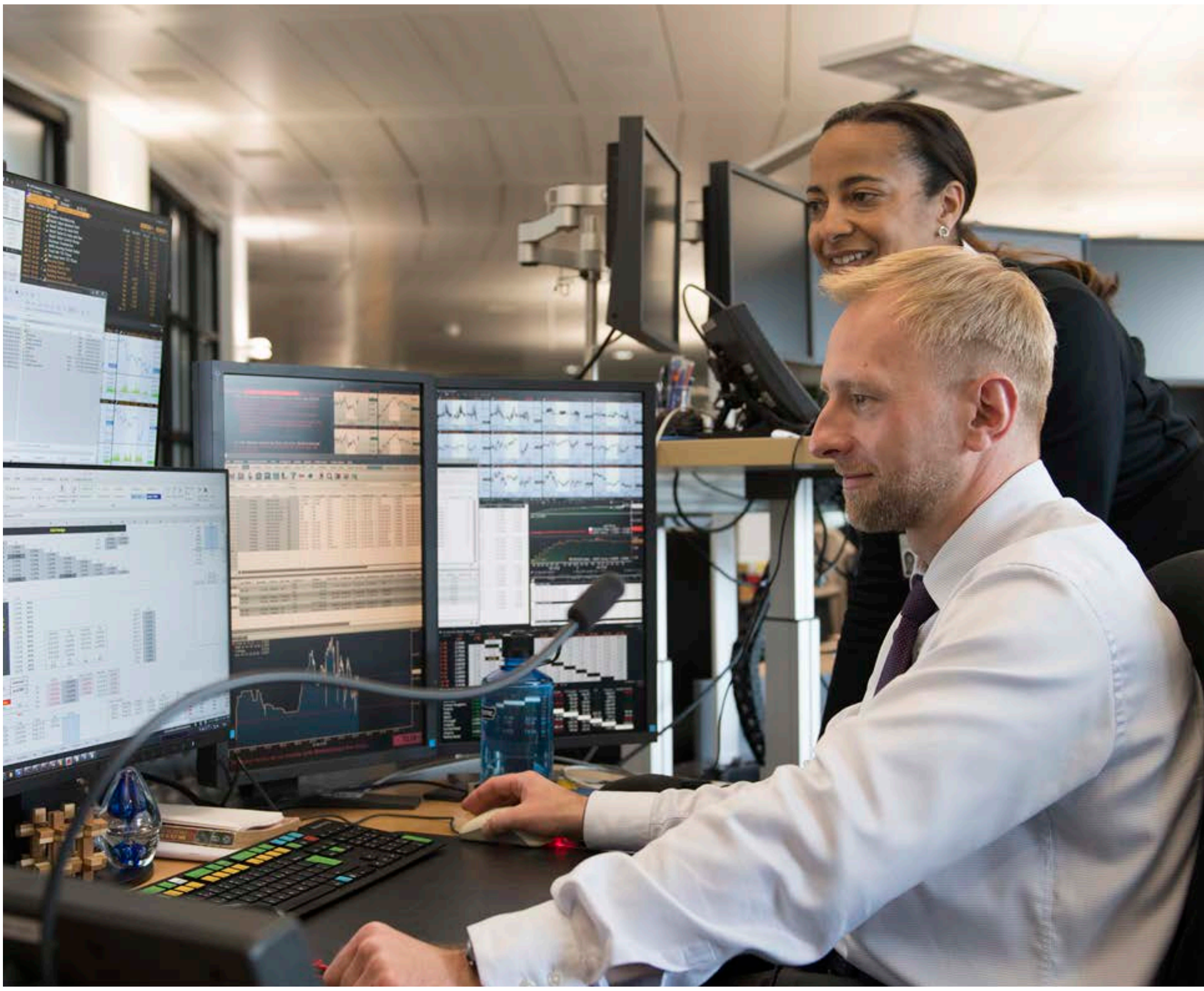
Banking activities

BIS banking services are designed to meet the reserve management needs of central bank customers in terms of safety, liquidity and return – the three core objectives of central banks' reserve management frameworks. This requires reliable execution, around-the-clock services across the whole product range and competitive pricing. And, just like the Bank itself, the BIS's banking activities continuously evolve to keep pace with the central bank community's adaptation to changing macroeconomic, political and technological conditions.

The BIS's banking business is underpinned by a strong capital position as well as stringent risk management and cyber security frameworks (see Chapter 7). It is conducted in accordance with relevant principles and industry standards, such as the FX Global Code and the SWIFT Customer Security Programme, as well as best market practices and the highest ethical standards. As part of its overall environmental sustainability agenda, the Bank also strives to promote green finance through sizeable climate-friendly investments and helps to establish relevant market standards, including by offering a range of green financial products to reserve managers and other BIS clients.

"Progress on our Banking 2025 strategy has helped us reach new records in terms of both customer deposits and third-party assets under management."

Peter Zöllner
Head of Banking



The year's highlights

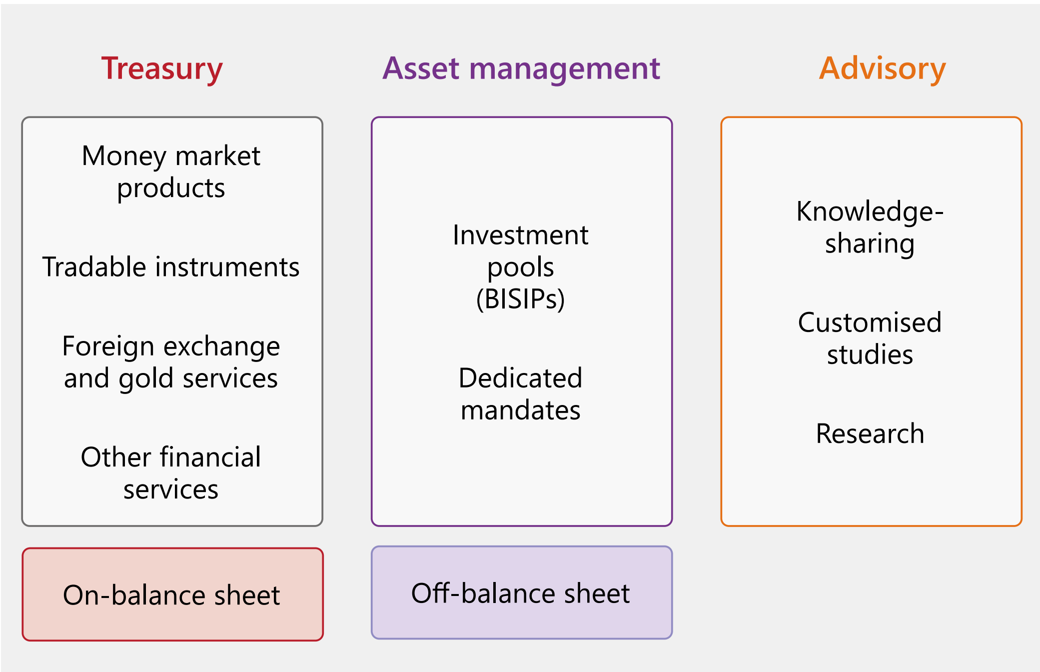
Driven by continued strong demand for BIS banking products, the key activity metrics for financial year 2021/22 point to a successful, if challenging, year. Continuing Covid-19-related constraints as well as volatile market conditions in the context of a changing monetary policy outlook and the escalating Russia-Ukraine war in early 2022 created a dynamic trading and investment environment. As of 31 March 2022, total assets stood at 347.6 billion Special Drawing Rights (SDR, a basket of currencies defined by the IMF which serves as the Bank's unit of account or "numeraire"). With both customer deposits and third-party assets under management rising to new record levels during the year, net profits reached SDR 341.0 million by end-March 2022. This represented a return to a more typical level after the exceptionally high profit of 2020/21 and the exceptionally low profit of 2019/20, both of which reflected the impact of the pandemic on financial markets. Total comprehensive income for the year was SDR 918.1 million, reflecting net unrealised gains on own funds assets, along with positive actuarial re-measurements (see page 149). Another highlight of the year was the addition of green bonds as part of the broader BIS work on the climate agenda (see page 91).

Scope of banking services

Overview

The BIS offers a full range of financial services to a global customer base of about 180 central banks, monetary authorities and international organisations (see graph below). To provide these services, the Banking Department operates from three interlinked dealing rooms, located in Basel, Hong Kong SAR and Mexico City. Jointly, 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 and from the Asian through the European and US trading sessions.

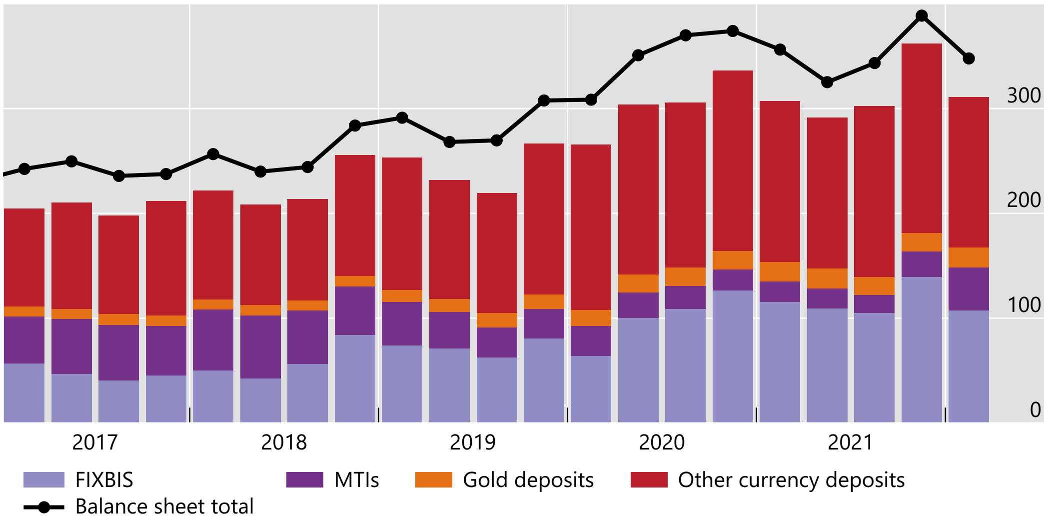
BIS banking products and services



Source: BIS.

Reflecting further additions to the Bank's product range and competitive pricing, average currency deposits (on a settlement date basis) over the financial year increased to SDR 284 billion, from about SDR 275 billion in 2020/21, with a record level of daily deposits at SDR 339 billion reached on 30 December. As of 31 March 2022, total deposits at the BIS, a broader measure covering additional placements, stood at SDR 311 billion, of which about 94% was denominated in currencies (SDR 292 billion) and the remainder in gold (see graph on next page).

Balance sheet total and deposits by product[1]



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

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 (so-called 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 required by reserve managers.

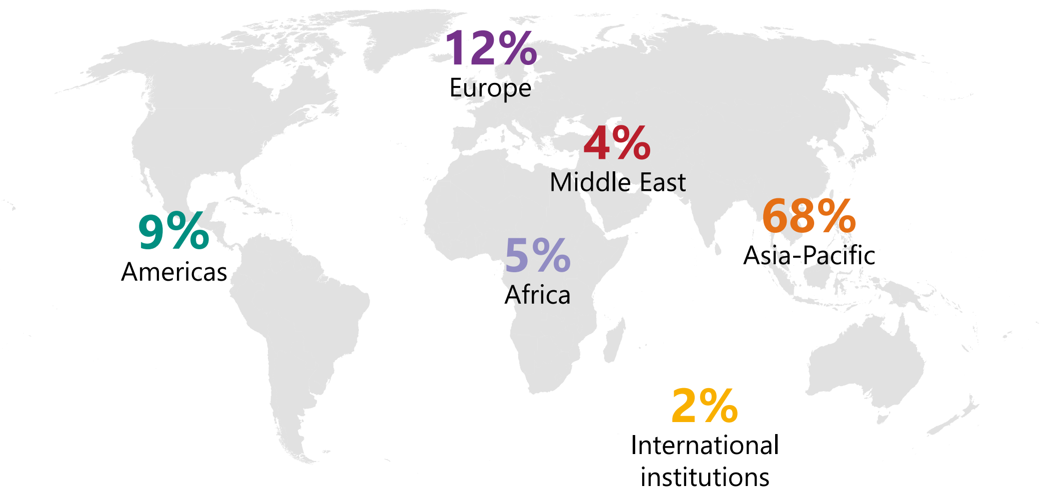
> Continued asset diversification and product innovation have helped to maintain a high level of customer placements in the context of low, but increasingly volatile, yields and spreads.

Over the past year, accelerated development of new customer products remained a key priority area, helping to maintain a high level of customer placements. Highlighting the Bank's global reach, some 68% of overall currency deposits came from the Asia-

Pacific region, with Europe contributing another 12%, and much of the remainder shared by the Americas, Africa and the Middle East (see graph below).

In this context, a particular development focus was placed on the continuation of the Bank's comprehensive Libor reform programme. After the successful launch of new MTIs referencing the new risk-free benchmark rates in sterling in the previous financial year, MTIs referencing the United States' Secured Overnight Financing Rate (SOFR) were added in October, followed by MTIs in offshore renminbi (CNH) in December. Work is continuing on the introduction of new currencies and the development of new investment products in the medium-term sector as well as on the finalisation of a new liquidity facility with major Asia-Pacific central banks, complementing earlier work on similar facilities in the context of the March 2020 pandemic shock. Work on electronic trading capabilities for BIS instruments based on a new execution and order management system is also progressing.

Geographical distribution of currency deposits[1]



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

Source: BIS.

Foreign exchange and gold services

Foreign exchange (FX) services are another key 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), which combine deposits and currency options.

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 recently upgraded e-FX platform, in particular, offers price aggregator-based trade execution capabilities to help customers navigate the increasingly fragmented FX marketplace and implement even large-sized spot trades at competitive rates. As a result, about 55% of customer spot deals are now handled via this platform, up from 42% previously. Enhanced capabilities for the trading of e-FX swaps were added in March 2022.

> The Bank's e-FX platform helps customers implement even large-sized spot trades at competitive rates.

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 2021/22, activity in all these areas benefited from volatile gold prices, with price peaks reached in early June and November, respectively. Other gold services comprise sight accounts, fixed-term and dual currency deposits as well as physical services, such as quality upgrading, refining, safekeeping and location exchanges. The latter are available also for other precious metals, such as palladium, platinum and silver.

Asset management services

In addition to managing the Bank's own funds (see page 92), BIS Asset Management offers two types of product: (i) dedicated portfolio management mandates tailored to each central bank customer's individual preferences; and (ii) 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 product, which are not included in the BIS balance sheet, amounted to a record SDR 25.4 billion at 31 March 2022, up from SDR 22.3 billion the previous year.

The BISIP structure, in addition to offering investments in core US dollar- and euro-denominated sovereign bonds, is a key tool for accommodating central bank interest in more diversified foreign exchange reserve portfolios. This includes BISIPs dedicated to US TIPS and to sovereign bonds denominated in EME currencies, such as the Chinese renminbi (CNY) and the Korean won (KRW). Leveraging the local market expertise of the Bank's Hong Kong-based staff (see Chapter 3), a new BISIP investing in CNY bonds issued by Chinese policy banks was added early in the financial year.

> Close cooperation between our three offices has been key to the development of new products, such as the Policy Bank BISIP and the Asian Green Bond Fund.

In addition, working closely with client central banks, the BIS has developed a suite of products to help meet reserve managers' growing demand for climate-friendly investments and to support the adoption of best market practices and reporting standards for these new instruments. With a new US dollar-denominated green bond BISIP targeting issuers from the Asia-Pacific region added in February 2022, the overall size of these sustainable investments amounted to a total of around SDR 3.4 billion by end-financial year 2021/22, about 13% of total third-party assets under management. This includes the two US dollar- and euro-denominated green bond BISIPs issued in 2019 and 2021, respectively, as well as a corporate bond BISIP managed on the basis of responsible investment guidelines and dedicated investment mandates offered to BIS clients. As an additional service for its green BISIP investors, the BIS also prepares dedicated annual impact reports, based on information provided by the issuers of the underlying bonds, to provide a sense of the environmental benefits that investors can expect to achieve (see box on next page).

Other 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 Bank 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.

Assessing the impact of the BIS's green bond funds

The key rationale for green bond investments is to channel funds into environmentally focused projects. Assessing the success of such investments requires going beyond traditional risk-return considerations to get a sense of the expected environmental benefits. This is why regular impact reporting is an important pillar of the green bond market, with key market standards (such as the International Capital Market Association (ICMA) Green Bond Principles and the Climate Bonds Initiative's Climate Bonds Standard) recommending that issuers provide such reports annually.

A single, internationally recognised impact reporting standard is still needed; however, practices have improved and existing standards (such as the ICMA Handbook and the Nordic Position Paper) have started to converge as the green bond market has continued to grow. Data reporting has become more granular, and many issuers now report at the bond and project level, allowing for easier impact attribution. While aggregation across bonds and issuers remains a challenging task, direct engagement with issuers helps to fill gaps, allowing impact metrics to be constructed at the portfolio level.

Estimated environmental impact of BIS green bond BISIPs[1]

Renewable energy 42,231 tonnes of CO_2e emission prevented 42,996 MWh of renewable energy produced	**Clean transportation** 11,629 tonnes of CO_2e emission prevented 2,072 MWh of annual energy savings
Energy efficiency 8,720 tonnes of CO_2e emission prevented 26,249 MWh of annual energy savings	**Green buildings** 1,392 tonnes of CO_2e emission prevented
Water and wastewater management 26,249 MWh of annual energy savings	**Biodiversity** 349 hectares of forest added
Waste management 2,262 tonnes of CO_2e emission prevented 17,107 tonnes of waste prevented/recycled	**Total CO_2e emissions prevented** 66,235 tonnes

[1] Expected annual impact attributed to the reporting period for bonds held as of end-September 2021; per $100 million invested, based on the relative size of the two BISIPs using data from issuer reports.

Sources: ICMA Handbook – the Harmonized Framework for Impact Reporting; Nordic Position Paper on Green Bond Impact Reporting; use of proceeds and impact reports from individual bond issuers; BIS calculations.

On this basis, as of end-September 2021 and per $100 million invested, the BIS's two green bond BISIPs together were estimated to have an annual expected impact equivalent to 66,235 tonnes of CO_2 emissions prevented across a range of categories – an amount comparable with the emissions from 14,405 passenger cars driven for a year, with the greatest effect coming from 42,996 MWh of renewable energy produced. In addition, investing central banks financed the treatment of an estimated 9 million m^3 of wastewater and an estimated 349 hectares of new forest.

Management of the Bank's own funds

The BIS's shareholders' equity capital stems from the paid-in capital of its shareholders and the retained earnings from its banking activities. The shareholders' equity was SDR 23.4 billion as of 31 March 2022, up from SDR 22.8 billion the previous year, of which some SDR 4.6 billion was held in gold (102 tonnes). The remainder of the shareholders' equity is invested in high-quality, highly liquid fixed income instruments, with additional asset classes having been phased in as part of the Innovation BIS 2025 strategy.

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) process. It comprises SDR-weighted bond indices and currently has a target duration of 2.7 years, with the Banking Department's Asset Management unit being charged with managing these investments within the constraints established by the Bank's risk management framework (see Chapter 7).

> The Bank's own funds strategy involves diversification into a range of asset classes to broaden the drivers of return.

In line with the Bank's strategic objective to broaden the drivers of return of the Bank's own funds, additional diversifying exposures to selected highly rated investment grade corporate bonds and US inflation-protected government securities were added in financial year 2021/22. Following the regular reassessment of the Bank's SAA in early 2022, further adjustments to the allocation of own funds investments are planned for financial year 2022/23.

Customer outreach activities

Regular client outreach programme

The Banking Department maintains an active programme of regular client meetings as well as a schedule of larger seminar-style events to share knowledge. 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, informing 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.

Expanding range of online offerings

Due to the continued contraints imposed by the Covid-19 pandemic, all bilateral client meetings in financial year 2021/22 once again took place in virtual format. In addition, replacing the regular schedule of workshops and seminars, four series of knowledge-sharing webinars and various individual online presentations were conducted throughout the year. This included a new webinar series on FX reserve management, offered jointly with the Federal Reserve Bank of New York. Across a total of 38 webinar presentations, these events attracted 1,031 participants from 137 BIS client institutions (up from 365 and 75, respectively, in 2020/21). Topics included recent trends in foreign exchange reserve management, sustainable investment, gold as a reserve asset and findings from topical BIS research and their implications for reserve managers.

> The Banking Department's outreach activities help to strengthen the feedback mechanism between the BIS and its banking customers, and inform product development as well as service delivery.

As in financial year 2020/21, leveraging the expertise of the two regional dealing rooms in Asia and the Americas (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

Rapid technological change in the financial sector brings both opportunities and risks. The BIS helps central banks 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 Innovation Hub two years on

In its first two years of existence, the BIS Innovation Hub has been instrumental in positioning the BIS as a thought leader on financial innovation, with projects in areas such as central bank digital currencies (CBDCs), regulatory and supervisory technology (regtech and suptech), next-generation financial market infrastructures and green finance. The Innovation Hub works on prototypes or proofs of concept (PoCs) to enhance the functioning of the global financial system. These projects investigate the technological and practical feasibility of particular designs and products.

Multiple BIS Innovation Hub Centres located around the world facilitate collaboration among central banks. On many projects, the Innovation Hub also collaborates with international organisations, academia, financial service providers and the broader private sector. Part of the Innovation Hub's work is closely linked with G20 efforts to improve cross-border payments. Together with the BIS Committee on Payments and Market Infrastructures, the Innovation Hub is co-leading building block 17 on multilateral payment platforms and 19 on the cross-border dimension of CBDC. It also contributes to the conceptual work of several international CBDC groups and other initiatives led by BIS departments and hosted committees and associations.

The BIS Innovation Hub Centre Heads gathered at BIS headquarters in Basel in May 2022

Innovating at the BIS

The future of central banking is inextricably linked to innovation. Yet innovating involves overcoming challenges while facing uncertainty and complexity. To explore the development of public goods, the BIS Innovation Hub has been experimenting with technologies and methodologies. These enable us to understand the needs of central banks and identify the best projects while also developing them quickly and flexibly.

First, the Innovation Hub uses design thinking to explore where central banks face current and future challenges that can be addressed through technology. Hub Centres interview central bankers to understand their requirements and define their problems. Ideation workshops then explore potential public good solutions to these problems, generating the ideas for project proposals. Project proposals are carefully scoped and budgets reviewed. Coordination between Hub Centres allows for synergies to be identified and broader central bank perspectives to be incorporated.

Second, development begins. The Innovation Hub uses Scrum, a project management methodology suited for smaller collaborative teams working on complex problems. Once projects are developed, the results are measured and evaluated with decisions required on continuing development, pivoting to another approach or moving to a different idea. Finally, projects enter a handover phase. This can be as simple as the publication of a report and sharing results, or as complex as managing the delivery of a minimum viable product (one that can be used by early customers who can then provide feedback for future development) to central banks with accompanying support.

The year's highlights

In 2021/22, the BIS Innovation Hub made significant progress on key themes that reflect the innovation priorities of the central bank community. CBDCs and improvements in payment systems continue to be an area of exploration, accounting for 13 out of the Innovation Hub's 17 projects that were active in 2021/22. This focus reflects the interests and priorities of BIS member central banks. Alongside these projects, the second BIS Innovation Summit, "Money, technology and innovation", held in March 2022, brought together senior leaders from the public and private sectors and academia to showcase innovative work that is reshaping the global financial system in the digital era.

The Innovation Hub draws on the pools of talent and expertise on innovation that exist among the BIS's member central banks through the BIS Innovation Network. The Network's working groups focus on using technology to solve problems in the financial sector in the Innovation Hub's areas of strategic focus. The working groups collaborate on practical problem statements and solutions, and exchange views on nascent technologies.

The BIS Innovation Hub has identified six themes of strategic focus which are of critical importance to the Hub and to the central banking community. These themes are: central bank digital currencies, green finance, regtech and suptech, next-generation financial market infrastructures, open finance and cyber security. Key highlights from the past year are set out below.

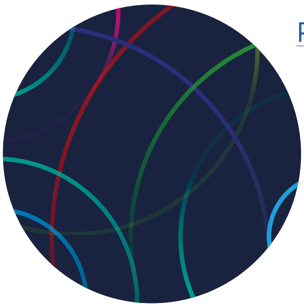
Central bank digital currencies

On wholesale CBDCs (wCBDCs), Project Helvetia was a multi-phase investigation conducted together with the Swiss National Bank and the financial infrastructure operator SIX. The project explored how central banks can support the settlement of securities issued on a distributed ledger technology (DLT) platform. Helvetia Phase I, completed in December 2020, settled such assets either by issuing wCBDCs onto the SIX Digital Exchange (SDX) or by linking SDX to the existing Swiss real-time gross settlement system.

Helvetia Phase II was completed in January 2022. It demonstrated that a wCBDC can be integrated with existing core banking systems and processes of commercial and central banks. It also showed that issuing a wCBDC on a platform operated and owned by a private sector company is feasible under Swiss law.

On cross-border aspects of CBDCs, three projects all make use of a DLT platform upon which multiple central banks issue their own wCBDCs so that they can be traded between participants to enable faster, cheaper and safer cross-border settlements. These projects are exploratory in nature, and their technical implementations differ.

Staff of the BIS Innovation Hub Singapore Centre

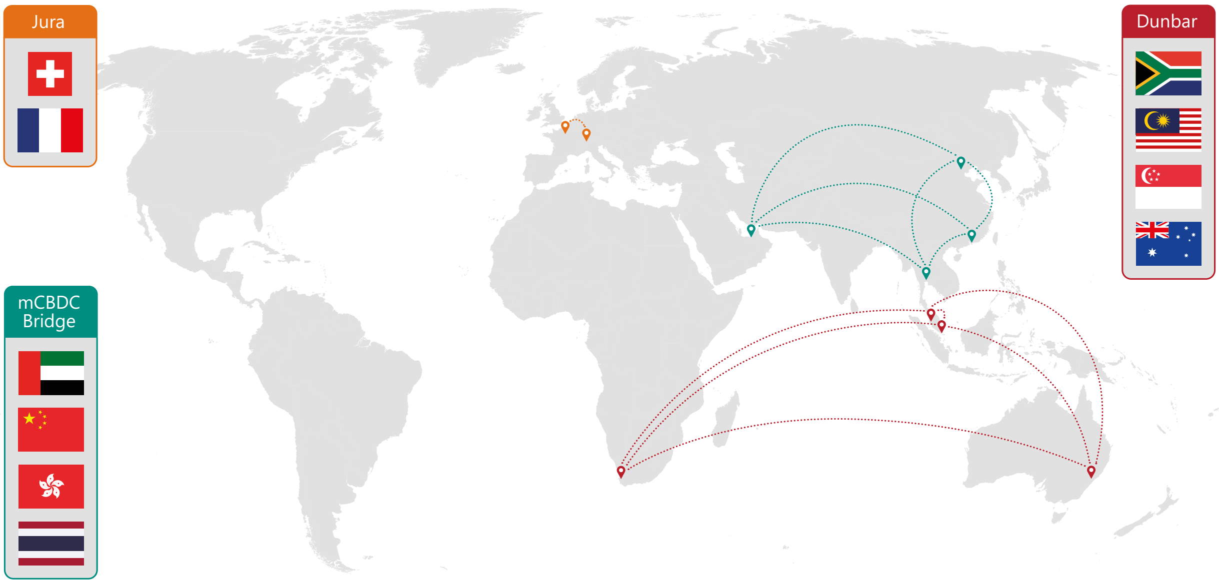


Project Jura, in collaboration with the Bank of France and the Swiss National Bank, studied a new approach in which each central bank maintains individual control over its own CBDC on a single platform with separate subnetworks. The project explored settlement of tokenised euro commercial paper and foreign exchange transactions. Tests were conducted in a near real-life setting and met current regulatory requirements.

Project mBridge is a joint initiative with the Hong Kong Monetary Authority, the Bank of Thailand, the Digital Currency Institute of the People's Bank of China and the Central Bank of the United Arab Emirates. The 2021 prototype was able to complete cross-border transfers in seconds, as opposed to several days. It also demonstrated the potential to reduce several cost components of correspondent banking by up to half.

Project Dunbar, in partnership with the Reserve Bank of Australia, Central Bank of Malaysia, Monetary Authority of Singapore and the South African Reserve Bank, developed different DLT prototypes that proved the technical feasibility of implementing a common multi-CBDC platform.

BIS Innovation Hub cross-border projects related to CBDCs[1]



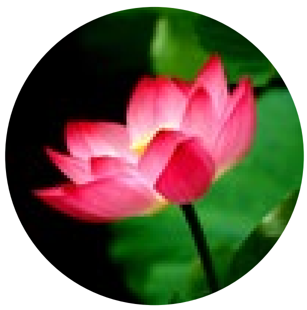
The BIS Innovation Hub is investigating the use of wholesale CBDCs for cross-border settlements. Hub Centres in Hong Kong SAR, Switzerland and Singapore all ran experiments to build multiple CBDC platforms. These experiments – mBridge, Jura and Dunbar – are being done in collaboration with central banks and private sector partners around the world.

[1] 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.

Project Aurum studies the benefits and challenges presented by tiered architectures for the distribution of retail CBDC through commercial banks and payment service providers.

Green finance

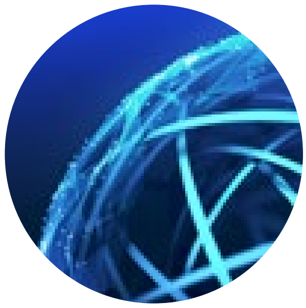
In the area of green finance, Project Genesis completed two prototypes for green bond tokenisation. The first prototype simulated the life cycle of a typical bond on a permissioned DLT platform, including origination, subscription, settlement and secondary trading. The prototype was able to streamline these processes. A second prototype tested the same procedures using a public permissionless blockchain infrastructure. It also streamlined investor onboarding and facilitated direct payments and settlements between issuers and investors. New phases of the project will further address scalability and accounting questions.



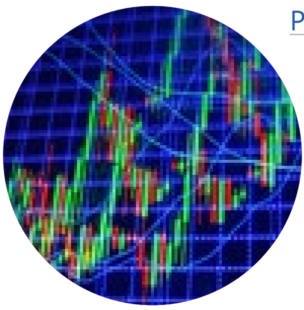
The second edition of the G20 TechSprint, organised by the BIS Innovation Hub and the Bank of Italy, within the G20 Italian Presidency, searched for innovative solutions to resolve operational problems in green and sustainable finance. The winning firms proposed innovative projects on data collection and sharing, analysis of transition and physical climate-related risks, and better connecting projects and investors.

Regtech/suptech

Project Ellipse is a prototype that authorities can test in their own environments, and which may help them to explore new solutions. In phase I, carried out in partnership with the Monetary Authority of Singapore, the Bank of England and the International Swaps and Derivatives Association, the project explored the concept of cross-border digital regulatory reporting, and demonstrated the efficiencies gained from using a machine-executable data model.



In Phase II, the project took existing large exposures regulatory data and integrated these with unstructured data. Advanced analytics such as machine learning and natural language processing were applied to these data sources to make risk correlations and to analyse sentiment, alerting supervisors in real time of issues that might need further investigation. Network analytics were also used to demonstrate how exposures could be mapped, indicating possible systemic risks to the banking system.



Project Rio explores how central banks can use cloud-based data streaming technologies to monitor fast-paced electronic markets (FPMs). A prototype has already demonstrated that it is technically feasible for central banks to monitor FPMs in real time using new open source technologies. The current version of Rio focuses on the foreign exchange spot market. Future work will focus on the design and development of a professional grade and production-ready user dashboard.

Staff of the BIS Innovation Hub Swiss Centre

Next-generation financial market infrastructures

Project Nexus aims to create a cross-border payments bridge that connects multiple domestic instant payment systems, leveraging existing infrastructures to enable cross-border payments in under 60 seconds. In 2021, the blueprint for Nexus was published as an overview report along with comprehensive technical documentation.

As a next step, the project will develop a technical PoC that links the payment systems of Singapore, Malaysia and the euro zone.

Innovation Hub expansion and future projects

The year 2022 marks a new phase in the Innovation Hub's expansion, with the first projects in the London and Nordic Hub Centres, the expected opening of the Eurosystem and Toronto Centres, and the advancement of the strategic partnership with the Federal Reserve System. Later in 2022, the Innovation Hub will launch new projects on CBDCs, next-generation payment systems and decentralised finance (DeFi), expanding its portfolio of explorations seeking to develop new technological public goods for central banks.

- The London Centre's first projects will consider how individuals and businesses can benefit from the development of CBDCs. One project will enable the development of innovative payment solutions that can be settled quickly and cheaply with central bank money. And a second will develop a platform supporting applications that individuals and businesses can use to store, transfer and pay with retail CBDCs.

- The Nordic Centre begins with two projects. One seeks to demonstrate how a holistic view of payments data could be used to detect illegal activities, such as money laundering, tax evasion and the financing of terrorism. The second will investigate the security and resilience demands and solutions that enable CBDCs to be used offline.

A global force for innovation

BIS Innovation Hub locations around the world

Cyber Resilience Coordination Centre

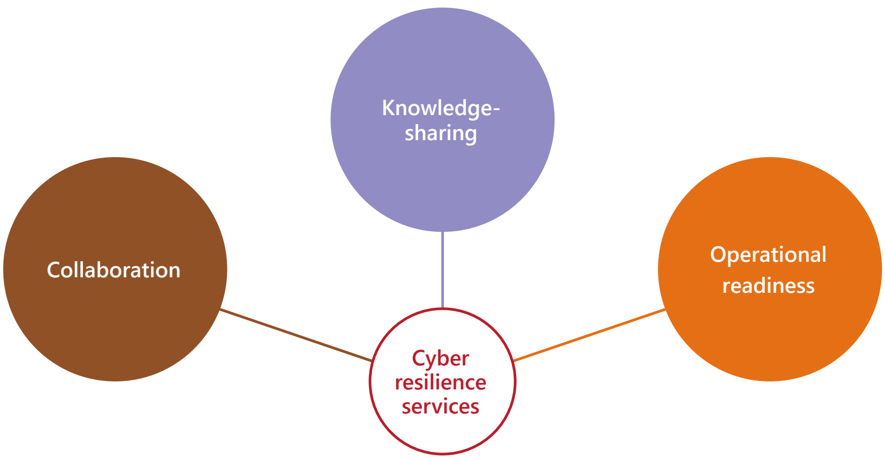
Innovation is a key component of the digital transformation journey that enables organisations to modify existing or create new business processes, corporate cultures and customer experiences to meet ever changing business and market requirements. However, the rapid adoption of technology used to accelerate this transformation introduces complexity and exposes organisations to an expanding and increasingly diverse cyber risk landscape. Accordingly, it is imperative for organisations to manage the related cyber resilience risks that are introduced into their environment.

The Cyber Resilience Coordination Centre (CRCC) helps to strengthen the collective cyber resilience of central banks by providing a structured approach to knowledge-sharing, collaboration and operational readiness. The CRCC carries out its mandate as one of the BIS's key entities to support the central bank community by delivering cyber resilience services in three main activity areas:

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

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

- **Operational readiness:** Realistic hands-on cyber response training exercises and active collaboration by the CRCC with BIS member central banks help strengthen operational readiness.



The year's highlights

The CRCC made progress in all three main activity areas by delivering on key initiatives to increase the central bank community's cyber resilience. Given the ongoing pandemic measures, the CRCC delivered all its planned events in a virtual format. Ten events were held with participation from over 450 central bank colleagues from 57 central banks, including the Annual Cyber Security Seminar and table top and cyber range exercises.

Cyber Resilience Coordination Centre

2021/22

10
events held

56
central banks joined the **Global Cyber Resilience Group**

140
participants attended the **Annual Cyber Security Seminar**

Collaborative activities

Webinars
Delivered webinars on several topics: Covid-19 and cyber risks; cyber range activities; cyber resilience and threat landscape

Collective Strength
CRCC partnered with Israel's Ministry of Finance to deliver a multinational table top exercise

Cyber Resilience Assessments (CRAs)

8
central banks participated and completed the **CRA pilot**

10
meetings per central bank

299
questions asked per CRA

80
meetings held during the CRA pilot

200
central bank staff members involved

1,800
hours spent during assessments

35
participants entered the inaugural **Capture the Flag** competition organised by CRCC

480
minutes of course content developed for the FSI's **BIS-FIT** cyber security module

475
members from central banks and the cyber security community joined in CRCC activities

92%
of member central banks joined CRCC-organised events

Knowledge-sharing

Cyber Resilience Assessment pilot project

The BIS organised Cyber Resilience Assessments (CRAs) with eight BIS member central banks in 2021. The CRA was developed by Carnegie Mellon University's Software Engineering Institute. The methodology focuses on the cyber resilience of a specific critical business service and the mix of strategies that are needed to protect and sustain the people, information, technology and facilities assets deployed to deliver the service.

The 2021 assessments focused on critical business services such as reserve management, monetary operations, the real-time gross settlement system, wholesale payment operations and instant payments. Participants gained first-hand experience with the methodology and can use the CRA outcomes to help improve their own cyber resilience. In addition, the aggregate findings contributed to the development of a cyber resilience benchmark by the BIS that is relevant for central banks and which will be used to coordinate on common areas for improvement. In 2022, the CRCC will engage with BIS member central banks and assist them in performing CRAs eg on central bank innovations and on a systemic basis with multiple participants. These assessments will further enhance the cyber resilience benchmark for central banks.

The FSI's BIS-FIT courses

The CRCC is collaborating with the Financial Stability Institute (FSI) to develop the Cyber Resilience module in the BIS online course on finance, innovation and technology (BIS-FIT; see Chapter 3). The module covers cyber resilience topics that are relevant to the financial sector, such as tutorials on cyber security risks and how to perform a cyber resiliency assessment, technology deep dives on fintech topics such as the security of DLT, cloud security and supply chain risk management. Additionally, a hands-on lab was developed where participants can virtually explore the cyber attack life cycle.

Collaboration

Global Cyber Resilience Group

The Global Cyber Resilience Group (GCRG) is a forum where central bank Chief Information Security Officers (CISOs) or their equivalent can discuss both tactical and strategic cyber resilience topics. Set up in 2020, the group has 55 members and held its inaugural meeting in May 2021. In the November biannual meeting, the GCRG announced that Joseph Leonard from the Federal Reserve Bank of New York would begin his three-year term as its new chair.

The GCRG's overall objective is to further enhance international consistency and seek ways that central banks can coordinate to increase the effectiveness and efficiency of approaches to strengthening cyber resilience. Three special focus groups were formed around: (i) risk management; (ii) zero trust; and (iii) cloud monitoring and identity and access management. The intent of these groups is to share practical guidance to help address common cyber resilience needs, improve central bank approaches and, where desirable, further develop ways to enhance coordination in the central bank community.

World Expo

The CRCC developed the technical table top component and participated in a multinational financial cyber simulation for finance and treasury ministries and international financial organisations held at the World Expo in Dubai, called Collective Strength. Thirteen finance and treasury ministries from 10 countries participated in the event, with the overall goal of enhancing global financial resilience through multilateral financial cyber collaboration between financial leaders from around the world in the event of a major cyber attack.

Operational readiness

Capture the Flag tournaments

Capture the Flag (CTF) tournaments are computer security competitions involving a series of security challenges. As competitors complete exercises by solving various forensics and defence challenges, they "capture flags", increasing their score. CTF objectives include practising cyber defence skills to detect, investigate, contain and recover from a cyber attack, developing analytical thinking to identify and characterise an ongoing cyber attack, and collaborating and information-sharing within the team and with external entities.

The CRCC held two CTF tournaments in 2021/22. These two-day virtual events had 68 participants from 33 central banks. The hands-on technical exercises utilised common cyber security tools available in a security operations centre (SOC) environment.

6 The way we work

In order to pursue our mission, we work in a purpose-driven way motivated by our core values. We foster a culture of diverse thought and innovation to promote effective collaboration in the central bank community. Our people are at the core of all our efforts.

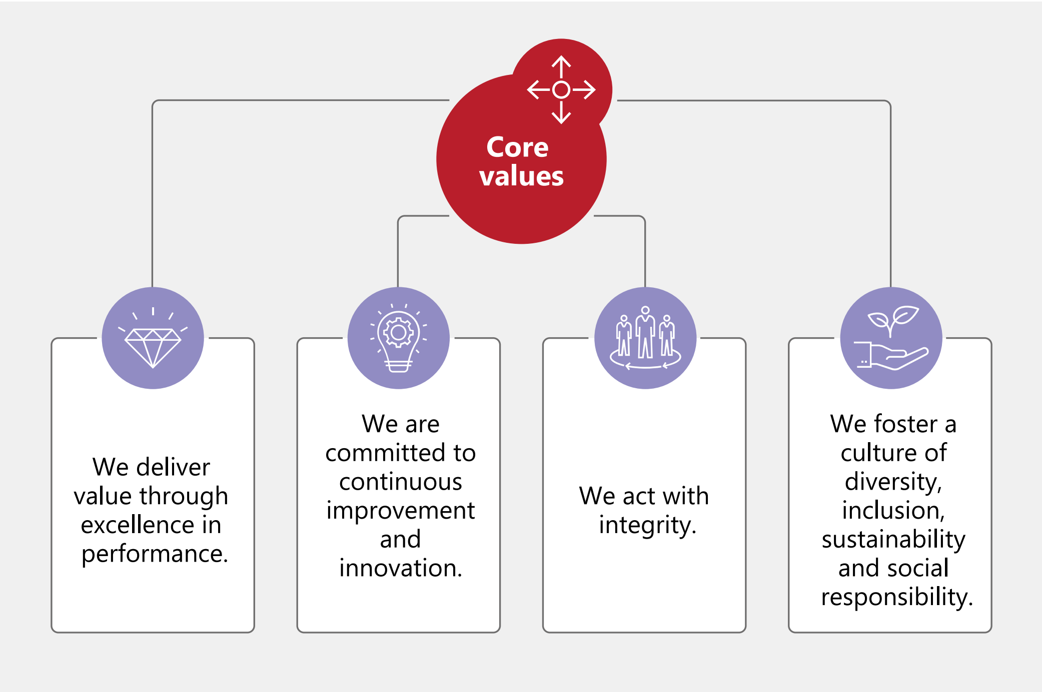
The way we work

Our people are central to the successful delivery of our mission. At the BIS, we work with a strong sense of mission and purpose, in an inclusive and dynamic work environment with sustainable and socially responsible work practices. Our work culture is grounded in four core values, which shape our way of working and the outcome of our work. It is our cohesive, purpose-driven culture that enables the BIS to support central banks through their current and future challenges.

Our core values influence all that we do

To respond to evolving central bank challenges and goals, the BIS fosters a culture of diverse thought and innovation. Four core values underpin our culture and are reflected in our outcomes.

BIS core values

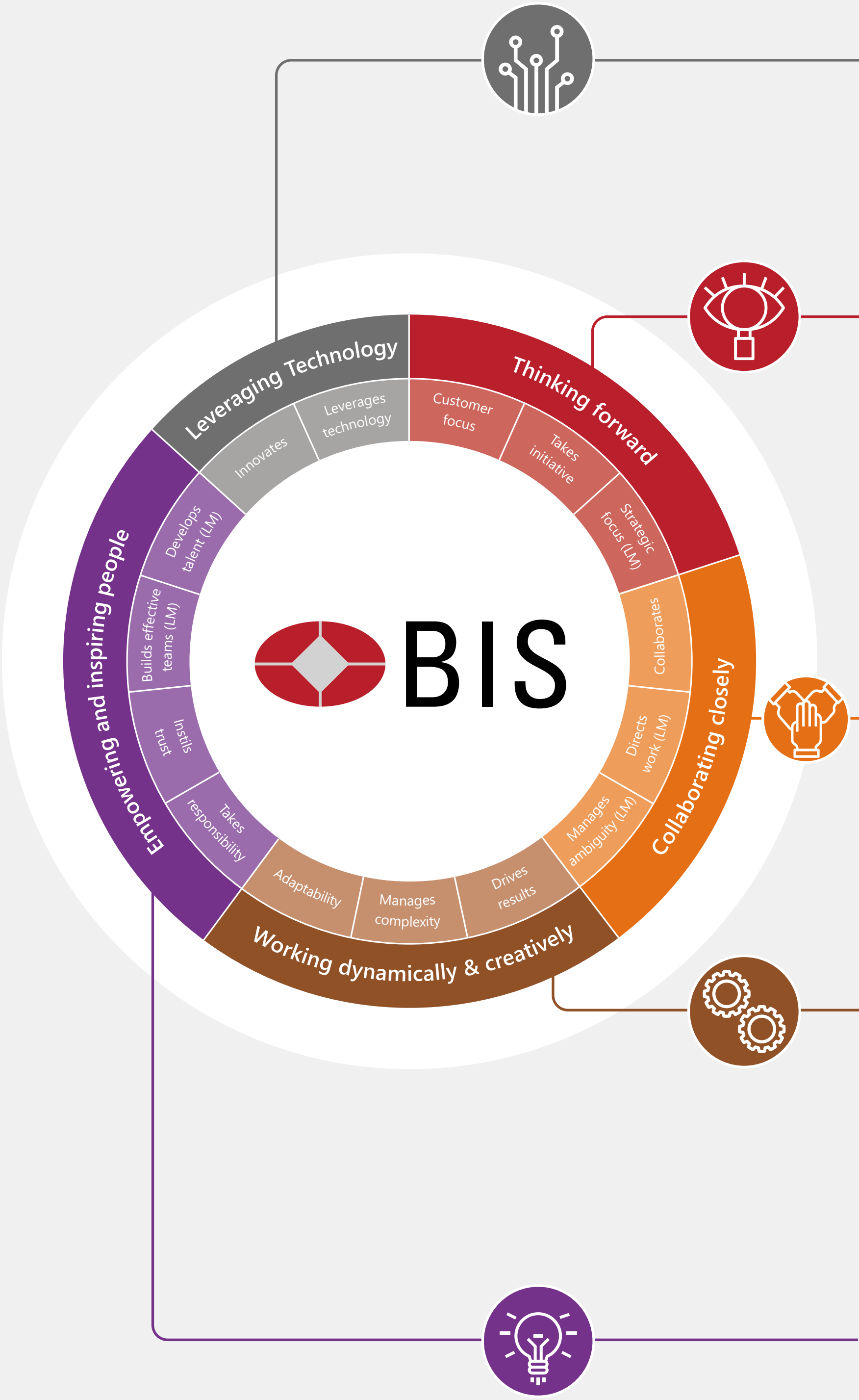


Excellence in performance

The BIS has defined fifive behaviours and 15 underlying competencies (10 for all staff and five for line managers) which, when embraced by staff, allow us to live our values and make the Bank a performance-driven organisation. The competency framework (see next page) lets us 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 our Innovation BIS 2025 strategy.

BIS competency framework

The five behaviours and 15 underlying competencies that enable us to achieve our goals are the following:



Leveraging technology is embracing relevant new trends, technologies and best practices to continuously improve ways of working.

Thinking forward means anticipating future business requirements and acting proactively to meet current and emerging customer needs.

Collaborating closely involves building connections and working together to meet shared objectives. Staff establish partnerships and foster open communication and collaboration.

Working dynamically and creatively means managing execution effectively and flexibly, despite complexity and changing priorities.

Empowering and inspiring people is taking responsibility for one's own actions with honesty and respect for others, and contributing to a safe work environment.

Working in this way, with a strong sense of purpose, enabled us to attain multiple and significant achievements during financial year 2021/22 that demonstrated our commitment to our values.

Continuous improvement and innovation

Two key drivers of change are pushing us along the path of continual improvement. The first is our Innovation BIS 2025 strategy, which has the overarching goal of making the BIS more flexible and adaptable. The second is the Covid-19 pandemic, which has continued to pose new challenges and also led to adaptations that have allowed us to embrace an agile mindset. Flexibility has helped us adapt quickly and productively to new demands and opportunities.

Innovation BIS 2025

To better serve the central bank community, the BIS is committed to exploring innovation. Our Innovation BIS 2025 strategy leverages technology and new collaboration channels to further our analysis and offer more advanced services. Our staff are now using big data technology to expand economic analysis and offer enhanced metadata on global economic data for the economic research community. Other initiatives have helped to advance secure collaboration tools for economic study and banking services, including new computing capabilities to provide high-speed financial risk analysis. In addition, our new core infrastructure investments now allow for faster, more resilient application development, scaling and management, which will allow the Bank to adapt to emerging digital needs faster and with fewer risks.

While delivering technology gains, the BIS has also improved various processes to better serve the Bank's operations. In 2021/22, we continued to make progress on the three lines of defence model for risk management. This approach ensures that we have a robust and transparent approach to operational risk management as the activities of the Bank expand and modernise (see Chapter 7).

We also made business process improvements to enhance the day-to-day experience of our people. These included a project to improve the onboarding of newcomers to strengthen understanding of the Bank and integration upon arrival, as well as streamlining our travel processes. And, building on lessons from the Covid-19 pandemic, we made innovations in our resource management. While posing many challenges, the pandemic also allowed us to reconsider our past practices and invest in new ways of working to align resources with our strategic priorities. For example, diverting resources from business travel allowed us to increase investment in digital communications and collaboration services.

Innovating how we work

Expectations about what “work” will look like post-pandemic have changed dramatically over the past two years. In 2021/22, BIS staff continued to adopt new ways of working and embraced technology as the Covid-19 pandemic necessitated that most staff work remotely. Digitisation and investment in diverse technology tools enabled remote working, which offered new flexibility and resiliency and helped promote work-life balance for our staff. At the same time, remote working has helped us appreciate the value of face-to-face collaboration when possible.

To leverage the flexibility and resiliency benefits of remote work and the value of on-site work, the BIS is piloting a hybrid working model in our headquarters campus in Switzerland which allows staff to work up to half of their time remotely over a two-week period, and we offer some additional flexibility for working abroad periodically. Hybrid working presents new opportunities and challenges for blending on-site and remote work while continuing to enrich both on-site working and remote working in the event we need to pivot from one model to the other quickly. In preparation for hybrid working, a new training programme was defined to help our people adapt to this new way of working, and enhanced digital communication tools were rolled out to ensure inclusiveness of staff on site and those working remotely.

The introduction of hybrid working has allowed us to think intentionally about redesigning our on-site working environments to enhance new ways of working. To promote more effective collaboration for on-site work, the BIS is experimenting with activity-based working, which allows employees to choose from a variety of work settings according to the nature of what they are doing, combined with a workplace experience that encourages staff to use those spaces throughout the day. We aim to provide an environment that stimulates collaboration, promotes well-being and supports productivity. At the same time, we recognise that staff are engaged in a diverse range of activities throughout the day and therefore need a variety of work settings suited to these activities.

In the first of half 2022, we rolled out a new staff engagement tracker, which allows us to take the pulse of the organisation through regular surveys to build our listening capabilities internally on a range of topics from hybrid working to well-being. Management is using the results from the survey to identify priorities for the organisation and follow-up actions. This helps to ensure that our new ways of working are advancing our business objectives and finding the right level of flexibility for staff.

Acting with integrity

Ethical conduct and social responsibility shape our conduct 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.

Aspiring to have the highest ethical standards allows us to build trust with our employees, stakeholders and the wider community. As part of the Bank's efforts to raise ethics awareness, the Bank makes available an e-learning programme that addresses the principal physical, psychological and social factors that promote a harmonious workplace. Staff who participate in the programme are better equipped to identify and prevent bullying and sexual harassment, guard against all forms of discrimination and contribute to promoting health and safety throughout the organisation.

In 2021/22, the BIS took steps to further clarify our commitment to ethical standards and provide an inclusive working environment that fosters authenticity and diverse perspectives. In August 2021, the Bank established a new Ethics and Conduct unit dedicated to promoting the strategic importance of ethics for the Bank and its corporate culture (see Chapter 7). In addition, the Bank introduced a whistleblower policy to ensure that all staff are adhering to the code of conduct and the highest ethical standards (see Chapter 7).

Cultural values

Sustainability

To further strengthen its safeguarding of personal data, in 2021/22 the BIS revised its personal data protection framework to ensure alignment with evolving practices (see Chapter 7).

The BIS is committed to environmental sustainability through its work for and with the central banking community (see box in Chapter 3) and in its drive to operate as a responsible international financial institution. Our internal efforts cover our corporate activities and employee behaviour as well as our investment activities.

The BIS Green Team, a group of staff volunteers, plays a key role in shaping our corporate sustainability discussions. The team researches and presents to Management environmental sustainability ideas and helps create ongoing awareness across the Bank. Notable awareness-raising initiatives over the past year included a webinar on carbon offsetting which explored the individual's role in compensating for environmental damage caused by personal consumption choices, and a quiz to commemorate Earth Day.

The environmental footprint of the BIS's Switzerland offices (where 90% of staff are based) is tracked on an annual basis, and we strive to reduce our impact. Changes that have helped improve our footprint include the switch to recycled paper, the installation of energy-saving lights and the installation of environmentally friendly cooling equipment.

Similar to most organisations, the Bank's greenhouse gas emissions declined in 2020 and 2021 as pandemic restrictions curbed business travel and extensive remote working arrangements reduced on-site energy consumption.

As travel resumes post-pandemic, we are making efforts to limit our business travel. We updated our business travel policy in 2021 to further enhance the Bank's consideration for the environmental impact of our business travels. In addition, we have invested in technology to make videoconferencing more widely available. These developments are likely to lead to a lower volume of business travel and thereby help contain future emissions relative to historical trends.

Regarding our investment activities, we have integrated sustainability considerations into the management of our staff pension fund and have invested in green bonds in our own funds portfolio (see Chapter 4). In addition, we have planned a pilot to assess climate-related financial risks on the Bank's balance sheet.

Social responsibility

The BIS brings together the international community to advance economic policy in order to ultimately enhance global social well-being. The Bank plays an important part within its own local communities as well. In 2021/22, we took a number of actions to promote social responsibility at home and abroad.

Our 90th anniversary

To mark its 90th anniversary, the BIS organised the *BIS 90 Years* exhibition, which showcased the Bank's past and present role in the global financial system. It was an occasion to look back at our challenges and achievements as we also look towards our future.

At the same time that the exhibition highlighted the BIS's international work, it was an opportunity for us to open our doors to the people of our local community. Originally scheduled for the year 2020, the exhibition was postponed due to the Covid-19 pandemic. Held from 26 October to 4 November 2021, it was set up in the BIS Tower building in Basel. The goal was to give visitors an insight into what the BIS does today, and how the Bank is preparing for the future. To do this, we created a visually attractive and interactive visitor experience, in collaboration with a local design firm (see photo collage in Chapter 1).

It was the first time since 2005 that the BIS headquarters had opened its doors to the general public, and the exhibition was a great success. There were over 8,000 visitors and 14,200 visitors to the dedicated website. Highlights from the exhibition continue to be featured at www.bis.org/about/bis90.htm.

BIS 90 Years exhibition

Donations

The BIS's tradition of philanthropic giving goes back nine decades. The Bank's first donation was made on 30 September 1930, four months after the Bank opened its doors for business. Since then, the Bank has made financial contributions in support of both the local Basel community and relief efforts related to natural and humanitarian disasters across the globe.

In 2021, the Bank updated its donations guidelines to include support not only for social and cultural activities but also for activities with an environmental focus. It also expanded its definition of charities with a local dimension to include all locations in which the Bank maintains business operations (ie the locations of its headquarters, Representative Offices and Innovation Hub Centres).

During 2021, the BIS Donations Committee ran four staff fundraising campaigns in collaboration with the BIS Staff Committee, the Diversity Affinity Networks and the BIS Sports Club. The campaigns raised matched donations in support of Covid-19 relief efforts by Médecins Sans Frontières, for emergency relief in Timor-Leste and for World Vision, a global charity supporting children.

In March the Donations Committee, in partnership with the BIS Staff Committee and the WE@BIS women's diversity and affinity network, organised a staff fundraiser with proceeds going to CARE, which provides emergency aid to displaced Ukrainian families. The donations were matched by the BIS. The International Women's Day virtual charity auction organised by WE@BIS also supported CARE and this important effort.


Donation of used office furniture to Startup Academy Basel

In addition, the funds of the Donations Committee were distributed internationally to the following organisations in 2021: in Basel, Robi-Spiel-Aktionen, ExilAktion, Verein Treffpunkt Glaibasel, Stiftung für krebskranke Kinder Regio Basiliensis, Basler Kindertheater, CHOOSE Integration, Krebsliga Beider Basel, Offene Kirche Elisabethen, the Basler Kunstmuseum, Verein ELA Schweiz, Basler Bach Chor, Make-a-Wish Switzerland, Jazzmatics, Stiftung pro REHAB Basel and Gamaraal Foundation Switzerland; in Hong Kong SAR, the Bethune House Migrant Women's Refuge Ltd, Food Angel, ImpactHk, Mother's Choice, Save the Children, the Remedy Project and Senior Citizen Home Safety Association; and in Mexico, Fundación Origen, SSFundasida and Construyendo.

The BIS also donated used office furniture to Startup Academy Basel, an organisation supporting business startups.

Diversity and inclusion

The BIS is committed to welcoming and respecting diversity across all dimensions, including gender, sexual orientation, gender identity and expression, nationality, race, ethnicity, physical abilities, age, beliefs, educational background and experience. To deliver on our mission centred around international cooperation, we recruit people with diverse backgrounds and thinking styles, from all over the world. Work on the Bank's people policies and practices supports the BIS's ability to attract and retain a diverse workforce by improving policies that help foster a culture of diversity, inclusion and fairness at the BIS.

A key aim of the BIS is to measurably increase gender diversity. Reflecting its full commitment to equal opportunity employment, the Bank has set a 50/50 gender target to fill vacancies for line managers and senior professionals (a category which includes line managers). In 2021/22, we reached an overall recruitment distribution of 62% for female line managers and 46% for senior professionals. As a result, since 2015 the percentage of female line managers has increased from 9% to 29%.

To implement its wider diversity agenda, the BIS has a Diversity Steering Committee made up of representatives from around the Bank. The committee oversees activities related to diversity and inclusion. In addition, to help drive forward our diversity and inclusion agenda, the Bank's first Diversity and Inclusion Adviser was appointed in March 2022.

In 2021/22, the Diversity Steering Committee oversaw work to build awareness of the role implicit bias plays in our behaviours

Mary C Daly, President of the Federal Reserve Bank of San Francisco, speaks to BIS staff about diversity and inclusion

and actions – which is an important element in fostering a culture of diversity and inclusion at the BIS.

The Diversity Steering Committee is working to review policies and has also examined recruitment processes, together with Human Resources, to identify existing barriers to increasing diversity. Work is under way to develop a recruitment training programme to provide training on best practices to avoid unfair and biased outcomes. The Bank has also introduced a new web-based application to help business areas craft job descriptions for recruitment purposes. The tool is particularly useful for identifying and avoiding potential gender bias in adverts and was adopted for all recruitment adverts from January 2022.

Internal diversity and affinity networks

A number of staff-led diversity and affinity networks were launched in 2021/22:

PRIDE @BIS Affinity Network

- Pride@BIS, started in March 2021, aims to promote an open, inclusive and respectful working environment where everyone, regardless of sexual orientation or gender identity, feels accepted and confident. It also facilitates engagement, retention and professional development of LGBTQI+ staff at the BIS. A highlight during Pride Month 2021 was the conversation around diversity and inclusion with Mary C Daly, President of the Federal Reserve Bank of San Francisco.

WE @BIS Affinity Network

- WE@BIS, the women's diversity and affinity network, was also launched in March 2021. WE@BIS helps women and their allies support each other to achieve their full potential at the BIS and beyond. It delivers events and programmes focused on building skill, confidence and a sense of connection. To celebrate International Women's Day in March 2022, the network organised a number of events, including a series of talks, among them one by Central Bank of Chile Governor Rosanna Costa on breaking the bias in central banking, and a charity auction to raise funds for CARE, an organisation supporting displaced Ukranian families.

EMBRACE @BIS Affinity Network

- EMBRACE@BIS, which celebrates, promotes and advocates ethnic and racial diversity and representation in the BIS, was initiated in July 2021. Its goal is to make the BIS more reflective of its global membership. It provides a safe space where ethnic minorities can share their experiences and fosters an open and inclusive dialogue on race and ethnicity at the BIS. To celebrate Black History Month, the network kicked off its book club with *Homegoing*, a book by Ghanaian author Yaa Gyasi.

PARENTS +CARERS @BIS Affinity Network

- The Parents and Carers network began in October 2021. It promotes connection, information exchange, learning and knowledge-sharing amongst parents, carers and others who are supportive of parents and carers. The network also seeks to raise awareness of the challenges they face, and to facilitate a more inclusive culture for parents and carers at the BIS.

To foster a diverse and inclusive culture, the BIS celebrated international diversity and inclusion days in the past year, such as International Women's Day, Pride Month, the International Day Against Homophobia, Biphobia and Transphobia, and the International Day of Families.

Staff

The BIS is a diverse global organisation with a truly international workforce. As of 31 March 2022, the Bank employed 629 staff members from 63 countries, excluding hosted associations. Its modest size encourages collaboration and knowledge-sharing both inside and outside the institution.

Meet our people

Ben

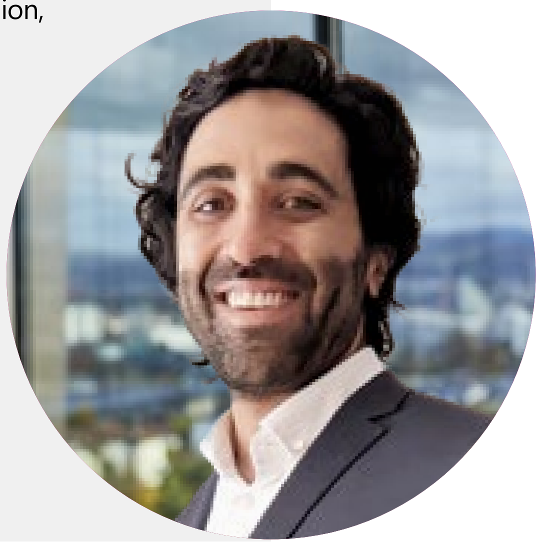
Adviser, BIS Innovation Hub Singapore Centre

I lead Project Nexus in the BIS Innovation Hub Singapore Centre. The project aims to improve cross-border payments by connecting domestic payment systems. This year we're undertaking a proof of concept, building technology to link up the payment systems of Singapore, Malaysia and the euro zone. This supports the work being led by the BIS CPMI, FSB and G20 to improve the speed, cost, access to and transparency of cross-border payments. Work in the Innovation Hub is both stimulating and challenging. We try to work in an agile way, building and improving the technology through a series of iterations, prioritising the features that will give the most benefit to payment users, and accepting that it's better to have a good solution that works than a perfect solution that is never actually finished. Along the way we are collaborating with central banks, payment system operators and the wider banking and payments industry around the world.

Jess

Visiting Economist, Representative Office for the Americas

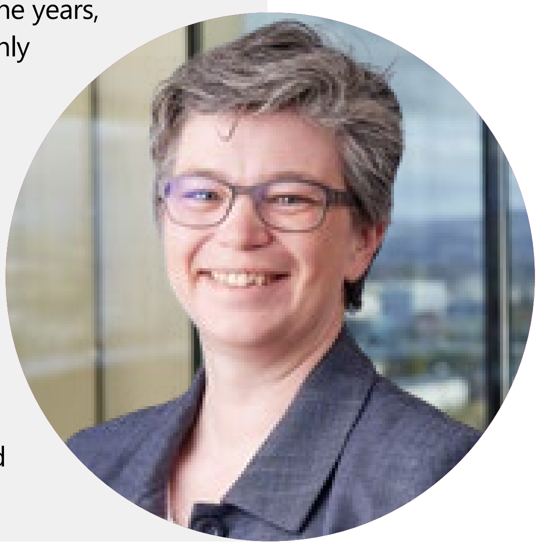
I am visiting the Representative Office for the Americas through a secondment with the Bank of Canada. Here I have learned about topics ranging from the evolution of digital payments in Latin America to the economics of climate change to the region's recovery from the pandemic. Also, whether the issue is the creation of payment solutions for the region, the implementation of new risk management frameworks or the monitoring of the latest economic developments, we facilitate valuable collaboration among our partners. Finally, given our unique position, we are well placed to bring regional and global considerations to economic debates in the region. Mexico City is an excellent place to work and live. Being in Latin America makes what happens here less of an abstraction. And most importantly, the culture, history, food, natural amenities and people in this country are all incredible.



Louisa

Administrative Officer, Monetary and Economic Department

For the last 15 years, I have supported the Administration Helpdesk of eBIS, a secure web-based platform that facilitates global information exchange between central banks, BIS stakeholder groups at all levels and the BIS-hosted committees and organisations. Over the last 12 months, I have guided a first-level support team, freeing me up to work with our technical team to upgrade the system. eBIS has evolved over the years, taking us from a bespoke solution that could only unilaterally disseminate documents to meeting attendees, to a modern platform that supports data collection exercises, two-way document distribution and secure communication channels, multifactor authentication and tailored access. We now have over 100 separate user areas and thousands of sub-areas. Though mainly serving MED, the areas span most of the Bank's activities, each with their own unique setup and security groups, and over 15,500 users worldwide have accessed the platform in the last year.



Tim

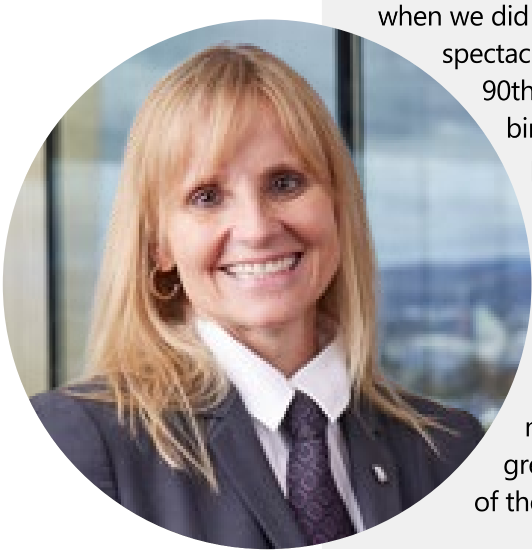
Principal Dealer, Banking – Hong Kong Dealing Room

I moved back to the Asian Office in 2017, after nine years working in Basel. As a trader in a small team in Hong Kong SAR, my time is now split between the interest rates and FX businesses. A major focus for us over the past year was the expansion of the CNY business, which has proven very successful. Client interest in those services has grown as CNY is increasingly being added as a reserve currency by central banks. Another focus was the impact of Libor reform on the Asian business. Over the past year, Banking implemented the ISDA protocol, which guides the treatment of legacy Libor transactions, actively reduced the Bank's Libor exposures and introduced new products which reference the new risk-free rate benchmarks. Clients' interest in these new products has proven very strong, which vindicates the huge efforts made across the Bank throughout this initiative.

Jasmin

Security Officer, Corporate Security

I am part of the Physical Security Team and work mainly at the main entrance of the Tower and the security desk of the Botta building. I am also responsible for preparing the access badges for meeting participants. The challenges of the past year were that we went from a very quiet period due to the pandemic, when we did not have so much traffic in the buildings, to a spectacular restart with the exhibition for the Bank's 90th anniversary. Immediately afterwards, the first bimonthly meeting since the start of the Covid-19 pandemic took place, after which things unfortunately came to a partial shutdown again due to Covid-19, which thankfully eased in early 2022, when we were able to welcome colleagues back in person. For now, I am very happy that we can welcome more and more staff in the Bank buildings and that the meetings are taking place on-site again. It is a great pleasure to ensure the safety and well-being of the people here.



Esther

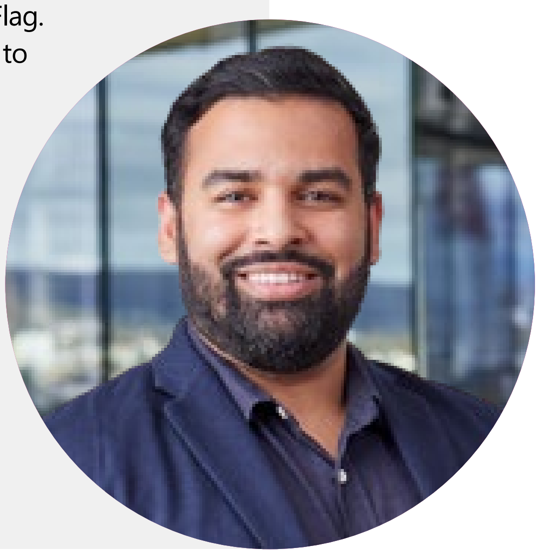
Head of Purchase to Pay, Finance

The Purchase to Pay team takes care of the transactional side of procurement. Our focus this year was addressing the expansion of the BIS Innovation Hub Centres and the Innovation BIS 2025 strategy, now fully on-stream. Beyond my Procurement responsibilities, this year I had the opportunity to co-lead the Travel Transformation project, a joint initiative between Finance, Meeting Services and Information Technology and Services. We used the phase of low travel activity due to the pandemic to revamp our travel processes from A to Z. We simplified our travel rules, incorporated environmental principles and introduced an online travel agent and expense management technology. This was a big change for the Bank, and now that travel is picking up, we are pleased to see the high adoption rates of the booking portal by staff and the significantly reduced end-to-end processing times for expenses.

Sukhvir

Senior Security Specialist, Cyber Resilience Coordination Centre

The Cyber Resilience Coordination Centre's (CRCC) remit is to promote and enhance cyber resilience and collaboration amongst BIS shareholding central banks, and last year was incredibly rewarding. We launched several new projects, including a Cyber Resilience Assessment pilot with eight central banks and a type of cyber range exercise known as Capture the Flag. Along with our other efforts, these contributed to a successful year which saw a marked increase in participation and interest from all our shareholding central banks, and the result is that we are now more in demand than ever before. Having come from highly operational roles before, the strategic and global outreach nature of my duties in the CRCC has been pivotal in my career. It's been challenging working from home almost the entire time I have been at the BIS so far, but it's been a very positive experience, and I look forward to more.



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 bodies participates in the governance and decision-making related to BIS activities in the areas of international cooperation, policy analysis, banking operation, corporate operations and innovation.

BIS member central banks and General Meetings

Sixty-three central banks and monetary authorities are currently members of the BIS.

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	Czechia
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

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 Türkiye	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. On 12 January 2022, the Board elected François Villeroy de Galhau, Governor of the Bank of France, as its Chair, to succeed Jens Weidmann, then President of the Deutsche Bundesbank. The current Vice-Chair is Stefan Ingves, Governor of Sveriges Riksbank, who was elected on 6 November 2021 for a three-year term.

Changes in the Board

On 31 December 2021, Jens Weidmann left the Deutsche Bundesbank and thereby also left the BIS Board. Joachim Nagel, his successor at the Deutsche Bundesbank, took up his ex officio seat on the BIS Board on 7 January 2022.

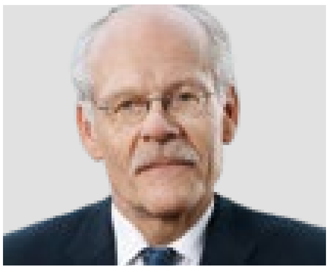
François Villeroy de Galhau
Chair; Bank of France, Paris

Roberto Campos Neto
Central Bank of Brazil, Brasília

Andrew Bailey
Bank of England, London

Shaktikanta Das
Reserve Bank of India, Mumbai

Yi Gang
People's Bank of China, Beijing



Stefan Ingves
Sveriges Riksbank, Stockholm

Thomas Jordan
Swiss National Bank, Zurich

Klaas Knot
Netherlands Bank, Amsterdam

Haruhiko Kuroda
Bank of Japan, Tokyo

Alejandro Díaz de León’s term as Governor of the Bank of Mexico ended on 31 December 2021, and he thereby also left the BIS Board. With effect from 1 February 2022, the Board elected Victoria Rodríguez Ceja, new Governor of the Bank of Mexico, as a Board member for a period of three years.

In addition, Juyeol Lee stepped down as Governor of the Bank of Korea at the end of his term on 31 March 2022. The new Bank of Korea Governor, Chang Yong Rhee, was elected to the Board as from 9 May 2022.

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 1,051,374 as of 1 April 2022. 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 for financial year 2021/22 amounts to CHF 984,564.

Christine Lagarde
European Central Bank, Frankfurt am Main

Tiff Macklem
Bank of Canada, Ottawa

Joachim Nagel
Deutsche Bundesbank, Frankfurt am Main

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

Chang Yong Rhee
Bank of Korea, Seoul

Victoria Rodríguez Ceja
Bank of Mexico, Mexico City

Ignazio Visco
Bank of Italy, Rome

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

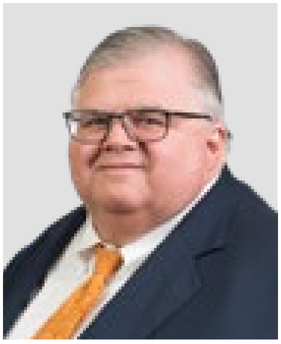
Pierre Wunsch
National Bank of Belgium, Brussels

BIS Management

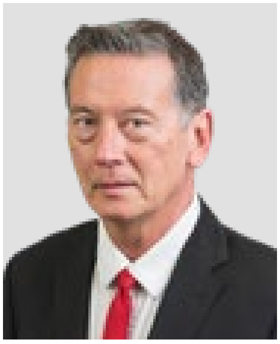
The management of the Bank is directed by the General Manager, who is responsible to the Board of Directors for the conduct of the Bank. The General Manager is assisted by the Deputy General Manager and advised by the Executive Committee.

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 these 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



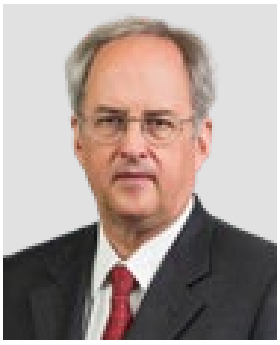
Luiz Awazu Pereira da Silva
Deputy General Manager

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



Diego Devos
General Counsel

Bertrand Legros
Deputy Secretary General

Changes in Management

After his appointment as President of the Deutsche Bundesbank in January 2022, Joachim Nagel left his position as Deputy Head of the Banking Department. Luis Bengoechea replaced him as Acting Deputy Head of the Banking Department.

In January 2022, Benoît Cœuré left the BIS to become President of France's Competition Authority. Ross Leckow replaced him as Acting Head of the BIS Innovation Hub.

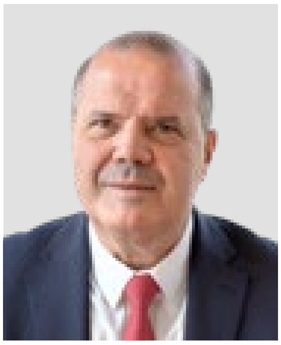
Senior management remuneration

The salaries of senior officials are regularly benchmarked against compensation in comparable institutions and market segments. As of 1 July 2021, 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.

Stijn Claessens
Deputy Head of Monetary and Economic Department

Fernando Restoy
Chair 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

Ross Leckow
Acting Head of BIS Innovation Hub

Luis Bengoechea
Acting Deputy Head of Banking Department

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.

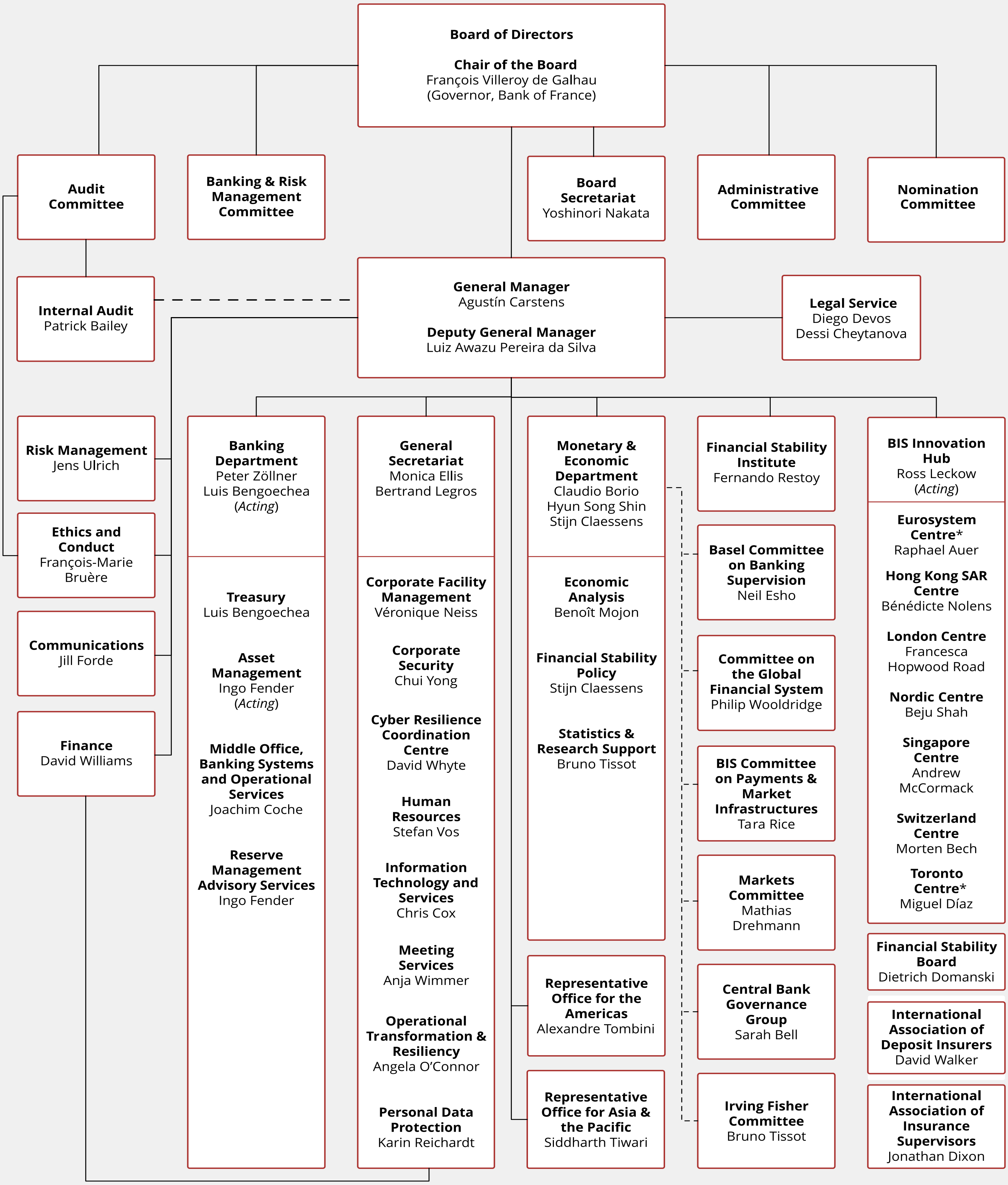
The **BIS Innovation Hub** (see Chapter 5) identifies and develops in-depth insights into critical trends in financial technology of relevance to central banks, explores the development of public goods to enhance the functioning of the global financial system, and serves as a focal point for a network 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, operational risk management, human resources, finance, facilities management, security and meeting services.

The BIS is further supported by the **Legal Service** and the **Risk Management, Internal Audit, Ethics and Conduct** 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, June 2022



* Opening date pending.

Risk management

The BIS has well tested 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.

To strengthen the implementation of its three lines of defence approach to reduce operational risk and improve resilience (see below), the Bank has undertaken a review of roles and responsibilities related to compliance and conduct risks across the organisation. In August 2021, the Bank reallocated responsibilities. As a result, the Risk Management function, jointly with the Legal Service, provides guidance and monitoring for compliance risk related to BIS banking services. In addition, a new Ethics and Conduct unit was established in 2021 to underline the strategic importance of ethics for the Bank and its corporate culture (see page 141).

Financial risks

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

The BIS manages its financial risks within a financial risk management framework established by the Board. The implementation of the financial risk management 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 financial risk management 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, in particular during the second half of the financial year, and the flexibility to continue to support central banks in responding to Covid-19-related economic challenges and the outbreak of war in Ukraine. To reinforce its capacity in this regard, the Bank further 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 technological 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 of defence 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 Operational Transformation and Resiliency unit and guided by the Operational Risk and Resiliency Framework introduced in financial year 2020/21 and 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.

Advancing the Bank's resiliency

As the severity of the Covid-19 pandemic has ebbed and flowed across the Bank's different operational sites, the BIS has put in place a Response Team to guide working arrangements and staff safety plans to ensure critical activities continue to be performed and the Bank advances its strategic goals. The Bank's response plans placed top priority on health and safety and invested in Covid-19 testing for staff, their families and visitors and vaccination for staff and their families. The BIS closely followed the guidance of local authorities on social distancing and remote working practices to prevent infection. Thanks to these measures, activities continued uninterrupted, and the BIS did not encounter any material operational risk incident directly caused by Covid-19-related measures over the past year.

The experience of managing through the pandemic has helped to fortify the Bank's resiliency for other unexpected disruptions. Response plans now include more options for weathering unforeseen events, and preparedness exercises now account for "stress test scenarios" to prepare for multiple events that may take place at the same time. Thus, the pandemic leaves us better prepared for future events and more aware of response options we can employ.

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 reports functionally to the Chair of the Audit Committee of the Board and administratively to the General Manager. Every activity and entity of the Bank, including outsourced activities, falls within the overall scope of 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.

Independent external auditor

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 2022, 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 identification, management and control of legal risks, including litigations, across the organisation. In August 2021, in the context of the implementation of the three lines of defence approach at the Bank, the Legal Service, jointly with Risk Management, assumed responsibilities to provide guidance and monitor compliance risk regarding banking activities under the applicable BIS banking rules and policies.

In 2021/22, the Legal Service advised on, and contributed to, several BIS strategic initiatives, including the development of new policies and processes related to the People Strategy and supporting the Banking Department as it developed new services and adjusted its suite of products, in particular in a post-Libor environment.

Other highlights included providing legal advice on the expansion of the BIS Innovation Hub, where the necessary immunity frameworks (host country agreements and related national legislation) required for the operations of the BIS Innovation Hub Centres in London and Stockholm were put in place in the spring of 2021, and another host country agreement was signed with France in September 2021.

In the reporting period, the Legal Service also:

- contributed to strengthening the BIS accountability framework by supporting the development of the BIS whistleblowing policy (and reporting platform);
- contributed to the enhancement of the Bank's personal data protection framework; and
- supported the establishment of additional liquidity facilities offered by the BIS to central banks.

Ethics and conduct

The Bank's Management and Board of Directors attach the highest importance to ethics and conduct. Ethical conduct is one of the BIS's core values and therefore a key pillar of its corporate culture (see Chapter 6). Following the reorganisation of the Compliance function, the Bank's independent Ethics and Conduct unit was established in August 2021 to provide assurance that the activities of the BIS and its personnel are conducted in accordance with the highest ethical standards and the relevant codes of conduct. The Chief Ethics and Conduct Officer reports to the General Manager and the Deputy General Manager and also has direct access to the Board's Audit Committee.

Working with integrity

The BIS Code of Conduct requires that all BIS staff members maintain the highest standards of conduct, both at the Bank 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, Ethics and Conduct organises mandatory training for all new staff members on the Code of Conduct and fraud awareness.

Speaking up practices

In November 2021, the Bank adopted a whistleblowing policy with a view to clarifying existing rules and making new reporting channels available. Whistleblowers (employees or third parties) can report breaches of rules to the Chief Ethics and Conduct Officer, their line manager, the Head of Human Resources, any member of the Executive Committee or the Chair of the Board. Reports can also be made through an externally managed telephone hotline and an online platform. The Bank does not to seek to identify anonymous whistleblowers and grants them protection against retaliation.

As a general ethical principle, 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, thus ensuring 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 and roles 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.

The Annual General Meeting approves the remuneration of members of the Board of Directors, with adjustments taking place at regular intervals (see page 131).

BIS staff members have access to a contributory health insurance plan and a contributory defined benefit pension plan. Subject to certain conditions, staff members who are not nationals of the host countries where the BIS offices are located, including senior officials, are entitled to expatriation benefits as well as an education allowance for the international schooling of their children.

Taxation

Pursuant to host country agreements or legislation, BIS staff members are generally exempt from income tax on Bank salaries and allowances that would otherwise be levied by the relevant host 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). The exemption from national taxation reflects a well established international practice for international organisations.

8

Financial results and profit allocation

The Bank's balance sheet and financial results are driven mainly by its banking activities and by the management of the funds associated with its shareholders' equity. The annual net profit is allocated as a dividend or transferred to a reserve fund according to the Bank's Statutes.

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 **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 and losses on sales. The Bank's total comprehensive income includes their total change in fair value, including unrealised valuation movements.

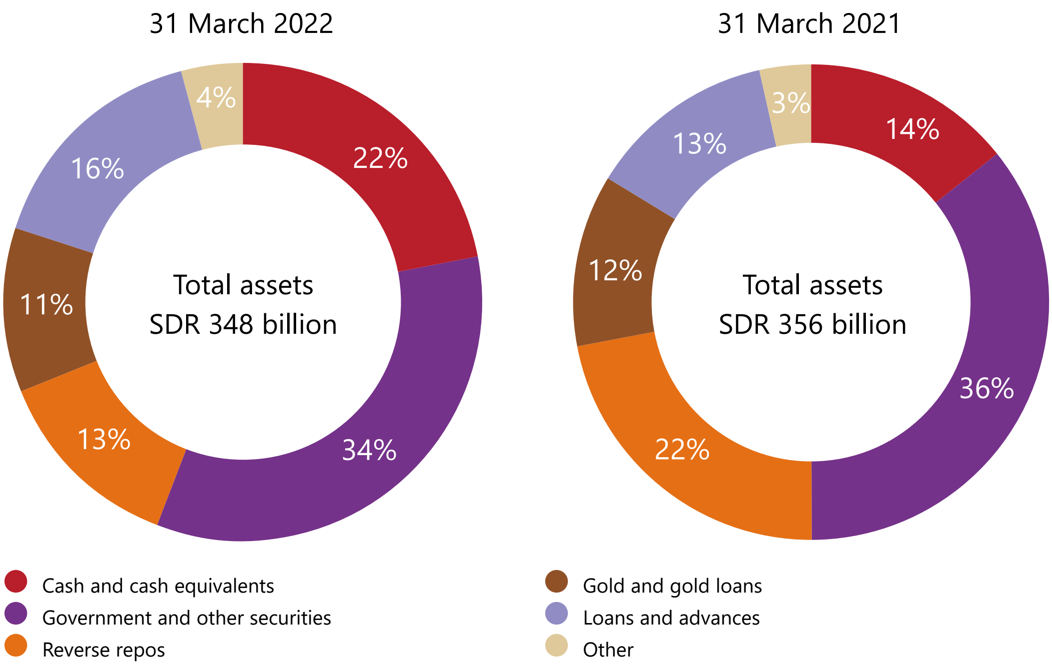
The **borrowed funds** represent deposits from central banks and other official sector customers in currency and gold, and the investment of the proceeds and associated hedging through derivative financial instruments. These portfolios are managed on an overall fair value basis. They are primarily accounted 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.

Apart from the portfolios mentioned above, the Bank has other portfolios which include the income from asset management services and income from foreign exchange and gold services.

Balance sheet

The BIS's balance sheet total as of 31 March 2022 was SDR 348 billion. The composition of the Bank's assets is shown in the graph below.

Balance sheet asset composition



The balance sheet decreased by SDR 8 billion over the year. This reflected a SDR 1 billion increase in shareholders' equity, offset by a SDR 9 billion decrease in total liabilities. Within total liabilities, currency deposits rose by SDR 4 billion over the year, while other liabilities (principally the volume of transactions awaiting settlement) decreased by SDR 13 billion.

Currency deposits	Gold deposits	Other liabilities	Total liabilities
SDR 292 billion	SDR 19 billion	SDR 13 billion	SDR 324 billion
31 March 2022	31 March 2022	31 March 2022	31 March 2022
SDR 288 billion	SDR 19 billion	SDR 26 billion	SDR 333 billion
31 March 2021	31 March 2021	31 March 2021	31 March 2021
+ SDR 4 billion	No change	– SDR 13 billion	– SDR 9 billion

Financial performance

Net profit

The net profit for 2021/22 was SDR 341 million, comprising:

Borrowed funds total income		Own funds total income		Income on other business		Operating expense
SDR 428.1 million	+	SDR 192.3 million	+	SDR 36.2 million	−	SDR 315.6 million
reflecting the margin earned on an average currency deposit volume of SDR 284 billion				including asset management services, and foreign exchange and gold services		

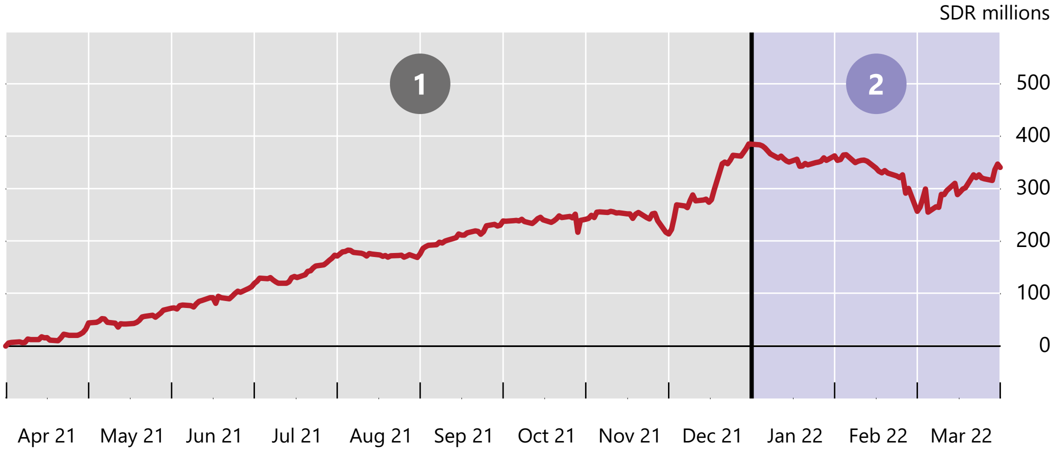
The net profit for 2021/22 was SDR 896 million lower than the exceptional level of SDR 1,237 million recorded in the prior year. There were two main factors to this.

First, the total income on the borrowed funds reverted to a more normal level after two financial years in which it reflected the effects of the pandemic on financial markets. The sharp widening of money market and credit spreads in early 2020 led to unrealised valuation losses which depressed the borrowed funds margin in 2019/20, and then elevated it to an exceptional level in 2020/21 when the losses were recouped. By comparison, the margin on the borrowed funds in 2021/22 was at a more normal level, albeit slightly reduced by spread widening due to the war in Ukraine. As a result, the total income on the borrowed funds in 2021/22 was SDR 746 million lower than in the exceptional level in the prior year.

Second, the total income on the own funds was SDR 136 million lower than in 2020/21 due to the rise in bond yields during the year. Higher bond yields reduced the valuation of own funds assets. This resulted in lower gains on sales, and also led to losses on financial instruments which are accounted for at fair value through profit and loss.

The development of net profit over financial year 2021/22 is illustrated in the graph on the next page.

Year-to-date net profit



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

Period 1 runs from the start of the financial year to the end of December 2021. Profit was relatively stable during this period. Year-to-date profit was SDR 385 million at the end of December 2021, boosted slightly by a higher than expected borrowed funds margin.

Period 2 spans the remainder of the financial year until end-March 2022. The Bank recorded a loss of SDR 44 million during this period, reflecting two main factors. First, the increase in bond yields impacted the total income on the own funds from January 2022 onwards. Second, market tensions after the start of the war in Ukraine led to unrealised valuation losses on the borrowed funds in February 2022.

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 682 million was due to a 17% increase in the gold price. Second, an actuarial re-measurement gain on the Bank's post-employment defined benefit obligations of SDR 277 million reflected the rise in bond yields, which led to an increase in the discount rate used to value the obligations. Third, the unrealised valuation movement on fair value through other comprehensive income own funds securities of SDR –383 million reflected a revaluation loss due to the rise in SDR bond yields, along with 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 2021/22 was SDR 918 million.

Allocation and distribution of profit

Proposed dividend

The dividend policy of the BIS has three fundamental principles:

- the Bank should maintain an exceptionally strong capital position;
- the dividend should be predictable, stable and sustainable; and
- the dividend should be an annual decision reflecting prevailing financial circumstances.

The policy incorporates a normal dividend, which usually increases by SDR 10 per share per annum, with the payout ratio between 20 and 50% in most years. The dividend policy was revised in 2021/22 to incorporate the use of the Special Dividend Reserve Fund to help smooth future dividend payments. The Special Dividend Reserve Fund would be drawn on to support dividend payments in years when profits are low (when the payout ratio would be above 50%). Conversely, when profits are high (and the payout ratio would be below 30%), the dividend policy allows for the Special Dividend Reserve Fund to be replenished by an allocation of profit. The policy also allows for the possibility of a supplementary dividend when the payout ratio would be below 20%.

Consistent with the dividend policy, it is proposed to declare a normal dividend of SDR 275 per share for financial year 2021/22. The proposed dividend would be paid on 567,125 eligible shares at a total cost of SDR 156 million. This would represent a payout ratio of 46% of net profit, and hence there is no transfer to or from the Special Dividend Reserve Fund in 2022.

Proposed allocation to reserves

In accordance with Article 51 of the BIS Statutes, the Board of Directors recommends that the General Meeting allocate the 2021/22 net profit of SDR 341.0 million in the following manner:

SDR 156.0 million

to be paid out as dividend

SDR 9.3 million

to be transferred to the General Reserve Fund

SDR 175.7 million

to be transferred to the Free Reserve Fund

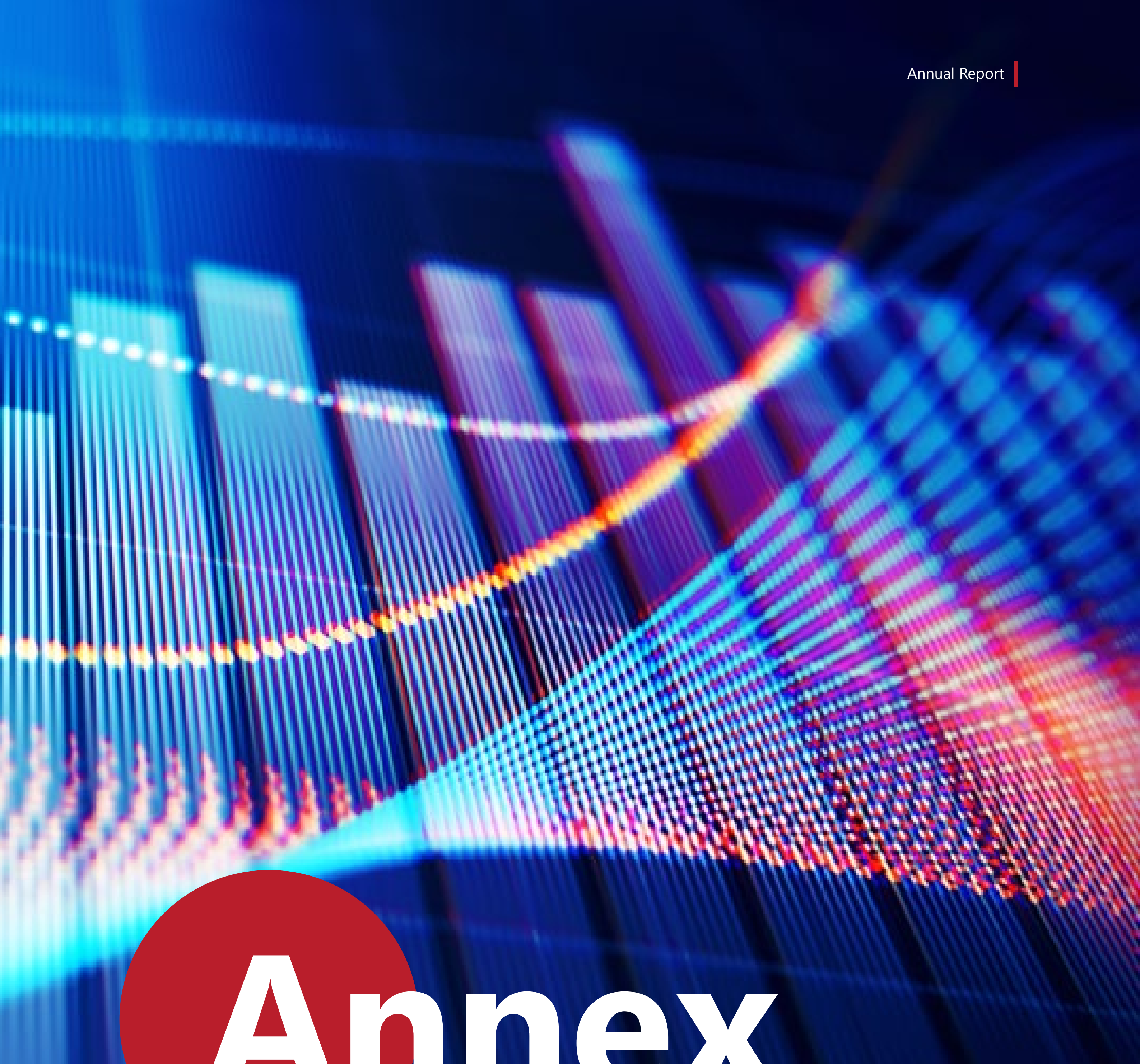
Independent auditor

Report of the auditor

The BIS financial statements for the year ended 31 March 2022 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 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 2022 was the third year of PricewaterhouseCoopers' term as auditor.



Annex

Financial statements

The BIS's financial statements for the financial year ended 31 March 2022 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 on 26 June 2022

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 2022.

Pursuant to Article 49 of the Bank's Statutes, they are presented in a form approved by the Board of Directors on 9 May 2022, and are subject to approval by shareholders at the Annual General Meeting.

The net profit for the year was SDR 341.0 million. This compares with the exceptional profit of SDR 1,237.3 million for the prior year when valuation losses from the start of the pandemic were recouped. The Board of Directors proposes to allocate this profit as follows. First, SDR 156.0 million to pay a normal dividend of SDR 275 per share. Second, SDR 9.3 million to the general reserve fund. Third, SDR 175.7 million to the free reserve fund.

Basel, 18 May 2022

Agustín Carstens
General Manager

Luiz Awazu Pereira da Silva
Deputy General Manager

Contents

Balance sheet

As at 31 March

SDR millions	Note	**2022**	2021
Assets			
Cash and cash equivalents	1	77,554.5	50,854.6
Securities purchased under resale agreements	2	43,934.7	78,572.0
Loans and advances	2	56,442.5	45,544.4
Government and other securities	2	118,391.9	127,079.5
Gold and gold loans	3	39,656.2	41,665.7
Derivative financial instruments	4	7,994.1	7,621.8
Accounts receivable and other assets	5	3,443.3	4,618.0
Land, buildings and equipment	6	201.9	198.4
Total assets		**347,619.1**	356,154.4
Liabilities			
Currency deposits	7	292,178.4	288,014.7
Gold deposits	9	18,858.8	18,848.9
Derivative financial instruments	4	3,246.0	2,208.1
Accounts payable	10	9,135.2	23,319.7
Other liabilities	11	753.7	940.0
Total liabilities		**324,172.1**	333,331.4
Shareholders' equity			
Share capital	13	710.2	710.2
Less: shares held in treasury	13	(1.7)	(1.7)
Statutory reserves	14	18,085.0	17,141.8
Profit and loss account		341.0	1,237.3
Other equity accounts	15	4,312.5	3,735.4
Total shareholders' equity		**23,447.0**	22,823.0
Total liabilities and shareholders' equity		**347,619.1**	356,154.4

Profit and loss account

For the financial year ended 31 March

SDR millions	Note	**2022**	2021
Interest income	16	222.8	254.9
Interest expense	17	(226.7)	(174.2)
Change in expected credit loss impairment provision	18	(1.2)	0.8
Net income on financial assets and liabilities at fair value through profit and loss	19	542.5	1,310.4
Net interest and valuation income		**537.4**	1,391.9
Net gain / (loss) on sales of currency assets at fair value through other comprehensive income	20	102.0	127.6
Net fee income	22	5.9	6.7
Net foreign exchange income	23	11.3	27.5
Total income		**656.6**	1,553.8
Administrative expense	24	(289.3)	(288.8)
Depreciation and amortisation	6	(26.3)	(27.7)
Operating expense		**(315.6)**	(316.5)
Net profit		**341.0**	1,237.3

Statement of comprehensive income

For the financial year ended 31 March

SDR millions	Note	**2022**	2021
Net profit		**341.0**	1,237.3
Other comprehensive income			
Items that are or may be reclassified subsequently to profit and loss			
In respect of currency assets at fair value through other comprehensive income:			
Net change in fair value during the year		(281.8)	(227.8)
Net change in expected credit loss impairment provision		1.2	(0.7)
Reclassification to profit and loss	20	(102.0)	(127.6)
Net movement on currency assets at fair value through other comprehensive income		**(382.6)**	(356.1)
In respect of gold at fair value through other comprehensive income:			
Net change in fair value during the year	15B	682.5	60.9
Reclassification to profit and loss		–	–
Net movement on gold at fair value through other comprehensive income		**682.5**	60.9
Items that will not be reclassified to profit and loss			
Re-measurement of defined benefit obligations	15C	**277.2**	128.7
Total comprehensive income		**918.1**	1,070.9

Statement of cash flows

For the financial year ended 31 March

SDR millions	Note	**2022**	2021
Cash flow from / (used in) operating activities			
Interest income received		262.3	336.5
Interest expenses paid		(196.9)	(160.8)
Net fee income	22	5.9	6.7
Net gain on foreign exchange transactions	23	17.4	13.5
Administrative expense	24	(289.3)	(288.8)
Adjustments for non-cash flow items			
Net income on financial assets and liabilities at fair value through profit and loss	19	542.5	1,310.4
Net change in expected credit loss impairment provision	18	(1.2)	0.8
Net foreign exchange translation gain / (loss)	23	(6.1)	14.0
Lease interest expense	17	(0.1)	(0.1)
Change in accruals		(69.4)	(95.5)
Change in operating assets and liabilities			
Currency deposits		4,231.5	39,033.7
Currency banking assets		19,239.1	(31,916.5)
Gold deposits		9.9	3,627.8
Gold banking assets		2,692.0	(10,167.4)
Change in cash collateral balance on derivatives transactions		(4.2)	(3.0)
Accounts receivable and other assets		(1.4)	(0.5)
Accounts payable and other liabilities		94.1	41.5
Net derivative financial instruments		665.6	(4,941.9)
Net cash flow from / (used in) operating activities		**27,191.7**	(3,189.6)
Cash flow from / (used in) investment activities			
Change in currency investment assets		(165.5)	88.6
Change in securities sold under repurchase agreements in investment portfolios		–	(148.8)
Capital expenditure on land, buildings and equipment	6	(29.2)	(26.5)
Net cash flow from / (used in) investment activities		**(194.7)**	(86.7)

SDR millions	Note	**2022**	2021
Cash flow from / (used in) financing activities			
Issue of shares		–	112.3
Dividends paid	25	(294.1)	–
Repayment of principal on lease liabilities		(3.0)	(2.8)
Net cash flow from / (used in) financing activities		**(297.1)**	109.5
Total net cash flow		**26,699.9**	(3,166.8)
Net effect of exchange rate changes on cash and cash equivalents		(786.9)	(1,168.8)
Net movement in cash and cash equivalents		27,486.8	(1,998.0)
Net change in cash and cash equivalents		**26,699.9**	(3,166.8)
Cash and cash equivalents, beginning of year	1	**50,854.6**	54,021.4
Cash and cash equivalents, end of year	1	**77,554.5**	50,854.6

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 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**
Payment of 2020/21 dividend		–	–	–	(294.1)	–	–	–	(294.1)
Allocation of 2020/21 profit		–	–	943.2	(943.2)	–	–	–	–
Total comprehensive income	15	–	–	–	341.0	277.2	(382.6)	682.5	918.1
Balance as at 31 March 2022		**710.2**	**(1.7)**	**18,085.0**	**341.0**	**360.2**	**(166.4)**	**4,118.7**	**23,447.0**

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 unless otherwise stated.

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.

The BIS Innovation Hub is a department of the BIS that fosters international collaboration on innovative financial technology in the central banking community. As such, the assets and liabilities associated with the Innovation Hub are included in these financial statements. Cost-sharing arrangements have been established with the host central banks. The Bank's share of the costs of the Innovation Hub is included within 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, RMB 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 expected credit loss 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. A contractual cash flow characteristic does not affect the classification of the financial asset if it could have only a "de-minimis" effect on the contractual cash flows of the financial asset, or if it could have an effect that is more than de-minimis but the characteristic is not genuine because it relates to circumstances that are extremely rare, highly abnormal and very unlikely to occur.

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 profits 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 (currency banking portfolios) or FVOCI (currency 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 the USD exchange rate to 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 the USD exchange rate to 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 tax exemptions have been established by the government of the People's Republic of China with respect to Hong Kong SAR, and the governments of Mexico, Singapore, Sweden and the United Kingdom. Income and gains received by the Bank may be subject to tax imposed in other countries. Tax expense is recognised under "Net fee income".

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, 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 cash collateral received from counterparties in relation to derivatives transactions. Cash balances are analysed in the table below:

As at 31 March

SDR millions	**2022**	2021
Balance at central banks	76,039.6	50,151.0
Balance at commercial banks	134.6	48.7
Total cash and sight accounts	**76,174.2**	50,199.7
Notice accounts	1,380.3	654.9
Total cash and cash equivalents	**77,554.5**	50,854.6

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 2022

SDR millions	FVPL	FVOCI	**Total**
Securities purchased under resale agreements	**43,934.7**	**–**	**43,934.7**
Loans and advances	**56,442.5**	**–**	**56,442.5**
Government and other securities			
Sovereigns and central banks	75,929.3	14,589.5	90,518.8
Other	25,750.6	2,122.5	27,873.1
Total government and other securities	**101,679.9**	**16,712.0**	**118,391.9**
Total currency assets	**202,057.1**	**16,712.0**	**218,769.1**

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

Government and other securities classified as FVPL as at 31 March 2022 include SDR 732.1 million (2021: SDR 1,460.9 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. The amount of government and other securities which were 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) was SDR 112.7 million as at 31 March 2022 (2021: SDR 104.4 million).

The Bank gives or pledges as collateral some of its debt securities in certain derivative and repurchase agreement 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	**2022**	2021
Gold investment assets	4,622.3	3,939.6
Gold banking assets	35,033.9	37,726.1
Total gold and gold loan assets	**39,656.2**	41,665.7
Comprising:		
Gold bars	39,646.0	40,992.2
Sight accounts denominated in gold	10.2	194.1
Gold loans	–	479.4

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 16,173.9 million (358 tonnes) of gold (2021: SDR 18,873.2 million; 490 tonnes) that the Bank holds in connection with 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 are primarily 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. Also included under this line are two other types of contracts which are traded in smaller volumes by the BIS. First, equity futures, which are traded for the management of the BIS pension fund only. These are contractual agreements to receive or pay a net amount based on changes in equity index levels at a future date. Second, options on futures, which are contractual agreements that confer the right, but not the obligation, to buy or sell a futures contract at a predetermined price during a specified period of time. All types of futures contracts are settled daily with the exchange. Associated margin payments are settled by cash or marketable securities.

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.

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

	2022			2021		
SDR millions	Notional amounts	Fair values Assets	Fair values Liabilities	Notional amounts	Fair values Assets	Fair values Liabilities
Cross-currency swaps	1,697.9	52.5	(9.4)	2,766.2	75.1	(33.4)
Currency and gold forwards	6,210.7	17.7	(33.7)	10,013.7	66.9	(64.4)
Currency and gold options	3,633.5	20.4	(23.8)	1,388.1	0.2	(9.4)
Currency and gold swaps	280,680.4	7,174.1	(2,026.8)	288,514.4	7,002.8	(1,403.3)
Forward rate agreements	–	–	–	467.2	–	(0.5)
Futures contracts	2,179.9	1.6	(0.7)	2,171.0	1.0	(0.3)
Interest rate swaps	348,517.9	727.3	(1,148.9)	262,293.4	475.2	(694.9)
TBAs	235.6	0.5	(2.7)	578.7	0.6	(1.9)
Total derivative financial instruments	**643,155.9**	**7,994.1**	**(3,246.0)**	568,192.7	7,621.8	(2,208.1)

5. Accounts receivable and other assets

As at 31 March

SDR millions	**2022**	2021
Financial transactions awaiting settlement	3,416.4	4,596.5
Other assets	26.9	21.5
Total accounts receivable and other assets	**3,443.3**	4,618.0

"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							2022	2021
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**	**301.0**	**24.4**	**68.6**	**20.1**	**13.4**	**473.9**	451.7
Capital expenditure	–	–	–	–	29.2	–	29.2	26.5
Transfers	–	4.0	2.0	10.9	(17.0)	–	–	–
Change in right-of-use assets	–	–	–	–	–	0.6	0.6	0.2
Disposals and retirements	–	–	(2.7)	(5.0)	–	–	(7.7)	(4.6)
Balance at end of year	**46.4**	**305.0**	**23.7**	**74.6**	**32.3**	**14.0**	**496.0**	473.9
Accumulated depreciation and amortisation								
Balance at beginning of year	**–**	**209.1**	**16.6**	**44.5**	**–**	**5.3**	**275.5**	252.4
Depreciation and amortisation	–	10.8	1.8	10.7	–	3.0	26.3	27.7
Disposals and retirements	–	–	(2.7)	(5.0)	–	–	(7.7)	(4.6)
Balance at end of year	**–**	**219.9**	**15.7**	**50.2**	**–**	**8.3**	**294.1**	275.5
Net book value at end of year	**46.4**	**85.1**	**8.0**	**24.4**	**32.3**	**5.7**	**201.9**	198.4

Changes in right-of-use assets include new lease transactions, along 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 7.7 million has been removed from the historical cost and from accumulated depreciation for the year ended 31 March 2022 (2021: SDR 4.6 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 2022, the Bank had no CMTIs.

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 DCDs includes the fair value of the embedded foreign exchange option. These deposits all mature between April and July 2022 (2021: between April and June 2021).

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 2022 (including total future interest payments) is SDR 258,271.6 million (2021: SDR 255,066.9 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	**2022**	2021
Repayable at one to three days' notice		
Sight and notice deposit accounts	32,733.1	29,993.3
Medium-Term Instruments	41,193.7	19,346.8
Callable MTIs	–	718.5
Fixed Rate Investments at the BIS	107,371.8	115,441.7
	181,298.6	165,500.2
Other currency deposits		
Floating Rate Investments of the BIS	1,191.1	1,244.0
Fixed-term deposits	108,654.8	120,331.2
Dual-currency deposits	1,033.9	939.3
	110,879.8	122,514.5
Total currency deposits	**292,178.4**	288,014.7

8. Securities sold under repurchase agreements

The Bank has no securities sold under repurchase agreements in 2022 (2021: nil).

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	**2022**	2021
Post-employment benefit obligations		
Staff pensions	208.2	334.7
Directors' pensions	10.9	11.0
Medical benefits	476.1	536.0
Lease liabilities	6.1	8.3
Other liabilities	52.4	50.0
Total other liabilities	**753.7**	940.0

12. Post-employment benefit obligations

The Bank operates three post-employment arrangements:

- 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.
- An unfunded defined benefit arrangement for its Directors, whose entitlement is based on a minimum service period of 49 months.
- 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 2022/23, the Bank expects to make contributions of CHF 48.5 million (2021/22: CHF 49.4 million of actual contribution) to its post-employment benefit 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	**2022**	2021	**2022**	2021	**2022**	2021
Present value of obligations	(1,569.8)	(1,620.8)	(10.9)	(11.0)	(476.1)	(536.0)
Fair value of fund assets	1,361.6	1,286.1	–	–	–	–
Net liability at end of year	**(208.2)**	(334.7)	**(10.9)**	(11.0)	**(476.1)**	(536.0)

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	**2022**	2021	**2022**	2021	**2022**	2021
Present value of obligations at beginning of year	(1,620.8)	(1,586.6)	(11.0)	(10.8)	(536.0)	(493.7)
Employee contributions	(9.9)	(8.9)	–	–	–	–
Benefit payments	67.7	68.6	0.5	0.5	4.4	4.3
Service cost, including past service cost	(58.6)	(54.4)	(0.5)	(0.5)	(21.9)	(20.6)
Interest cost	(3.3)	(7.9)	–	(0.1)	(1.1)	(2.5)
Actuarial gain / (loss) arising from experience adjustments	(0.2)	2.7	–	–	(0.7)	(0.5)
Actuarial gain / (loss) arising from changes in demographic assumptions	–	30.2	–	0.1	–	7.4
Actuarial gain / (loss) arising from changes in financial assumptions	131.1	(84.9)	0.7	(0.4)	104.6	(37.1)
Foreign exchange differences	(75.8)	20.4	(0.6)	0.2	(25.4)	6.7
Present value of obligations at end of year	**(1,569.8)**	(1,620.8)	**(10.9)**	(11.0)	**(476.1)**	(536.0)

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	**2022**	2021	**2022**	2021	**2022**	2021
Weighted average duration	**16.1**	17.1	**13.3**	13.9	**23.9**	26.1

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	**2022**	2021	**2022**	2021	**2022**	2021
Service cost	(58.6)	(54.4)	(0.5)	(0.5)	(21.9)	(20.6)
Interest cost on net liability	(0.7)	(2.3)	–	(0.1)	(1.1)	(2.5)
Amounts recognised in operating expense	**(59.3)**	(56.7)	**(0.5)**	(0.6)	**(23.0)**	(23.1)

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	**2022**	2021	**2022**	2021	**2022**	2021
Return on plan assets in excess of opening discount rate	37.9	210.6	–	–	–	–
Actuarial gain / (loss) loss arising from experience adjustments	(0.2)	2.7	–	–	(0.7)	(0.5)
Actuarial gain / (loss) arising from changes in demographic assumptions	–	30.2	–	0.1	–	7.4
Actuarial gain / (loss) arising from changes in financial assumptions	131.1	(84.9)	0.7	(0.4)	104.6	(37.1)
Foreign exchange gain / (loss) on items in other comprehensive income	4.6	0.8	(0.2)	–	(0.6)	(0.3)
Amounts recognised in other comprehensive income	**173.4**	159.4	**0.5**	(0.3)	**103.3**	(30.5)

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	**2022**	2021
Fair value of fund assets at beginning of year	1,286.1	1,109.6
Employer contributions	33.2	33.6
Employee contributions	9.9	8.9
Benefit payments	(67.7)	(68.6)
Interest income on plan assets	2.6	5.6
Return on plan assets in excess of opening discount rate	37.9	210.6
Foreign exchange differences	59.6	(13.6)
Fair value of fund assets at end of year	**1,361.6**	1,286.1

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	**2022**			2021		
SDR millions	Quoted in active market	Unquoted	Total	Quoted in active market	Unquoted	Total
Cash (including margin accounts)	58.8	–	58.8	47.5	–	47.5
Debt securities	337.3	–	337.3	312.8	–	312.8
Fixed income funds	202.7	–	202.7	208.2	–	208.2
Equity funds	437.0	–	437.0	465.1	30.7	495.8
Real estate funds	–	171.2	171.2	–	151.0	151.0
Infrastructure funds	–	31.3	31.3	–	–	–
Commodity investments	110.9	–	110.9	–	74.5	74.5
Derivative financial instruments	(1.7)	14.1	12.4	0.6	(4.3)	(3.7)
Total	**1,145.0**	**216.6**	**1,361.6**	1,034.2	251.9	1,286.1

G. Principal actuarial assumptions used in these financial statements

As at 31 March	2022	2021
Applicable to staff pension arrangement		
Discount rate	1.20%	0.20%
Assumed average salary increase rate	2.20%	1.70%
Applicable to post-employment medical benefit arrangement		
Discount rate	1.25%	0.20%
Long-term medical cost inflation assumption	3.20%	3.00%
Applicable to Directors' pension arrangement		
Discount rate	1.20%	0.20%
Assumed Directors' pensionable remuneration increase rate	1.00%	0.50%
Applicable to staff and Directors' pension arrangements		
Assumed increase in pensions payable	1.00%	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 BVG2020 with generational projection CMI 2019 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 1.00% at 31 March 2022 (2021: 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*	2022	2021
Current life expectancy of members aged 65		
Male	21.7	21.7
Female	23.5	23.4
Life expectancy of members aged 65 projected forward in 10 years' time		
Male	22.5	22.4
Female	24.3	24.2

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	**2022**	2021
Discount rate		
Increase by 0.5%	(119.3)	(129.7)
Decrease by 0.5%	135.0	147.5
Rate of salary increase		
Increase by 0.5%	33.0	35.7
Decrease by 0.5%	(31.4)	(34.0)
Rate of pension payable increase		
Increase by 0.5%	98.9	107.0
Decrease by 0.5%	(89.5)	(97.2)
Life expectancy		
Increase by 1 year	53.4	60.0
Decrease by 1 year	(53.4)	(60.0)

As at 31 March	**Directors' pensions** Increase / (decrease) in defined benefit obligation	
SDR millions	**2022**	2021
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	0.5	0.6
Decrease by 1 year	(0.5)	(0.6)

As at 31 March	Post-employment medical benefits Increase / (decrease) in defined benefit obligation	
SDR millions	**2022**	2021
Discount rate		
Increase by 0.5%	(52.9)	(64.3)
Decrease by 0.5%	62.4	76.6
Medical cost inflation rate		
Increase by 1.0%	104.2	129.5
Decrease by 1.0%	(77.7)	(95.1)
Life expectancy		
Increase by 1 year	42.4	51.5
Decrease by 1 year	(40.0)	(47.7)

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	**2022**	2021
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	2,840.6	2,840.6
Paid-up capital (25%)	**710.2**	710.2

As at 31 March 2022 the number of member central banks was 63 (31 March 2021: 63). During the financial year ended 31 March 2021, the Bank issued 3,000 shares to the central bank of Vietnam.

The number of shares eligible for dividend is:

As at 31 March	**2022**	2021
Issued shares	568,125	568,125
Shares held in treasury	(1,000)	(1,000)
Outstanding shares eligible for dividend	**567,125**	567,125
Of which:		
Eligible for full dividend	567,125	564,125
New shares eligible for dividend pro rata from the value date of subscription	–	3,000

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 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**
Allocation of 2020/21 profit	–	47.1	300.0	596.1	943.2
Balance at 31 March 2022	**71.0**	**4,104.3**	**484.0**	**13,425.7**	**18,085.0**

At 31 March 2022, statutory reserves included share premiums of SDR 1,385.1 million (2021: SDR 1,385.1 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 2021/22 profit:

SDR millions	**2022**
Net profit	**341.0**
Proposed dividend:	
Proposed dividend	(156.0)
Profit available for allocation	**185.0**
Proposed transfers to reserves:	
General reserve fund	(9.3)
Free reserve fund	(175.7)
Balance after allocation to reserves	**–**

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	**2022**	2021
Securities revaluation account	(166.4)	216.2
Gold revaluation account	4,118.7	3,436.2
Re-measurement of defined benefit obligations	360.2	83.0
Total other equity accounts	**4,312.5**	3,735.4

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	**2022**	2021
Fair value of assets	16,712.0	15,790.5
Historical cost	16,881.5	15,576.2
Securities revaluation account (excluding ECL)	**(169.5)**	214.3
Of which:		
Gross gains	49.6	237.1
Gross losses	(219.1)	(22.8)
ECL impairment provision	**3.1**	1.9
Securities revaluation account	**(166.4)**	216.2

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	**2022**	2021
Balance at beginning of year	3,436.2	3,375.3
Gold price movement	682.5	60.9
Balance at end of year	**4,118.7**	3,436.2

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	**2022**	2021
Balance at beginning of year	83.0	(45.7)
Staff pensions	173.4	159.4
Directors' pensions	0.5	(0.3)
Post-employment medical benefits	103.3	(30.5)
Net movement on the re-measurement of defined benefit obligations	**277.2**	128.7
Balance at end of year	**360.2**	83.0

16. Interest income

For the financial year ended 31 March

SDR millions	**2022**	2021
Assets classified as amortised cost		
Cash and cash equivalents	1.2	0.7
Gold loan and sight accounts denominated in gold	–	0.9
	1.2	1.6
Financial assets classified as FVOCI		
Government and other securities	172.6	198.1
	172.6	198.1
Interest income on liabilities classified as amortised cost	**49.0**	55.2
Total interest income	**222.8**	254.9

Interest expense includes "negative" interest income on assets of SDR 209.4 million (2021: SDR 160.4 million).

17. Interest expense

For the financial year ended 31 March

SDR millions	**2022**	2021
Liabilities classified as amortised cost		
Currency deposits: sight and notice deposit accounts	(17.2)	(13.7)
Gold deposits	–	–
Securities sold under repurchase agreements	–	–
Interest on lease liabilities	(0.1)	(0.1)
	(17.3)	(13.8)
Interest expense on assets classified as amortised cost or FVOCI	**(209.4)**	(160.4)
Total interest expense	**(226.7)**	(174.2)

Interest income includes “negative” interest expense on liabilities classified as amortised cost of SDR 49.0 million (2021: SDR 55.2 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, loss given default and exposure at default for individual exposures. No significant changes in estimation techniques were made during the reporting period.

Estimating ECL involves judgement. 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 2022, unchanged from 31 March 2021.

For the financial year ended 31 March

SDR millions	**2022**	2021
Financial assets classified as amortised cost	–	–
Financial assets classified as FVOCI	(1.2)	0.8
Loan commitments	–	–
Net change in ECL impairment provision	**(1.2)**	0.8

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

For the financial year ended 31 March

SDR millions	**2022**	2021
Financial assets		
Securities purchased under resale agreements	(95.5)	(127.6)
Loans and advances	(79.8)	204.3
Government and other securities	(618.3)	514.8
	(793.6)	591.5
Financial liabilities		
Currency deposits	493.5	(658.2)
	493.5	(658.2)
Derivative financial instruments	**842.6**	1,377.1
Net income on financial assets and liabilities at FVPL	**542.5**	1,310.4

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	**2022**	2021
Financial assets		
Interest	185.9	636.5
Realised and unrealised valuation movements	(979.5)	(45.1)
	(793.6)	591.4
Financial liabilities		
Interest	(747.6)	(1,176.9)
Realised and unrealised valuation movements	1,241.1	518.7
	493.5	(658.2)
Derivative financial instruments		
Interest	1,217.1	1,479.6
Realised and unrealised valuation movements	(374.5)	(102.4)
	842.6	1,377.2
Net income on financial assets and liabilities at FVPL	**542.5**	1,310.4

20. Net gain on sales of currency assets at FVOCI

For the financial year ended 31 March

SDR millions	**2022**	2021
Disposal proceeds	4,682.1	5,704.5
Amortised cost	(4,580.1)	(5,576.9)
Net gain on sales of currency assets at FVOCI	**102.0**	127.6
Of which:		
Gross realised gains	106.8	163.3
Gross realised losses	(4.8)	(35.7)

21. Net gain on sales of gold investment assets

The Bank did not sell any own gold during the financial years ended 31 March 2022 and 31 March 2021.

22. Net fee income

For the financial year ended 31 March

SDR millions	**2022**	2021
Third-party asset management net fee income	17.9	16.9
Other income	2.7	5.5
Withholding taxes	(5.1)	(5.3)
Other fees and expenses	(9.6)	(10.4)
Net fee income	**5.9**	6.7

23. Net foreign exchange income

For the financial year ended 31 March

SDR millions	**2022**	2021
Net gain on foreign exchange transactions	17.4	13.5
Net foreign exchange translation gain / (loss)	(6.1)	14.0
Net foreign exchange income	**11.3**	27.5

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	**2022**	2021
Board of Directors		
Directors' fees	2.1	2.1
Pensions to former Directors	0.7	0.7
Travel and other costs	0.1	–
	2.9	2.8
Management and staff		
Remuneration	143.1	154.1
Pensions	74.2	71.6
Other personnel-related expense	53.9	60.1
	271.2	285.8
Office and other expense	**87.0**	72.1
BIS administrative expense	**361.1**	360.7
Direct contributions to hosted international organisations	15.5	15.2
Total administrative expense in CHF millions	**376.6**	375.9
Total administrative expense in SDR millions	**289.3**	288.8

The average number of full-time equivalent senior officials and officials employed on behalf of the Bank during the financial year ended 31 March 2022 was 613 (2021: 612). In addition to the above regular BIS staff, the Bank accommodates up to 14 graduates a year and supports secondments from other organisations. The Bank also employs a small number of cleaners (currently four). 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	2022	2021
Net profit for the financial year (SDR millions)	341.0	1,237.3
Weighted average number of shares eligible for dividend	567,125.0	565,522.3
Dividend per share (SDR per share)	275.0	520.0
Total dividend (SDR millions)	**156.0**	294.1

The Bank's dividend policy requires that the dividend be set at a sustainable level which should vary over time in a predictable fashion. The policy also requires that the dividend reflects the Bank's capital needs and its prevailing financial circumstances, with a payout ratio of between 20% and 50% in most years. The Special Dividend Reserve Fund could also be drawn on to help smooth the flow of dividends to shareholders if the pay-out ratio were to be above 50%.

In line with the Bank's dividend policy, it is proposed to declare a normal dividend for 2021/22 of 275 SDR per share, 10 SDR per share higher than the normal dividend for the previous year. The proposed dividend for 2022 represents a payout ratio of 46% of net profit (2021: 24%).

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	
	2022	2021	**2022**	2021
USD	0.724	0.705	0.707	0.710
EUR	0.802	0.828	0.822	0.828
JPY	0.0059	0.0064	0.0063	0.0067
GBP	0.950	0.973	0.966	0.928
RMB	0.114	0.108	0.110	0.105
CHF	0.784	0.749	0.770	0.769
Gold (per ounce)	1,404.4	1,196.8	1,286.7	1,294.3

27. Off-balance sheet items

The following items are not included in the Bank's balance sheet:

As at 31 March

SDR millions	**2022**	2021
Gold bars held under earmark arrangements	17,079.7	15,015.1
Nominal value of securities:		
Securities held under safe custody arrangements	2,443.6	2,065.3
Net asset value of portfolio management mandates:		
BISIPs	21,362.4	18,091.1
Dedicated mandates	4,023.0	4,238.5

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). As at 31 March 2022, gold bars held under earmark amounted to 378 tonnes of gold (2021: 390 tonnes).

Portfolio management mandates include BISIPs 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. As at 31 March 2022, there were no outstanding commitments that were collateralised (2021: nil), and SDR 217.1 million of uncollateralised commitments (2021: SDR 211.6 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 80 staff members (2021: 75) 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. It also includes instruments valued using unadjusted quoted prices in less active markets.

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. It also includes instruments valued using unadjusted quoted prices in illiquid markets.

As at 31 March 2022

SDR millions	Level 1	Level 2	Level 3	**Total**
Financial assets classified as FVPL				
Securities purchased under resale agreements	–	43,934.7	–	43,934.7
Loans and advances	–	56,442.5	–	56,442.5
Government and other securities	71,619.8	24,946.7	5,113.4	101,679.9
Derivative financial instruments	3.0	7,991.1	–	7,994.1
Financial assets classified as FVOCI				
Government and other securities	15,622.6	909.7	179.7	16,712.0
Total financial assets accounted for at fair value	**87,245.4**	**134,224.7**	**5,293.1**	**226,763.2**
Financial liabilities classified as FVPL				
Currency deposits	–	(259,445.3)	–	(259,445.3)
Derivative financial instruments	(4.3)	(3,241.7)	–	(3,246.0)
Total financial liabilities accounted for at fair value	**(4.3)**	**(262,687.0)**	**–**	**(262,691.3)**

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				
Securities purchased under resale agreements	–	–	–	–
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)
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)

A. Transfers between levels in the fair value hierarchy

Of the debt securities categorised as level 1 as at 31 March 2022, SDR 756.2 million related to assets that were categorised as level 2 as at 31 March 2021. Of the debt securities categorised as level 2 as at 31 March 2022, SDR 1,219.9 million related to assets that were categorised as level 1 as at 31 March 2021. Of the debt securities categorised as level 3 as at 31 March 2022, SDR 80.2 million related to assets that were categorised as level 2 as at 31 March 2021.

The transfer of financial assets between levels 1, 2 and 3 reflected specific market conditions existing at the reporting dates that affected the observability of the inputs as defined above. No financial liabilities or other types of financial asset 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 2022, 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 2022, the Bank categorised SDR 5,293.1 million of securities as level 3 in the fair value hierarchy. Of these securities, SDR 4,689.2 million were valued using prices, and SDR 603.9 million were valued by a discounted cash flow model based on spreads to a yield curve.

As at 31 March 2022

SDR millions	FVPL	FVOCI	**Total**
Balance at the beginning of the year	**549.8**	**144.1**	**693.9**
Purchases	5,073.2	37.1	5,110.3
Sales	(508.0)	(85.4)	(593.4)
Transfers in	–	80.2	80.2
Transfers out	–	–	–
Valuation impact recognised in net profit	(1.6)	–	(1.6)
Valuation impact recognised in other comprehensive income	–	3.7	3.7
Balance at end of the year	**5,113.4**	**179.7**	**5,293.1**
Unrealised gains / (losses) relating to assets still held as at the reporting date	(12.9)	1.9	(11.0)

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 2022

	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	4,689.2	Price	Bond prices	98.4	101.8	99.9	Points	A 1 point change in the prices would increase / decrease the fair value by SDR 46.9 million
Debt securities	603.9	Discounted cash flow based on spread to yield curve	Bond spreads	(20.5)	50.0	4.2	Basis-points	A 100 basis point change in the spreads would increase / decrease the fair value by SDR 8.9 million
Total level 3 assets at fair value	**5,293.1**							

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 2022 and 31 March 2021. If the valuation of these instruments were categorised using the fair value hierarchy, the valuation of "gold loans" 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. Level 1 observable prices may not always 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 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	**2022**	2021
Securities purchased under resale agreements	(0.2)	(0.4)
Loans and advances	(1.5)	(1.2)
Government and other securities	(12.5)	(12.1)
Currency deposits	12.1	9.7
Derivative financial instruments	(2.3)	1.0

30. Interest rate benchmark reform

A fundamental global reform of major interest rate benchmarks is underway, including the discontinuation of London Interbank Offered Rates (Libor). The non-US dollar Libor fixings and the one-week and two-month US dollar Libor fixings ceased to be published at the end of 2021. The remaining US dollar Libor fixings are planned to be discontinued at the end of June 2023.

Starting in 2019, the Bank began implementing changes to its IT systems, front and back office processes, risk management processes and valuation models. It also began to develop new customer products, and to deal with the legal aspects of the Libor reform. This included the introduction of derivative products and customer products linked to the risk-free rates that replace Libor as market benchmarks. Libor-referencing legacy derivatives and MTIs that were affected by the December 2021 index cessations were either terminated or updated to reference the new risk-free rates ahead of the discontinuation.

As a result of these efforts, as at 31 March 2022, the Bank's residual Libor exposure was limited to US dollars only. The exposure was concentrated in derivatives (interest rate swaps and cross-currency swaps), MTIs held by central bank customers as well as floating rate notes.

In line with the strategy pursued for other currencies, the Bank aims to either terminate or update the references to US dollar Libor (including via the corresponding contractual fallbacks where required). Therefore, operational risk is the main risk faced by the Bank as a result of the US dollar Libor discontinuation, including risk associated with the implementation and operation of the products referencing the new risk-free rates. In addition, the transition from Libor to the new risk-free rates in various products will create temporary basis risks, which are partly mitigated by the nature of contractual fallbacks. The interest rate benchmark reform does not require material changes to the Bank’s risk management strategy.

The interest rate benchmark reform had no material impact on these financial statements, and the impact is not expected to be significant in future periods. The following table summarises exposures to US dollar Libor as at 31 March 2022:

As at 31 March 2022

SDR millions	**Fair value**
Government and other securities	140.6
Currency deposits	(6,110.6)
Derivative financial instruments	(77.8)

The exposure disclosed is for positions with contractual maturities after 31 March 2022. The notional amount of the derivative financial instruments reported in the table above is SDR 24,301 million.

31. Geographical analysis

A. Total liabilities

As at 31 March

SDR millions	**2022**	2021
Africa and Europe	76,406.4	106,379.6
Asia-Pacific	212,702.7	189,040.5
Americas	29,611.3	31,335.7
International organisations	5,451.7	6,575.6
Balance at end of year	**324,172.1**	333,331.4

B. Off-balance sheet items

As at 31 March

SDR millions	**2022**			2021		
	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	7,043.9	–	4,654.0	6,463.0	–	3,993.3
Asia-Pacific	4,831.0	2,443.6	11,825.4	4,116.8	2,065.3	11,011.4
Americas	5,204.8	–	8,906.0	4,435.3	–	7,324.9
Total	**17,079.7**	**2,443.6**	**25,385.4**	15,015.1	2,065.3	22,329.6

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

SDR millions	**2022**	2021
Asia-Pacific	217.1	211.6
Total	**217.1**	211.6

32. 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

CHF millions	**2022**	2021
Salaries, allowances and medical cover	8.9	8.6
Post-employment benefits	2.8	2.8
Total compensation	**11.7**	11.4
SDR equivalent in millions	9.0	8.8

The Bank offers personal deposit accounts for staff members and Directors. The accounts bear (or charge) interest at a rate equivalent to the rate applied by the Swiss National Bank on its sight deposits. 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	**2022**	2021
Balance at beginning of year	12.2	14.9
Deposits taken and other inflows	0.7	2.0
Withdrawals and other outflows	(7.8)	(4.7)
Balance at end of year	**5.1**	12.2
SDR equivalent in millions	4.0	9.1
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 (or charge) interest at a rate equivalent to the rate applied by the Swiss National Bank on its sight deposits plus 1%. The total balance of blocked accounts at 31 March 2022 was SDR 4.5 million (2021: SDR 4.8 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 2022 (for the financial year 2020/21) amounted to SDR 181.6 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 that 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	2022			2021		
	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	77,554.5	**71,910.3**	92.7	50,854.6	49,160.9	96.7
Securities purchased under resale agreements	43,934.7	**3,425.2**	7.8	78,572.0	2,515.2	3.2
Loans and advances	56,442.5	**6,176.3**	10.9	45,544.4	8,030.3	17.6
Government and other securities	118,391.9	**4,308.8**	3.6	127,079.5	3,810.4	3.0
Gold and gold loans	39,656.2	**39,646.0**	100.0	41,665.7	41,471.6	99.5
Derivative financial instruments	7,994.1	**41.8**	0.5	7,621.8	51.8	0.7
Other assets	26.9	**1.4**	5.2	21.5	1.1	5.1
Liabilities						
Currency deposits	(292,178.4)	**(140,078.0)**	47.9	(288,014.7)	(135,952.7)	47.2
Gold deposits	(18,858.8)	**(13,472.2)**	71.4	(18,848.9)	(11,480.6)	60.9
Derivative financial instruments	(3,246.0)	**(246.1)**	7.6	(2,208.1)	(41.6)	1.9

Main profit and loss items arising from transactions with related party customers

For the financial year ended 31 March	2022			2021		
	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	222.8	**41.8**	18.8	254.9	49.6	19.5
Interest expense	(226.7)	**(202.2)**	89.2	(174.2)	(151.6)	87.0
Net change in ECL impairment provision	(1.2)	**–**	–	0.8	–	–
Net income on financial assets and liabilities at FVPL						
Financial assets	(793.6)	**41.0**	–	591.5	27.7	4.7
Financial liabilities	493.5	**477.9**	96.8	(658.2)	(244.6)	37.2
Derivative financial instruments	842.6	**45.2**	5.4	1,377.1	(1.2)	–

33. Contingent liabilities

In the opinion of the Bank’s Management, there were no significant contingent liabilities at 31 March 2022 (31 March 2021: 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	**2022**	2021
Share capital	710.2	710.2
Statutory reserves per balance sheet	18,085.0	17,141.8
Less: shares held in treasury	(1.7)	(1.7)
Share capital and reserves	**18,793.5**	17,850.2
Securities revaluation account	(166.4)	216.2
Gold revaluation account	4,118.7	3,436.2
Re-measurement of defined benefit obligations	360.2	83.0
Other equity accounts	**4,312.5**	3,735.4
Expected loss	(66.8)	(151.8)
Intangible assets	(34.7)	(29.4)
Prudential adjustments	**(101.5)**	(181.1)
Profit and loss account	**341.0**	1,237.3
Dividend adjustment	**(156.0)**	(294.1)
Common Equity Tier 1 capital	**23,189.5**	22,347.8

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	2022		2021	
SDR millions	Allocation	Utilisation	Allocation	Utilisation
Insolvency and transfer risk	8,500.0	6,245.7	7,700.0	6,050.4
FX settlement risk	400.0	400.0	400.0	400.0
Credit risk	8,900.0	6,645.7	8,100.0	6,450.4
Market risk	5,300.0	4,485.4	5,300.0	3,987.6
Operational risk	850.0	850.0	1,100.0	1,100.0
Minimum capital cushion	3,478.4	3,478.4	3,352.2	3,352.2
Total economic capital (A)	**18,528.4**	**15,459.6**	17,852.2	14,890.2
Common Equity Tier 1 capital (B)		**23,189.5**		22,347.8
Available economic capital (B) – (A)		**7,729.9**		7,457.6

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 also includes the fair value of assets of the pension fund, 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

SDR millions	2022	2021
Common Equity Tier 1 capital (A)	**23,189.5**	22,347.8
Total balance sheet assets	**347,619.1**	356,154.4
Derivatives	5,760.7	7,346.0
Securities purchased under resale agreements	10.3	25.4
Committed and uncommitted facilities	4,626.8	4,979.1
Pension fund assets	1,361.6	1,286.1
Exposure adjustments	**11,759.4**	13,636.6
Total BIS exposure (B)	**359,378.5**	369,791.0
BIS leverage ratio (A) / (B)	**6.5%**	6.0%

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

		2022			2021		
SDR millions	Approach used	Amount of exposure	Risk-weighted assets (A)	Minimum capital requirement (B)	Amount of exposure	Risk-weighted assets (A)	Minimum capital requirement (B)
Credit risk							
Exposure to sovereigns, banks and corporates	Advanced internal ratings-based approach, where (B) is derived as (A) x 8%	254,771.4	32,756.6	2,620.5	227,562.6	30,400.6	2,432.0
Securitisation exposures and other assets	Standardised approach, where (B) is derived as (A) x 8%	268.9	706.9	56.6	413.1	1,423.0	113.8
Market risk							
Exposure to foreign exchange risk and gold price risk	Internal models approach, where (A) is derived as (B) / 8%	–	34,167.7	2,733.4	–	37,453.7	2,996.3
Operational risk							
	Advanced measurement approach, where (A) is derived as (B) / 8%	–	7,288.4	583.1	–	8,957.5	716.6
Total			**74,919.5**	5,993.6		78,234.7	6,258.8

The Common Equity Tier 1 capital ratio is set out in the following table:

As at 31 March

SDR millions	**2022**	2021
Total Common Equity Tier 1 capital (A)	**23,189.5**	22,347.8
Total risk-weighted assets (B)	**74,919.5**	78,234.7
Common Equity Tier 1 capital ratio (A) / (B)	**31.0%**	28.6%

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 function. 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 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 Risk Management function, jointly with the Legal Service, provides guidance on and monitors compliance risk related to the BIS banking services.

The Ethics and Conduct unit educates staff on conduct risk matters, investigates breaches and assists Management in ensuring that all activities of the BIS and its staff are conducted in conformity with ethics and conduct rules. The Chief Ethics and Conduct Officer reports to the General Manager and the Deputy General Manager, and also has a right of direct access to the Audit Committee, which is an advisory committee to the Board of Directors.

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. To ensure independence, the Head of Internal Audit reports functionally to the Chair of the Audit Committee of the Board and administratively to the General Manager.

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 almost 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 credit assessments for material counterparties following a well-defined internal rating process. As part of this process, counterparty financial statements and market information are analysed. The main assessment criterion in these reviews is the ability of the counterparties to meet interest and principal repayment obligations in a timely manner. 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. On a general basis, ratings and related limits are reviewed at least annually for material counterparties with internal ratings (expressed as equivalent external ratings) of BBB+ or below. Certain non-material counterparties with small individual limits have internal ratings set equal to the lowest equivalent external rating, and are monitored systematically on the basis of market information. Ratings for these counterparties are updated daily and limits are updated at least semiannually.

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 2022, excluding local currency cash at central banks, 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 2021: 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 2022

SDR millions	Sovereign and central banks	Public sector	Banks	Corporate	Securitisation	Total
On-balance sheet exposure						
Cash and cash equivalents	76,039.6	1,366.2	148.7	–	–	77,554.5
Gold and gold loans	–	–	10.2	–	–	10.2
Securities purchased under resale agreements	9,199.5	–	25,882.4	8,852.8	–	43,934.7
Loans and advances	9,067.3	76.1	47,299.1	–	–	56,442.5
Government and other securities	90,518.8	11,243.3	8,330.7	8,261.0	38.1	118,391.9
Derivative financial instruments	248.7	28.4	7,716.7	0.3	–	7,994.1
Accounts receivable and other assets	7.1	5.0	181.7	8.7	–	202.5
Total on-balance sheet exposure	**185,081.0**	**12,719.0**	**89,569.5**	**17,122.8**	**38.1**	**304,530.4**
Commitments						
Undrawn unsecured facilities	217.1	–	–	–	–	217.1
Total commitments	**217.1**	**–**	**–**	**–**	**–**	**217.1**
Total exposure	**185,298.1**	**12,719.0**	**89,569.5**	**17,122.8**	**38.1**	**304,747.5**

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

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 2022

SDR millions	Africa and Europe	Asia-Pacific	Americas	International institutions	Total
On-balance sheet exposure					
Cash and cash equivalents	54,435.4	21,733.7	19.2	1,366.2	77,554.5
Gold and gold loans	10.2	–	–	–	10.2
Securities purchased under resale agreements	29,658.8	10,850.7	3,425.2	–	43,934.7
Loans and advances	42,634.7	9,642.1	4,129.5	36.2	56,442.5
Government and other securities	31,146.1	59,404.1	25,610.6	2,231.1	118,391.9
Derivative financial instruments	5,712.6	833.1	1,434.0	14.4	7,994.1
Accounts receivable and other assets	188.9	3.9	9.6	0.1	202.5
Total on-balance sheet exposure	**163,786.7**	**102,467.6**	**34,628.1**	**3,648.0**	**304,530.4**
Commitments					
Undrawn unsecured facilities	–	217.1	–	–	217.1
Total commitments	**–**	**217.1**	**–**	**–**	**217.1**
Total exposure	**163,786.7**	**102,684.7**	**34,628.1**	**3,648.0**	**304,747.5**

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

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 2022

SDR millions	AAA	AA	A	BBB	BB and below	Unrated	Total
On-balance sheet exposure							
Cash and cash equivalents	49,478.3	10,322.1	17,627.3	123.5	3.3	–	77,554.5
Gold and gold loans	–	–	10.2	–	–	–	10.2
Securities purchased under resale agreements	–	12,277.9	12,834.1	18,822.7	–	–	43,934.7
Loans and advances	–	8,458.5	44,687.8	405.2	2,891.0	–	56,442.5
Government and other securities	3,042.3	41,256.9	62,922.0	11,148.7	22.0	–	118,391.9
Derivative financial instruments	0.1	793.9	6,678.4	469.3	40.1	12.3	7,994.1
Accounts receivable and other assets	–	1.9	179.5	4.4	1.6	15.1	202.5
Total on-balance sheet exposure	**52,520.7**	**73,111.2**	**144,939.3**	**30,973.8**	**2,958.0**	**27.4**	**304,530.4**
Commitments							
Undrawn unsecured facilities	–	–	–	217.1	–	–	217.1
Total commitments	**–**	**–**	**–**	**217.1**	**–**	**–**	**217.1**
Total exposure	**52,520.7**	**73,111.2**	**144,939.3**	**31,190.9**	**2,958.0**	**27.4**	**304,747.5**

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

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 use 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 2022, the Bank had lent SDR 1.9 million of the collateral it held (31 March 2021: nil).

The fair value of collateral held which the Bank had the right to sell or use was:

As at 31 March

SDR millions	**2022**	2021
Collateral held in respect of:		
Derivatives	6,536.8	5,245.7
Securities purchased under resale agreements	34,255.0	56,072.8
Total	**40,791.8**	61,318.5

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 BISIPs.

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 2022		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	43,934.7	(6,701.2)	–	(37,223.2)	10.3	–	10.3
Advances	2,891.0	–	–	(2,891.0)	–	–	–
Derivative financial instruments	7,994.1	–	(2,173.0)	(5,507.3)	313.8	188.0	125.8
Financial liabilities							
Securities sold under repurchase agreements	–	–	–	–	–	–	–
Derivative financial instruments	(3,246.0)	–	2,173.0	6.8	–	–	–

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 2022, the Bank did not pledge any of the debt securities as collateral under its obligations related to derivative financial instrument contracts (31 March 2021: SDR 13.0 million). The counterparties have an obligation to return any securities that have been pledged as collateral.

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	**2022**				2021			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Economic capital utilisation for credit risk	7,008.5	7,569.3	6,396.9	**6,645.7**	6,622.3	7,298.5	5,912.5	6,450.4

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 2022 includes SDR 66.4 million for interest rate contracts (2021: SDR 50.7 million) and SDR 893.1 million for FX and gold contracts (2021: SDR 1,194.4 million). In line with the Basel Framework, the minimum capital requirement is determined as 8% of risk-weighted assets.

As at 31 March 2022

Internal rating grades expressed as equivalent external rating grades *SDR millions / percentages*	Amount of exposure *SDR millions*	Exposure-weighted PD *%*	Exposure-weighted average LGD *%*	Exposure-weighted average risk weight *%*	Risk-weighted assets *SDR millions*
AAA	52,221.7	0.01	2.9	0.6	301.0
AA	63,980.8	0.02	37.3	10.6	6,795.2
A	126,252.4	0.06	47.9	16.1	20,378.1
BBB	12,279.9	0.23	55.9	41.4	5,085.9
BB and below	36.6	20.68	56.1	136.9	50.1
Total	**254,771.4**				**32,610.4**

As at 31 March 2021

Internal rating grades expressed as equivalent external rating grades *SDR millions / percentages*	Amount of exposure *SDR millions*	Exposure-weighted PD *%*	Exposure-weighted average LGD *%*	Exposure-weighted average risk weight *%*	Risk-weighted assets *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

At 31 March 2022, the minimum capital requirement for credit risk related to exposures to sovereigns, banks and corporates was SDR 2,608.8 million (2021: SDR 2,393.9 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 2022	305,031.0	50,259.6	**254,771.4**
As at 31 March 2021	312,777.4	85,214.8	227,562.6

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 Basel 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 2022

SDR millions	Amount of exposures	Risk weight	Risk-weighted assets
Securities backed by mortgages	38.1	1250%	476.1
Total	**38.1**		**476.1**

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

At 31 March 2022, the minimum capital requirement for securitisation exposures was SDR 38.1 million (2021: SDR 96.1 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 2022, the Bank's net gold investment assets were 102 tonnes with a value of SDR 4,622.3 million, approximately 20% of shareholders' equity (31 March 2021: 102 tonnes, SDR 3,939.6 million, representing 17% 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 by reference to benchmarks comprised of fixed-income securities.

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 2022

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	2.9	(15.6)	(32.6)	(28.1)	(29.2)	(59.8)	(3.4)	(165.9)
Japanese yen	14.3	0.6	–	(0.1)	0.4	(0.2)	–	14.8
Pound sterling	(2.6)	(2.6)	(8.4)	(7.2)	(6.7)	(2.1)	(3.4)	(33.0)
Renminbi	(0.1)	(4.5)	(7.4)	(8.9)	(13.9)	(7.5)	(23.8)	(66.2)
Swiss franc	10.4	(0.1)	(0.1)	(0.1)	(0.9)	(1.2)	(1.0)	7.0
US dollar	1.7	(13.1)	(25.5)	(29.8)	(34.5)	(31.7)	(133.7)	(266.7)
Other currencies	1.0	0.1	(1.0)	(0.5)	(0.4)	(1.4)	(0.7)	(2.9)
Total	**27.6**	**(35.3)**	**(75.1)**	**(74.7)**	**(85.2)**	**(104.1)**	**(166.0)**	**(512.8)**

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)

C. Foreign exchange risk

The Bank's functional currency, the SDR, is a composite currency comprising fixed amounts of USD, EUR, JPY, GBP and RMB. 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 shareholders' 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 2022

SDR millions	SDR	USD	EUR	GBP	JPY	RMB	CHF	Gold	Other currencies	Total
Assets										
Cash and cash equivalents	1,366.2	42.1	33,941.3	10.7	17,520.9	0.9	20,442.7	–	4,229.7	77,554.5
Securities purchased under resale agreements	–	3,425.2	20,250.0	9,408.8	10,850.7	–	–	–	–	43,934.7
Loans and advances	–	29,707.8	14,968.3	7,245.6	–	–	2,616.2	–	1,904.6	56,442.5
Government and other securities	–	26,736.8	31,863.8	3,454.1	43,828.4	2,001.4	218.3	–	10,289.1	118,391.9
Gold and gold loans	–	–	–	–	–	–	–	39,656.2	–	39,656.2
Derivative financial instruments	3,417.1	133,366.5	(44,360.1)	(5,591.8)	(73,964.9)	16,002.8	(15,546.5)	(2,979.8)	(2,349.2)	7,994.1
Accounts receivable and other assets	–	2,360.8	851.2	0.5	–	219.7	10.2	–	0.9	3,443.3
Land, buildings and equipment	180.8	7.2	0.4	0.4	–	–	13.1	–	–	201.9
Total assets	**4,964.1**	**195,646.4**	**57,514.9**	**14,528.3**	**(1,764.9)**	**18,224.8**	**7,754.0**	**36,676.4**	**14,075.1**	**347,619.1**
Liabilities										
Currency deposits	(2,749.7)	(237,281.8)	(19,955.8)	(12,612.4)	(119.7)	(14,431.8)	(140.0)	–	(4,887.2)	(292,178.4)
Gold deposits	–	–	–	–	–	–	–	(18,858.8)	–	(18,858.8)
Derivative financial instruments	903.1	48,636.6	(25,640.8)	98.8	2,915.9	(1,937.3)	(6,762.8)	(13,195.8)	(8,263.7)	(3,246.0)
Accounts payable	–	(434.9)	(7,129.8)	(741.4)	–	(43.1)	–	–	(786.0)	(9,135.2)
Other liabilities	–	(3.5)	(1.6)	(0.7)	–	–	(742.3)	–	(5.6)	(753.7)
Total liabilities	**(1,846.6)**	**(189,083.6)**	**(52,728.0)**	**(13,255.7)**	**2,796.2**	**(16,412.2)**	**(7,645.1)**	**(32,054.6)**	**(13,942.5)**	**(324,172.1)**
Net currency and gold position	**3,117.5**	**6,562.8**	**4,786.9**	**1,272.6**	**1,031.3**	**1,812.6**	**108.9**	**4,621.8**	**132.6**	**23,447.0**
Adjustment for gold	–	–	–	–	–	–	–	(4,621.8)	–	(4,621.8)
Net currency position	**3,117.5**	**6,562.8**	**4,786.9**	**1,272.6**	**1,031.3**	**1,812.6**	**108.9**	**–**	**132.6**	**18,825.2**
SDR-neutral position	(3,117.5)	(6,621.3)	(4,871.2)	(1,282.6)	(1,111.5)	(1,821.1)	–	–	–	(18,825.2)
Net currency exposure on SDR-neutral basis	**–**	**(58.5)**	**(84.3)**	**(10.0)**	**(80.2)**	**(8.5)**	**108.9**	**–**	**132.6**	**–**

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)
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	–

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	**2022**				2021			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Economic capital utilisation for market risk	4,312.9	4,718.1	3,978.8	**4,485.4**	4,357.6	4,722.8	3,853.4	3,987.6

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	**2022**				2021			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Gold price risk	3,068.3	3,541.0	2,898.4	**3,333.9**	3,088.8	3,484.9	2,779.7	2,870.2
Interest rate risk	2,404.8	2,663.1	2,148.5	**2,444.8**	2,586.5	2,693.0	2,194.9	2,194.9
Foreign exchange risk	886.1	994.9	834.8	**932.1**	905.5	1,037.6	765.4	832.9
Diversification effects	(2,046.3)	(2,290.1)	(1,902.7)	**(2,225.4)**	(2,223.2)	(2,478.2)	(1,910.3)	(1,910.3)
Total				**4,485.4**				3,987.6

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, the number of backtesting outliers observed remained within the range where no add-on is required. 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	**2022**			2021		
SDR millions	VaR	Risk-weighted assets (A)	Minimum capital requirement (B)	VaR	Risk-weighted assets (A)	Minimum capital requirement (B)
Market risk, where (A) is derived as (B) / 8%	584.7	34,167.7	**2,733.4**	538.0	37,453.7	2,996.3

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.

A. 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	**2022**				2021			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Economic capital utilisation for operational risk	974.5	1,100.0	850.0	**850.0**	1,100.0	1,100.0	1,100.0	1,100.0

B. 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	2022			2021		
	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%	583.1	7,288.4	**583.1**	716.6	8,957.5	716.6

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 96% (2021: 92%) of its total liabilities. At 31 March 2022, currency and gold deposits originated from 178 depositors (2021: 174 depositors). Within these deposits, there are significant individual customer concentrations, with five customers each contributing in excess of 5% of the total on a settlement date basis (2021: three 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 2022

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	77,554.5	–	–	–	–	–	–	–	77,554.5
Securities purchased under resale agreements	29,857.0	7,279.9	95.5	–	–	–	–	–	37,232.4
Loans and advances	15,034.4	21,800.7	10,816.7	8,871.9	–	–	–	–	56,523.7
Government and other securities	11,718.7	29,058.9	21,360.1	23,145.6	10,888.2	16,999.1	4,590.6	924.7	118,685.9
Gold and gold loans	39,656.2	–	–	–	–	–	–	–	39,656.2
Total assets	**173,820.8**	**58,139.5**	**32,272.3**	**32,017.5**	**10,888.2**	**16,999.1**	**4,590.6**	**924.7**	**329,652.7**
Liabilities									
Currency deposits									
Deposit instruments repayable at 1–3 days' notice	(43,557.4)	(36,242.4)	(33,974.4)	(42,273.6)	(15,684.3)	(9,797.8)	–	–	(181,529.9)
Other currency deposits	(51,413.7)	(24,356.9)	(20,903.8)	(12,800.4)	–	–	–	–	(109,474.8)
Gold deposits	(18,858.8)	–	–	–	–	–	–	–	(18,858.8)
Total liabilities	**(113,829.9)**	**(60,599.3)**	**(54,878.2)**	**(55,074.0)**	**(15,684.3)**	**(9,797.8)**	**–**	**–**	**(309,863.5)**
Derivatives									
Net settled cash flows									
Options and interest rate contracts	(25.1)	(59.4)	(109.5)	(144.4)	(160.7)	73.1	30.7	–	(395.3)
Gross settled cash flows									
Interest rate contracts									
Inflows	29.6	43.5	118.3	392.1	989.2	181.9	–	–	1,754.6
Outflows	(32.2)	(37.6)	(109.8)	(379.1)	(957.1)	(182.2)	–	–	(1,698.0)
Subtotal	(2.6)	5.9	8.5	13.0	32.1	(0.3)	–	–	56.6
Currency and gold contracts									
Inflows	140,252.1	80,604.9	38,682.2	28,771.7	–	–	–	–	288,310.9
Outflows	(138,841.5)	(78,543.0)	(37,462.9)	(27,808.6)	–	–	–	–	(282,656.0)
Subtotal	1,410.6	2,061.9	1,219.3	963.1	–	–	–	–	5,654.9
Total derivatives	**1,382.9**	**2,008.4**	**1,118.3**	**831.7**	**(128.6)**	**72.8**	**30.7**	**–**	**5,316.2**
Total future undiscounted cash flows	**61,373.8**	**(451.4)**	**(21,487.6)**	**(22,224.8)**	**(4,924.7)**	**7,274.1**	**4,621.3**	**924.7**	**25,105.4**

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

The following table shows the contractual expiry date of the credit commitments as at the balance sheet date:

Contractual expiry date

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 2022	–	–	–	217.1	–	–	–	–	**217.1**
As at 31 March 2021	–	–	–	211.6	–	–	–	–	211.6

The following table shows the contractual undiscounted cash flows under lease contracts at the balance sheet date:

Contractual expiry date

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 2022	(0.4)	(0.8)	(0.3)	(1.6)	(2.0)	(0.6)	(0.5)	–	**(6.2)**
As at 31 March 2021	(0.3)	(0.7)	(0.3)	(1.5)	(2.8)	(2.2)	(0.6)	–	(8.4)

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	**2022**				2021			
Percentages	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Liquidity ratio	139.9%	170.8%	121.5%	**147.3%**	131.3%	154.8%	118.8%	129.0%

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 2022, the estimated outflow of currency deposits in response to the stress scenario amounted to 44.2% (2021: 49.0%) 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	**2022**	2021
Liquidity available		
Estimated cash inflows	138.3	130.9
Estimated liquidity from sales of highly liquid securities	41.6	43.2
Estimated sale and repurchase agreements	11.8	9.6
Total liquidity available (A)	**191.7**	183.7
Liquidity required		
Estimated withdrawal of currency deposits	126.6	138.3
Estimated drawings of facilities	2.6	2.7
Estimated other outflows	0.9	1.3
Total liquidity required (B)	**130.1**	142.4
Liquidity ratio (A) / (B)	**147.3%**	129.0%

For reference, the Bank also calculates an LCR following the principles set out in the guidance issued by the BCBS. At 31 March 2022, the Bank's LCR stood at 210.0% (2021: 184.8%).

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 2022, 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 2022 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 Code of Ethics for Professional Accountants (including International Independence Standards) of the International Ethics Standards Board for 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 SA

Christophe Kratzer	Natalia Dmitrieva
Audit expert	Audit expert

Geneva, 18 May 2022

Promoting global monetary and financial stability

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