BIS

Annual Report

2018/19

Promoting global monetary
and financial stability

Foreword by the BIS General Manager

It is my great pleasure to present the *Annual Report 2018/19* of the Bank for International Settlements. The report looks back at a productive year in which we strove to provide excellent service to the central bank community and also launched a new strategy to shape the Bank for the future.

Ten years after the peak of the Great Financial Crisis, we are now in a good position to reassess how we are fulfilling our mission in the light of new challenges.

At the BIS, we provide support and value added to the central bank community, promote monetary and financial stability, and foster international cooperation in those areas, while continuing to ensure the Bank's financial strength and independence.

In the current context, our challenges have grown. The post-crisis environment poses policy issues, as central banks rethink their monetary policy strategies. Technological innovation is affecting the financial sector and the economy as the digital revolution gathers pace. And the ever changing macroeconomic and financial environment, increased competition and evolving stakeholder needs have given rise to business pressures.

In that light, to prepare ourselves for the new opportunities ahead we launched our new medium-term strategy, Innovation BIS 2025. Developed with strong support and input from our stakeholders, it means the following changes in our three main areas of activity:

- Our *economic analysis and research* will broaden in focus to include new themes and respond to the current and foreseeable challenges facing the central bank community and the financial services industry. We will focus work on the implications of technological innovation for central banks, the financial system and the economy at large; monetary policy frameworks in advanced and emerging market economies; and the evaluation of post-crisis financial reforms.
- As a *global forum for cooperation* among central banks and other financial authorities, we will continue our strong support for the Basel Process and develop new channels of collaboration and knowledge-sharing.
- Our role as the "bank for central banks" requires our *banking business* to continue to excel, calling for investment in next-generation technologies. We aim to expand our range of financial products and services, extend our global operational presence with the establishment of a new dealing room in the Americas, and upgrade our IT environment to more effectively support our activities.

Innovation BIS 2025 was launched in the context of a prolific year. Our research output in 2018/19 garnered much attention.

Our banking activities also had a solid year. Thanks to increased competitiveness, average customer deposits over the 2018/19 financial year increased above the Bank's SDR 200 billion target level, the highest value since 2009. Total assets rose to SDR 291.1 billion by end-March 2019, up 13% from the previous year's level, with net profits at SDR 461 million. Leveraging the regional market expertise of the Representative Office for Asia and the Pacific, new money market and tradable instruments in offshore renminbi (CNH) have been added to the product range, and business in onshore renminbi (CNY) products expanded.

During the year we also celebrated two 20th anniversaries, of the Asian Office and of the Financial Stability Institute. Special events marked both occasions – a reaffirmation of our commitment to our global stakeholders.

As this Annual Report shows, our activities in the past year already reflected the spirit of continuous innovation that we are cultivating – paving the way for the new strategy.

Agustín Carstens

Contents

Annual Report

1

Innovation BIS2025

Shaping the Bank for tomorrow

In the year under review, we launched Innovation BIS 2025, our new medium-term strategy. It comprises a set of initiatives that positions the Bank for the challenges ahead. It aims to build a stronger BIS that embraces continuous innovation on both the analytical and business fronts, at the same time as it considers best practices at the organisation-wide level.

Innovation BIS 2025 is motivated by our constant commitment to excel in our work. It is designed to position the Bank to tackle new business challenges in the post-Great Financial Crisis financial environment and respond to the evolving needs of central banks and other financial authorities amid rapid economic and technological changes.

Innovation BIS 2025 consists of a set of initiatives that is anchored by our mission: to provide support and value added to central banks in their pursuit of monetary and financial stability, to foster international cooperation in those areas, and to act as a bank for central banks.

It is a strategic effort that encompasses not only the substance of our activities but also the way in which we accomplish them.

Our ultimate aim is to build a forward-thinking and dynamic BIS that uses its resources effectively to continuously deliver added value to our stakeholders.

Some of our work in the past year already pointed in the direction of Innovation BIS 2025. As the new initiatives bear fruit in the coming years, we will share the outcomes in future Annual Reports.

International cooperation

In our role as a forum for international cooperation and knowledge-sharing, we will develop on multiple fronts.

- Maintain a strong engagement with BIS committees and hosted associations in the context of **the Basel Process** (see page 48)
- Broaden our **economic analysis and research** to include new themes (eg the economic, financial and policy implications of technological innovation; monetary policy frameworks in advanced and emerging market economies) (see page 24)
- Engage with central banks in the innovation space through a **new multidisciplinary hub** to explore the practical implications of new technological trends
- Develop capabilities in **advanced analytics** (eg big data) and new online tools for external collaboration, including for the compilation and dissemination of international statistics (see page 21)
- Establish new channels of **knowledge-sharing** among central banks in **cyber security** practices (see page 51)
- Enhance our Financial Stability Institute's work in **capacity-building and knowledge-sharing**, especially in technology-related topics and financial crisis management, to help supervisory authorities address ongoing and new supervisory challenges (see page 37)
- Deepen our **global engagement**, including through our two representative offices in the Asia-Pacific region and in the Americas (see page 41)

Banking services

In relation to our financial operations and the banking services we offer to central banks, we have plans in four key areas (see page 29).

- Improve the **risk-return profile** of our investments, both in terms of funds from our customers and our own capital
- Expand our **range of products and services**, including establishing a new dealing room in our Representative Office for the Americas
- Implement an updated **financial risk management framework** to allow us to maintain our prudent investment approach while diversifying the way we use capital in an efficient manner
- Review and upgrade the **technology environment** supporting our banking services

Organisation-wide initiatives

To enable all front-line business units to work effectively and in line with the strategy's ultimate goals, we will have major undertakings in three areas.

- Invest in next-generation technology to build a resilient and future-ready **digital workplace** for the organisation as a whole
- Align our **people strategy** and human resources management policies and practices with the evolving needs of the organisation
- Improve the way we work, emphasising **dynamism**, **efficiency** and **individual accountability**

Annual Report

Annual Report

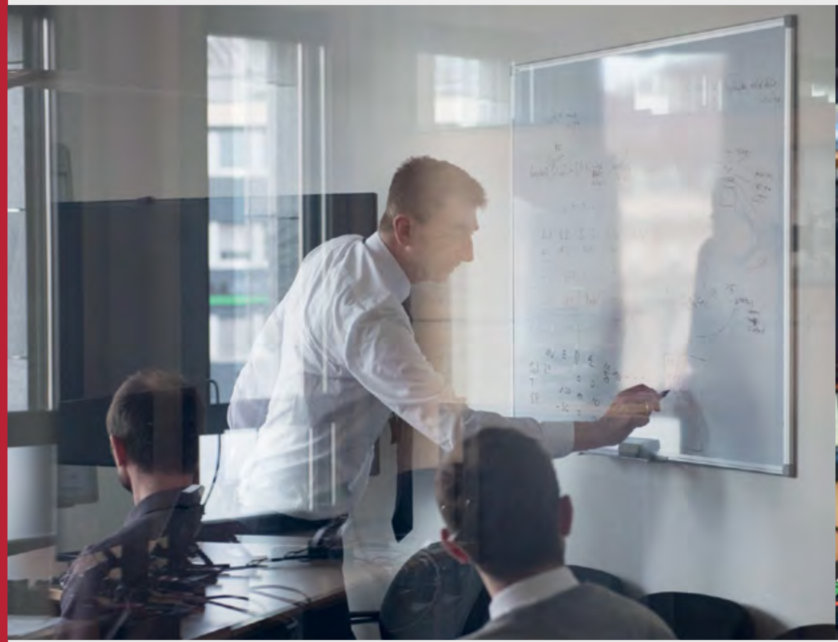
2

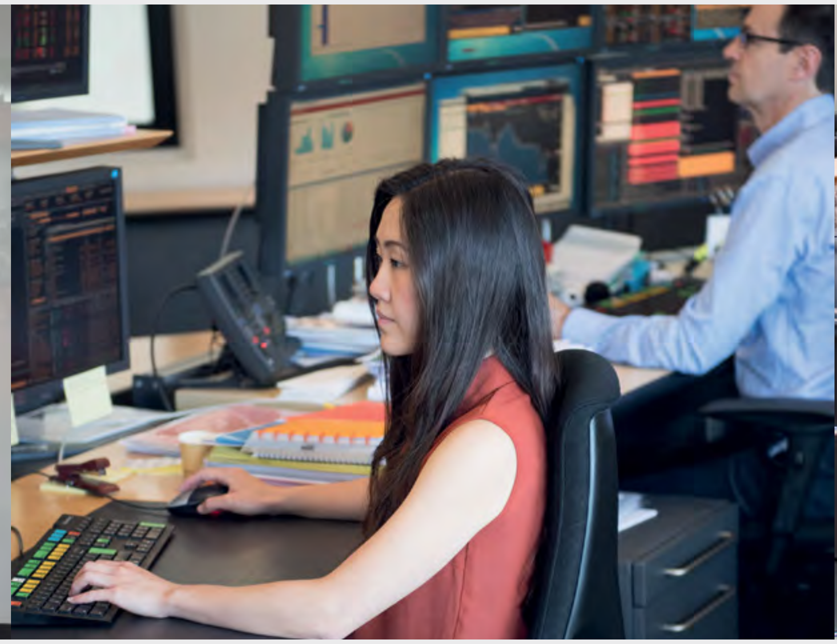
The global bank for central banks

As a hub for central banks and other financial regulatory and supervisory authorities across the globe, the BIS is in a unique position to respond to their needs. It does this through its work in three main areas: economic research and analysis, banking services and international cooperation.

The Bank for International Settlements (BIS) is an international organisation headquartered in Basel, Switzerland. It is owned by 60 member central banks and monetary authorities from around the world.

By conducting research on policy issues confronting authorities, acting as a prime counterparty for central banks in their financial transactions and facilitating dialogue and collaboration, the BIS contributes to monetary and financial stability, which is essential for sustained economic growth.





Conducting economic research and analysis

Through its research, analysis and statistics, the BIS supports central bank cooperation and provides an independent voice to sound policymaking.

BIS research emphasises the links between the real economy and the financial system, global rather than country-specific aspects, and longer-term drivers of activity. It seeks to strike a balance between responsiveness to short-term, conjunctural issues and proactivity in exploring themes of strategic importance for central banks and regulatory and prudential authorities.

Its research networks for Asia and the Pacific and for the Americas place the Bank in a unique position to undertake research and collaborate with central banks and supervisory authorities from these regions.

The BIS also compiles and disseminates international statistics on financial institutions and markets.

Providing banking services to central banks and international organisations

As an institution owned and governed by central banks, the BIS is well placed to understand the needs of reserve managers – their primary focus on safety and liquidity, as well as the evolving need to diversify their exposures and obtain a competitive return.

To meet those needs, the Bank provides credit, gold and foreign exchange intermediation, and asset management services, while administering its own capital.

The financial services of the BIS are exclusively offered to central banks, monetary authorities and international organisations, mainly to assist them in the management of their foreign exchange assets. An integrated risk management function ensures that financial and operational risks are properly measured and controlled.

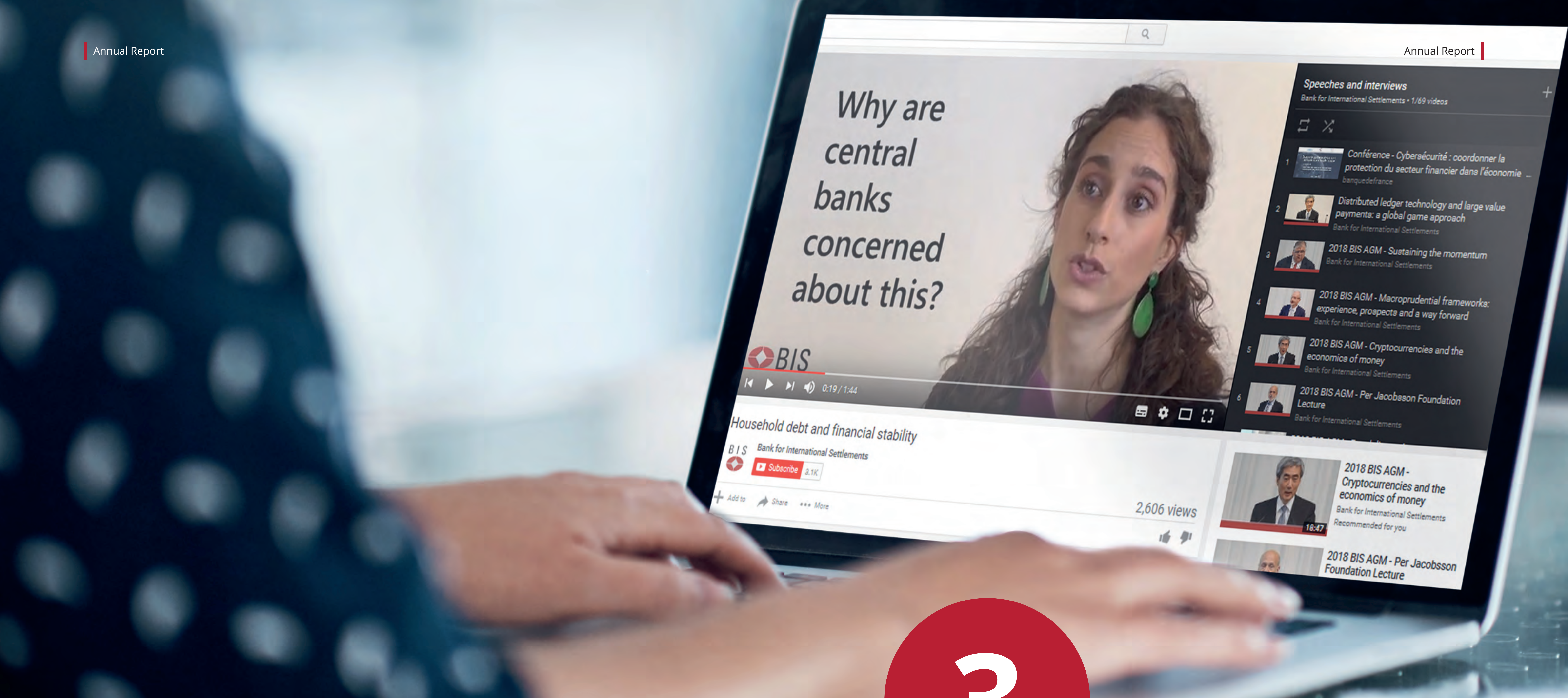
Promoting international cooperation among monetary and financial authorities

Through the Basel Process, the BIS acts as a forum for discussion and a platform for cooperation among policymakers, to foster monetary and financial stability.

In this role, the Bank contributes its expertise in economic research and analysis, its practical experience in banking and its knowledge in regulatory and supervisory issues, adding value to the discussions and cooperative efforts.

In turn, this close interaction with policymakers informs the work of the BIS and allows it to respond to their needs more effectively, in a mutually enriching dialogue that enhances the collaborative process.

Annual Report



3

Promoting global monetary and financial stability

The BIS provides a platform for central bankers and other authorities to serve them in their pursuit of monetary and financial stability. It does so by helping to build a greater collective understanding of the world economy, fostering international cooperation and supporting policymaking.

Economic research, analysis and statistics

Research at the BIS provides value added to central banks in their pursuit of monetary and financial stability and responds to the current and foreseeable challenges facing the central bank community. To do this effectively, the BIS draws strength from its unique position at the intersection of research and policy in those areas, leveraging its close contacts with the central banking and financial supervisory community, and its production of banking and financial statistics.

The BIS's economic research and analysis are conducted within its Monetary and Economic Department (MED). MED also compiles and disseminates statistics on international banking, financial instruments and markets.

Through these efforts, MED supports the cooperative activities of the Bank (see page 47) and helps it meet the policy and analytical needs of monetary and supervisory authorities as well as other international organisations.

Research and analysis are the basis of the background notes that the BIS produces for regular meetings of central bank officials (see pages 48–50), of its support for the Basel-based groups (see pages 52–3) and of the Bank's own publications. In its research, the BIS seeks a balance between responding to short-term issues and proactively exploring themes that are of more strategic and lasting importance.

BIS research emphasises the interaction between the real and financial sides of the economy, global rather than country-specific issues, and the longer-term implications of economic developments. It is currently guided by five broad themes: the impact of technological innovation, macro-financial stability frameworks, monetary policy frameworks, lessons from crisis management, and monitoring and spillovers.

The BIS international banking and financial statistics, compiled in cooperation with central banks and other national authorities as well as international organisations, 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 online among member central banks.

Highlights in 2018/19

Over the past year, important work has tackled current major challenges facing the central bank community: monetary policy in the post-crisis environment, the impact of post-crisis regulatory reforms and the broader implications of technological innovation. Policy collaboration has further intensified.

Monetary policy challenges

A decade after the financial crisis, central banks are treading a narrow and winding path bringing policy back towards more normal settings and managing challenges of the new environment. But they lack a time-tested compass to properly navigate this new terrain, with stubbornly low inflation and accumulating side effects from an extended period of low interest rates.

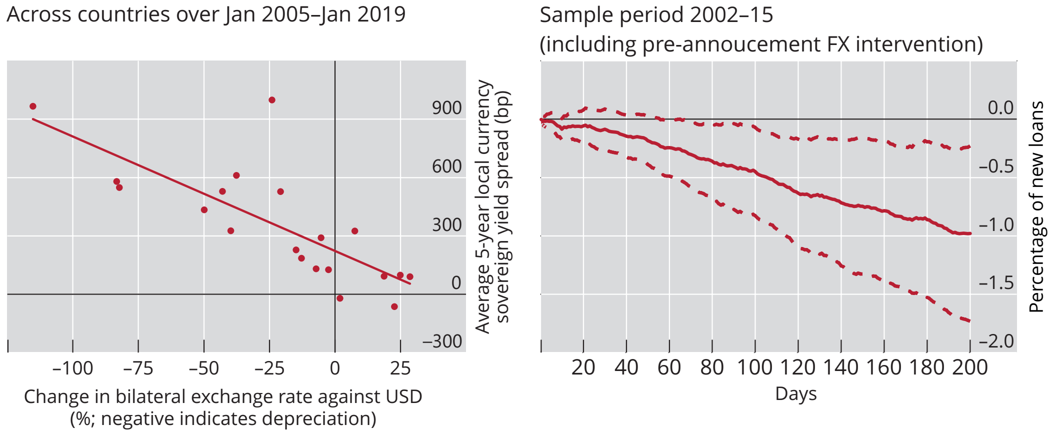
Improving understanding of macro-financial linkages

Improving the understanding of how the monetary system, the financial system and the macroeconomy interact was one important focus. Research highlighted the importance of setting out a new framework to connect a range of issues normally addressed separately in economics. These include monetary, exchange rate, macroprudential, fiscal and structural policies. One finding supporting such macro-financial stability frameworks is that business cycles tend to become more fragile as financial cycles peak. Even if financial booms do not end in crises, they tend to herald recessions.

Monetary policy frameworks in advanced and emerging market economies

In the wake of the financial crisis, both advanced and emerging market economies (EMEs) need to rethink their monetary policy strategies and tactics. Although EMEs have improved their resilience by strengthening policy frameworks and macroeconomic and financial fundamentals, the experiences of the post-crisis years have shown that they remain more exposed to the vicissitudes of global financial conditions. EMEs face more serious challenges related to exchange rates and capital flows than their advanced economy counterparts. EMEs continue to rely heavily on external financing, by borrowing in foreign currency and in local currency from foreign lenders, so that exchange rate depreciation tightens financial conditions, and vice versa (see graph below). As a consequence, exchange rate swings push inflation and financial conditions in opposite directions, creating difficult trade-offs for central banks. Activating additional monetary policy instruments, such as foreign exchange intervention and other balance sheet policies to deal with swings in investor sentiment,

Changes in the bilateral exchange rate and financial conditions and the impact of FX intervention on new corporate loans



Sources: *BIS Working Papers*, no 774 and no 775.

can help ameliorate trade-offs by dampening the build-up of financial imbalances (see graph on p 18). This raises the broader question of how to calibrate and sequence the use of multiple policy instruments, including macroprudential tools, in the pursuit of price and financial stability. A new research network in the Representative Office for the Americas is analysing monetary policy frameworks and communication, and a similar network is being set up in the Asian Office (see pages 41–5).

Navigating uncharted waters

The post-crisis environment includes persistent low inflation and low unemployment as well as low market interest rates in advanced economies – developments economists are still struggling to fully understand. Low inflation may reflect, among other structural factors such as globalisation and technology, demographics. Lower rates, which could weaken central banks' ability to stimulate growth in case of another downturn, may be reflecting secular trends in productivity or a savings glut at the global level, but they could also be reflecting monetary policies.

Monetary policy lessons

Central bank balance sheet policies and communication are important tools added to the toolkit during the last decade, but have shown limitations. Changes in the size and composition of balance sheets affect financial markets in new and at times unexpected ways. Forward guidance may fail to stimulate economic growth unless central banks can promise additional monetary stimulus down the road. Low policy rates may have had unintended consequences ranging from low bank net interest margins to the rise in "zombie" firms.

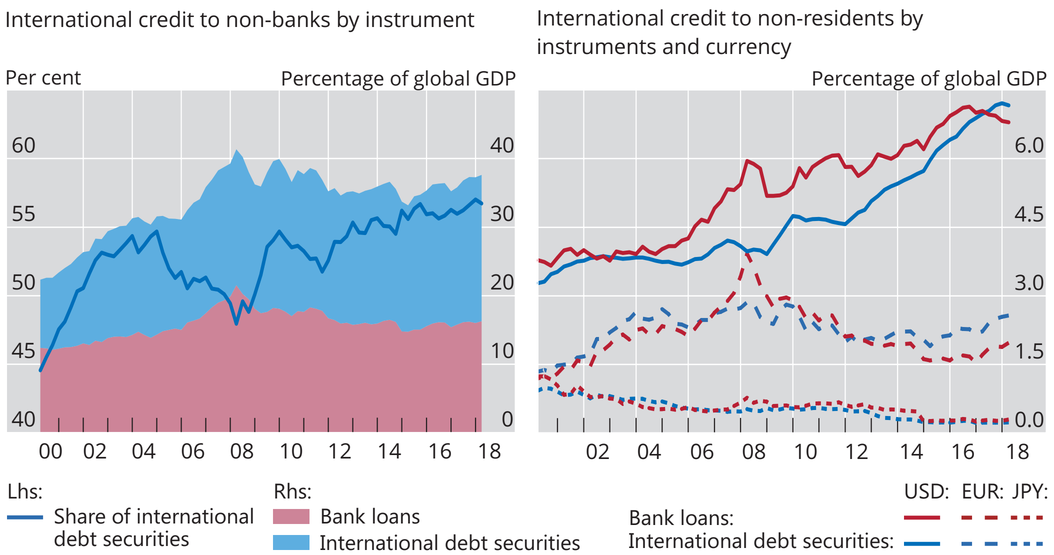
Globalisation and spillovers

Tighter trade and investment linkages have changed the macroeconomy and the transmission of monetary policy. At the Federal Reserve Bank of Kansas City's 42nd Economic Policy Symposium in Jackson Hole, BIS General Manager Agustín Carstens argued that financial and real globalisation are joined at the hip. Measures to reverse globalisation and retreat into protectionism put at risk the economic gains from closer trade and investment links, and the financial interdependencies underpinning those links, he said.

Monetary policy changes and financial developments can also be transmitted across borders in surprising ways. The BIS's in-house data are an invaluable resource in analysing these spillovers, in particular using the international banking statistics (IBS) and the global liquidity indicators (GLIs). For example, one research project uses the IBS to examine the impact of monetary policy on cross-border bank lending. It finds that monetary easing in the lender or the borrower country reduces cross-border lending. But

The share of debt securities and the US dollar in international credit has risen

International credit to the non-bank sector, amounts outstanding



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.
Source: *BIS Quarterly Review*, September 2018.

when US rates fall, cross-border bank lending in US dollars tends to increase outside the United States.

The IBS consolidated statistics also provide insights by measuring banks' exposures to country risk, although they have their limits. More generally, the data shed light on global lending patterns (see graph above).

Assessing post-crisis reforms

The finalisation of the market risk framework by the Basel Committee on Banking Supervision (BCBS) in January 2019 marked the final stage of post-crisis reforms. With the focus now shifting to implementation, evaluations of the reforms' impact are gaining momentum.

Studies and surveys

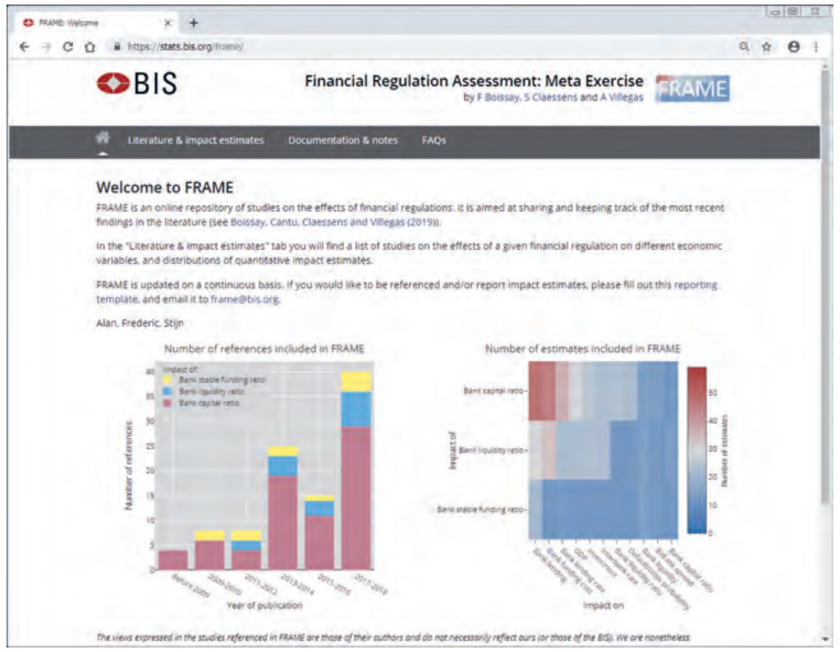
A BCBS study found that the probable systemic impact of a global systemically important bank's (G-SIB's) failure has declined since the introduction of the G-SIB framework. Related BIS research documents that G-SIBs and central counterparties interact in increasingly concentrated derivatives markets. This puts a premium on holistically assessing the effects of reforms.

To group this and other research together, the BIS launched an online interactive repository of studies on the effects of financial regulations, called FRAME (see screenshot on page 22). This repository tracks, standardises and organises the latest findings in the literature. It relates differences in these findings to variations

Innovation BIS 2025 for research and analysis

As a part of the Bank's new medium-term strategy, Innovation BIS 2025, a new unit has been created within MED dedicated to Innovation and the Digital Economy. The unit will undertake policy-oriented analysis and research focusing on the impact of technological innovation, such as the rise of fintech companies, the venture of big tech firms into finance and the rise of distributed ledger technology on financial intermediation. It will also explore how machine learning and big data can be put to use for practical economic purposes, such as "nowcasting" of inflation and other economic activity, and for monitoring of financial vulnerabilities. This unit will also work on the development of public goals in the technology space for a better financial system.

The BIS has also started a strategic programme to expand its ability to manage and exploit increasing volumes and variety of data, given the availability of big data and advanced analytics technologies such as machine learning and artificial intelligence. The insights gleaned will help to inform our work on financial stability assessments and surveillance and support research on corporate and banking sector activity and vulnerabilities. At the same time, cutting-edge business intelligence and collaboration tools will transform the way the BIS disseminates its statistics.



in the underlying data and assumptions. Researchers can add their own findings to the database.

Expanded statistical initiatives

Much of the BIS's statistics work reflects and supports the regulatory reforms agreed in the aftermath of the crisis. In this endeavour the BIS cooperates closely with other international financial organisations as a member of the Inter-Agency Group on Economic and Financial Statistics (IAG),[1] which has been tasked with coordinating and monitoring the implementation of the recommendations of the Data Gaps Initiative (DGI) endorsed by the G20.[2] Together with other IAG members, the BIS also sponsors the Statistical Data and Metadata eXchange (SDMX) standard.

These international efforts have already greatly helped to fill known blind spots in data collection. For instance, the BIS now regularly collects a wide range of institution-level data to inform the work of central banks and supervisory authorities, including through its support of the Quantitative Impact Studies undertaken by Basel-based groups, principally the BCBS. It also hosts the International Data Hub, where balance sheet information about systemically important banks is stored and analysed on behalf of participating supervisory authorities.

Additional notable projects were launched in 2018/19 in the context of the DGI recommendations. One was the collection of new data on securities financing transactions, such as repurchase agreements and securities lending, which began in early 2019. This forms part of the Financial Stability Board's work to better monitor non-bank financial intermediation, with the BIS providing operational support for the collection and potential dissemination of the data. Another project was related to the preparation of the 12th Triennial Central Bank Survey of Foreign Exchange and Over-the-counter Derivatives Markets. The results of the survey will be published in September 2019 and will cover more than 3,000 dealers in 54 countries.

Lastly, efforts have been made to facilitate the policy use of these new statistics and tools. In 2018/19, Irving Fisher Committee (IFC) member central banks analysed the access to trade repository data, which are now collected in most relevant jurisdictions, and their policy use. They also reviewed the need for, and usefulness of, data on commercial property prices to support financial stability policies. The IFC has also set up a fintech working group to identify key data gaps, assess how to address them and share data collection experiences. Preliminary findings have identified some common challenges, including the lack of adequate statistical definitions. International coordination is key to develop them.

More about BIS statistics at www.bis.org/statistics.

1 The IAG comprises the BIS, the ECB, Eurostat, the International Monetary Fund, the Organisation for Economic Co-operation and Development, the United Nations and the World Bank Group.

2 For the second phase of the DGI, see Financial Stability Board and International Monetary Fund, *The financial crisis and information gaps – Second phase of the G-20 data gaps initiative (DGI-2): first progress report*, 2015.

The impact of technological innovation

The digital revolution has far-reaching implications. As technological innovation continued to transform the financial and monetary landscape in 2018/19, the BIS expanded its analysis of the digital economy. Research concentrated on understanding the effects of technological innovation on the financial system and the economy at large, focusing particularly on those aspects of key interest for central banks. This includes subjects such as the entry of large technology companies ("big tech") into the financial services arena, the economics of private digital tokens and the costs and benefits of central bank digital currencies (CBDCs).

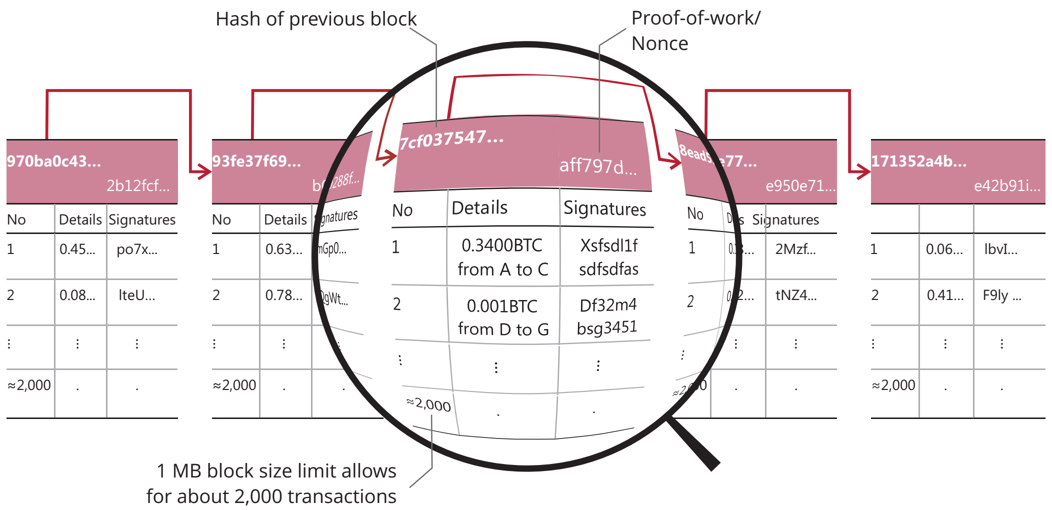
Big tech and fintech

The growth of big tech firms raises a host of questions around competition, financial inclusion, data protection and financial stability. Big tech firms are more active lenders in countries with less competitive banking sectors and less stringent regulation, even more so than the wider financial technology (fintech) sector.

Crypto-currencies

Research delved into the economics of cryptocurrencies based on distributed ledger technology (DLT), or blockchain (see graph below). It identified further shortcomings with current models, but also avenues for future examination. Today's cryptocurrencies are set to become even less liquid because of the high costs of verifying that payments are final. In fact, through the lens of global game theory, DLT may not be suitable for payments at all. As cryptocurrency prices fell in 2018, it also became clear that regulatory actions have a significant impact on valuations, transaction volumes and user bases.

Cryptographically chained, valid blocks of transactions form Bitcoin's blockchain



Source: *BIS Working Papers*, no 765.

Central bank digital currencies

New technology also has practical implications for central banks. A prominent example is the debate over whether they should issue their own digital currencies. Although most central banks are conducting research into CBDCs, only a handful intend to issue one in the near term. CBDCs would bring fundamental changes to both money and payments. Central banks are rightly proceeding with caution, as the General Manager laid out in a lecture.

Many of these aspects are also discussed in this year's Annual Economic Report.

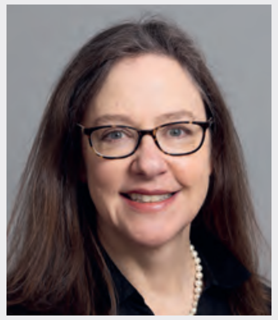
Policy collaboration

Collaboration with central bank and academic researchers around the world stimulates broad dialogue on key policy questions. During the past year, the BIS welcomed 50 academics and central bank researchers under its various visitor programmes to conduct collaborative research on policy-related issues of relevance to the BIS. The programmes range from visits of a few days or weeks to longer stays by resident scholars. These included the Alexandre Lamfalussy Senior Research Fellowships, which were awarded in 2018 to Catherine Schenk and Amit Seru. In addition, the BIS expanded its Fellowship Programme, which allows students in economics, finance or related fields to acquire practical experience in policy research and analysis in monetary and financial stability issues, with the unique perspective provided by an international institution like the BIS.

Conferences and workshops are organised frequently to bring together participants from policymaking, academia and business. The semiannual meetings of the BIS Research Network provide another opportunity to discuss current macroeconomic and financial topics.

An important part of the BIS's analysis and research activities is carried out at the two representative offices in Hong Kong SAR and Mexico City (see pages 41–5). Both

Lamfalussy Fellows 2018



Catherine Schenk, Professor of Economic and Social History, University of Oxford

Amit Seru, Steven and Roberta Denning Professor of Finance, Graduate School of Business, Stanford University

Research collaboration at the BIS

April 2018–March 2019

50
Visiting academic and central bank researchers

17 BIS Research Fellows

16 Central Bank Research Fellows

11 Technical Advisers

4 Graduates

2 Lamfalussy Fellows

165
Research seminars and meetings

38 internal speakers

129 external speakers

65
BIS Working Papers

47 internal authors

76 external authors

offices have active research programmes alongside secondment and exchange schemes to collaborate with member central banks in their respective regions. The representative offices also oversee conferences and collaborative research networks.

Regular reports of the research activities of the BIS Representative Office for Asia and the Pacific are presented to the Asian Consultative Council, currently chaired by Veerathai Santiprabhob, Governor of the Bank of Thailand. Research activities in the BIS Representative Office for the Americas are organised in cooperation with the Consultative Council for the Americas, chaired by Julio Velarde, Governor of the Central Reserve Bank of Peru.

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

BIS research is published mainly in *BIS Working Papers*, the *BIS Quarterly Review* and *BIS Papers*, as well as in the publications of hosted committees. It also informs the analysis of policy challenges reviewed in the Annual Economic Report. To gain further feedback and academic recognition, BIS economists present research at international conferences and publish in professional journals and other external publications.

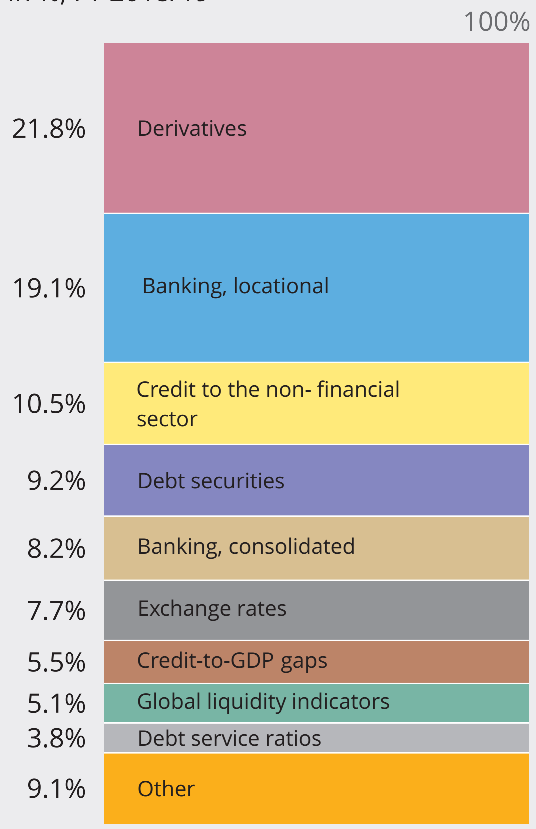
More about BIS research at www.bis.org/forum/research.htm.

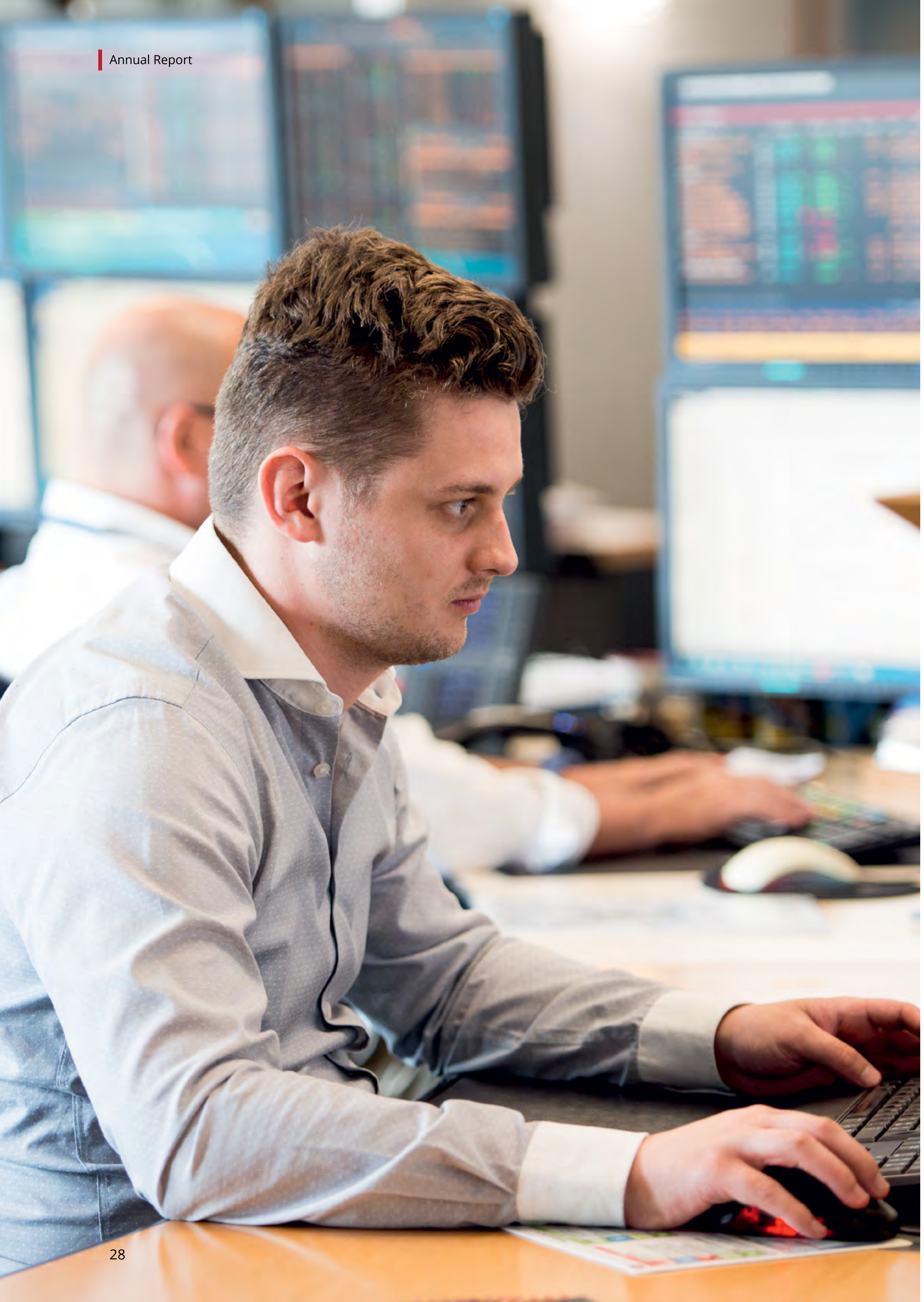
Interactive tools grow in popularity

The BIS has increasingly moved to publish its in-house data online in an interactive format, allowing users to download and analyse the data more easily. Dynamic graphs are published with regular statistical updates and in the Quarterly Review, inviting users to experiment with the data.

There are two main portals: the Statistics Explorer and the Statistics Warehouse. In 2018/19, use of external statistical data dissemination tools increased by around 80%, with users primarily interested in statistics on derivatives, banking (locational and consolidated statistics), credit to the non-financial sector and debt securities.

Statistics downloads by topic, in %, FY 2018/19





Banking activities

The BIS provides a full range of banking services to central banks and other official sector clients. Its banking activities include deposit-taking, mostly in the form of money market and tradable instruments, the provision of gold and foreign exchange services, and the off-balance sheet asset management of fixed income investment products. The Bank also manages its own capital, a large part of which is invested in sovereign debt denominated in the constituent currencies of the Special Drawing Right (SDR, a basket of currencies defined by the IMF), which serves as the Bank's unit of account. As of end of March 2019, total assets stood at SDR 291.1 billion, up 13% from the previous year, with net profits at SDR 461 million (see page 72).

BIS banking services are designed to meet the asset diversification demands of the Bank's global customer base and to take account of the sustained expansion of global foreign exchange reserves over recent years. To address these client needs, over the past few years the BIS has added new products, both on- and off-balance sheet and denominated in different currencies such as the onshore renminbi (CNY) and the Korean won (KRW). BIS banking activities continuously evolve to keep pace with the central bank community's response to the changing macroeconomic, political and technological environment.

The banking business is supported by a strong capital position and a conservative risk management framework (see page 34). The Bank is committed to ensuring that its activities and those of its staff are conducted in accordance with all applicable principles and industry standards, such as the FX Global Code and the SWIFT Customer Security Programme, in line with best market practices and the highest ethical standards.

Innovation BIS 2025 for banking services

During the past financial year, the BIS developed an ambitious agenda that will enhance its banking activities as part of the Innovation BIS 2025 strategy. This will include a cautious increase of the Bank's investment universe and asset duration, expanding the range of products and services available to an increasingly sophisticated client base, and extending the Bank's customer outreach. The latter will include expanding both its physical presence and hours of operations, as well as enhancing its cooperative activities with central banks.

Furthermore, as part of the Bank's overall information technology strategy, the Banking Department will conduct a strategic review of its IT systems and pursue significant upgrades of its trading and reporting systems to more effectively support its broadening set of activities and better prepare the BIS's technological architecture for the future.

The implementation of the new strategy will be customer-driven, with the Bank actively reaching out to central bank clients to help develop these new activities in line with reserve managers' continuously evolving needs. With some of the groundwork having been laid in 2018/19, the upcoming financial year will see the start of implementation of new products and systems across all of the BIS's banking activities.

Management of own capital

The equity capital of the BIS stems from the paid-in capital of its shareholders and the retained earnings from its banking activities. The bank's capital was SDR 19.9 billion as of 31 March 2019, of which SDR 3.1 billion was held in gold (102 tonnes). The remainder of the Bank's equity is invested primarily in high-quality, highly liquid fixed income instruments.

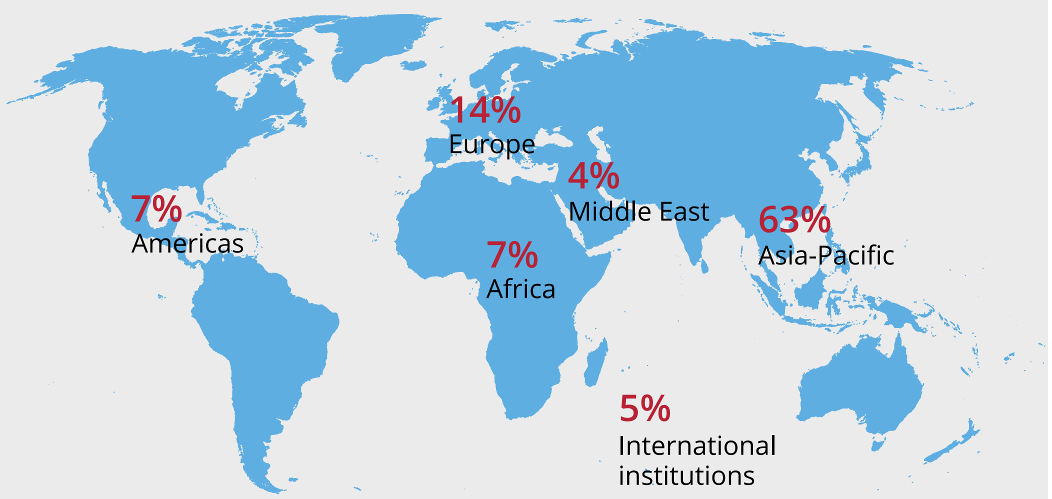
The strategic benchmark for the Bank's own funds fixed income investments is set by BIS Management within parameters established by the Board of Directors. It comprises SDR-weighted sovereign bond indices and currently has an average duration of 3.16 years, reflecting a slight increase in target duration from 2.5 years in FY 2017/18. For FY 2019/20, the Innovation BIS 2025 strategy foresees diversifying investments into new asset classes, country exposures and currencies to broaden the drivers of return of the Bank's own funds.

Scope of banking services

The BIS offers financial services to a broad client base comprising some 140 central banks, monetary authorities and international organisations across the globe. To provide these services, the Banking Department operates from two linked trading rooms, one in Basel at the Bank's head office and one in Hong Kong SAR at the Representative Office for Asia and the Pacific, and plans to open a new one in the Representative Office for the Americas in 2020.

Geographical distribution of customer deposits

Based on balance sheet values in SDR, excluding gold



Financial products and services

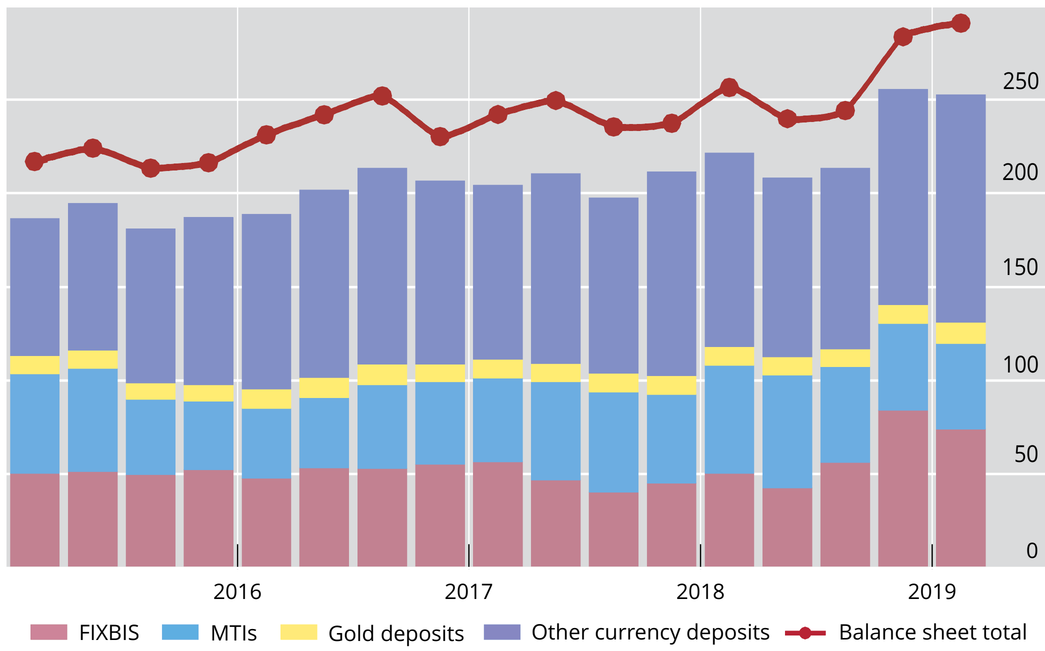
Money market and tradable instruments

The BIS offers money market placements, such as sight/notice accounts and fixed-term deposits, and tradable instruments in maturities ranging from one week to five years. These take the form of Fixed-Rate Investments at the BIS (FIXBIS), Medium-Term Instruments (MTIs) and products with embedded optionality (Callable MTIs). All these products are designed and priced to offer competitive returns over and above comparable sovereign debt instruments, while providing the top-notch credit quality and liquidity demanded by reserve managers. Over the past year, leveraging the expertise of the Asian Office (see pages 41–3), money market and tradable instruments in offshore renminbi (CNH) have been added to the product range. New instruments, such as MTIs and FIXBIS denominated in onshore renminbi (CNY), are under development as part of the Bank's new medium-term strategy, while existing products are being adapted in response to the ongoing reform of Libor and similar benchmark rates.

Average customer deposits over the financial year increased above SDR 200 billion, the highest value since 2009. As of 31 March 2019, total deposits at the BIS stood at SDR 253 billion, of which about 96% was denominated in currencies and the remainder in gold (see the graph below and page 70).

Balance sheet total and deposits by product

End-quarter figures, in billions of SDR



The sum of the bars indicates total deposits.

Annual Report

Foreign exchange and gold services

Foreign exchange (FX) is another integral part of the BIS's banking services. 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). Over the past few years, electronic FX trading capabilities have been developed to provide BIS customers with enhanced liquidity and transparency for their spot transactions, which can be conducted via the Bank's own e-FX platform. In parallel, the range of services in traditional reserve currencies and SDR has been expanded to meet reserve managers' rising demand for investment in major EME currencies, including CNY and KRW.

The Bank also provides gold services that include buying and selling on a spot basis and through outright forwards, swaps and options. Other gold services comprise sight accounts, fixed-term deposits (as well as DCDs), quality upgrading, refining, safekeeping and location exchanges. The latter are currently being expanded to other precious metals, such as silver and palladium.

Asset management services

BIS Asset Management offers two types of products: dedicated portfolio management mandates tailored to each central bank customer's individual preferences, and BIS Investment Pools (BISIPs) – open-ended fund structures allowing various BIS customers to invest in a common pool of assets. Both types are held off balance sheet.

The BISIP structure, initially designed for US dollar- and euro-denominated sovereign bond portfolios, is also used to accommodate growing central bank demand for investments in other fixed income assets. The product range includes US inflation-protected government securities, domestic Chinese and Korean sovereign fixed income instruments, and corporate bonds meeting environmental, social and governance (ESG) standards.

Building on the experience gained with the BISIPs denominated in CNY and KRW, the Bank will continue to expand its offering of products denominated in EME currencies under the Innovation BIS 2025 strategy. The BISIP structure will also be used to help meet central banks' growing demand for climate-friendly investments as part of the Bank's new green bond initiative, which was launched in 2018 to help reserve managers reap opportunities in this fast-growing market segment (see box on next page).

The BIS's support of green finance

The BIS is committed to supporting finance and investment practices which are environmentally responsible and facilitate the transition towards an environmentally sustainable economy.

In this context, the Bank has launched a green bond initiative to help central banks invest in green assets. Green bonds are fixed income securities whose proceeds are used to finance or refinance, in part or in full, new or existing eligible green projects to combat, for example, pollution, climate change and depletion of biodiversity and natural resources.

The initiative is supported by an advisory committee involving a global group of 26 central banks, and will pool BIS client funds to: (i) promote green finance through sizeable climate-friendly investments; (ii) support standardisation, certification and adoption of best practice principles in the market; and (iii) help establish minimum standards for the eligibility of green bonds to safeguard against "greenwashing" (ie overstatement of environmental benefits). Working closely with the advisory committee, the BIS has already begun product design, with the aim of launching new green bond BISIPs, which will be denominated in US dollars and in euros, in the second half of 2019.

The BIS also contributes to the work of the Central Banks and Supervisors Network for Greening the Financial System (NGFS). The NGFS is a voluntary, consensus-based forum of 36 national central banks and supervisors and six international institutions collaborating to develop climate- and environment-related risk management practices in the financial sector and to mobilise mainstream finance to support the transition towards a sustainable economy. The Deputy General Manager represents the BIS on the NGFS Steering Committee, and a cross-departmental team of staff members actively contributes to the NGFS's global working groups researching climate-related risks (CRRs) and their implications for financial stability. A growing body of research and studies on CRRs by central banks, the NGFS, institutions such as the BIS and academics is helping to link more closely the effects of climate change to the stability of the financial sector. The magnitude of the potential financial consequences of CRRs makes them a new form of systemic risk that affects financial stability.

Other services

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

Risk management

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;
- carefully managing its market risk exposures, which include strategic positions such as the Bank's gold holdings; and
- maintaining a high level of liquidity.

To achieve these objectives, the BIS conducts its banking activities within a financial risk management framework established by its Board of Directors, which 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 risk exposures – credit, market and liquidity risks – are identified, appropriately measured and controlled, and monitored and reported.

The Bank has an independent Risk Management function covering both financial and operational risks. The unit continuously assesses the Bank's capital adequacy, considering both balance sheet leverage and economic capital utilisation. The Bank's regular value-at-risk (VaR) and economic capital calculations are complemented by stress tests subjecting its market and credit risk exposures to severe historical and adverse hypothetical macroeconomic scenarios, as well as sensitivity tests of extreme but still plausible movements of key risk factors.

Customer outreach

Under the Innovation BIS 2025 strategy, more emphasis will be placed on the Banking Department's various outreach efforts and the improved delivery of services in the various client regions.

Enhanced regional scope

As part of these efforts, to expand the Bank's regional scope and better serve its customers, in 2020 the BIS will establish a dealing room at its Representative Office for the Americas in Mexico City. Combined with the existing facilities in Basel and recently

enhanced operations in Hong Kong, this will allow the Bank to comprehensively serve its client central banks across all time zones, including during the later US trading hours.

Knowledge-sharing activities

The Bank's knowledge-sharing activities facilitate the exchange of information among reserve managers and promote the development of investment and risk management capabilities at central banks and international organisations. They also strengthen feedback mechanisms between the BIS and its banking customers, informing product development and service delivery. To this end, the Bank hosts a variety of events both in Switzerland and elsewhere to bring together senior reserve and risk managers, as well as other senior central bank officials.

In 2018/19, the Bank's knowledge-sharing activities included three seminars covering topics such as reserve management trends and governance, investment strategy, risk management, outsourcing of asset management mandates and cryptocurrencies. Two additional seminars focused on portfolio analytics and strategic asset allocation. Furthermore, the Bank's Asset Management Associate Programme (AMAP) provided technical training on asset allocation and risk budgeting for central banks, and staff members from the Banking Department contributed to similar events organised at various partner institutions (such as the Seventh Public Investors Conference, co-organised with the World Bank, Bank of Canada and Bank of Italy in October 2018).

As part of the Innovation BIS 2025 strategy, the Banking Department will build on the current range of offered events to emphasise regional outreach and technical seminars geared towards specific customer needs. A particular area of focus will be cooperative work on quantitative investment approaches, based on the BIS Asset Allocation Module (BAAM).

Financial Stability Institute

The Financial Stability Institute (FSI) contributes to the BIS's goal of promoting international cooperation. Its mandate is to assist 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. The FSI pursues this mandate through its three main activities: policy implementation work, outreach events and online training for financial sector authorities.

In 2018/19, the FSI issued 10 *FSI Insights on policy implementation*, held 35 outreach events and developed or updated around 40 FSI Connect online tutorials. The main focus of these activities continues to be on the post-crisis global regulatory reforms for both banking and insurance, and the application of the principle of proportionality in the implementation of these reforms in different jurisdictions.

The FSI published FSI Insights on the following topics:

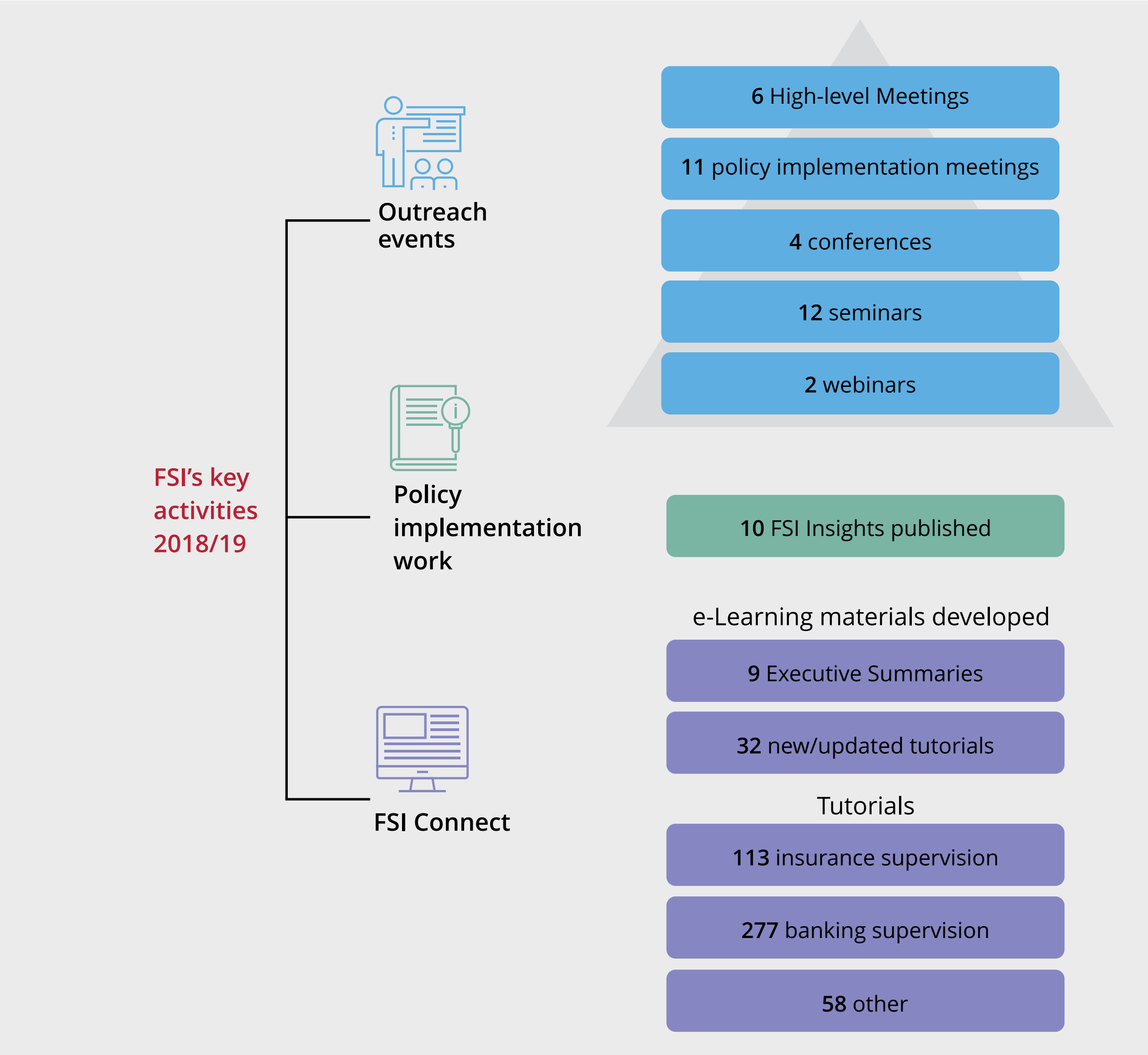
- Implementation of financial reforms and proportionality (ie Basel III implementation and proportionality approaches in non-BCBS countries; regulation and supervision of cooperatives; proportionality in insurance solvency requirements)
- Fintech regulation and supervision (ie suptech; cloud use by insurance companies)
- Changes in financial supervisory architecture since the crisis
- Crisis management (ie early intervention regimes for weak banks; management of failures of non-systemic banks)
- Identification and measurement of non-performing assets

In the year under review, the FSI also laid the foundation for its future, specifically its contribution to the Innovation BIS 2025 strategy. In particular, three areas will be the focus of the FSI in relation to the new strategy:

Expanding online offering to support the implementation of new standards and sound supervisory practices

To meet substantially higher demands from supervisors, the new strategy expects the FSI to expand its offering of online courses to cover core areas of financial supervision and cross-sectoral themes such as fintech and cyber security.

To this end, in 2018 the FSI, jointly with the IMF, piloted the Supervisory and Regulatory Online Course (SROC) for banking supervisors. This complements the FSI-IAIS Regulatory and Supervisory Online Programme (FIRST ONE) for insurance supervisors. Both online courses comprise selected FSI Connect tutorials and live webinars covering main topics of banking and insurance supervision.



Knowledge-sharing in technology-related regulatory and supervisory developments

The new strategy also calls on the FSI to help supervisors adjust their policies and practices in the light of new technological developments in financial services. This would include the active integration of technology into the regulatory and supervisory processes. In 2018/19, the FSI initiated a number of activities related to technology.

In terms of policy implementation work, the FSI published FSI Insights papers on suptech and regulatory approaches to the use of cloud computing by insurance firms.

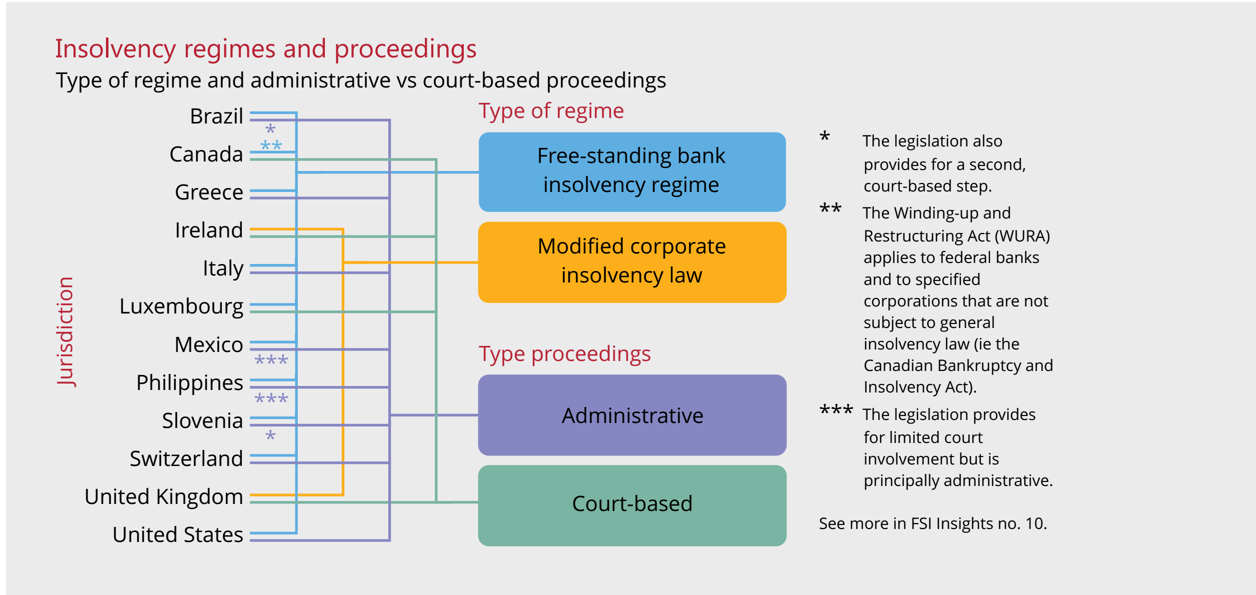
In terms of outreach, the FSI held the following technology-related events:

- Policy implementation meetings on the use of innovative technology in financial supervision, cyber and fintech, and supervision of cloud use in the insurance market

- The Global Partnership for Financial Inclusion-FSI conference on global standard-setting bodies and innovative financial inclusion – implications of fintech and other regulatory and supervisory developments

Technology issues also figured prominently in the agenda of high-level meetings and conferences. Furthermore, the FSI established the Informal Suptech Network, which aims to promote information exchange among supervisory authorities.

In terms of FSI Connect, two in-house developed technology-related tutorials were released: one on the implications of fintech for banks and bank supervisors, and another on fintech innovation facilitators. In addition, five off-the-shelf tutorials were released covering the fundamentals of data analytics, smart contracts and blockchain applications, blockchain structure and security, Bitcoin and blockchain, and cryptocurrencies and initial coin offerings.



Support for financial crisis management

Under the Bank's new strategy, the FSI also will also work on practical tools or approaches for financial crisis management. This work will build on existing FSI work concerning crisis management and resolution. FSI Insights no 10, for example, reviews different approaches to managing failures of non-systemic banks, ranging from court-based or administrative insolvency procedures to bank-specific frameworks (see graph above). Financial crisis management and resolution was also included in the agenda of some high-level meetings. Moreover, an FSI Connect tutorial on cross-border bank resolution was released.

In 2018/19, the FSI celebrated 20 years of pursuing its mandate. It marked this special occasion by holding a cross-sectoral conference in Basel on 12–13 March 2019, which attracted close to 300 participants. It featured six panels comprising central bank Governors and high-ranking officials from the public and private sectors who shared their thoughts on topics relating to technology, climate change, supervisory architecture, global banking standards, resolution and corporate governance.

Annual Report

Representative Offices

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

Representative Office for Asia and the Pacific

The Asian Office undertakes economic research, organises high-level regional meetings and, through its trading room, helps deliver the Banking Department's specialised banking services. It is also through the Asian Office that the Financial Stability Institute delivers a programme of meetings and seminars in the region that are closely tailored to local priorities. The Asian Office's activities are guided by the Asian Consultative Council (ACC), comprising the Governors of the 12 member central banks in the Asia-Pacific region. Governor Veerathai Santiprabhob of the Bank of Thailand is the current Chair of the Council, and the Chief Representative of the Asian Office, Siddharth Tiwari, currently serves as its Secretary.

As part of Innovation BIS 2025, the BIS also relaunched the activities of the Asian Office in February 2019. The Office's new work programme focuses on exploiting its unique location and engaging in activities that are tailored to the BIS shareholders in Asia, under an overall objective of bringing more of the BIS to Asia, and more of Asia to the BIS. This reorientation has been reflected in a deeper engagement of the Asian Office, senior staff in Basel and the General Manager with the membership in Asia. In order to better support the evolving needs of central banks in Asia, the Asian Office started to embrace a more focused and rapid approach to analytical work, to further strengthen the Bank's role as a financial service provider in the region, and to enhance BIS meeting support for Governors, as explained below.

Asian Consultative Council

At the February 2019 ACC meeting in Hong Kong SAR, it was agreed that the Asian Office's research be rebalanced towards issues of current critical importance. The focus of the short-term work would be on: (i) fintech and big tech; (ii) emerging market economies and capital flows; and (iii) the Chinese economy and financial markets.

With regard to the banking business, it was agreed that the BIS would enhance the responsibilities of the Asian Office to enable it to participate more in the region's financial markets.

Research and analysis

Economists in the Asian Office completed research on a theme that had been endorsed in early 2017 by the ACC: "Asia-Pacific fixed income markets: evolving structure, participation and pricing". The highlights of the research findings were presented at a conference jointly hosted with the Bank of Korea in Seoul in November 2018. Papers discussed at the conference consistently touched on challenges associated with developing local currency bond markets – an ongoing policy priority in Asia since the 1997–98 Asian financial crisis. Economists in the Asian Office also continued their work on another endorsed theme, "Central bank policy under changing inflation dynamics: challenges for Asia-Pacific".

Also in the year under review, Asian Office economists began research on a new set of projects intended for delivery in 2019–20 related to the three broad areas endorsed by the ACC in February 2019. Related to fintech, the Asian Office began work on the impact of digital innovation in financial markets. The Office also conducted research on capital flows and the underlying investor behaviour in the Asia-Pacific region.

Banking operations

Through its Regional Treasury, the Asian Office serves as the gateway for BIS banking customers' regional investment activities. The Regional Treasury also provides regional customers with access to the full range of the Bank's financial services during Asia-Pacific trading hours, supplementing the Basel-based banking activities. This has resulted in increased placements by regional central banks over the past year, which now constitute 63% of total placements.

The Hong Kong-based trading room provides access to – and expertise on – key investment destinations, such as the onshore renminbi interbank bond market. As a member of the China Foreign Exchange Trade System (CFETS) since 2016, the BIS, through the Asian Office's direct access, provides all its banking customers with onshore renminbi services. This expertise, and its close relationships with regional central banks, make the Asian Office trading room exceptionally well placed to manage and execute reserve managers' growing investments in the region.

Through the Asian Office, the BIS is also focused on broadening its involvement in regional financial markets. The Asian Bond Fund (ABF2), which is sponsored by the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) is one such initiative to foster the development of local currency bond markets. At end-March 2019, the combined size of the ABF2 funds stood at $6.2 billion. The total return on the Pan-Asia Bond Index Fund (PAIF) from its inception on 7 July 2005 to end-March 2019 was 4.4% on an annualised basis, which compared favourably with the 3.3% return on a US Treasury index of similar duration.

High-level regional meetings

During the past year, the Asian Office organised eight high-level policy meetings, held jointly with a central bank or with either EMEAP or the South East Asian Central Banks (SEACEN). To celebrate the Asian Office's 20th anniversary, two of these events were held in Hong Kong in October 2018. First, the BIS held a symposium on new challenges for central banking, at which 12 Governors and 10 former Governors discussed: (i) globalisation and monetary policy; and (ii) technology, the financial system and central banks. On the following day, the BIS and the Hong Kong Monetary Authority organised a conference on exchange rates and monetary policy frameworks.

In February 2019, the ACC Governors met with others from around the world in a Special Governors' Meeting (SGM) held in Hong Kong. The event included a roundtable of the Governors together with the chief executive officers of large financial institutions active in the region, including major fintech firms. The discussion covered the challenges that fintech and big tech firms pose for financial institutions, financial stability and regulation. The SGM also included the General Manager's presentation to the Governors on the Innovation BIS 2025 strategy and meetings of Governors on recent developments in the global economy, as well as on evolving inflation dynamics and monetary policy.

Special Governors' Meeting, Hong Kong SAR, 10–11 February 2019

Annual Report

Representative Office for the Americas

The Americas Office contributes to strengthening the relationship of the BIS with central banks and other relevant institutions in the region and promoting cooperation among them. It also conducts research on issues related to regional financial markets, monetary policy and financial stability, and facilitates the organisation of meetings and networks for central banks to analyse key topics in the region.

As part of Innovation BIS 2025, the Bank plans to establish a new dealing room in the Americas Office in 2020. This will not only broaden the regional scope to better serve central bank customers in the Americas, but will also extend the time zone coverage, complementing the dealing rooms in Basel and Hong Kong SAR.

Consultative Council for the Americas

The Americas Office conducts its cooperative activities under the guidance of the Consultative Council for the Americas (CCA), comprising the Governors of BIS member central banks in the region.[3] The CCA is currently chaired by Julio Velarde, Governor of the Central Reserve Bank of Peru. The CCA is regularly briefed on the Office's activities through meetings that usually also include an economic discussion. Three such meetings were organised in Basel in the year under review.

The cooperative activities of the Americas Office have a strong research component. They are structured under three functional groups reporting to the CCA:

- The **Scientific Committee**, comprising CCA Heads of Research, guides research activities in macroeconomics and monetary policy.
- The **Consultative Group of Directors of Financial Stability** centres its work on the analysis and research initiatives in the area of financial stability.
- The **Consultative Group of Directors of Operations** holds regular teleconferences to exchange views on financial market developments and central bank operations.

Each of these groups attends an annual meeting to exchange policy views and discuss its work programme.

In addition, the CCA research networks are collaborative associations of BIS economists, central bank members and academic advisers who jointly research themes on key monetary and financial issues in the Americas. Research network projects are extensive, tackling one primary topic at a time and typically taking between one and two years to complete.

3 The central banks of Argentina, Brazil, Canada, Chile, Colombia, Mexico, Peru and the United States.

Research and analysis

The research projects in macroeconomics have recently focused on micro data. The CCA annual research conference, hosted by the Central Bank of Brazil in Rio de Janeiro in June 2018, analysed central bank micro data research. The theme of the research network that concluded in late 2018 was exchange rate pass-through using micro data. A new research network was launched in March 2019 on monetary policy frameworks and communication, in line with the research priorities of Innovation BIS 2025.

In the area of financial stability, the main research initiative, completed in late 2018, was the use of banking micro data (credit registers) to analyse bank business models and the bank lending channel of monetary policy. A study group of central bank experts has shared experiences with different aspects of stress testing. Within this group, a stress testing exercise carried out by the Latin American members with a common scenario enabled an in-depth discussion on similarities and differences in methodologies. Finally, an overview of fintech developments in Latin America is being completed.

Another study group is working under the umbrella of the Consultative Group of Directors of Operations to analyse and discuss the key issues on foreign exchange interventions from an operational perspective.

Outreach events

Activities in the Americas Office also aim at fostering cooperation with non-BIS central banks in the region, usually in collaboration with regional financial organisations, and with academia. Jointly with the Center for Latin American Monetary Studies (CEMLA), in May 2018 the BIS organised a roundtable on globalisation and deglobalisation in Mexico City. Additionally, it contributed to regional events organised by the Association of Supervisors of Banks of the Americas (ASBA), the Financial Stability Board, the BIS's Financial Stability Institute, Fondo Latinoamericano de Reservas and the Inter-American Development Bank, as well as a number of academic conferences organised by central banks in the region.

The Americas Office also sponsored and organised three sessions at the annual meeting of the Latin American and Caribbean Economic Association (LACEA).

Annual Report

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Promoting international cooperation

The BIS promotes international cooperation among monetary and financial authorities by offering them a forum for discussion and a platform for cooperation. In this role, the Bank provides support to a number of committees and international associations located at the BIS in their efforts to promote global economic stability and financial resilience. In addition, the Bank participates in international forums and contributes to regional initiatives related to monetary and financial stability.

The Basel Process

The BIS is a forum for discussion and a platform for cooperation among central banks and other financial authorities in the pursuit of monetary and financial stability.

This international cooperation is known as the Basel Process. The Basel Process revolves around two main axes: regular high-level meetings of senior monetary and financial officials, and the BIS's support for and collaboration with international groups pursuing financial stability. The outcomes of this process are visible to the public in the form of committee reports analysing specific topics and internationally agreed standards produced by the standard-setting committees. The BIS also supports the implementation of these standards through its Financial Stability Institute (see page 37), including its contribution to capacity-building of financial authorities worldwide.

Governors' meetings

Governors and other senior officials of BIS member central banks meet every two months to discuss current 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.

Global Economy Meeting

The Global Economy Meeting (GEM) brings together the Governors of 30 BIS member central banks in major advanced and emerging market economies that account for about four fifths of global GDP. The Governors of another 19 central banks attend the GEM as observers. The GEM is currently chaired by Mark Carney, Governor of the Bank of England.


Mark Carney, Chair of the Global Economy Meeting and the Economic Consultative Committee

The GEM has two main roles:

- monitoring and assessing developments in the world economy and the global financial system; and
- providing guidance to three BIS-based central bank committees – the Committee on the Global Financial System (CGFS), the Committee on Payments and Market Infrastructures (CPMI) and the Markets Committee.

The GEM's economic discussions focus on current macroeconomic and financial developments in major advanced and emerging market economies. Topics discussed by the GEM over the past year included signals of overheating in the global economy, the relationship between financial conditions and economic activity, the impact of fiscal policy on the economic outlook and monetary policy, monetary policy communication, spillovers and spillbacks, and the financial cycle and corporate balance sheets.

Economic Consultative Committee

The Economic Consultative Committee (ECC) is an up to 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 conducts analyses and prepares proposals for the GEM's consideration. In addition, the ECC Chair makes recommendations to the GEM on the appointment of chairs and the composition and organisation of the CGFS, the CPMI and the Markets Committee.

All Governors' Meeting

The All Governors' Meeting comprises the Governors of the 60 BIS member central banks and is conducted by the Chairman of the Board, currently Jens Weidmann, President of the Deutsche Bundesbank. It convenes to discuss selected topics of general interest to its members. In 2018/19, the topics discussed included artificial intelligence and machine learning in the financial service industry and the issues they raise for central banks, banknote counterfeiting risks and procurement and their implications for central banks, the Legal Entity Identifier and its future, and financial inclusion.


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

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

Other regular gatherings

The Group of Central Bank Governors and Heads of Supervision (GHOS) meets periodically to decide on global banking regulations and oversee the work of the Basel Committee on Banking Supervision. Chaired by Mario Draghi, President of the European Central Bank, the GHOS is a high-level forum responsible for international collaboration on banking regulation and supervision. A highlight in the past year was the GHOS meeting in January 2019 to finalise the revisions to the market risk framework under Basel III (see page 54).

The central bank Governors of major EMEs meet during the January, May and September bimonthly meetings to discuss issues of importance to their economies. The topics discussed in 2018/19 included the benefits and risks of fintech and big tech developments in EMEs and the changing nature of global investors and implications for capital flows. In June 2018, the BIS held a roundtable of Governors from African central banks on the implications of debt on the effectiveness of monetary policy in Africa.

In February 2019, a Special Governors' Meeting (SGM) was held in Hong Kong, which provided a welcome opportunity to better understand what central banks need and how the BIS can serve them better. The SGM consisted of five meetings: a CEO roundtable; a meeting of Governors on Innovation BIS 2025; an Asian Consultative Council meeting; a meeting of Governors on the global economy; and a meeting of Governors on inflation dynamics.

The BIS also holds regular meetings for the Governors of central banks from small open economies (SOEs). Discussion themes during the past year included the evolution of central banks' role in financial stability work, central bank communication policies, housing markets and monetary policy, implications of recent shifts in global capital flows for SOEs and calibration of macroprudential instruments.

In addition, various meetings bring 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.

Cyber security seminar and cyber range exercise

Towards the end of the period under review, 50 central banks and monetary authorities came together in Basel for a BIS-hosted cyber security seminar. Well known speakers from the central bank community and external experts addressed participants on the constant, and constantly evolving, threat of cyber attacks.

Over five days, the BIS also held its first Cyber Range exercise. Twenty-four participants from 15 central banks were divided into four teams, each representing a fictitious central bank. Experts from various areas of the BIS – including the Banking Department and the Committee on Payments and Market Infrastructures – briefed the teams, which then kicked off the range exercise by scouring their simulated central bank systems for any sign they might have already been compromised. These cyber specialists then spent three days defending against live attacks carried out by on-site professional hackers.

One of the most striking takeaways of the seminar and cyber range was that, although there are many things that can be achieved on an institutional basis, to be truly effective against the common threat of cyber attack, central banks must work together.

In this spirit, and as part of the Innovation BIS 2025 strategy, the Bank is setting up a Cyber Resilience Coordination Centre and developing a cyber resilience self-assessment framework, both specifically tailored to the needs of central banks. The Centre will offer cyber security seminars, technical training with hands-on cyber ranges similar to the one described above, and a secure platform to help build collaboration within the central bank community. There will also be various secondment opportunities for central bank cyber specialists.

BIS-organised meetings April 2018 to March 2019

247	11,163
meetings	participants
161 in Basel 86 elsewhere	7,740 in Basel 3,423 elsewhere

Excluding FSB, IADI and IAIS meetings

International groups at the BIS

A number of committees and associations engaged in the pursuit of financial stability are located at the BIS. Each group is supported by a secretariat that prepares the group's meetings, background papers and reports and publishes its work.

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. The BIS also makes a financial contribution to the costs associated with the secretariats of these international committees and associations, and supports them in terms of facilities and corporate services.

Co-location at the BIS's premises facilitates communication and collaboration among these groups, as well as their interaction with policymakers in the context of the BIS's regular meetings programme. This exchange of information also makes it easier to coordinate efforts and prevents overlaps and gaps in the various work programmes.

Annual Report

BIS committees

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

The following associations have secretariats at the BIS, but have their own separate legal identity and governance structure, and report to their members.

- The **Financial Stability Board** coordinates the work of national authorities and international standard setters in developing and promoting the implementation of effective regulatory, supervisory and other financial sector policies in the interest of global financial stability.
- The **International Association of Deposit Insurers** sets global standards for deposit insurance systems and promotes cooperation on deposit insurance and bank resolution arrangements.
- The **International Association of Insurance Supervisors** sets global standards for the insurance sector to promote effective and globally consistent supervision for the benefit and protection of policyholders and to contribute to global financial stability.

The BIS is a member of the FSB and the IAIS.

Basel Committee on Banking Supervision

The Basel Committee on Banking Supervision (BCBS) is the primary global standard setter for the prudential regulation of banks and provides a forum for regulatory cooperation on banking supervisory matters. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions. The BCBS consists of senior representatives of banking supervisory authorities and central banks responsible for banking supervision or financial stability in their respective jurisdictions. In March 2019, Pablo Hernández de Cos, Governor of the Bank of Spain, was appointed as the new Chairman of the Basel Committee, replacing Stefan Ingves, Governor of Sveriges Riksbank.

The work of the Basel Committee is overseen by the Group of Central Bank Governors and Heads of Supervision (GHOS), chaired by Mario Draghi, President of the ECB, and comprising central bank Governors and non-central bank heads of supervision from BCBS member jurisdictions. The GHOS directs the Committee's work, approves its work programme and provides operational guidance.

Revised market risk framework

The 2007–09 financial crisis revealed that the BCBS market risk framework was not sufficient to ensure that banks could withstand significant market distress. In response, the Basel Committee developed a new, more robust framework drawing on the experience of what went wrong in the build-up to the crisis.

After the revised market risk framework was launched in January 2016, the BCBS continued to monitor its expected impact and identified a number of issues that needed to be addressed prior to its implementation. At its meeting in January 2019, the GHOS endorsed final revisions to the framework, which enhance its design and calibration to facilitate timely implementation. Among other things, the revised framework introduces a simplified standardised approach for banks with small or non-complex trading portfolios, clarifies the scope of exposures that are subject to market risk capital requirements and enhances the risk sensitivity of the standardised approach.

"The final revisions to the market risk framework provide additional clarity to the Basel III post-crisis reforms, and allow banks and supervisors to implement the framework in a timely manner."

Mario Draghi
Chair of the GHOS

The revised market risk standard comes into effect on 1 January 2022, concurrent with the implementation of the Basel III reforms endorsed by the GHOS in December 2017.

Future work plan

In January 2019, the GHOS also endorsed the Basel Committee's strategic priorities and work programme for 2019. The programme focuses on four key themes: finalising ongoing policy reforms and pursuing targeted new policy initiatives where needed; evaluating and monitoring the impact of post-crisis reforms and assessing emerging risks; promoting strong supervision; and supporting full, timely and consistent implementation of the BCBS post-crisis reforms.

Finalising policy reforms

The policy reform work includes potential measures related to banks' exposures to cryptoassets, the treatment of client-cleared derivatives in the leverage ratio, measures to curtail window-dressing behaviour and longer-term work in response to expected credit loss accounting changes.

Assessing impact of reforms

The BCBS will devote more time to evaluating and monitoring the impact of its reforms and assessing emerging risks. These evaluations will assess the effectiveness of individual standards, the interactions and coherence among standards, and the broader macroeconomic impact of the Basel Committee's post-crisis reforms.

Promoting strong supervision

As part of its efforts to renew its focus on bank supervision, the BCBS will monitor and assess the risks emerging from financial technology and the consequent impact on supervisory and regulatory strategies. It will also review other supervisory issues such as operational resilience and cyber risk; ways to improve cooperation among prudential regulatory, anti-money laundering and investigative authorities; Pillar 2 implementation; and the effectiveness of supervisory colleges.

Ensuring reform implementation

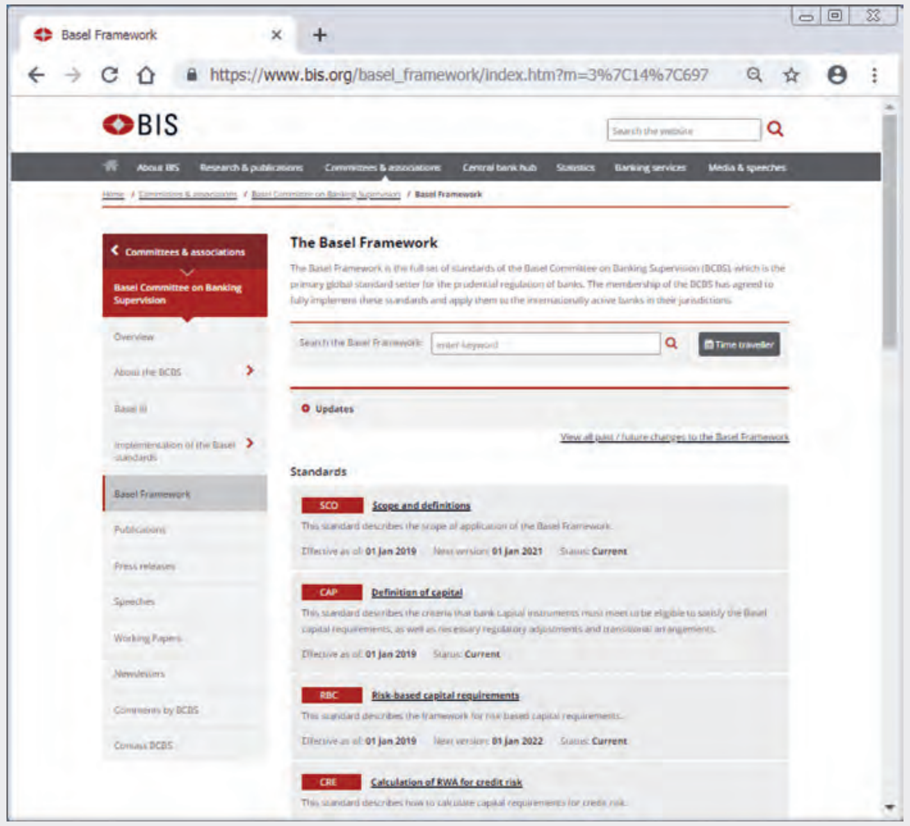
The Committee will continue its Regulatory Consistency Assessment Programme in 2019, with a view to delivering on the G20 Leaders' repeated commitment to full, timely and consistent implementation of post-crisis reforms. The next stage of this programme will focus on the implementation of the net stable funding ratio and large exposure standards. The BCBS expects to complete the assessments for most member jurisdictions by the end of 2020.

Consolidated framework

In April 2019, the Basel Committee launched its consolidated framework, a new interactive tool which brings together all current and future BCBS standards in a modular structure, making them easier to navigate. It is available online at www.bis.org/basel_framework/index.htm.

The consolidated framework:

- Is divided into 14 standards, each containing a series of chapters with interactive cross-references to help users navigate between them.
- Incorporates the answers to frequently asked questions, displaying them underneath the paragraphs to which they relate.
- Has a "time traveller" feature which allows users to select a future date and see the framework as it is due to apply at that date.
- Has an improved search function, which makes it easier to find specific content in each standard.
- Will record all modifications to the framework in a dedicated section.



The consolidated framework has been launched initially in draft form, together with a consultative document to gather feedback. The Committee aims to finalise the framework and make it publicly available by end-2019.

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

Committee on Payments and Market Infrastructures

Benoît Cœuré
Chair of the CPMI

The Committee on Payments and Market Infrastructures (CPMI) is a global standard-setting body that promotes the safety and efficiency of payment, clearing, settlement and reporting systems and other financial market infrastructures. The CPMI also serves as a forum for central banks to monitor and analyse developments and cooperate in related oversight, policy and operational matters, including the provision of central bank services. Chaired by Benoît Cœuré, a member of the ECB's Executive Board, the CPMI comprises senior officials from 28 central banks.

Digital innovations in payments

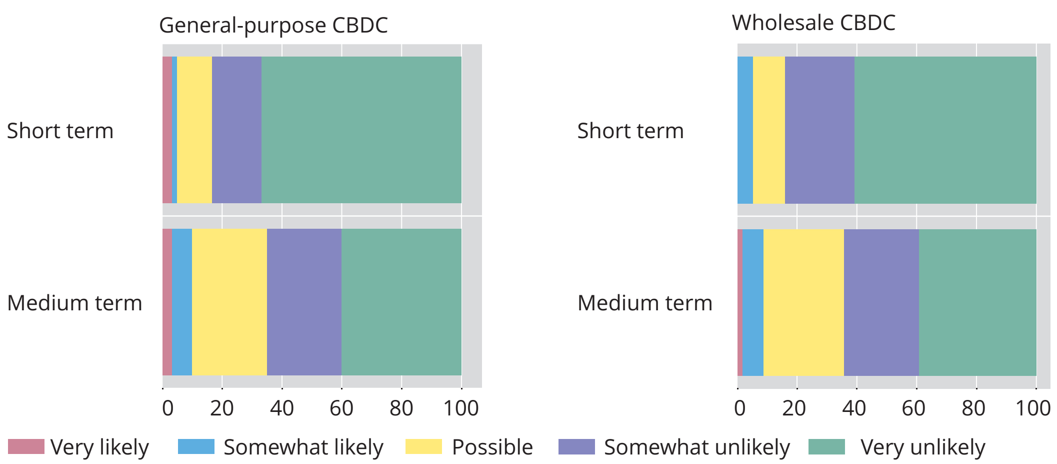
In the year under review, the CPMI focused on the opportunities and challenges arising from digital innovations in payments.

Digital currencies and digital tokens for wholesale payments

Central banks continue to analyse and experiment with central bank digital currencies (CBDCs) and distributed ledger technology (DLT) in their payment and settlement systems. In turn, private sector initiatives involving DLT or digital tokens are entering more advanced stages. The CPMI continued to work on issues related to these developments, in particular in the context of wholesale payments. A survey conducted in late 2018 showed central banks are proceeding with caution, consistent with the key message from the report on CBDCs published by the CPMI and the Markets Committee in March 2018.

Likelihood of issuing a CBDC in the short and medium term*

Share of respondents



* Short term: 1–3 years; medium term: 1–6 years.

Source: *BIS Papers*, no 101.

Modernisation of real-time gross settlement systems

As many central banks modernise their real-time gross settlement (RTGS) systems, the CPMI continued to exchange information and views regarding these recent and planned developments. Overall, access to RTGS systems is expanding, and these systems' opening hours are longer.

Strengthening wholesale payments security and cyber resilience

The CPMI engaged with the global central bank community and the financial services industry to strengthen wholesale payments security and cyber resilience.

Wholesale payments security

The threat of cyberattacks and wholesale payments fraud continues to grow, with nefarious activity becoming ever more sophisticated. Given the high interconnectedness of financial market infrastructures, industry-wide cooperation is needed and global coordination required. Against this backdrop, the CPMI published in May 2018 its strategy to reduce the risk of wholesale payments fraud related to endpoint security. The CPMI is promoting the operationalisation of the strategy in member jurisdictions and reaching out to non-member central banks and the financial services industry to support efforts.

Cyber resilience of financial market infrastructures

The joint CPMI-IOSCO working group on cyber resilience has been monitoring and encouraging the implementation of the *Guidance on cyber resilience for financial market infrastructures* ("Cyber Guidance"). As part of the industry engagement, the CPMI and IOSCO held an industry roundtable in September 2018, where senior executives of private and public sector financial market infrastructures and financial authorities discussed continued collaboration, preparation for and response to cyber incidents, focusing on cross-border actions.

"It is vital for authorities and operators to work together to advance FMIs' ability to withstand increasingly complex cyber threats, and to restore services in a timely way in the event of a successful attack."

Benoît Cœuré
Chair of the Committee on Payments and Market Infrastructures

Annual Report

BIS committees

Enhancing the resilience and recovery of CCPs and accelerating the implementation of international standards

The default of a member at a Swedish central counterparty (CCP) in September 2018 underlined the importance of sound risk management and the implementation of the 2012 CPMI-International Organization of Securities Commissions (IOSCO) *Principles for financial market infrastructures* (PFMI) and the subsequent guidance on resilience and recovery of CCPs.

Recognising the systemic importance of CCPs, the CPMI and IOSCO jointly published a report on CCP supervisory stress testing in April 2018, and hosted an industry workshop on default management auctions in September 2018.

The CPMI and IOSCO continued to monitor the implementation of the PFMI, and published a Level 1 assessment report (July 2018), Level 2 assessment reports on Canada (August 2018) and Switzerland (January 2019), and a Level 3 assessment follow-up report on CCP resilience (May 2018). Two new online tools (Level 1 tracker and Level 2 database) allow user-friendly access to the PFMI implementation monitoring findings.

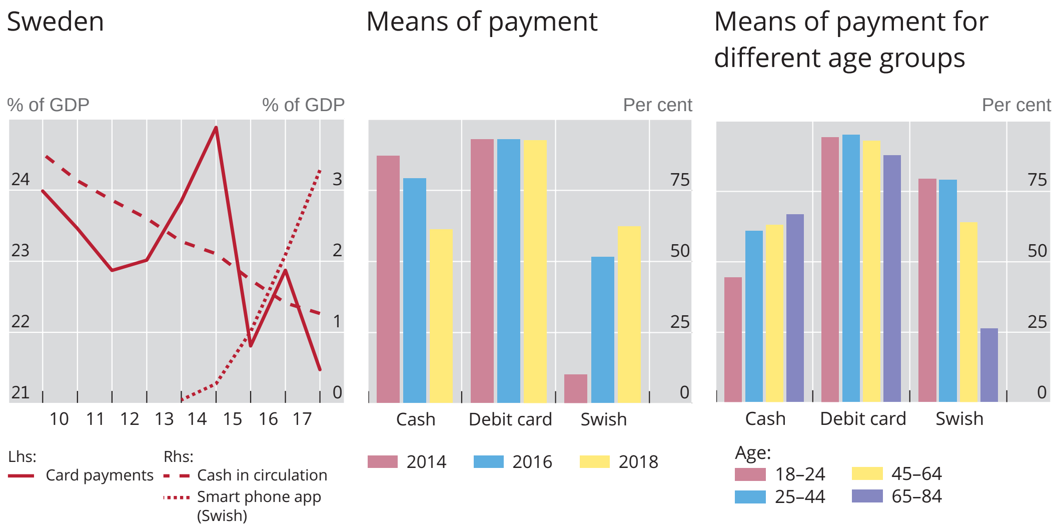
Data collection, research and analysis on payments, clearing and settlement

The CPMI acts as a forum for central banks to collect, research and analyse data on payment, clearing and settlement systems.

New Red Book statistics

In September 2018, the CPMI published its first Red Book statistics based on a new methodology. The statistics now include more information on the latest payment developments including the role of non-banks, online and contactless payments and fast

Rapid increase in use of mobile payments in Sweden



Source: *BIS Papers*, no 101.

payments (for example, see the graph on page 60 for data on mobile payments in Sweden). The new methodology also clarifies how statistics on debit and credit cards should be compiled, and which retail cashless payments count as domestic and which as cross-border. In addition, the geographical coverage has expanded to include three new CPMI member jurisdictions (Argentina, Indonesia and Spain). The new statistics are also presented in a more user-friendly, interactive format (BIS Statistics Explorer).

Economics of Payments IX conference

Digital innovation, regulation and ever-evolving market structures have fundamental impacts on payments, clearing and settlements. To encourage interactions among policymakers, oversight/supervisory authorities, academic researchers and central bank economists, the CPMI and the BIS hosted the Economics of Payments IX conference in November 2018, to explore recent developments in these areas and to think creatively about the future of payments.

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

Committee on the Global Financial System

The Committee on the Global Financial System (CGFS) monitors financial sector developments for the Governors of the BIS Global Economy Meeting and analyses the implications for financial stability and central bank policy. In June 2018, Philip Lowe, Governor of the Reserve Bank of Australia, took over from William C Dudley as Chair of the CGFS, which comprises 23 members.

Philip Lowe
Chair of the CGFS

Vulnerabilities and political uncertainty

In the past year, the CGFS monitored global financial sector developments, putting particular emphasis on the risks in the transition from a benign global economic outlook to one reflecting greater uncertainty about the pace of growth. Risks related to political and trade tensions were a recurring theme in the discussions, especially when these were compounded by a downward revision in global economic activity later on in the year under review. Members discussed the role of central banks in helping steer the economy through this period of greater uncertainty, manifesting itself as bouts of market volatility, but also highlighted the risks related to central banks being seen as the first and main line of defence by financial market participants.

BIS committees

Developing resilient capital markets

Developed and deep capital markets play a key role in financing economic growth and influence financial stability as well as the transmission of monetary policy. Central banks are stakeholders in market development as financial market depth and liquidity interact with their policy objectives and responsibilities. A report prepared by the CGFS summarises recent trends in capital market development, identifies factors that make capital markets more robust, and makes recommendations to policymakers seeking to strengthen their domestic markets. Two key recommendations of the report were the need to strengthen the independence and capacity of regulators, and the importance of developing a diverse investor base in domestic markets.

Low rates

The decade following the Great Financial Crisis has been marked by historically low interest rates, which are expected to rise only slowly and to stabilise at lower levels than before. A report by the CGFS identified channels through which a "low for long" interest rate scenario might affect financial stability, focusing on the impact of low rates on banks (in both advanced and emerging market economies) and on insurance companies and private pension funds. It also discussed the risks associated with a snapback scenario for rates where adjustments by financial institutions to low rates may make them more vulnerable to the rapid reversal. The report found that while a low-for-long scenario presents considerable solvency risk for insurance companies and pension funds and limited risk for banks, a snapback would alter the balance of vulnerabilities.

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

Markets Committee

The Markets Committee is a forum where senior central bank officials discuss current market conditions, market functioning and monetary operations. With 22 member institutions, the Committee is chaired by Jacqueline Loh, Deputy Managing Director at the Monetary Authority of Singapore.

Jacqueline Loh
Chair of the Markets Committee

Monitoring financial market and policy developments

The Markets Committee's work continued to leverage its technical knowledge of financial markets, close contact with market participants and hands-on experience in central bank operations. Its discussions focused on monitoring developments in financial markets, changes in monetary policy implementation and their interaction with financial markets. One key area of attention was the impact of balance sheet normalisation by advanced economy central banks on financial markets (including spillovers and spillbacks to EMEs). Another was banks' demand for central bank reserve balances and its impact on monetary policy implementation. The implications of benchmark rate reform for monetary policy implementation and market functioning were also discussed.

Technological innovations and their impact on market structure and central bank operations

Foreign exchange and other fast-paced electronic markets in which central banks operate have undergone a wide range of structural changes in recent years. Trading has become increasingly electronic and automated, significantly changing the market ecosystem. A Markets Committee report published in September 2018 identifies three key structural trends that have intensified in recent years: (i) greater speed and fragmentation of trading activity; (ii) greater concentration of liquidity provision among the largest banks and the new set of non-bank intermediaries; and (iii) the rise in volume and commoditisation of large quantities of high-frequency data on the back of greater electronification. The report describes how market participants' approaches to market monitoring (including by central banks) adapt to these changes in market structure. Going forward, changes in market structure due to technological changes and their implications for market dynamics and central bank operation will remain an important part of the Markets Committee's agenda.

Outreach activities and workshops

In addition to its regular meetings, the Markets Committee continued to engage in outreach activities. Members participated in the 12th Meeting on Monetary Policy Operating Procedures, held in October 2018 in Hong Kong SAR and chaired by Jacqueline Loh. In addition, it sponsored the third workshop on market intelligence-gathering at central banks at the Bank of Japan in May 2019.

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

Central Bank Governance Group

The Central Bank Governance Group is a venue for Governors to exchange views on the design and operation of their institutions. The focus is on central banks' institutional and organisational arrangements, including the choice of functions, decision-making structures, independence and accountability. The Group, currently chaired by Veerathai Santiprabhob, Governor of the Bank of Thailand, comprises nine Governors: Ardo Hansson (Bank of Estonia), Lesetja Kganyago (South African Reserve Bank), Haruhiko Kuroda (Bank of Japan), Philip Lowe (Reserve Bank of Australia), Mario Marcel (Central Bank of Chile), Yves Mersch (ECB), Jerome Powell (Board of Governors of the US Federal Reserve System) and, until November 2018, Karnit Flug (Bank of Israel). Flug was replaced in March 2019 by Juan José Echavarría (Central Bank of Colombia).

Veerathai Santiprabhob
Chair of the Central Bank Governance Group

The Group's discussions use information collected through the Central Bank Governance Network, comprising almost 50 of the BIS member central banks. Such information is made available to central bank officials, while selected examples of the resulting research are published. Insights flowing out of the Group's discussions are disseminated within the central bank community, helping central banks assess the effectiveness of their own arrangements and gain insights into the alternatives available.

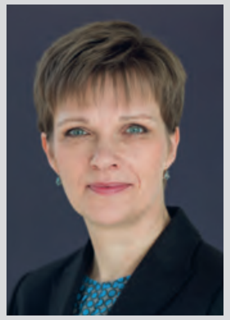
Discussions

The Group's recent focus has been broad-ranging, covering new, more open approaches to engaging with the public; the types of codes and protocols used at central banks to ensure good behaviour of senior officials and staff; and their strategies for recruiting and retaining a high-quality, appropriately representative and flexible staff. Issues around central banks' autonomy from the mainstream of government administration and around the selection and management of their research programmes are also coming into focus.

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

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 address statistical topics related to monetary and financial stability. Governed by the BIS member central banks, it is hosted by the BIS and associated with the International Statistical Institute (ISI). The IFC has 91 institutional members, including all BIS member central banks, and is currently chaired by Claudia Buch, Vice President of the Deutsche Bundesbank.



Claudia Buch
Chair of the IFC

Seminars and publications

The IFC organised several activities with the support of its member central banks and a number of international organisations. A key event was the Ninth IFC Conference, "Are post-crisis statistical initiatives completed?". Almost 50 papers were presented by economists and statisticians from central banks and international organisations on various topics.

The IFC also co-organised, with Bank Indonesia, a technical workshop and a policy seminar on big data in central banks. In conjunction with the Central Bank of Armenia, it held a workshop to revisit issues related to external sector statistics.

In addition, the IFC conducted a survey among central banks to assess the consequences of post-crisis reforms which mandated the collection of data on the global derivatives market, and published a report on the topic.

Addressing new data needs

The IFC continued to support global statistical initiatives in the year under review, especially in relation to the implementation of the second phase of the G20-endorsed Data Gaps Initiative to enhance economic and financial statistics.

In addition, the IFC started work to analyse the data issues related to the development of fintech, by taking stock of user demand for statistics in this area and of projects and experience at IFC member central banks. The aim is to review statistical definitions and consider different ways of collecting relevant data before formulating recommendations for central bank 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, but have their own separate legal identity and governance structures, reporting to their members. The BIS is a member of the FSB and the IAIS.

FSB FINANCIAL STABILITY BOARD

Financial Stability Board

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

During the year under review, the FSB continued work to identify and assess vulnerabilities in the financial system, in particular considering developments with fintech, cyber and operational resilience of financial institutions, the financial stability implications of cryptoassets and risks from non-bank financial intermediation.

The FSB's policy work focused on finalising and operationalising the remaining elements of the post-crisis reform agenda, including work to deliver resilient, recoverable and resolvable central counterparties; implementation of measures to address risks from asset management activities; and work by the IAIS to deliver a new framework for addressing systemic risks in insurance sector.

The FSB continued to monitor and report on implementation of agreed post-crisis reforms and undertook work to evaluate the effects of the reforms. It completed two evaluations, on incentives for increased central clearing of over-the-counter derivatives and on the effect of the reforms of the provision of infrastructure finance. The evaluations found that the intended policy outcomes had been achieved.

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

Annual Report

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 by promoting international cooperation among deposit insurers, bank resolution authorities and other safety net organisations. The President and Chair of IADI's Executive Council is Katsunori Mikuniya, Governor of the Deposit Insurance Corporation of Japan.

Over the 2018/19 financial year, IADI continued to implement its Strategic Goals, adopted in 2015. The Association has developed a comprehensive database on deposit insurance and produces research and guidance on deposit insurance issues. IADI also conducts numerous international conferences and training and technical assistance activities around the world. It works closely with the FSB and the Financial Stability Institute in conducting conferences and meetings on deposit insurance and bank resolution issues. The Association expanded significantly and now includes 87 deposit insurers as Members, 10 central banks and bank supervisors as Associates and 14 institutional Partners.

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 the insurance sector. Its mission is to promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders and to contribute to global financial stability. The IAIS Executive Committee is chaired by Victoria Saporta, Executive Director of the Prudential Regulation Authority at the Bank of England.

During the period under review, the IAIS continued to progress its work on its part of the post-financial crisis reform agenda – the Common Framework for the Supervision of Internationally Active Insurance Groups, including the Insurance Capital Standard, and the Holistic Framework for the Assessment and Mitigation of Systemic Risk in the Insurance Sector. At the same time, it began a pivot to an increased focus on emerging risks and trends (eg fintech, climate risk, cyber) and began providing enhanced support for implementation of agreed standards. It also neared completion of its Strategic Plan and Financial Outlook for 2020–24, outlining its strategic direction through a new set of high-level goals and strategies.

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 such as the International Monetary Fund, the World Bank Group and the International Organization of Securities Commissions. It also contributes to the activities of central banks and regional central bank organisations by participating in their events as well as hosting joint events.

During the past year, the Bank co-organised events or collaborated with the following regional organisations:

- Arab Monetary Fund (AMF)
- ASEAN Insurance Training and Research Institute (AITRI)
- Asian Bureau of Finance and Economic Research (ABFER)
- Asian Forum of Insurance Regulators (AFIR)
- Association of Insurance Supervisors of Latin America (ASSAL)
- Association of Southeast Asian Nations (ASEAN)
- Association of Supervisors of Banks of the Americas (ASBA)
- Caribbean Group of Banking Supervisors (CGBS)
- Center for Latin American Monetary Studies (CEMLA)
- Central Banks and Supervisors Network for Greening the Financial System (NGFS)
- Centre for Economic Policy Research (CEPR)
- European Banking Authority (EBA)
- European Stability Mechanism (ESM)
- European Supervisor Education Initiative (ESE)
- Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)
- Group of Banking Supervisors from Central and Eastern Europe (BSCEE)
- Joint Vienna Institute (JVI)
- Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI)
- South East Asian Central Banks (SEACEN)

5

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. Through these activities, the BIS provides financial services to its customers, which are solely central banks, monetary authorities and international organisations.

Balance sheet

The BIS's balance sheet total as of 31 March 2019 was SDR 291.1 billion, representing an increase of SDR 34.6 billion over the year. The increase reflected higher currency deposits from the Bank's customers.

Currency deposits, primarily from central banks, constitute the largest share of the Bank's liabilities.

Total deposits

SDR 252.9 billion
31 March 2019

SDR 221.5 billion
31 March 2018

+ SDR 31.4 billion

Currency deposits

SDR 241.6 billion
31 March 2019

SDR 211.7 billion
31 March 2018

+ SDR 29.9 billion

Gold deposits

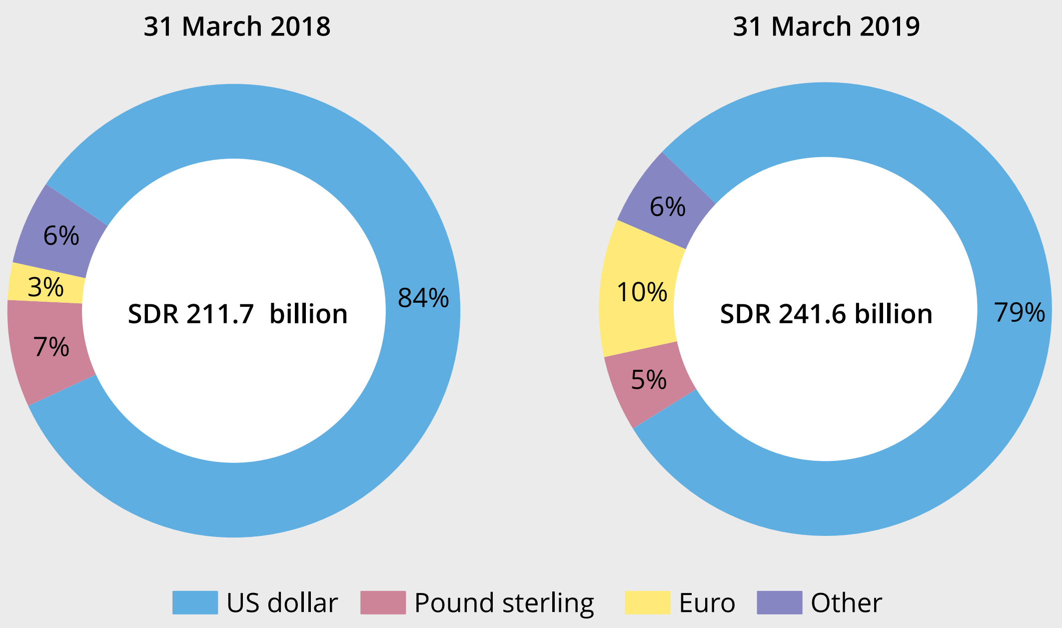
SDR 11.3 billion
31 March 2019

SDR 9.9 billion
31 March 2018

+ SDR 1.5 billion

Most of the deposits with the Bank are in US dollars, as shown in the graph below.

Currency deposit composition



The Bank's portfolios are organised as follows:

Own funds

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

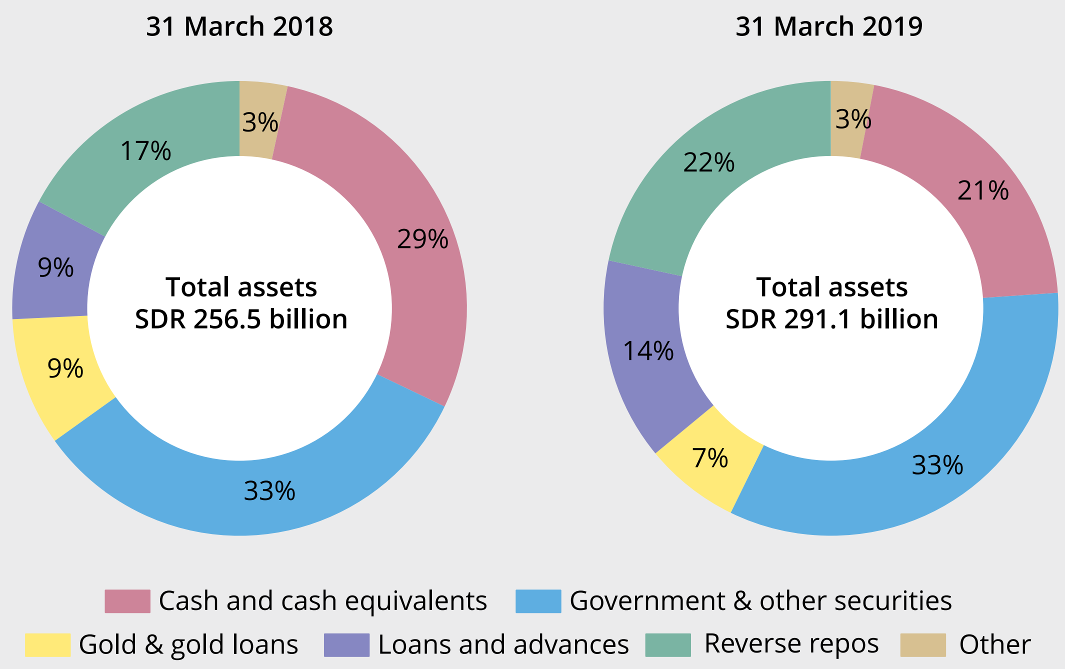
Own gold

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

Borrowed funds

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

Balance sheet asset composition



Financial performance

Net profit

The net profit for 2018/19 was SDR 461 million.

The net profit can be decomposed by business line as follows:

Borrowed funds total income

SDR 577 million

reflecting an average deposit volume of SDR 202 billion

+

Own funds total income

SDR 169 million

reflecting a return of 1.0%

+

Income on other business

SDR 17 million

including asset management services and foreign exchange and gold services

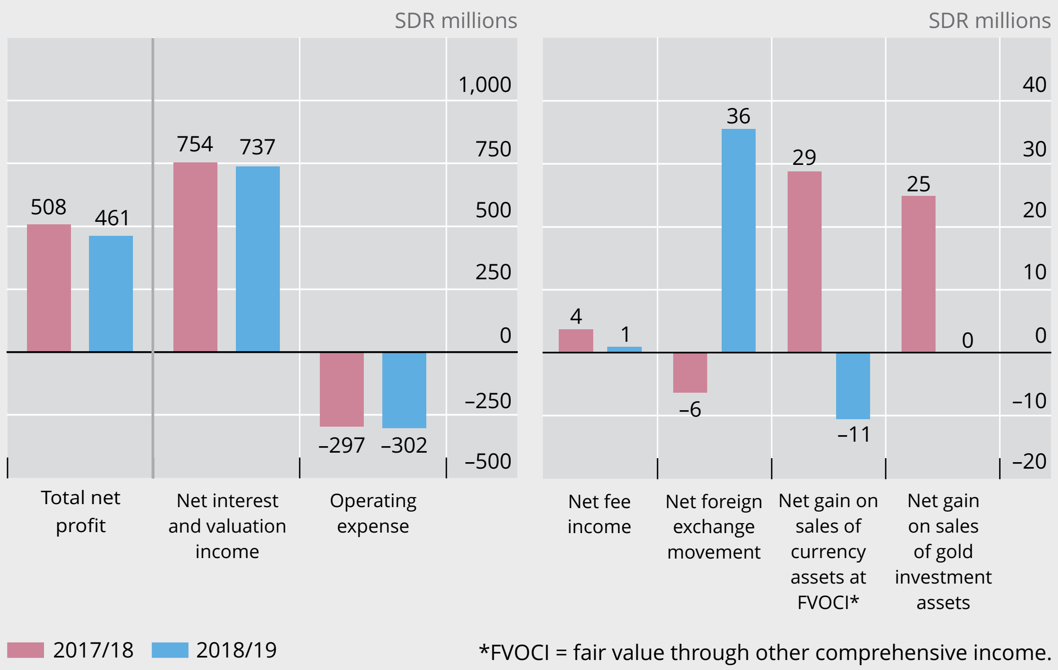
–

Operating expense

SDR 302 million

including administrative expense, depreciation and impairment

Analysis of net profit



*FVOCI = fair value through other comprehensive income.

Total comprehensive income

The Bank's total comprehensive income for 2018/19 was SDR 725 million, up from SDR 426 million in 2017/18.

In addition to net profit, total comprehensive income includes three valuation changes:

Net movement on currency assets at fair value through other comprehensive income

SDR 218 million

primarily because SDR bond yields were lower at year-end

Net movement on gold at fair value through other comprehensive income

SDR 74 million

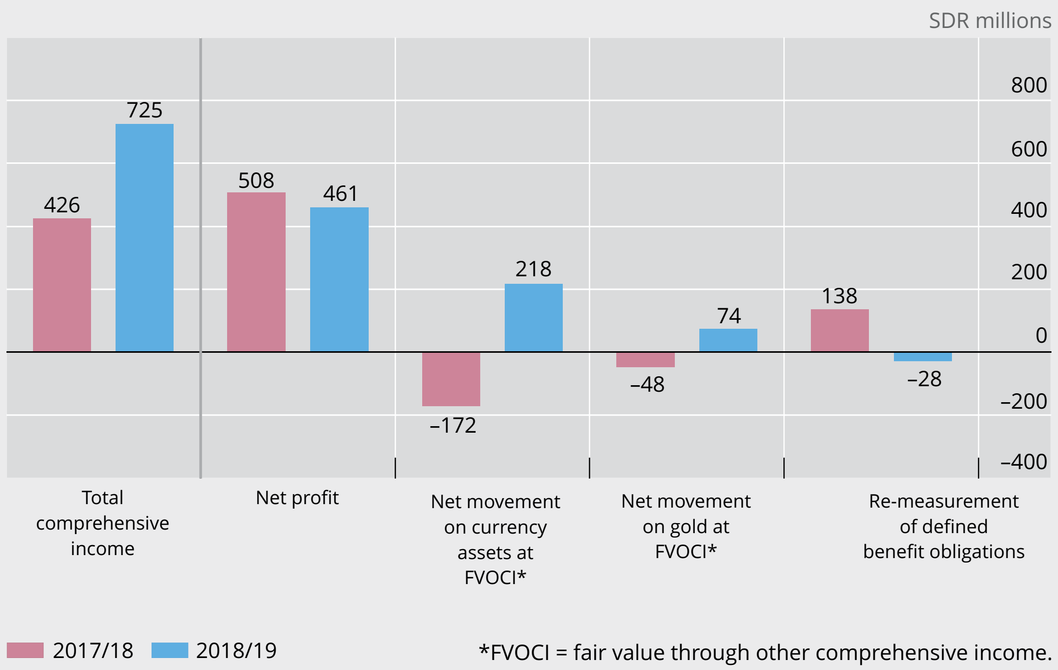
reflecting a 2.5% increase in the gold price

Re-measurement of defined benefit obligations

SDR –28 million

due to a higher actuarial valuation of the liabilities resulting from a decrease in the discount rates used

Analysis of total comprehensive income



*FVOCI = fair value through other comprehensive income.

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. The dividend policy also allows for the possibility of a supplementary dividend in years when profits are high and the Bank's financial circumstances allow.

Consistent with the dividend policy, it is proposed to declare a normal dividend of SDR 245 per share for financial year 2018/19. The proposed dividend would be paid on 558,125 eligible shares at a total cost of SDR 136.7 million.

Proposed allocation of net profit

In accordance with Article 51 of the BIS Statutes, the Board of Directors recommends that the General Meeting allocate the 2018/19 net profit of SDR 461 million in the following manner:

SDR 136.7 million	SDR 16.2 million	SDR 308.2 million
to be paid as a dividend of SDR 245 per share	to be transferred to the general reserve fund	to be transferred to the free reserve fund

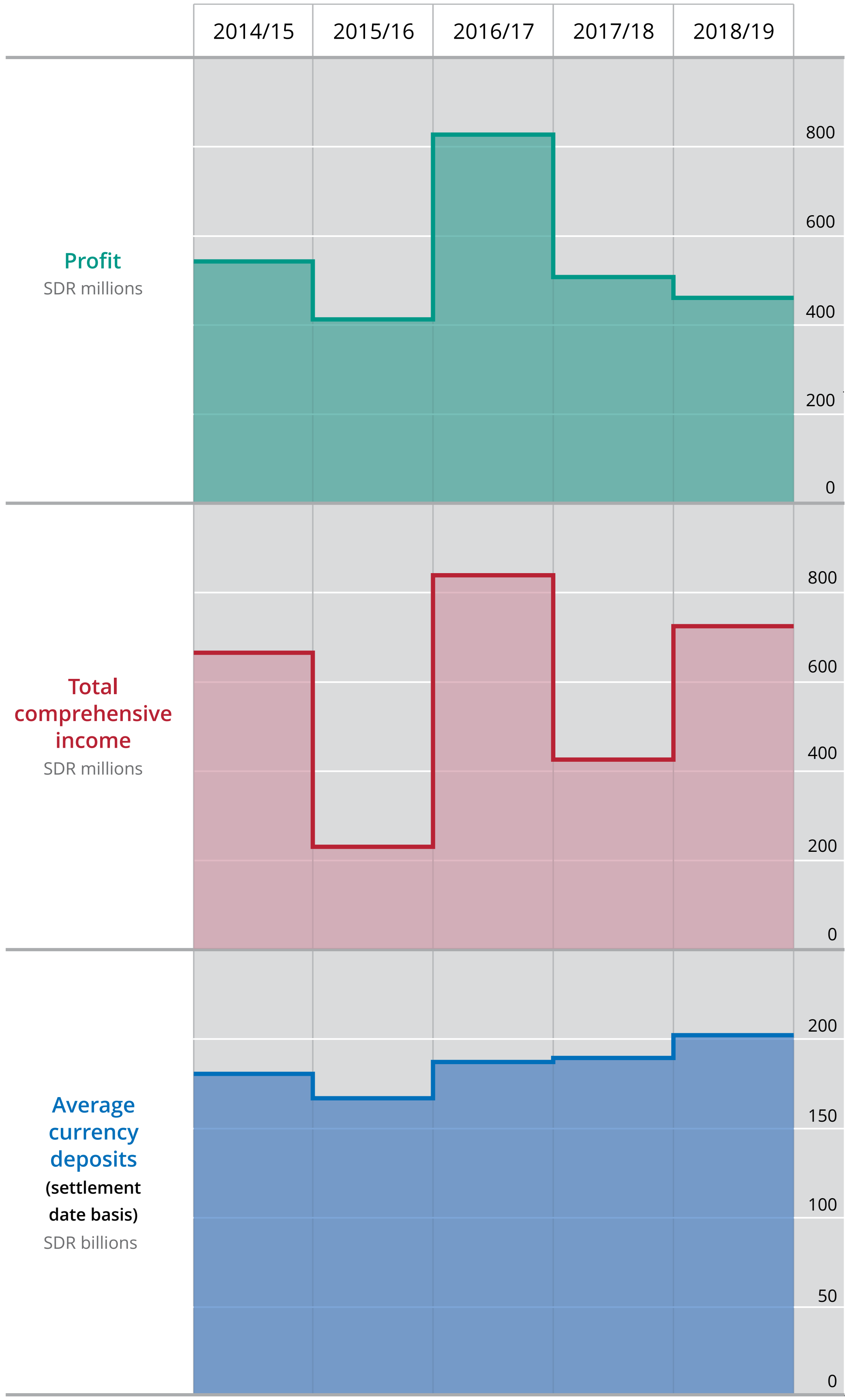
The Annual General Meeting will also be asked to decide that the SDR 0.7 million adjustment arising from the change in accounting policy at 1 April 2018 (described in note 1 to the financial statements) be allocated to the free reserve fund.

Independent auditor

Report of the auditor
The BIS financial statements for the year ended 31 March 2019 have been audited by Ernst & Young, which confirmed that it gives a true and fair view of the Bank's financial position and of its financial performance and its cash flows for the year then ended. The audit report can be found on pages 172–173.

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 2019 was the seventh and final year of Ernst & Young's term as auditor. Following a selection process involving the Bank's Management and the Audit Committee, it is intended that PricewaterhouseCoopers will become the Bank's new auditor; a resolution to appoint it for 2019/20 will be presented to the Annual General Meeting.

Five-year graphical summary



Annual Report

6

Governance and organisation

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

General Meetings

Sixty central banks and monetary authorities are currently members of the BIS, each having rights of voting and representation at General Meetings. The BIS Annual General Meeting (AGM) is held within four months of the end of the financial year on 31 March. The AGM approves the Annual Report and the accounts of the Bank, decides on the distribution of a dividend and elects the Bank's auditor.

BIS member central banks

Bank of Algeria	Algeria
Central Bank of Argentina	Argentina
Reserve Bank of Australia	Australia
Central Bank of the Republic of Austria	Austria
National Bank of Belgium	Belgium
Central Bank of Bosnia and Herzegovina	Bosnia and Herzegovina
Central Bank of Brazil	Brazil
Bulgarian National Bank	Bulgaria
Bank of Canada	Canada
Central Bank of Chile	Chile
People's Bank of China	China
Central Bank of Colombia	Colombia
Croatian National Bank	Croatia
Czech National Bank	Czech Republic
Danmarks Nationalbank	Denmark
Bank of Estonia	Estonia
European Central Bank	Euro area
Bank of Finland	Finland
Bank of France	France
Deutsche Bundesbank	Germany
Bank of Greece	Greece
Hong Kong Monetary Authority	Hong Kong SAR
Magyar Nemzeti Bank	Hungary
Central Bank of Iceland	Iceland
Reserve Bank of India	India
Bank Indonesia	Indonesia
Central Bank of Ireland	Ireland
Bank of Israel	Israel
Bank of Italy	Italy
Bank of Japan	Japan
Bank of Korea	Korea
Bank of Latvia	Latvia
Bank of Lithuania	Lithuania
Central Bank of Luxembourg	Luxembourg
National Bank of the Republic of North Macedonia	North Macedonia
Central Bank of Malaysia	Malaysia
Bank of Mexico	Mexico
Netherlands Bank	Netherlands
Reserve Bank of New Zealand	New Zealand
Central Bank of Norway	Norway
Central Reserve Bank of Peru	Peru
Bangko Sentral ng Pilipinas	Philippines
Narodowy Bank Polski	Poland
Bank of Portugal	Portugal
National Bank of Romania	Romania
Central Bank of the Russian Federation	Russia
Saudi Arabian Monetary Authority	Saudi Arabia
National Bank of Serbia	Serbia
Monetary Authority of Singapore	Singapore
National Bank of Slovakia	Slovakia
Bank of Slovenia	Slovenia
South African Reserve Bank	South Africa
Bank of Spain	Spain
Sveriges Riksbank	Sweden
Swiss National Bank	Switzerland
Bank of Thailand	Thailand
Central Bank of the Republic of Turkey	Turkey
Central Bank of the United Arab Emirates	United Arab Emirates
Bank of England	United Kingdom
Board of Governors of the Federal Reserve System	United States

Annual Report

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 Chairman from among its members for a three-year term and may elect a Vice-Chairman. The current Chairman is Jens Weidmann, President of the Deutsche Bundesbank, who was re-elected on 31 October 2018 for a second three-year term with effect 1 November 2018.

In line with Article 27 of the BIS Statutes, the Board may have up to 18 Directors. These include six ex officio Directors (the central bank Governors of Belgium, France, Germany, Italy, the United Kingdom and the United States), who may jointly appoint one other Director of the nationality of one of their central banks. In addition, 11 Governors of other member central banks may be elected to the Board.

Photo: *BIS Board of Directors as of May 2019, with the BIS General Manager*

Standing, left to right: John C Williams (Federal Reserve Bank of New York, New York), Ignazio Visco (Bank of Italy, Rome), Shaktikanta Das (Reserve Bank of India, Mumbai), Jerome H Powell (Board of Governors of the Federal Reserve System, Washington DC), Mark Carney (Bank of England, London), Mario Draghi (European Central Bank, Frankfurt am Main), Stephen S Poloz (Bank of Canada, Ottawa), Stefan Ingves (Sveriges Riksbank, Stockholm), Juyeol Lee (Bank of Korea, Seoul), Pierre Wunsch (National Bank of Belgium, Brussels).

Seated, left to right: Alejandro Díaz de León (Bank of Mexico, Mexico City), François Villeroy de Galhau (Bank of France, Paris), Agustín Carstens (BIS General Manager), Jens Weidmann (Chairman; Deutsche Bundesbank, Frankfurt am Main), Yi Gang (People's Bank of China, Beijing), Klaas Knot (Netherlands Bank, Amsterdam), Thomas Jordan (Swiss National Bank, Zurich), Roberto Campos Neto (Central Bank of Brazil, Brasília).

Not pictured: Haruhiko Kuroda (Bank of Japan, Tokyo).

Advisory committees

Four advisory committees assist the Board:




Administrative Committee: reviews key areas of the Bank's administration, such as budget and expenditures, human resources policies and information technology. Chaired by Haruhiko Kuroda.

Audit Committee: examines matters related to the Bank's internal control systems and financial reporting. Chaired by Stephen S Poloz.

Banking and Risk Management Committee: reviews and assesses the Bank's financial objectives, its business model for banking operations and its risk management frameworks. Chaired by Stefan Ingves.

Nomination Committee: deals with the appointment of members of the BIS Executive Committee. Chaired by Jens Weidmann.

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 1,024,620 as of 1 April 2019. Board members also receive an attendance fee for each Board meeting in which they participate. Assuming that the full Board is represented in all Board meetings, the annual total of these attendance fees amounts to CHF 970,704.

Changes in the Board

In June 2018, William C Dudley was replaced in his position as President of the Federal Reserve Bank of New York by John C Williams. Mr Williams was appointed to replace Mr Dudley as a BIS Director by Jerome Powell, Chairman of the Board of Governors of the Federal Reserve System (from 18 June 2018 until 31 December 2018; see also below). On 10 December 2018, Urjit Patel stepped down as Governor of the Reserve Bank of India and thereby left the BIS Board. His successor as Governor of the Reserve Bank of India, Shaktikanta Das, was elected to the Board with effect from 22 January 2019 for a period of three years.

In the context of the changes to Article 27 of the BIS Statutes, which allow for greater flexibility in the Board's composition and which came into effect on

1 January 2019, Juyeol Lee, Governor of the Bank of Korea, was elected to the Board with effect 1 January 2019 for a period of three years. Moreover, four appointed BIS Directors left the Board with effect 31 December 2018: John Cunliffe (Bank of England), Andreas Dombret (formerly Deutsche Bundesbank), Fabio Panetta (Bank of Italy) and Pierre Wunsch (National Bank of Belgium). Instead, the six ex officio Directors of the BIS jointly appointed John C Williams, President of the Federal Reserve Bank of New York, as a BIS Director for a term of three years effective 1 January 2019.

On 1 January 2019, Jan Smets retired from his position as Governor of the National Bank of Belgium, and therefore also from the BIS Board. Pierre Wunsch, his successor at the National Bank of Belgium, took up his ex officio seat on the BIS Board on 2 January 2019. Ilan Goldfajn stepped down as Governor of the Central Bank of Brazil on 27 February 2019 and thereby also left the BIS Board. With effect 19 March 2019, the Board elected Roberto Campos Neto, Mr Goldfajn's successor in Brazil, as a new Board member for a period of three years.

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 three BIS departments (the General Secretariat, the Banking Department and the Monetary and Economic Department), the Economic Adviser and Head of Research, and the General Counsel.

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

Changes in Management

With effect from 1 November 2018, Siddharth Tiwari, Chief Representative of the BIS Representative Office for Asia and the Pacific, became a senior official and thereby a member of the senior management team of the BIS.

Senior management remuneration

The salaries of senior officials are regularly benchmarked against compensation in comparable institutions and market segments. As of 1 July 2018, their annual remuneration, before expatriation and other applicable allowances, is based on the salary structure of CHF 696,100 for the General Manager, CHF 589,008 for the Deputy General Manager and CHF 535,462 for Heads of Department. In addition, the General Manager enjoys enhanced pension rights.

Photo: *BIS Management as of May 2019, from left to right:* Claudio Borio (Head of Monetary and Economic Department), Stijn Claessens (Deputy Head of Monetary and Economic Department), Monica Ellis (Secretary General), Hyun Song Shin (Economic Adviser and Head of Research), Bertrand Legros (Deputy Secretary General), Fernando Restoy (Chairman of Financial Stability Institute), Agustín Carstens (General Manager), Diego Devos (General Counsel), Luiz Awazu Pereira da Silva (Deputy General Manager), Jens Ulrich (Head of Risk Management), Peter Zöllner (Head of Banking Department), Jean-François Rigaudy (Deputy Head of Banking Department), Siddharth Tiwari (Chief Representative for Asia and the Pacific).

Organisation

The BIS has three main departments. Two of these encompass the two principal activities of the Bank – economic research and banking – while the third provides general internal support.

The BIS is further supported by the Legal Service and the Risk Management, Internal Audit and Compliance units. In addition, the BIS's Financial Stability Institute promotes the implementation of global regulatory standards and sound supervisory practices worldwide.

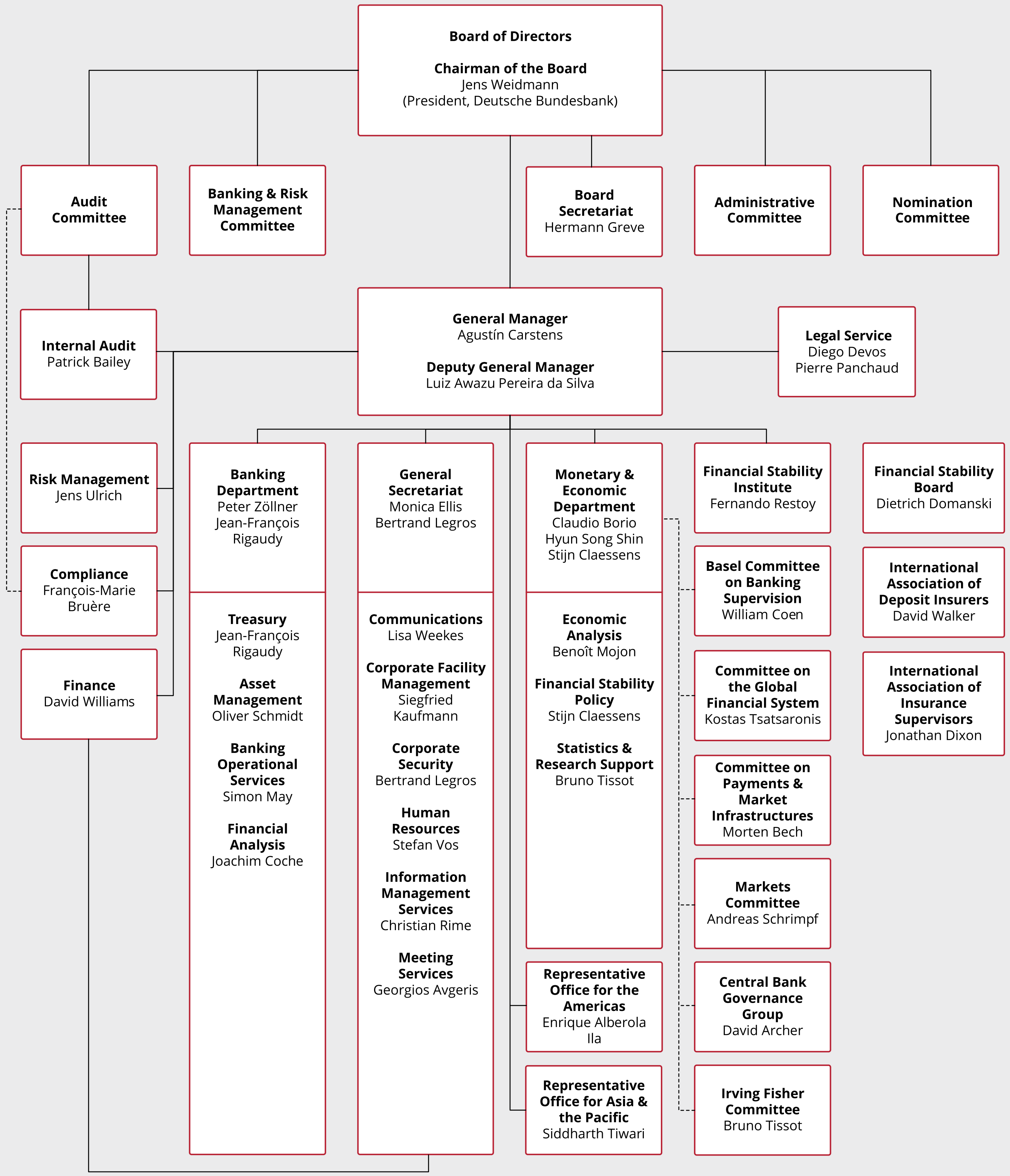
The **Monetary and Economic Department** undertakes research and analysis to shape the understanding of policy issues concerning central banks, provides committee support and organises key meetings of senior central bankers and other officials in charge of financial stability.

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

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 pages 41–5). A number of international groups engaged in the pursuit of financial stability have their secretariats at the BIS (see pages 52–66).

Organisation of the BIS, May 2019



Staff

The Bank's employees are its greatest asset. BIS staff have expertise in finance, banking, risk management, international law, monetary and financial economics, statistics, financial technology and cyber security, among other fields.

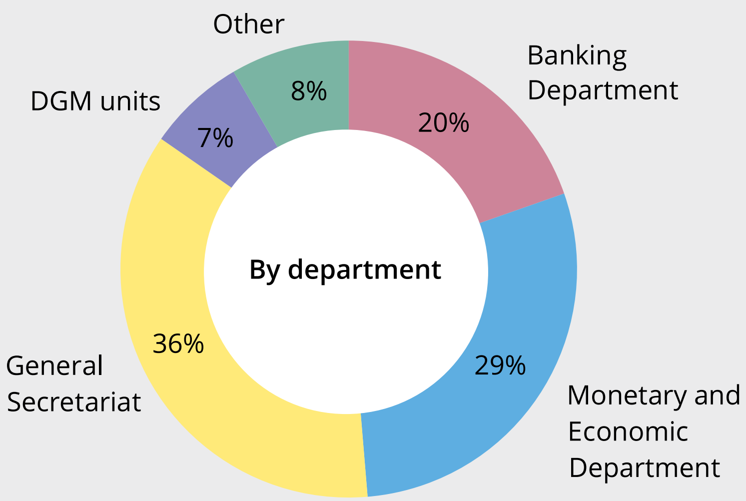
The BIS is a small and diverse organisation. As of 31 March 2019, the Bank employed 606 staff members, excluding hosted associations. Its modest size encourages collaboration and knowledge-sharing both inside and outside the institution.

606
Staff members
(March 2019)

39% **Female**

61% **Male**

62 **Nationalities**



Annual Report

Meet our people

Alan
Research Analyst, MED

This past year, I have been engaged in several joint initiatives as part of the Innovation BIS 2025 data dissemination project and thus exposed to a variety of new statistical tools and techniques. I have contributed to the development of a new internal catalogue of databases, evaluated different software libraries for interactive graphs, and tested a pilot infrastructure for distributed data storage and processing.

One trend in my day-to-day work is towards fully automatising data retrieval from web sources. We have also been using state-of-the-art visualisation tools and reactive programming libraries to build web-based analytical applications. For example, the BIS launched FRAME, an online interactive repository of studies on the effects of financial regulations (see page 20). FRAME lets users plot the distributions of the estimated effects of a given regulation on a number of variables.

Michela
Senior Business Analyst, Banking Department

Every other year, the Banking Department collects and compiles information on central banks' reserve management practices. I lead this effort, from the creation of the questionnaire to the drafting and presentation of the results to our customers.

Last year we collected information from 125 central banks worldwide, the highest number since the inception of the survey in 2012, representing over 90% of global foreign exchange reserves and helping make it one of the most authoritative sources of reserve management intelligence. The survey touches upon a broad set of reserve management topics, including strategic asset allocation, portfolio and risk management, and governance aspects.

Our survey helps shed some light on how reserve management practices have evolved, and in particular how central banks have been gradually broadening the range of assets and currencies in which they invest. Our customers often get in touch to know about reserve management trends at peer institutions or particular aspects related to reserve management.

Ana
Senior Economist, Americas Office

I am contributing to the new research network on monetary policy frameworks. These frameworks have been in constant evolution, especially since the Great Financial Crisis. It started with the inclusion of financial stability considerations in policymaking and the need to expand the monetary policy toolkit. These have imposed tremendous challenges for communication. Our goal is to boost research that could lead to a more formal analysis of these topics and improvements in current monetary policy frameworks and communication, one of the BIS research priorities under the Innovation BIS 2025 strategy. It is a coordinated effort, since the network will be run in parallel with other BIS networks.

Being at the BIS has allowed me the opportunity to think deeper on the subjects I am passionate about. In my previous job, I had to do daily tasks related to policy, which was interesting and demanding, but I had little time for reflexion. I think this is the great value the BIS adds: leading intellectual analysis on monetary and financial policies.

Alina
Associate, Banking Department

I joined the BIS Graduate Programme within the Banking Department's Financial Analysis group this year. During my time here I have worked on developing an application for analysing trends in central bank communication using natural language processing (NLP) techniques. Text mining and NLP algorithms have become more popular recently because of the increasing amount of information available through different media channels. These analyses can be used to either identify market reactions to news releases, or to extract customer insights from communication patterns.

Although central bank communications are generally well studied, few studies have attempted to analyse the communications in an unsupervised and automated fashion. By using machine learning to identify the themes present in different central bank communications – such as central bankers' speeches – we can see how central bankers' interests develop through time, creating new insights into the customers that drive our business.

Wei
Visiting Member of Secretariat, CPMI

Coming from bank supervision, I was mainly familiar with the BIS through the Basel capital standards. But shortly after joining the CPMI Secretariat, I was amazed by the myriad endeavours and talent at the BIS that support monetary and financial stability. The CPMI is at the forefront of monitoring fintech developments and promoting safety and efficiency in the rapidly evolving area of global payment, clearing and settlement.

It has been gratifying to support the work on central counterparty default management auctions, currently a hot topic in the industry and the regulatory community. I helped organise an industry workshop on these auctions, and together with colleagues from around the world managed the drafting of a consultative report.

Thomas
Deputy Head of Regional Treasury and Asset Management, Asian Office

My team builds infrastructure that enables the BIS to invest in the Chinese renminbi market, and develop renminbi products that facilitate central banks' inclusion of the currency in their FX reserves. As the BIS is one of the largest Special Drawing Right (SDR) users, the renminbi's inclusion in the SDR necessitated both significant portfolio rebalancing and an infrastructure upgrade. In 2016, facilitated by its fully fledged dealing room in Hong Kong SAR, the BIS became one of the earliest offshore investors to directly trade in the onshore renminbi FX market through CFETS (China Foreign Exchange Trade System). This made our renminbi investment process more efficient, allowing us to keep providing SDR-denominated banking services to the central bank community.

More recently, with support from the Chinese authorities, the BIS became one of the earliest foreign official investors to sign the National Association of Financial Market Institutional Investors (NAFMII) Bond Repurchase Master Agreement. With an enlarged investment universe, access to more hedging tools and more counterparties to provide trading liquidity in the future, we aim to develop a full range of renminbi products to serve central banks' needs.

Communications and outreach

The BIS is taking steps to communicate better with its stakeholders and the broader public.

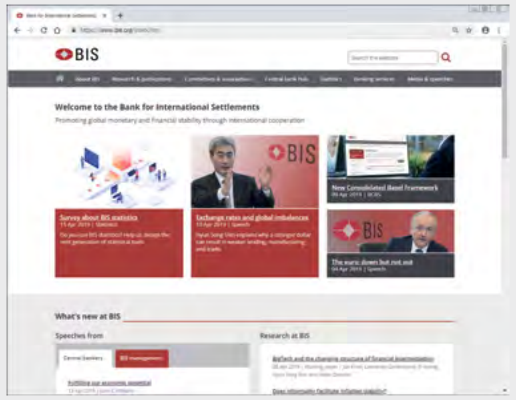
To cater for broader audiences, more effort is being put into providing materials in simpler language alongside the more complex texts intended for technical experts. Likewise, video, visuals and explainers are being used increasingly to reach out to new audiences.

Engagement with the local community

The BIS's connections with the city of Basel and Switzerland have been strong since its establishment. This last year saw a number of opportunities to further strengthen these ties and build better awareness locally of the Bank's activities. Each year the BIS welcomes a number of local groups who want to learn more about the Bank, including secondary schools, universities and service organisations.

While the BIS keeps in regular contact with the Basel city authorities, in September it was honoured to receive a delegation from the Ständerat (Council of States), the upper chamber of Switzerland's parliament, for the first time.

Major projects in the past year to improve communications:



A complete redesign of the BIS website, making the user experience much more pleasant for our web visitors (www.bis.org).

The introduction of dynamic charts in our online publications. These make it easier for people to use and interact with our data.

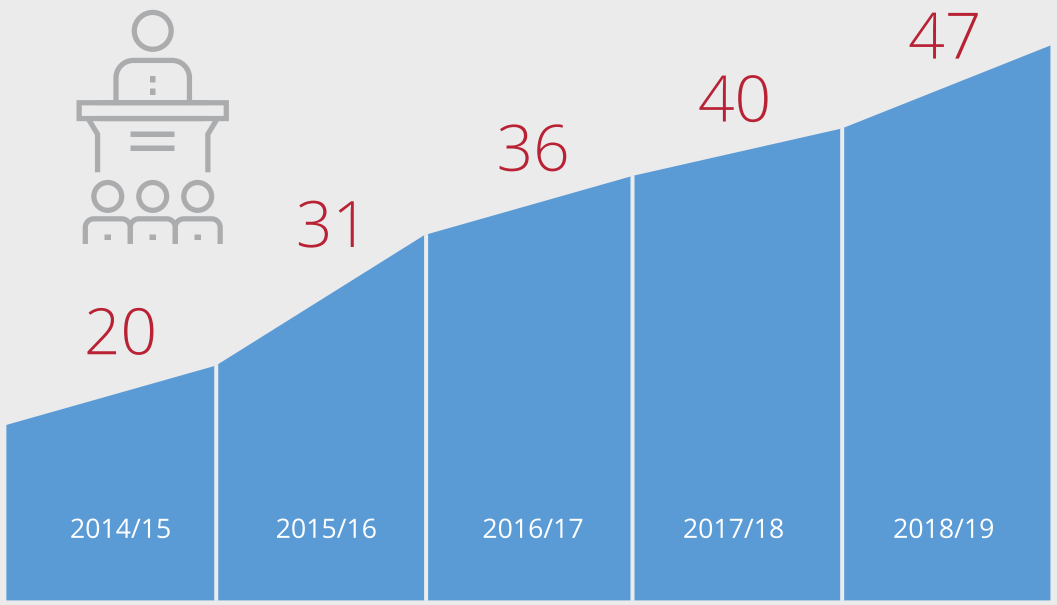
Also in September, General Manager Agustín Carstens presented a donation of CHF 1 million towards the renovation of the Stadtcasino Basel, one of Europe's oldest and most important music venues. Through its donations programme, the BIS provided financial support to another 23 charities and cultural and social activities in the Basel region last year.

A highlight for 2020 will be the BIS's 90th anniversary celebrations. Planning is under way for a public exhibition on the work of the BIS as part of this.

"The Stadtcasino Basel renovation is a project of great cultural significance for the local community. Our donation is an affirmation of the BIS's ongoing commitment to the city of Basel, which has been home to us for the past 88 years."

Agustín Carstens, BIS General Manager

Number of speeches by BIS Management (per financial year)



7

Financial statements

The BIS's financial statements for the financial year ended 31 March 2019 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 in Basel on 30 June 2019

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 2019.

Pursuant to Article 49 of the Bank's Statutes, they are presented in a form approved by the Board of Directors on 13 May 2019, and are subject to approval by shareholders at the Annual General Meeting.

The net profit for the year amounted to SDR 461.1 million, compared with SDR 508.1 million for the preceding year. The Board of Directors proposes, in application of Article 51 of the Bank's Statutes, that the Annual General Meeting apply the sum of SDR 136.7 million in payment of a dividend of SDR 245 per share, payable in any constituent currency of the SDR or in Swiss francs. The Board further recommends that SDR 16.2 million of the 2018/19 net profit be transferred to the general reserve fund and the remainder – amounting to SDR 308.2 million – to the free reserve fund.

As described in note 1 to the financial statements, the Bank changed its accounting policy for financial instruments effective 1 April 2018. The Board recommends that the decrease in the Bank's statutory reserves arising from the change in accounting policy be dealt with by deducting SDR 0.7 million from the free reserve fund.

If these proposals are approved, the Bank's dividend for the financial year ended 31 March 2019 will be payable to shareholders on 5 July 2019.

Basel, 5 June 2019

Agustín Carstens
General Manager

Luiz Awazu Pereira da Silva
Deputy General Manager

Contents

Balance sheet

As at 31 March

SDR millions	Note	2019	2018
Assets			
Cash and cash equivalents	2	60,756.4	73,615.8
Securities purchased under resale agreements	3	62,904.4	44,112.9
Loans and advances	3	41,856.5	21,962.8
Government and other securities	3	97,055.6	84,641.9
Gold and gold loans	4	19,654.3	23,429.6
Derivative financial instruments	5	2,564.9	1,725.1
Accounts receivable and other assets	6	6,115.2	6,809.0
Land, buildings and equipment	7	188.3	192.3
Total assets		**291,095.6**	256,489.4
Liabilities			
Currency deposits	8	241,604.6	211,665.6
Securities sold under repurchase agreements	9	549.1	2,095.0
Gold deposits	10	11,333.4	9,859.5
Derivative financial instruments	5	1,455.4	3,138.5
Accounts payable	11	15,116.8	9,381.2
Other liabilities	12	1,087.0	994.0
Total liabilities		**271,146.3**	237,133.8
Shareholders' equity			
Share capital	14	698.9	698.9
Less: shares held in treasury	14	(1.7)	(1.7)
Statutory reserves	15	16,326.3	15,950.1
Profit and loss account		461.1	508.1
Other equity accounts	16	2,464.7	2,200.2
Total shareholders' equity		**19,949.3**	19,355.6
Total liabilities and shareholders' equity		**291,095.6**	256,489.4

The presentation of the balance sheet for the 2018 figures has been changed from the previous year's financial statements as described in Note 1.

Profit and loss account

For the financial year ended 31 March

SDR millions	Note	2019	2018
Interest income	17	237.5	200.4
Interest expense	18	(449.4)	(382.8)
Net income on financial assets and liabilities at fair value through profit and loss	19	949.3	936.6
Net interest and valuation income		737.4	754.2
Net gain on sales of currency assets at fair value through other comprehensive income	20	(10.6)	28.8
Net gain on sales of gold investment assets	21	–	24.9
Net fee income	22	0.9	3.7
Net foreign exchange movement	23	35.6	(6.4)
Total income		763.3	805.2
Administrative expense	24	(280.0)	(277.4)
Depreciation	7	(22.2)	(19.7)
Operating expense		(302.2)	(297.1)
Net profit / (loss)		461.1	508.1

Effective 1 April 2018, the Bank applied a new classification and measurement approach for its financial instruments. The Bank has also updated the presentation of the profit and loss account. The new financial instrument classification terminology and presentation have been used for both years in the profit and loss account. As a result, the presentation of the 2018 figures has been changed from the previous year's financial statements as described in Note 1.

Statement of comprehensive income

For the financial year ended 31 March

SDR millions	Note	2019	2018
Net profit / (loss)		461.1	508.1
Other comprehensive income			
Items that are or may subsequently be reclassified to profit and loss			
Currency assets at fair value through other comprehensive income			
Net change in fair value during the year		207.2	(142.9)
Net change in expected credit loss impairment provision		0.1	–
Reclassification to profit and loss		10.6	(28.8)
Net movement on currency assets at fair value through other comprehensive income		**217.9**	(171.7)
Gold at fair value through other comprehensive income			
Net change in fair value during the year		74.1	(23.2)
Reclassification to profit and loss		–	(24.9)
Net movement on gold at fair value through other comprehensive income		**74.1**	(48.1)
Items that will not be reclassified to profit and loss			
Re-measurement of defined benefit obligations	16B	**(28.2)**	137.5
Total comprehensive income		724.9	425.8

Effective 1 April 2018, the Bank applied a new classification and measurement approach for its financial instruments. The Bank also updated the presentation of the statement of comprehensive income. The new financial instrument classification terminology and presentation have been used for both years in the statement of comprehensive income. As a result, the presentation of the 2018 figures has been changed from the previous year's financial statements as described in Note 1.

Annual Report

Statement of cash flows

For the financial year ended 31 March

SDR millions	Note	2019	2018
Cash flow from / (used in) operating activities			
Interest and similar income received		306.3	268.5
Interest and similar expenses paid		(442.4)	(356.6)
Net fee income	22	0.9	3.7
Net foreign exchange transaction gain	23	16.1	11.4
Administrative expense	24	(280.0)	(277.4)
Adjustments			
Net income on financial assets and liabilities at fair value through profit and loss	19	949.3	936.6
Net foreign exchange translation movement	23	19.5	(17.8)
Change in accruals and amortisation		(76.0)	(94.4)
Change in operating assets and liabilities			
Currency deposits		31,635.9	15,253.9
Currency banking assets		(47,507.0)	4,552.6
Gold deposits		1,473.9	(75.0)
Gold banking assets		3,849.6	3,793.5
Accounts receivable and other assets		1.4	(0.3)
Accounts payable and other liabilities		245.2	62.9
Net derivative financial instruments		(2,522.9)	1,810.6
Net cash flow from / (used in) operating activities		(12,330.2)	25,872.2
Cash flow from / (used in) investment activities			
Change in currency investment assets		1,166.3	(1,596.1)
Change in currency investment assets held at fair value through profit and loss		–	–
Change in gold investment assets		(0.2)	29.8
Change in securities sold under repurchase agreements in investment portfolios		(1,545.9)	686.2
Capital expenditure on land, buildings and equipment	7	(18.1)	(15.1)
Net cash flow from / (used in) investment activities		(397.9)	(895.2)

SDR millions	Note	2019	2018
Cash flow from / (used in) financing activities			
Dividends paid		(131.2)	(167.4)
Net cash flow used in financing activities		(131.2)	(167.4)
Total net cash flow		(12,859.3)	24,809.6
Net effect of exchange rate changes on cash and cash equivalents		(2,236.5)	2,041.8
Net movement in cash and cash equivalents		(10,622.8)	22,767.8
Net change in cash and cash equivalents		(12,859.3)	24,809.6
Cash and cash equivalents, beginning of year	2	73,615.8	48,806.2
Cash and cash equivalents, end of year	2	60,756.4	73,615.8

Effective 1 April 2018, the Bank applied a new classification and measurement approach for its financial instruments. The Bank has also updated the presentation of the statement of cash flows. The new classification terminology and presentation have been used for both years in the statement of cash flows. As a result, the presentation of the 2018 figures has been changed from the previous year's financial statements as described in Note 1.

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: Gold and securities revaluation	Shareholders' equity
Balance as at 31 March 2017		**698.9**	**(1.7)**	**15,289.9**	**827.6**	**(347.6)**	**2,630.1**	**19,097.2**
Payment of 2016/17 dividend		–	–	–	(167.4)	–	–	(167.4)
Allocation of 2016/17 profit	15	–	–	660.2	(660.2)	–	–	–
Total comprehensive income		–	–	–	508.1	137.5	(219.8)	425.8
Balance as at 31 March 2018		**698.9**	**(1.7)**	**15,950.1**	**508.1**	**(210.1)**	**2,410.3**	**19,355.6**
Change of accounting policy	1	–	–	(0.7)	–	–	0.7	–
Balance as at 1 April 2018		**698.9**	**(1.7)**	**15,949.4**	**508.1**	**(210.1)**	**2,411.0**	**19,355.6**
Payment of 2017/18 dividend		–	–	–	(131.2)	–	–	(131.2)
Allocation of 2017/18 profit	15	–	–	376.9	(376.9)	–	–	–
Total comprehensive income		–	–	–	461.1	(28.2)	292.0	724.9
Balance as at 31 March 2019		**698.9**	**(1.7)**	**16,326.3**	**461.1**	**(238.3)**	**2,703.0**	**19,949.3**

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.

Accounting policies

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

Effective 1 April 2018, the Bank applied a new classification and measurement approach for its financial instruments. The new approach described in the accounting policies set out below amended the terminology of the classifications used for financial instruments, but did not change the underlying accounting other than through the implementation of an expected credit loss (ECL) impairment provision, the value of which at 1 April 2018 was SDR 0.7 million. The Bank elected not to restate comparative figures, and the financial statements have been adjusted to show the impact of this change on the opening statutory reserves. Following this change in accounting policy, the Bank has updated the presentation of its balance sheet, profit and loss account, statement of comprehensive income and statement of cash flows. The updated presentation and new terminology have been used throughout the financial statements.

Note 1 to the financial statements describes the change of accounting policy for financial instruments, and the update to the presentation of the financial statements.

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 reporting 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 policy 10).

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

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 investment entities operated by the Bank or on behalf of the staff pension fund (which are reporting entities with their own financial statements, but which do not have separate legal personality from the Bank). Unless otherwise stated, such transactions are not included in these financial statements.

3. Functional and presentation currency

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

Monetary assets and liabilities are translated into SDR at the exchange rates ruling at the balance sheet date. Other assets and liabilities and profits and losses are translated into SDR at the exchange rates ruling at the date of the transaction. Exchange differences arising from the retranslation of monetary assets and liabilities and from the settlement of transactions are included as net foreign exchange movements 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 “Interest Income”.

Fair value through other comprehensive income (FVOCI)

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

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

FVOCI financial assets are measured in the balance sheet at fair value. In addition, an amortised cost book value is calculated using the effective interest rate method, including an adjustment for the ECL impairment provision of each asset. Changes in the book value (due to the accrual of interest) are included as “Interest income” 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 or loss (FVPL)

All other financial assets are classified as FVPL. This includes:

- 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 or 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. As for stage 2, 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), which would change the future recognition of interest income.

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.
- For loan commitments: as a provision within other liabilities.

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 sell 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”.

Annual Report

Amortised cost

All other financial liabilities are classified as amortised cost.

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

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

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

A. Currency banking portfolios (“borrowed funds”)

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

B. Gold banking portfolio (“borrowed gold”)

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

C. Currency investment portfolios (“own funds”)

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

The Bank invests most of its shareholders’ equity in financial instruments. All 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.

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 15 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. They 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 (banking portfolios) or FVOCI (investment portfolios).

9. Loans and advances, and government and other securities

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

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

10. Gold and gold loans

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

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

The treatment of realised gains or losses on gold transactions, and unrealised gains and 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 movement" 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".

For gold investment assets held on 31 March 2003 (when the Bank changed its functional and presentation currency from the gold franc to the SDR), the deemed cost 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 all of them as 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 deposit products offered by the Bank to its customers. They are classified as FVPL.

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 (banking portfolios) or amortised cost (investment portfolios).

Annual Report

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. Unallocated gold deposits are classified as amortised cost. They are included in the balance sheet on a trade date basis at their weight in gold (translated at the gold market price and USD exchange rate into SDR) plus accrued interest.

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

15. Securities lending

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

17. Interest income and expense

Interest income and interest expense relates 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.

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.

The Bank's land is not depreciated. 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. 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.

21. Taxation

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

22. Post-employment benefit obligations

The Bank operates three post-employment benefit arrangements, respectively, for staff pensions, Directors' pensions, and staff health and accident insurance. An independent actuarial valuation is performed annually for each arrangement.

A. Staff pensions

The liability in respect of the staff pension fund is based on the present value of the defined benefit obligation less the fair value of the 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 fund assets. Past service costs from plan amendments are immediately recognised through profit or 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 subsequently included in profit and loss in future years.

B. Directors' pensions and staff post-employment health and accident benefits

The liability, defined benefit obligation, amount charged to the profit and loss account, and 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 fund.

23. 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. Change of accounting policy for financial instruments, and update to the presentation of the financial statements

A. Change of accounting policy for financial instruments

To reflect developments in global financial reporting, effective 1 April 2018, the Bank applied a new classification and measurement approach for its financial instruments.

The new approach reflects the business model in which the financial instruments are managed and the characteristics of their cash flows. The new classification includes three principal categories for financial assets: amortised cost, fair value through other comprehensive income (FVOCI) and fair value through profit and loss (FVPL). The former categories of loans and receivables and available for sale (AFS) financial assets are no longer used. The new approach did not change the classification of financial liabilities.

Under the new accounting policy, the Bank replaced its former incurred loss impairment model with a forward-looking expected credit loss (ECL) model. An ECL impairment provision is recognised at an amount equal to either 12-month ECL or lifetime ECL, depending on the change in credit quality of the counterparty since the date of the original transaction. The new impairment model applies to the following financial instruments that are not measured at FVPL: financial assets that are cash or debt instruments, and committed credit facilities.

This change in accounting policy affected the classification and measurement of financial assets for the year starting 1 April 2018, as follows:

- all financial assets formerly classified as AFS were reclassified as FVOCI under the new accounting policy; and
- all financial assets formerly classified as loans and receivables were reclassified as amortised cost under the new accounting policy.

No other financial instruments were reclassified. As a result, there was no change in the underlying accounting other than the implementation of an ECL impairment provision.

The ECL impairment provision relates primarily to financial assets which are classified as FVOCI or amortised cost. Reflecting the high credit quality or short residual maturity of these financial assets, the value of the ECL impairment provision at 1 April 2018 was SDR 0.7 million. The Bank elected not to restate comparative figures, and the financial statements have been adjusted to show the impact of this change on the opening statutory reserves.

The table below shows the impact of the change in accounting policy on the Bank's shareholders' equity. All other figures in the balance sheet were not impacted by the change in accounting policy.

SDR millions	31 March 2018 As originally presented	Change in accounting policy	1 April 2018 After the change in accounting policy
Shareholders' equity			
Statutory reserves	15,950.1	(0.7)	15,949.4
Other equity accounts	2,200.2	0.7	2,200.9

As at 31 March 2019, the change in the ECL impairment provision was immaterial, and is included within “Interest income” in the profit and loss account.

The new terminology of the revised classification system has been used for both financial years in these financial statements. As a result, financial assets which were presented in last year’s financial statements as AFS (or as loans and receivables) are presented using the new terminology of FVOCI (or amortised cost) in these financial statements.

Following the change in accounting policy, the Bank has updated the presentation of its balance sheet, profit and loss account, statement of comprehensive income and statement of cash flows.

B. Update to presentation of the balance sheet

Within the balance sheet, there are three changes. First, a new line has been created called “Cash and cash equivalents” to combine cash, sight and notice account balances. Previously, cash and sight accounts were reported as one line, while notice accounts were included under the heading “Loans and advances”. This new presentation provides a clearer link between the balance sheet and the statement of cash flows. Second, the former lines for “Treasury bills” and “Government and other securities” have been merged into the single line “Government and other securities”. Third, the order of presentation of line items in the balance sheet has been adjusted.

The table below shows the change in presentation for notice accounts and treasury bills. All other figures in the balance sheet were unchanged (except for a different order of presentation).

SDR millions	31 March 2018 As originally presented	Change in presentation for notice accounts and Treasury bills	Updated presentation as stated in these accounts
Assets			
Cash and cash equivalents (formerly “Cash and sight accounts”)	73,150.0	465.8	73,615.8
Loans and advances	22,428.6	(465.8)	21,962.8
Government and other securities	52,881.0	31,760.9	84,641.9
Treasury bills (no longer reported)	31,760.9	(31,760.9)	–

C. Update to presentation of the profit and loss account

Within the profit and loss account, there are four changes. First, all interest and valuation income on financial assets and liabilities classified as FVPL is reported in the line “Net income on financial assets and liabilities at fair value through profit and loss”. Previously, the interest component was reported under “Interest income” (financial assets) or “Interest expense” (financial liabilities), while the valuation component was reported under “Net valuation movement”. Under the new presentation, interest income and interest expense relate only to interest on financial instruments classified as FVOCI or amortised cost, and which has been calculated on an effective interest rate basis. Second, operating expense is analysed into two line items (“Administrative expense” and “Depreciation”), whereas formerly it was presented as a single line. Third, the order of presentation of the profit and loss account has been adjusted, with all income items presented first, followed by a new subtotal (“Total income”), with operating expense presented at the end. Previously, the income items which relate to gains on sale of investment assets (securities and gold) were presented after operating expense. Fourth, the new terminology “FVOCI” has replaced the former terminology “Available for sale”.

The table below shows the change in presentation for interest and valuation income on financial instruments classified as FVPL. All other figures were unchanged (except for the inclusion of additional analysis or subtotals, or a different order of presentation).

SDR millions	Financial year ended 31 March 2018 As originally presented	Change in presentation for interest and valuation income on financial instruments classified as FVPL	Updated presentation as stated in these accounts
Interest income	3,352.7	(3,152.3)	200.4
Interest expense	(2,598.8)	2,216.0	(382.8)
Net valuation movement (no longer reported)	0.3	(0.3)	–
Net income on financial assets and liabilities at fair value through profit or loss	–	936.6	936.6
Net interest and valuation income	754.2	–	754.2

D. Update to presentation of the statement of comprehensive income

There are two changes to the statement of comprehensive income. First in relation to the net movement on revaluation of currency investment assets and gold. These items were each previously presented as a single line. Under the new presentation, these data are now analysed into amounts reclassified to profit and loss during the year, and also other changes in value. Second, the new terminology “FVOCI” has replaced the former terminology “Available for sale”. These changes did not impact the figures presented in the statement of comprehensive income, except for the inclusion of additional analysis.

E. Update to presentation of the statement of cash flows

There are three changes to the statement of cash flows. First, the presentation of line items in the statement of cash flows has been changed to match the profit and loss presentation (under which interest income and expense relate only to interest on financial instruments classified as FVOCI or amortised cost, with all interest and valuation income on financial assets and liabilities classified as FVPL reported as “Net income on financial assets and liabilities at fair value through profit and loss”). Second, the former lines for “Sight and notice deposit account liabilities” and “Currency deposits” have been merged into the single line “Currency deposits”. Third, the statement of cash flows was updated with the new terminology “FVOCI” replacing the former terminology “Available for sale”.

The table below shows the change in presentation for interest and valuation income on financial assets and liabilities classified as FVPL, and for sight and notice deposit account liabilities.

SDR millions	31 March 2018 As originally presented	Change in presentation	Updated presentation as stated in these accounts
Cash flow from / (used in) operating activities			
Interest and similar income received	1,232.7	(964.2)	268.5
Interest and similar expenses paid	(1,221.1)	864.5	(356.6)
Net valuation movement (no longer reported)	0.3	(0.3)	–
Net income on financial assets and liabilities at fair value through profit or loss	–	936.6	936.6
Change in accruals and amortisation	742.2	(836.6)	(94.4)
Change in operating assets and liabilities			
Currency deposits	15,658.7	(404.8)	15,253.9
Sight and notice deposit account liabilities (no longer reported)	(404.8)	404.8	–
Total	16,008.0	–	16,008.0

2. Cash and cash equivalents

Cash and cash equivalents comprise sight accounts at central and commercial banks, as well as notice accounts at commercial banks. The balances are analysed in the table below:

As at 31 March

SDR millions	2019	2018
Balance at central banks	60,164.2	73,103.5
Balance at commercial banks	34.5	46.5
Total cash and sight accounts	60,198.7	73,150.0
Notice accounts	557.7	465.8
Total cash and cash equivalents	60,756.4	73,615.8

3. Currency assets

Currency assets comprise the following products:

Securities purchased under resale agreements ("reverse repurchase 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 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 2019

SDR millions	FVPL	FVOCI	Total
Securities purchased under resale agreements	62,355.2	549.2	62,904.4
Loans and advances	41,856.5	–	41,856.5
Government and other securities			
Treasury bills	45,332.1	21.4	45,353.5
Other government securities	13,980.9	14,277.5	28,258.4
Financial institutions	9,311.2	1,103.6	10,414.8
Other	12,375.6	653.3	13,028.9
Total government and other securities	80,999.8	16,055.8	97,055.6
Total currency assets	185,211.5	16,605.0	201,816.5

As at 31 March 2019

SDR millions	FVPL	FVOCI	Total
Securities purchased under resale agreements	42,017.7	2,095.2	44,112.9
Loans and advances	21,962.8	–	21,962.8
Government and other securities			
Treasury bills	31,637.9	123.0	31,760.9
Other government securities	14,599.8	14,132.3	28,732.1
Financial institutions	10,871.0	1,103.3	11,974.3
Other	11,811.0	363.6	12,174.6
	68,919.7	15,722.2	84,641.9
Total currency assets	132,900.2	17,817.4	150,717.6

The Bank lends some of its securities in exchange for a fee. Government and other securities which are transferred in securities lending transactions (and were not subject to de-recognition from the balance sheet to the extent of the Bank's continuing involvement) represented SDR 91.1 million as at 31 March 2019 (2018: SDR 59.7 million).

4. Gold and gold loans

As at 31 March

SDR millions	2019	2018
Gold investment assets	3,069.8	2,995.5
Gold banking assets	16,584.5	20,434.1
Total gold and gold loan assets	19,654.3	23,429.6
Comprising:		
Gold bars	19,141.1	23,429.6
Gold loans	513.2	–

Included in "Gold banking assets" is SDR 5,248.5 million (175 tonnes) of gold (2018: SDR 10,572.2 million; 361 tonnes) that the Bank holds in connection with its gold swap contracts.

5. Derivative financial instruments

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

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

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

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

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

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

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

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 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	2019			2018		
	Notional amounts	Fair values		Notional amounts	Fair values	
SDR millions		Assets	Liabilities		Assets	Liabilities
Cross-currency swaps	404.6	5.1	(9.3)	809.3	1.4	(76.2)
Currency and gold forwards	2,897.4	19.8	(16.4)	1,244.2	24.5	(22.4)
Currency and gold options	219.2	–	(0.5)	996.8	0.4	(0.7)
Currency and gold swaps	185,414.5	1,853.5	(521.9)	206,771.2	1,187.4	(2,297.9)
Forward rate agreements	6,967.2	2.7	(3.6)	4,557.3	1.0	(0.6)
Futures contracts	4,103.5	1.4	(1.1)	3,817.5	0.6	(0.6)
Interest rate swaps	249,397.8	682.4	(902.6)	213,145.7	509.8	(666.6)
Swaptions	–	–	–	3,645.5	–	(73.5)
Total derivative financial instruments	**449,404.2**	**2,564.9**	**(1,455.4)**	434,987.5	1,725.1	(3,138.5)

6. Accounts receivable and other assets

As at 31 March		
SDR millions	2019	2018
Financial transactions awaiting settlement	6,103.0	6,795.3
Other assets	12.2	13.7
Total accounts receivable and other assets	**6,115.2**	6,809.0

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

7. Land, buildings and equipment, and depreciation

For the financial year ended 31 March					2019	2018
SDR millions	Land	Buildings and installations	IT and other equipment	Computer software intangible assets	Total	Total
Historical cost						
Balance at beginning of year	46.4	285.7	23.8	58.4	414.3	406.7
Capital expenditure	–	5.9	3.2	9.0	18.1	15.1
Disposals and retirements	–	(0.6)	(3.2)	(8.6)	(12.4)	(7.6)
Balance at end of year	**46.4**	**291.0**	**23.8**	**58.8**	**420.0**	414.2
Depreciation						
Balance at beginning of year	–	177.2	13.8	30.9	221.9	209.8
Depreciation	–	10.2	3.7	8.3	22.2	19.7
Disposals and retirements	–	(0.6)	(3.2)	(8.6)	(12.4)	(7.6)
Balance at end of year	**–**	**186.8**	**14.3**	**30.6**	**231.7**	221.9
Net book value at end of year	**46.4**	**104.2**	**9.5**	**28.2**	**188.3**	192.3

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 12.4 million has been removed from the historical cost and from accumulated depreciation for the year ended 31 March 2019 (2018: SDR 7.6 million).

8. 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 10 years.

Callable MTIs (CMTIs) are MTIs that are callable at the option of the Bank at an exercise price of par. At 31 March 2019, the call date of all CMTIs had expired by the reporting date. At 31 March 2018, one CMTI had an option which expired during the year. The balance sheet total for CMTIs includes the fair value of the embedded interest rate option.

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

FRIBIS are floating rate investments at the Bank 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 Bank, 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 2019 and June 2019 (2018: between April 2018 and June 2018).

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 total currency deposits, including interest accrued to 31 March 2019, is SDR 241,874.4 million (2018: SDR 212,483.2 million).

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

As at 31 March

SDR millions	2019	2018
Repayable at one to three days' notice		
Sight and notice deposit accounts	13,006.6	15,584.9
Medium-Term Instruments (MTIs)	41,332.6	52,722.1
Callable MTIs (CMTIs)	4,515.9	4,951.1
Fixed-Rate Investments at the BIS (FIXBIS)	74,178.8	50,451.1
	133,033.9	123,709.2
Other currency deposits		
Floating Rate Investments of the BIS (FRIBIS)	1,029.4	1,056.2
Fixed-term deposits	107,325.6	86,680.9
Dual Currency Deposits (DCDs)	215.7	219.3
	108,570.7	87,956.4
Total currency deposits	**241,604.6**	211,665.6

9. Securities sold under repurchase agreements

As at 31 March

SDR millions	2019	2018
Amortised cost	549.1	2,095.0
Fair value through profit and loss	–	–
Total securities sold under repurchase agreements	**549.1**	2,095.0

10. Gold deposits

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

11. 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.

12. Other liabilities

As at 31 March

SDR millions	2019	2018
Post-employment benefit obligations (see note 13)		
Staff pensions	453.0	394.6
Directors' pensions	11.4	10.8
Health and accident benefits	597.9	567.1
Other liabilities	24.7	21.5
Total other liabilities	**1,087.0**	994.0

13. Post-employment benefit obligations

The Bank operates three post-employment arrangements:

1. A defined benefit pension arrangement for its staff in the event of retirement, disability or death. Under this arrangement, benefits accrue according to years of participation and pensionable remuneration. These benefits are paid out of a 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 participants in the arrangement. Except as shown in this note, and as described in note 5, "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.
2. An unfunded defined benefit arrangement for its Directors, whose entitlement is based on a minimum service period of 49 months.
3. An unfunded post-employment health and accident 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 health and accident benefits.

All three arrangements operate in Swiss francs and are valued annually by an independent actuary. During 2019/20, the Bank expects to make contributions of SDR 34.1 million (2018: SDR 33.3 million) to its post-employment arrangements. All matters of a general policy nature arising in connection with the management of the assets of the pension fund are dealt with by the Pension Fund Committee. The committee is chaired by the Deputy General Manager, and includes members of senior management, along with staff representatives and external pension experts. The Pension Fund Committee determines the investment policies of the fund, sets its risk tolerance, and establishes the long-term strategic allocation policy on the basis of regular asset liabilities studies. It also supervises the arrangements made by the Bank in this regard, including selecting external investment managers. If necessary, the Pension Fund Committee 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 health and accident benefits	
SDR millions	2019	2018	2019	2018	2019	2018
Present value of obligations	(1,617.3)	(1,538.1)	(11.4)	(10.8)	(597.9)	(567.1)
Fair value of fund assets	1,164.3	1,143.5	–	–	–	–
Liability at end of year	**(453.0)**	(394.6)	**(11.4)**	(10.8)	**(597.9)**	(567.1)

Annual Report

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 health and accident benefits	
SDR millions	**2019**	2018	**2019**	2018	**2019**	2018
Present value of obligations at beginning of year	(1,538.1)	(1,601.8)	(10.8)	(11.2)	(567.1)	(590.0)
Employee contributions	(6.9)	(6.9)	–	–	–	–
Benefit payments	45.7	54.6	0.4	0.5	3.6	3.4
Service cost	(56.8)	(61.2)	(0.6)	(0.6)	(25.8)	(27.9)
Interest cost	(13.6)	(10.9)	(0.1)	(0.1)	(5.7)	(4.1)
Actuarial gain / (loss) arising from experience adjustments	(4.2)	5.3	–	–	12.1	(1.9)
Actuarial gain / (loss) arising from changes in demographic assumptions	8.7	(7.1)	(0.1)	(0.1)	21.6	(7.0)
Actuarial gain / (loss) arising from changes in financial assumptions	(46.8)	55.6	(0.3)	0.5	(34.6)	47.3
Foreign exchange differences	(5.3)	34.3	0.1	0.2	(2.0)	13.1
Present value of obligations at end of year	**(1,617.3)**	(1,538.1)	**(11.4)**	(10.8)	**(597.9)**	(567.1)

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 health and accident benefits	
Years	**2019**	2018	**2019**	2018	**2019**	2018
Weighted average duration	**17.8**	18.0	**13.9**	13.7	**26.5**	26.0

C. Amounts recognised in the profit and loss account

For the financial year ended 31 March	Staff pensions		Directors' pensions		Post-employment health and accident benefits	
SDR millions	**2019**	2018	**2019**	2018	**2019**	2018
Service cost	(56.8)	(61.2)	(0.6)	(0.6)	(25.8)	(27.9)
Interest cost on net liability	(3.4)	(3.1)	(0.1)	(0.1)	(5.7)	(4.1)
Amounts recognised in operating expense	**(60.2)**	(64.3)	**(0.7)**	(0.7)	**(31.5)**	(32.0)

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 health and accident benefits	
SDR millions	**2019**	2018	**2019**	2018	**2019**	2018
Return on plan assets in excess of opening discount rate	16.2	37.4	–	–	–	–
Actuarial gain / (loss) arising from experience adjustments	(4.2)	5.3	–	–	12.1	(1.9)
Actuarial gain / (loss) arising from changes in demographic assumptions	8.7	(7.1)	(0.1)	(0.1)	21.6	(7.0)
Actuarial gain / (loss) arising from changes in financial assumptions	(46.8)	55.6	(0.3)	0.5	(34.6)	47.3
Foreign exchange gain or loss on items in other comprehensive income	(0.3)	3.5	–	0.1	(0.5)	3.9
Amounts recognised in other comprehensive income	**(26.4)**	94.7	**(0.4)**	0.5	**(1.4)**	42.3

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	**2019**	2018
Fair value of fund assets at beginning of year	1,143.5	1,140.5
Employer contributions	29.4	29.6
Employee contributions	6.9	6.9
Benefit payments	(45.7)	(54.6)
Interest income on plan assets	10.2	7.9
Return on plan assets in excess of opening discount rate	16.2	37.4
Foreign exchange differences	3.8	(24.2)
Fair value of fund assets at end of year	**1,164.3**	1,143.5

Annual Report

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	2019			2018		
SDR millions	Quoted in active market	Unquoted	Total	Quoted in active market	Unquoted	Total
Cash (including margin accounts)	87.4	–	87.4	72.2	–	72.2
Debt securities	243.5	–	243.5	256.8	–	256.8
Fixed income funds	169.7	–	169.7	169.9	–	169.9
Equity funds	443.8	38.1	481.9	441.0	43.5	484.5
Real estate funds	26.2	91.2	117.4	34.5	81.8	116.3
Commodity-linked notes	–	60.1	60.1	–	62.0	62.0
Derivative instruments	0.5	3.8	4.3	0.1	(18.3)	(18.2)
Total	**971.1**	**193.2**	**1,164.3**	974.5	169.0	1,143.5

G. Principal actuarial assumptions used in these financial statements

As at 31 March	2019	2018
Applicable to staff pension arrangement		
Discount rate	0.70%	0.90%
Applicable to post-employment health and accident benefit arrangement		
Discount rate	0.75%	1.00%
Applicable to Directors' pension arrangement		
Discount rate	0.60%	0.80%
Applicable to staff and Directors' pension arrangements		
Assumed increase in pensions payable	1.00%	1.00%
Applicable to staff pension arrangement		
Assumed average salary increase rate	2.60%	3.00%
Applicable to Directors' pension arrangement		
Assumed Directors' pensionable remuneration increase rate	1.00%	1.00%
Applicable to post-employment health and accident benefit arrangement		
Long-term medical cost inflation assumption	4.00%	4.00%

The assumed increases in staff salaries, Directors' pensionable remuneration and pensions payable incorporate an inflation assumption of 1.00% at 31 March 2019 (2018: 1.00%).

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	2019	2018
Current life expectancy of members aged 65		
Male	20.5	20.4
Female	22.6	22.5
Life expectancy of members aged 65 projected forward in 10 years' time		
Male	21.9	21.7
Female	23.7	23.6

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	2019	2018
Discount rate		
Increase by 0.5%	(134.2)	(129.2)
Decrease by 0.5%	153.6	147.7
Rate of salary increase		
Increase by 0.5%	40.4	38.5
Decrease by 0.5%	(37.2)	(36.9)
Rate of pension payable increase		
Increase by 0.5%	108.4	101.5
Decrease by 0.5%	(98.7)	(92.3)
Life expectancy		
Increase by one year	64.7	60.0
Decrease by one year	(63.1)	(58.4)

As at 31 March	Directors' pensions Increase / (decrease) in defined benefit obligation	
SDR millions	2019	2018
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	0.6
Decrease by 0.5%	(0.6)	(0.6)
Life expectancy		
Increase by one year	0.6	0.6
Decrease by one year	(0.6)	(0.6)

As at 31 March	Post-employment health and accident benefits Increase / (decrease) in defined benefit obligation	
SDR millions	2019	2018
Discount rate		
Increase by 0.5%	(72.3)	(66.9)
Decrease by 0.5%	86.1	79.4
Medical cost inflation rate		
Increase by 1.0%	163.6	150.0
Decrease by 1.0%	(118.2)	(108.6)
Life expectancy		
Increase by one year	56.8	53.3
Decrease by one year	(52.0)	(47.6)

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.

14. Share capital

The Bank's share capital consists of:

As at 31 March		
SDR millions	2019	2018
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: 559,125 shares	2,795.6	2,795.6
Paid-up capital (25%)	**698.9**	698.9

The number of shares eligible for dividend is:

As at 31 March	2019	2018
Issued shares	559,125	559,125
Shares held in treasury	(1,000)	(1,000)
Outstanding shares eligible for dividend	**558,125**	558,125

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

15. 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 2017	**69.8**	**3,656.5**	**184.0**	**11,379.6**	**15,289.9**
Allocation of 2016/17 profit	–	33.0	–	627.2	660.2
Balance at 31 March 2018	**69.8**	**3,689.5**	**184.0**	**12,006.8**	**15,950.1**
Allocation of ECL provision following change in accounting policy at 1 April 2018	–	–	–	(0.7)	(0.7)
Balance at 1 April 2018	69.8	3,689.5	184.0	12,006.1	15,949.4
Allocation of 2017/18 profit	–	18.8	–	358.1	376.9
Balance at 31 March 2019	**69.8**	**3,708.3**	**184.0**	**12,364.2**	**16,326.3**

At 31 March 2019, statutory reserves included share premiums of SDR 1,059.6 million (2018: SDR 1,059.6 million).

The Annual General Meeting will be asked to confirm that the SDR 0.7 million adjustment arising from the change of accounting policy at 1 April 2018 is allocated to the free reserve. In addition, 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 2019 profit:

SDR millions	2019
Net profit	**461.1**
Proposed dividend:	
SDR 245 per share on 558,125 shares	(136.7)
Profit available for allocation	**324.4**
Proposed transfers to reserves:	
General reserve fund	(16.2)
Free reserve fund	(308.2)
Balance after allocation to reserves	–

16. 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	2019	2018
Securities revaluation account	135.0	(83.6)
Gold revaluation account	2,568.0	2,493.9
Re-measurement of defined benefit obligations	(238.3)	(210.1)
Total other equity accounts	**2,464.7**	2,200.2

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 at FVOCI.

SDR millions	Fair value of assets	Historical cost	Securities revaluation account	Gross gains	Gross losses
As at 31 March 2019	16,605.0	16,470.8	**135.0**	157.0	(22.0)
As at 31 March 2018	17,817.4	17,901.0	(83.6)	43.2	(126.8)

The securities revaluation account at 31 March 2019 includes an ECL impairment provision of SDR –0.8 million (1 April 2018: SDR –0.7 million).

B. 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	2019	2018
Balance at beginning of year	(210.1)	(347.6)
Staff pensions	(26.4)	94.7
Directors' pensions	(0.4)	0.5
Post-employment health and accident insurance	(1.4)	42.3
Net movement on the re-measurement of defined benefit obligations	**(28.2)**	137.5
Balance at end of year	**(238.3)**	(210.1)

17. Interest income

For the financial year ended 31 March

SDR millions	2019	2018
Assets at amortised cost		
Cash and cash equivalents	14.4	9.1
Gold loan and sight accounts denominated in gold	0.3	0.1
	14.7	9.2
Financial assets classified at FVOCI		
Securities purchased under resale agreements	1.6	2.5
Government and other securities	209.6	169.3
	211.2	171.8
Interest income on liabilities classified at amortised cost	**11.6**	19.4
Total interest income	**237.5**	200.4

18. Interest expense

For the financial year ended 31 March

SDR millions	2019	2018
Liabilities classified at amortised cost		
Currency deposits: sight and notice deposit accounts	(282.7)	(167.7)
Gold deposits	–	–
Securities sold under repurchase agreements	(1.3)	(2.2)
	(284.0)	(169.9)
Interest expense on assets classified at amortised cost or FVOCI	**(165.4)**	(212.9)
Total interest expense	**(449.4)**	(382.8)

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

For the financial year ended 31 March

SDR millions	2019	2018
Financial assets		
Securities purchased under resale agreements	198.6	(68.1)
Loans and advances	508.8	142.9
Government and other securities	920.2	296.6
	1,627.6	371.4
Financial liabilities		
Currency deposits	(3,881.4)	(1,388.4)
	(3,881.4)	(1,388.4)
Derivative financial instruments	3,203.1	1,953.6
Net income on financial assets and liabilities at FVPL	949.3	936.6

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	2019	2018
Financial assets		
Interest	1,377.4	542.3
Realised and unrealised valuation movements	250.2	(170.7)
	1,627.6	371.6
Financial liabilities		
Interest	(3,514.1)	(1,871.9)
Realised and unrealised valuation movements	(367.3)	483.6
	(3,881.4)	(1,388.3)
Derivative financial instruments		
Interest	3,064.1	2,265.9
Realised and unrealised valuation movements	139.0	(312.6)
	3,203.1	1,953.3
Net income on financial assets and liabilities at FVPL	949.3	936.6

20. Net gain / (loss) on sales of currency assets at FVOCI

For the financial year ended 31 March

SDR millions	2019	2018
Disposal proceeds	10,853.3	4,188.7
Amortised cost	(10,863.9)	(4,159.9)
Net gain / (loss) on sales of currency assets at FVOCI	(10.6)	28.8
Comprising:		
Gross realised gains	47.6	35.9
Gross realised losses	(58.2)	(7.1)

21. Net gain on sales of gold investment assets

For the financial year ended 31 March

SDR millions	2019	2018
Disposal proceeds	–	29.7
Deemed cost	–	(4.8)
Net gain on sales of gold investment assets	–	24.9

The Bank did not sell any own gold during the financial year ended 31 March 2019.

22. Net fee income

For the financial year ended 31 March

SDR millions	2019	2018
Net third-party asset management fee income	13.5	12.6
Other fee income	3.6	3.1
Withholding taxes	(7.5)	(5.3)
Other fees and expenses	(8.7)	(6.7)
Net fee income	0.9	3.7

23. Net foreign exchange movement

For the financial year ended 31 March

SDR millions	2019	2018
Net transaction movement	16.1	11.4
Net translation movement	19.5	(17.8)
Net foreign exchange movement	35.6	(6.4)

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	2019	2018
Board of Directors		
Directors' fees	2.0	2.1
Pensions to former Directors	0.9	0.9
Travel and other costs	1.3	1.3
	4.2	4.3
Management and staff		
Remuneration	137.0	132.8
Pensions	82.2	86.4
Other personnel-related expense	64.9	64.2
	284.1	283.4
Office and other expense	84.7	76.9
BIS administrative expense	373.0	364.6
Direct contributions to hosted international organisations	15.7	15.0
Total administrative expenses in CHF millions	388.7	379.6
Total administrative expense in SDR millions	280.0	277.4

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 of Insurance Supervisors (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 Bank also provides indirect support in the form of logistical, administrative and staffing-related support for these organisations, the cost of which is included within the Bank's regular administrative expense categories.

The average number of full-time equivalent employees of the Bank during the financial year ended 31 March 2019 was 584 (2018: 582).

25. Dividend per share

For the financial year ended 31 March	2019	2018
Net profit for the financial year (SDR millions)	461.1	508.1
Weighted average number of shares entitled to dividend	558,125.0	558,125.0
Dividend per share (SDR per share)	245.0	235.0
Total dividend (SDR millions)	136.7	131.2

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 reflect the Bank's capital needs and its prevailing financial circumstances, with a payout ratio of between 20% and 50% in most years.

In line with the Bank's dividend policy, it is proposed to declare a normal dividend for 2018/19 of SDR 245 per share, SDR 10 per share higher than for the previous year. The proposed dividend for 2019 represents a payout ratio of 30% of net profit (2018: 26%).

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	
	2019	2018	2019	2018
USD	0.721	0.688	0.713	0.709
EUR	0.809	0.847	0.826	0.829
JPY	0.0065	0.0065	0.0064	0.0064
GBP	0.939	0.968	0.936	0.940
Renminbi	0.107	0.110	0.106	0.107
CHF	0.723	0.720	0.720	0.731
Gold (per ounce)	932.7	910.1	900.4	911.7

27. Off-balance sheet items

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

As at 31 March

SDR millions	2019	2018
Gold bars held under earmark arrangements	11,386.4	11,338.6
Nominal value of securities:		
Securities held under safe custody arrangements	2,265.4	3,290.6
Securities held under collateral pledge agreements	38.7	36.9
Net asset value of portfolio management mandates:		
BISIPs	11,242.4	10,403.6
Dedicated mandates	4,175.6	4,049.1

Gold bars held under earmark arrangements comprise specific gold bars which have been deposited with the Bank on a custody basis. They are included at their weight in gold (translated at the gold market price and the USD exchange rate into SDR). At 31 March 2019, gold bars held under earmark amounted to 380 tonnes of gold (2018: 387 tonnes).

Portfolio management mandates include BIS Investment Pools (BISIPs) and dedicated mandates.

The BISIPs are a range of open-ended investment funds created by the Bank and managed using entities that do not have a separate legal personality from the Bank. The Bank has an agency relationship with the BISIPs, such that the assets of the BISIPs are held in the name of the BIS, but the economic benefit lies with central bank customers. The Bank does not invest for its own account in the BISIPs.

Dedicated mandates are portfolios which are managed by the Bank in accordance with investment guidelines set by the customer. They are held for the financial benefit of the customer.

For both the BISIPs and the dedicated mandates, the Bank is remunerated by a management fee which is included under “Net fee income” in the profit and loss account.

28. Commitments

The Bank provides a number of committed standby facilities for its customers on a collateralised or uncollateralised basis. At 31 March 2019, there were no outstanding commitments that were collateralised (2018: nil) and SDR 216.2 million were uncollateralised (2018: SDR 206.4 million). As at 31 March 2019, total outstanding commitments amounted to SDR 216.2 million (2018: SDR 206.4 million).

The BIS is committed to supporting the operations of the three independent associations – the Financial Stability Board (FSB), the International Association of Deposit Insurers (IADI) and the International Association of Insurance Supervisors (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 77 staff members (2018: 74) 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. 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 rates, spreads and volatilities.

Level 3 – Instruments valued using valuation techniques where the significant inputs are not observable in financial markets.

Annual Report

As at 31 March 2019

SDR millions	Level 1	Level 2	Total
Financial assets classified at FVPL			
Securities purchased under resale agreements	–	62,355.2	62,355.2
Loans and advances	–	41,856.5	41,856.5
Government and other securities	54,787.5	26,212.3	80,999.8
Derivative financial instruments	1.5	2,563.4	2,564.9
Financial assets classified at FVOCI			
Securities purchased under resale agreements	–	549.2	549.2
Government and other securities	15,335.5	720.3	16,055.8
Total financial assets accounted for at fair value	**70,124.5**	**134,256.9**	**204,381.4**
Financial liabilities classified at FVPL			
Currency deposits	–	(228,598.0)	(228,598.0)
Derivative financial instruments	(1.2)	(1,454.2)	(1,455.4)
Total financial liabilities accounted for at fair value	**(1.2)**	**(230,052.2)**	**(230,053.4)**

As at 31 March 2018

SDR millions	Level 1	Level 2	Total
Financial assets classified at FVPL			
Securities purchased under resale agreements	–	42,017.7	42,017.7
Loans and advances	–	21,962.8	21,962.8
Government and other securities	42,537.6	26,382.1	68,919.7
Derivative financial instruments	0.7	1,724.4	1,725.1
Financial assets classified at FVOCI			
Government and other securities	15,211.6	510.6	15,722.2
Securities purchased under resale agreements	–	2,095.2	2,095.2
Total financial assets accounted for at fair value	57,749.9	94,692.8	152,442.7
Financial liabilities classified at FVPL			
Currency deposits	–	(196,080.7)	(196,080.7)
Derivative financial instruments	(0.8)	(3,137.7)	(3,138.5)
Total financial liabilities accounted for at fair value	(0.8)	(199,218.4)	(199,219.2)

A. Transfers between levels in the fair value hierarchy

Of the assets categorised as level 1 at 31 March 2019, SDR 2,949.3 million related to assets that were categorised as level 2 at 31 March 2018. Of the assets categorised as level 2 at 31 March 2019, SDR 436.5 million related to assets that had been categorised as level 1 at 31 March 2018. The transfer of assets between levels 1 and 2 reflected specific market conditions existing at the reporting dates that affected the observability of the market prices as defined above. No liabilities were transferred between fair value hierarchy levels.

B. Assets and liabilities categorised at fair value level 3

During the financial years ended 31 March 2019 and 31 March 2018, the Bank did not classify any assets or liabilities as level 3 in the fair value hierarchy.

C. 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 2019 and 31 March 2018. If the valuation of these instruments were categorised using the fair value hierarchy, the valuation of "gold loans" and "securities sold under repurchase agreements" would be considered level 2. All other amortised cost financial instruments would be considered level 1.

D. 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 should 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.

E. The valuation of financial assets and liabilities

Certain of the Bank's financial assets and financial liabilities are valued using valuation techniques which 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 change in interest rate assumptions of key financial instruments is shown in the table below:

For the financial year ended 31 March

SDR millions	2019	2018
Securities purchased under resale agreements	0.2	0.2
Loans and advances	1.3	0.4
Government and other securities	12.9	9.9
Currency deposits	10.0	11.8
Derivative financial instruments	0.8	4.8

30. Geographical analysis

A. Total liabilities

As at 31 March

SDR millions	2019	2018
Africa and Europe	76,774.7	82,412.9
Asia-Pacific	161,918.4	116,891.9
Americas	20,289.8	24,667.9
International organisations	12,163.4	13,161.1
Balance at end of year	**271,146.3**	237,133.8

B. Off-balance sheet items

As at 31 March

SDR millions	2019			2018		
	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	4,954.0	–	3,810.3	4,753.5	–	3,288.0
Asia-Pacific	3,208.2	2,265.4	8,466.8	3,130.8	3,290.6	9,049.0
Americas	3,224.2	38.7	3,141.0	3,454.4	36.9	2,115.7
Total	**11,386.4**	**2,304.1**	**15,418.1**	11,338.6	3,327.5	14,452.7

C. Credit commitments

As at 31 March

SDR millions	2019	2018
Asia-Pacific	216.2	206.4
Total	**216.2**	206.4

31. Related parties

The Bank considers the following to be its related parties:

- the members of the Board of Directors;
- the senior officials of the Bank;
- close family members of the above individuals;
- the Bank's post-employment benefit arrangements; and
- central banks whose Governor is a member of the Board of Directors and institutions that are connected with these central banks.

A listing of the members of the Board of Directors and senior officials is shown in the sections of the Annual Report entitled "Board of Directors" and "BIS Management". Note 13 provides 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	2019	2018
Salaries, allowances and medical cover	7.4	7.3
Post-employment benefits	2.5	2.3
Total compensation	**9.9**	9.6
SDR equivalent	7.1	7.0

The Bank offers personal deposit accounts for staff members and Directors. The accounts bear interest at a rate determined by the Bank based on the rate offered by the Swiss National Bank on its staff accounts. The movements and total balance on personal deposit accounts relating to members of the Board of Directors and the senior officials of the Bank were as follows:

For the financial year ended 31 March

CHF millions	2019	2018
Balance at beginning of year	12.4	11.5
Deposits taken and other inflows	2.5	2.7
Withdrawals and other outflows	(1.7)	(1.8)
Balance at end of year	**13.2**	12.4
SDR equivalent	9.6	9.0
Interest expense on deposits in CHF millions	**0.1**	0.1
SDR equivalent	–	0.1

Balances related to individuals who are appointed as members of the Board of Directors or as senior officials of the Bank during the financial year are included in the table above as other inflows. Balances related to individuals who ceased to be members of the Board of Directors or senior officials of the Bank during the financial year are included in the table above as other outflows.

In addition, the Bank operates a blocked personal deposit account for certain staff members who were previously members of the Bank's savings fund, which closed on 1 April 2003. The terms of these blocked accounts are such that staff members cannot make further deposits or withdrawals and the balances are paid out when they leave the Bank. The accounts bear interest at a rate determined by the Bank based on the rate offered by the Swiss National Bank on its staff accounts plus 1%. The total balance of blocked accounts at 31 March 2019 was SDR 7.5 million (2018: SDR 8.7 million). They are reported under the balance sheet heading "Currency deposits".

B. Related party customers

The BIS provides banking services to its customers, which are predominantly central banks, monetary authorities and international financial institutions. In fulfilling this role, the Bank, in the normal course of business, enters into transactions with customers which are related parties (as defined above). These transactions include making advances, and taking currency and gold deposits. It is the Bank's policy to enter into transactions with related party customers on similar terms and conditions to transactions with other, non-related party customers. The following tables show balances relating to these transactions, which the Bank believes are representative of the general level of business undertaken with related party customers during the year.

Balances with related party customers

As at 31 March	2019			2018		
	Balance sheet total	Balance with related parties		Balance sheet total	Balance with related parties	
SDR millions / percentages	*SDR millions*	*SDR millions*	*%*	*SDR millions*	*SDR millions*	*%*
Assets						
Cash and cash equivalents	60,756.4	**60,145.7**	99.0	73,615.8	73,078.8	99.3
Securities purchased under resale agreements	62,904.4	**6,325.9**	10.1	44,112.9	1,323.5	3.0
Government and other securities	97,055.6	**3,135.0**	3.2	86,641.9	343.3	0.4
Gold and gold loans	19,654.3	**19,419.3**	98.8	23,429.6	23,414.1	99.9
Derivative financial instruments	2,564.9	**60.1**	2.3	1,725.1	6.6	0.4
Accounts receivable and other assets	6,115.2	**0.1**	–	6,809.0	–	–
Liabilities						
Currency deposits	(241,604.6)	**(96,421.0)**	39.9	(211,665.6)	(88,850.5)	42.0
Gold deposits	(11,333.4)	**(8,946.8)**	78.9	(9,859.5)	(6,780.6)	68.8
Derivative financial instruments	(1,455.4)	**(8.8)**	0.6	(3,138.5)	(1.8)	0.1

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

For the financial year ended 31 March	2019			2018		
	Profit and loss total	Balance with related parties		Profit and loss total	Balance with related parties	
SDR millions / percentages	*SDR millions*	*SDR millions*	*%*	*SDR millions*	*SDR millions*	*%*
Interest income	237.5	**9.5**	4.0	200.4	11.6	5.8
Interest expense	(449.4)	**(310.6)**	69.1	(382.8)	(265.1)	69.3
Net income on financial assets and liabilities at fair value through profit and loss						
Financial assets	1,627.6	**100.2**	6.2	371.8	15.0	4.0
Financial liabilities	(3,881.4)	**(1,568.5)**	40.4	(1,388.4)	(496.0)	35.7
Derivative financial instruments	3,203.1	**60.1**	1.9	1,953.2	25.2	1.3

32. Contingent liabilities

In the opinion of the Bank's Management, there were no significant contingent liabilities at 31 March 2019 (31 March 2018: nil).

Annual Report

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 throughout the year. It operates an annual capital planning process that 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 Tier 1 capital ratio (Pillar 1), risk-weighted assets and more detailed related information. In addition, the Bank calculates for reference a Common Equity Tier 1 capital ratio, leverage ratio and 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.

The Bank has reviewed its capital adequacy framework and related capital planning process, and has made changes effective as from 1 April 2019. The most important changes relate to the definition of the Bank's risk-bearing capacity, the confidence level used for economic capital calculations and the modelling of credit risk economic capital utilisation.

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. The risk-bearing capacity is defined as allocatable economic capital that is derived from the components of the Bank's equity, which are set out in the following table:

As at 31 March

SDR millions	2019	2018
Share capital	698.9	698.9
Statutory reserves per balance sheet	16,326.3	15,950.1
Less: shares held in treasury	(1.7)	(1.7)
Share capital and reserves	**17,023.5**	16,647.3
Securities revaluation account	135.1	(83.6)
Gold revaluation account	2,567.9	2,493.9
Re-measurement of defined benefit obligations	(238.3)	(210.1)
Other equity accounts	**2,464.7**	2,200.2
Profit and loss account	**461.1**	508.1
Total equity	**19,949.3**	19,355.6

Allocatable economic capital is determined following a prudent evaluation of the Bank's equity components for their loss absorption capacity and sustainability. The components of capital with long-term risk-bearing capacity are the Bank's Tier 1 capital and the sustainable portion of the securities and gold revaluation accounts ("sustainable supplementary capital"). Only this "allocatable capital" is available for allocation to the various categories of risk. The portion of revaluation accounts that is considered more transitory in nature is assigned to the "capital filter" together with the profit accrued during the financial year.

As at 31 March

SDR millions	2019	2018
Share capital and reserves	17,023.5	16,647.3
Re-measurement of defined benefit obligations	(238.3)	(210.1)
Negative securities revaluation account	–	(83.6)
Tier 1 capital	**16,785.2**	16,353.6
Sustainable supplementary capital	1,514.8	1,646.4
Allocatable capital	**18,300.0**	18,000.0
Capital filter	1,649.3	1,355.6
Total equity	**19,949.3**	19,355.6

As part of the annual capital planning process, Management allocates economic capital to risk categories within the amount of allocatable capital. As a first step, capital is assigned to an "economic capital cushion" that provides an additional margin of safety and is sufficient to sustain a potential material loss without the need to reduce the capital allocation to individual risk categories or to liquidate any holdings of assets. The level of the economic capital cushion is determined based on stress tests that explore extreme but still plausible default events. Allocations are then made to each category of financial risk (ie credit risk, market risk and "other risks") as well as operational risk. "Other risks" are risks that have been identified but that are not taken into account in the economic capital utilisation calculations, and include model risk and residual basis risk. Reflecting the high level of solvency targeted by the Bank, the economic capital framework measures economic capital to a 99.995% confidence level assuming a one-year horizon, except for FX settlement risk (included in the utilisation for credit risk) and "other risks". The amount of economic capital set aside for FX settlement risk and other risks 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 for credit risk, market risk, operational risk and "other risks":

As at 31 March

	2019		2018	
SDR millions	Allocation	Utilisation	Allocation	Utilisation
Insolvency and transfer risk	10,200.0	8,686.4	9,600.0	6,314.3
FX settlement risk	300.0	300.0	300.0	300.0
Credit risk	10,500.0	8,986.4	9,900.0	6,614.3
Market risk	3,700.0	3,614.4	4,000.0	3,286.5
Operational risk	1,300.0	1,300.0	1,300.0	1,300.0
Other risks	300.0	300.0	300.0	300.0
Economic capital cushion	2,500.0	2,500.0	2,500.0	2,500.0
Total economic capital	**18,300.0**	**16,700.8**	18,000.0	14,000.8

On 1 April 2019, the Bank changed the definition of its risk-bearing capacity to Basel III Common Equity Tier 1 capital from allocatable capital. Moreover, the confidence level for measuring economic capital in the economic capital framework will be amended to 99.99% from 99.995%, affecting primarily the measurement of economic capital for credit risk.

3. Financial leverage

The Bank complements its capital adequacy assessment with a prudently managed financial leverage framework. The Bank monitors its financial leverage using a ratio that compares the BIS adjusted common equity with its total exposure. However, to reflect the scope and nature of its banking activities, the definition of the BIS adjusted common equity limits the recognition of revaluation accounts to the proportion of the gold and securities revaluation accounts that is considered sustainable ("sustainable supplementary capital"). Further, the exposure measure is supplemented by the inclusion of committed and uncommitted facilities, and pension fund assets.

The following table shows the calculation of the Bank's financial leverage ratio:

As at 31 March

SDR millions	2019	2018
Share capital and reserves	17,023.5	16,647.3
Sustainable supplementary capital	1,514.8	1,646.4
Share capital, reserves and sustainable supplementary capital	**18,538.3**	18,293.7
Re-measurement losses on defined benefit obligations	(238.3)	(210.1)
Negative securities revaluation account	–	(83.6)
Intangible assets	(28.3)	(27.4)
Prudential adjustments	**(266.6)**	(321.1)
Total BIS adjusted common equity (A)	**18,271.7**	17,972.6
Total balance sheet assets	**291,095.6**	256,489.4
Derivatives	2,874.0	(123.4)
Securities purchased under resale agreements	–	4.2
Committed and uncommitted facilities	3,897.4	3,901.1
Pension fund assets	1,164.3	1,143.5
Exposure adjustments	**7,935.7**	4,925.4
Total BIS exposure (B)	**299,031.3**	261,414.8
BIS leverage ratio (A) / (B)	**6.1%**	6.9%

The Bank also calculates a leverage ratio that is consistent with Basel III recommendations. The Bank's Basel III leverage ratio differs from the BIS leverage ratio in using Common Equity Tier 1 as its capital measure instead of BIS adjusted common equity as defined above. The calculation of Common Equity Tier 1 capital is included in Section 4B. At 31 March 2019, the Bank's Basel III leverage ratio stood at 6.5% (2018: 7.2%).

4. Capital ratios

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 capital ratios 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 II 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 frameworks, the expected loss is compared with write-offs, if applicable, and any shortfall is deducted from the Bank's 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. For operational risk, the advanced measurement approach is used. Both these approaches rely on value-at-risk (VaR) methodologies.

More details on the assumptions underlying the calculations are provided in the sections on credit risk, market risk and operational risk.

A. Tier 1 capital ratio

The following table summarises the relevant exposure types and approaches as well as the risk-weighted assets and related minimum capital requirements for credit risk, market risk and operational risk under the Basel II framework:

As at 31 March

		2019			2018		
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%	204,923.0	17,154.2	1,372.3	184,291.0	12,577.9	1,006.2
Securitisation exposures and other assets	Standardised approach, where (B) is derived as (A) x 8%	316.2	221.4	17.7	304.8	240.2	19.2
Market risk							
Exposure to foreign exchange risk and gold price risk	Internal models approach, where (A) is derived as (B) / 8%	–	6,812.1	545.0	–	7,604.2	608.3
Operational risk							
	Advanced measurement approach, where (A) is derived as (B) / 8%	–	10,031.1	802.5	–	9,981.4	798.5
Total			**34,218.8**	**2,737.5**		30,403.7	2,432.2

The capital ratio measures capital adequacy by comparing the Bank's Tier 1 capital with its risk-weighted assets. The Tier 1 capital ratio, consistent with the Basel II framework, is provided in the following table:

As at 31 March

SDR millions	2019	2018
Share capital and reserves	17,023.5	16,647.3
Re-measurement losses on defined benefit obligations	(238.3)	(210.1)
Negative securities revaluation account	–	(83.6)
Tier 1 capital	16,785.2	16,353.6
Expected loss	(34.0)	(23.8)
Tier 1 capital net of expected loss (A)	16,751.2	16,329.8
Total risk-weighted assets (B)	34,218.8	30,403.7
Tier 1 capital ratio (A) / (B)	49.0%	53.7%

B. Common Equity Tier 1 capital ratio

To facilitate comparability, information on risk-weighted assets and related minimum capital requirements calculated under the Basel III framework is provided in the following table. Credit risk-weighted assets differ, mainly due to the asset value correlation multiplier for large financial institutions. Relating to market risk, Basel III risk-weighted assets are calculated as the sum of the Basel II market risk-weighted assets (presented in the previous section) and market risk-weighted assets derived from a stressed VaR.

As at 31 March		2019			2018		
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%	204,923.0	20,111.3	1,608.9	184,291.0	14,428.8	1,154.3
Securitisation exposures and other assets	Standardised approach, where (B) is derived as (A) x 8%	316.2	221.4	17.7	304.8	240.2	19.2
Market risk							
Exposure to foreign exchange risk and gold price risk	Internal models approach, where (A) is derived as (B) / 8%	–	22,037.9	1,763.0	–	22,496.5	1,799.7
Operational risk							
	Advanced measurement approach, where (A) is derived as (B) / 8%	–	10,031.1	802.5	–	9,981.4	798.5
Total			52,401.7	4,192.1		47,146.9	3,771.7

Annual Report

The Common Equity Tier 1 capital ratio calculated under the Basel III framework is set out in the following table:

As at 31 March

SDR millions	2019	2018
Share capital and reserves	17,023.5	16,647.3
Revaluation accounts	2,703.0	2,410.3
Share capital, reserves and revaluation accounts	19,726.5	19,057.6
Re-measurement losses on defined benefit obligations	(238.3)	(210.1)
Expected loss	(34.0)	(23.8)
Intangible assets	(28.3)	(27.4)
Prudential adjustments	(300.6)	(261.3)
Total Common Equity Tier 1 capital (A)	19,425.9	18,796.3
Total risk-weighted assets (B)	52,401.7	47,146.9
Common Equity Tier 1 capital ratio (A) / (B)	37.1%	39.9%

Annual Report

Risk management

1. Risks faced by the Bank

The Bank supports its customers – predominantly central banks, monetary authorities and international financial institutions – in the management of their reserves and related financial activities.

Banking activities form an essential element of meeting the Bank's objectives and ensure its financial strength and independence. The BIS engages in banking activities that are customer-related as well as activities that are related to the investment of its shareholders' equity, each of which may give rise to financial risk comprising credit risk, market risk and liquidity risk. The Bank is also exposed to operational risk.

Within the risk frameworks defined by the Board of Directors, the Management of the Bank has established risk management policies designed to ensure that risks are identified, appropriately measured and controlled as well as monitored and reported.

2. Risk management approach and organisation

The Bank maintains superior credit quality and adopts a prudent approach to financial risk-taking, by:

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

A. Organisation

Under Article 39 of the Bank's Statutes, the General Manager is responsible to the Board for the management of the Bank, and is assisted by the Deputy General Manager. The Deputy General Manager is responsible for the Bank's independent risk management and compliance functions. The General Manager and the Deputy General Manager are supported by senior management advisory committees.

The key advisory committees are the Executive Committee, the Finance Committee and the Compliance and Operational Risk Committee. The first two committees are chaired by the General Manager and the third by the Deputy General Manager, and all 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 Compliance and Operational Risk Committee, chaired by the Deputy General Manager, provides a forum for considering important compliance and operational risk matters, ensures the coordination of compliance matters and operational risk management throughout the Bank, and informs or advises the Executive Committee as appropriate.

The independent risk management functions for financial risks and operational risk are performed by the Risk Management unit. The Head of Risk Management reports to the Deputy General Manager. The Head of the Operational Risk unit within Risk Management has reporting lines to the Deputy General Manager and the Head of Risk Management.

The Bank's independent compliance function is performed by the Compliance unit. The objective of this function is to assist Management in ensuring that all activities of the BIS and its staff are conducted in accordance with compliance laws, rules and standards. The Chief Compliance Officer reports to the Deputy General Manager and also has direct access to the Audit Committee, which is an advisory committee to the Board of Directors.

The Finance unit and the Legal Service complement the Bank's risk management. The Finance unit operates a valuation control function, produces the Bank's financial statements and controls the Bank's expenditure by setting and monitoring the annual budget. The objective of the valuation control function is to ensure that the Bank's valuations comply with its valuation policy and procedures. The Finance unit reports to the Deputy General Manager and the Secretary General.

The Legal Service provides legal advice and support covering a wide range of issues relating to the Bank's activities. The Legal Service reports to the General Manager.

The Internal Audit function evaluates and improves the effectiveness of risk management, control, and governance systems and processes. Internal Audit provides an independent, objective assurance function, and advises on best practice. Internal Audit has reporting lines to the General Manager and the Deputy General Manager, and to the Audit Committee.

B. Risk monitoring and reporting

The Bank's financial and operational risk profile, position and performance are monitored on an ongoing basis by the relevant units. Financial risk, operational risk and compliance reports aimed at various management levels are provided regularly to enable Management to adequately assess the Bank's risk profile and financial condition.

Management reports financial and risk information to the Board of Directors on a monthly and a quarterly basis. Furthermore, the Audit Committee receives regular reports from Internal Audit, and the Compliance, Finance and Operational Risk Management units. The Banking and Risk Management Committee, another advisory committee to the Board, receives regular reports from the Risk Management unit. The preparation of reports is subject to comprehensive policies and procedures, thus ensuring strong controls.

C. Risk methodologies

The Bank revalues virtually all of its financial instruments to fair value on a daily basis and reviews its valuations monthly, taking into account necessary adjustments for impairment. It uses a comprehensive range of quantitative methodologies for valuing financial instruments and for measuring risk to its net profit and equity. The Bank reassesses its quantitative methodologies in the light of its changing risk environment and evolving best practice.

The Bank's model validation policy defines the roles and responsibilities and processes related to the implementation of new or materially changed risk and valuation models.

A key methodology used by the Bank to measure and manage risk is the calculation of economic capital based on value-at-risk (VaR) techniques. VaR expresses the statistical estimate of the maximum potential loss on the current positions of the Bank measured to a specified level of confidence and a specified time horizon. VaR models depend on statistical assumptions and the quality of available market data and, while forward-looking, they extrapolate from past events. VaR models may underestimate potential losses if changes in risk factors fail to align with the distribution assumptions. VaR figures do not provide any information on losses that may occur beyond the assumed confidence level.

The Bank's economic capital framework covers credit risk, market risk, operational risk and other risks. As part of the annual 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 99.995% confidence level assuming a one-year holding period. An additional amount of economic capital is set aside for FX settlement risk (included in the utilisation for credit risk) and "other risks" based on Management's assessment of risks which are not reflected in the economic capital calculations. Moreover, capital is also allocated to an "economic capital cushion" that is based on stress tests that explore extreme but still plausible default events. The economic capital cushion provides an additional margin of safety to sustain a potential material loss without the need to reduce the capital allocated to individual risk categories or to liquidate any holdings of assets.

The management of the Bank's capital adequacy is complemented by a comprehensive stress testing framework, and a prudent 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 BIS adjusted common equity in relation to its total balance sheet exposure.

3. Credit risk

Credit risk arises because a counterparty may fail to meet its obligations in accordance with the agreed contractual terms and conditions. A financial asset is considered past due when a counterparty fails to make a payment on the contractual due date.

The Bank manages credit risk within a framework and policies set by the Board of Directors and Management. These are complemented by more detailed guidelines and procedures at the level of the independent risk management function.

A. Credit risk assessment

Credit risk is continuously controlled at both a counterparty and an aggregated level. The independent risk management function performs individual counterparty credit assessments following a well defined internal rating process. As part of this process, counterparty financial statements and market information are analysed. The rating methodologies depend on the nature of the counterparty. Based on the internal rating and specific counterparty features, the Bank sets a series of credit limits covering individual counterparties and countries. Internal ratings are assigned to all counterparties. In principle, the ratings and related limits are reviewed at least annually. The main assessment criterion in these reviews is the ability of the counterparties to meet interest and principal repayment obligations in a timely manner.

Credit risk limits at the counterparty level are approved by the Bank's Management and fit within a framework set by the Board of Directors.

On an aggregated level, credit risk, including default and country transfer risk, is measured, monitored and controlled based on the Bank's economic capital calculation for credit risk. To calculate economic capital for credit risk, the Bank uses a portfolio VaR model. Management limits the Bank's overall exposure to credit risk by allocating an amount of economic capital to credit risk.

B. Default risk

The following tables 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 on 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, and accounts receivable and other assets do not include unsettled liabilities issued, because these items do not represent credit exposures of the Bank.

The vast majority of the Bank's assets are invested in sight accounts at central banks, 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.

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 2019

SDR millions	Sovereign and central banks	Public sector	Banks	Corporate	Securitisation	Total
On-balance sheet exposure						
Cash and cash equivalents	60,154.6	539.3	62.5	–	–	60,756.4
Gold and gold loans	298.7	–	235.0	–	–	533.7
Securities purchased under resale agreements	6,325.9	–	37,525.7	19,052.8	–	62,904.4
Loans and advances	4,074.6	–	37,781.9	–	–	41,856.5
Government and other securities	72,284.0	10,072.9	6,353.8	8,226.4	118.5	97,055.6
Derivative financial instruments	120.7	4.4	2,438.4	1.4	–	2,564.9
Accounts receivable and other assets	4.0	2.0	60.5	6.2	–	72.7
Total on-balance sheet exposure	**143,262.5**	**10,618.6**	**84,457.8**	**27,286.8**	**118.5**	**265,744.2**
Commitments						
Undrawn unsecured facilities	216.2	–	–	–	–	216.2
Total commitments	**216.2**	**–**	**–**	**–**	**–**	**216.2**
Total exposure	**143,478.7**	**10,618.6**	**84,457.8**	**27,286.8**	**118.5**	**265,960.4**

As at 31 March 2018

SDR millions	Sovereign and central banks	Public sector	Banks	Corporate	Securitisation	Total
On-balance sheet exposure						
Cash and cash equivalents	73,081.7	453.1	81.0	–	–	73,615.8
Gold and gold loans	–	–	15.5	–	–	15.5
Securities purchased under resale agreements	1,323.5	–	30,568.4	12,221.0	–	44,112.9
Loans and advances	550.8	170.9	21,241.1	–	–	21,962.8
Governments and other securities	59,641.5	9,497.3	7,143.5	8,278.9	80.7	84,641.9
Derivative financial instruments	303.8	19.1	1,401.9	0.3	–	1,725.1
Accounts receivable and other assets	1.4	4.5	209.5	7.3	–	222.7
Total on-balance sheet exposure	134,902.7	10,144.9	60,660.9	20,507.5	80.7	226,296.7
Commitments						
Undrawn secured facilities	206.4	–	–	–	–	206.4
Total commitments	206.4	–	–	–	–	206.4
Total exposure	135,109.1	10,144.9	60,660.9	20,507.5	80.7	226,503.1

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 2019

SDR millions	Africa and Europe	Asia-Pacific	Americas	International institutions	Total
On-balance sheet exposure					
Cash and cash equivalents	38,473.0	21,707.4	36.7	539.3	60,756.4
Gold and gold loans	533.7	–	–	–	533.7
Securities purchased under resale agreements	49,981.1	2,925.8	9,997.5	–	62,904.4
Loans and advances	30,049.4	6,549.8	5,257.3	–	41,856.5
Government and other securities	26,560.7	41,508.5	23,809.9	5,176.5	97,055.6
Derivative financial instruments	1,916.4	360.9	283.7	3.9	2,564.9
Accounts receivable and other assets	69.2	1.3	0.2	2.0	72.7
Total on-balance sheet exposure	**147,583.5**	**73,053.7**	**39,385.3**	**5,721.7**	**265,744.2**
Commitments					
Undrawn unsecured facilities	–	216.2	–	–	216.2
Total commitments	**–**	**216.2**	**–**	**–**	**216.2**
Total exposure	**147,583.5**	**73,269.9**	**39,385.3**	**5,721.7**	**265,960.4**

Annual Report

As at 31 March 2018

SDR millions	Africa and Europe	Asia-Pacific	Americas	International institutions	Total
On-balance sheet exposure					
Cash and cash equivalents	61,687.9	11,445.1	29.7	453.1	73,615.8
Gold and gold loans	15.5	–	–	–	15.5
Securities purchased under resale agreements	42,101.5	–	2,011.4	–	44,112.9
Loans and advances	14,502.4	5,050.0	2,410.4	–	21,962.8
Government and other securities	31,287.7	30,949.3	16,318.9	6,086.0	84,641.9
Derivative financial instruments	1,118.5	127.7	459.8	19.1	1,725.1
Accounts receivable and other assets	204.0	1.2	13.0	4.5	222.7
Total on-balance sheet exposure	150,917.5	47,573.3	21,243.2	6,562.7	226,296.7
Commitments					
Undrawn unsecured facilities	–	206.4	–	–	206.4
Total commitments	–	206.4	–	–	206.4
Total exposure	150,917.5	47,779.7	21,243.2	6,562.7	226,503.1

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 2019

SDR millions	AAA	AA	A	BBB	BB and below	Unrated	Total
On-balance sheet exposure							
Cash and cash equivalents	31,969.6	6,788.7	21,869.9	128.2	–	–	60,756.4
Gold and gold loans	–	298.7	235.0	–	–	–	533.7
Securities purchased under resale agreements	–	25,378.6	30,700.4	6,825.4	–	–	62,904.4
Loans and advances	1,692.1	929.0	36,384.0	468.9	2,382.5	–	41,856.5
Government and other securities	8,117.4	37,311.3	46,829.7	4,797.2	–	–	97,055.6
Derivative financial instruments	–	37.8	2,429.0	87.5	7.1	3.5	2,564.9
Accounts receivable and other assets	0.2	0.6	31.6	29.3	0.5	10.5	72.7
Total on-balance sheet exposure	**41,779.3**	**70,744.7**	**138,479.6**	**12,336.5**	**2,390.1**	**14.0**	**265,744.2**
Commitments							
Undrawn unsecured facilities	–	–	–	216.2	–	–	216.2
Total commitments	**–**	**–**	**–**	**216.2**	**–**	**–**	**216.2**
Total exposure	**41,779.3**	**70,744.7**	**138,479.6**	**12,552.7**	**2,390.1**	**14.0**	**265,960.4**

As at 31 March 2018

SDR millions	AAA	AA	A	BBB	BB and below	Unrated	Total
On-balance sheet exposure							
Cash and cash equivalents	43,052.2	14,126.7	15,408.8	1,028.0	0.1	–	73,615.8
Gold and gold loans	–	–	15.5	–	–	–	15.5
Securities purchased under resale agreements	–	13,544.5	23,487.9	7,080.5	–	–	44,112.9
Loans and advances	–	550.4	20,200.3	661.2	550.9	–	21,962.8
Government and other securities	10,136.3	33,555.6	37,853.8	3,096.2	–	–	84,641.9
Derivative financial instruments	–	20.7	1,395.1	42.0	251.7	15.5	1,725.1
Accounts receivable and other assets	0.2	0.5	196.7	0.3	0.5	24.5	222.7
Total on-balance sheet exposure	53,188.7	61,798.4	98,558.1	11,908.2	803.2	40.0	226,296.7
Commitments							
Undrawn unsecured facilities	–	–	–	206.4	–	–	206.4
Total commitments	–	–	–	206.4	–	–	206.4
Total exposure	53,188.7	61,798.4	98,558.1	12,114.6	803.2	40.0	226,503.1

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 on 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 may provide collateral in respect of 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 ("re-hypothecate") 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 2019, the Bank had not lent out any of the collateral it held (2018: SDR 0.1 million).

Annual Report

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

As at 31 March

SDR millions	2019	2018
Collateral held in respect of:		
Derivatives	848.9	14.5
Securities purchased under resale agreements	43,421.5	34,436.7
Total	44,270.4	34,451.2

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.

As at 31 March 2019		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	62,904.4	(13,438.4)	–	(49,458.5)	7.5	–	7.5
Advances	2,382.5	–	–	(2,382.5)	–	–	–
Derivative financial instruments	2,564.9	–	(1,082.9)	(848.9)	633.1	46.0	587.1
Financial liabilities							
Securities sold under repurchase agreements	(549.1)	–	–	549.1	–	–	–
Derivative financial instruments	(1,455.4)	–	1,082.9	–	–	–	–

As at 31 March 2018		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	44,112.9	(8,647.7)	–	(35,465.1)	0.1	–	0.1
Advances	550.9	–	–	(550.9)	–	–	–
Derivative financial instruments	1,725.1	–	(1,329.2)	(14.5)	381.4	36.5	344.9
Financial liabilities							
Securities sold under repurchase agreements	(2,095.0)	–	–	2,095.0	–	–	–
Derivative financial instruments	(3,138.5)	–	1,329.2	–	–	–	–

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 99.995% 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	**2019**				2018			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Economic capital utilisation for credit risk	8,228.4	9,399.3	6,653.2	**8,986.4**	7,699.3	9,222.5	6,393.4	6,614.3

Effective 1 April 2019, the Bank amended the modelling of its economic capital for credit risk to better reflect the credit risk of short-term, very high-quality sovereign-related exposures. Following the revised methodology, including the change in confidence level to 99.99% from 99.995%, economic capital utilisation for credit risk as at end-March 2019 would have been SDR 5.7 billion.

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 Basel II 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 derivatives is calculated using an approach consistent with the internal models method proposed under the Basel II framework. In line with this methodology, 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. With effect from March 2018, the LGD estimates for central bank deposits were lowered to better reflect their risk characteristics, thereby reducing the estimated capital utilisation. 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 2019 includes SDR 107.4 million for interest rate contracts (2018: SDR 139.9 million) and SDR 481.6 million for FX and gold contracts (2018: SDR 234.4 million). In line with the Basel II framework, the minimum capital requirement is determined as 8% of risk-weighted assets.

As at 31 March 2019

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	41,353.6	0.01	8.9	1.3	544.7
AA	51,423.2	0.02	34.5	7.7	3,941.5
A	106,354.7	0.04	44.6	10.0	10,594.8
BBB	5,784.9	0.21	56.1	35.7	2,062.7
BB and below	6.6	5.02	58.7	159.8	10.5
Total	**204,923.0**				**17,154.2**

As at 31 March 2018

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	52,697.2	0.01	7.1	1.1	566.9
AA	52,128.9	0.02	31.4	6.8	3,557.0
A	74,369.9	0.04	44.1	9.4	6,962.0
BBB	5,092.5	0.22	46.7	29.2	1,488.1
BB and below	2.5	4.71	56.2	160.2	3.9
Total	184,291.0				12,577.9

At 31 March 2019, the minimum capital requirement for credit risk related to exposures to sovereigns, banks and corporates was SDR 1,372.3 million (2018: SDR 1,006.2 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 2019	264,828.8	59,905.8	**204,923.0**
As at 31 March 2018	228,979.4	44,688.4	184,291.0

Securitisation exposures

The Bank invests in highly rated securitisation exposures based on traditional, ie non-synthetic, securitisation structures. Given the scope of the Bank's activities, risk-weighted assets under the Basel II framework 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 II 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 2019

SDR millions	External rating	Amount of exposures	Risk weight	Risk-weighted assets
Securities backed by other receivables (government-sponsored)	AAA	118.5	20%	23.7
Total		**118.5**		**23.7**

As at 31 March 2018

SDR millions	External rating	Amount of exposures	Risk weight	Risk-weighted assets
Securities backed by other receivables (government-sponsored)	AAA	80.7	20%	16.1
Total		80.7		16.1

At 31 March 2019, the minimum capital requirement for securitisation exposures was SDR 1.9 million (2018: SDR 1.3 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 99.995% 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 2019, the Bank's net gold investment assets were 102 tonnes with a value of SDR 3,069.8 million (2018: 102 tonnes, SDR 2,995.5 million), approximately 15% of its equity (2018: 15%). The Bank sometimes also has small exposures to gold price risk arising from its banking activities with central and commercial banks. Gold price risk is measured within the Bank's VaR methodology, including its economic capital framework and stress tests.

B. Interest rate risk

Interest rate risk is the exposure of the Bank's financial condition to adverse movements in interest rates including credit spreads. The Bank is exposed to interest rate risk through the interest-bearing assets relating to the management of its equity held in its investment portfolios and investments relating to its banking portfolios. The investment portfolios are managed using a fixed-duration benchmark of bonds.

The Bank measures and monitors interest rate risk using a VaR methodology and sensitivity analyses taking into account movements in relevant money market rates, government bond yields, swap rates and credit spreads.

The following tables show the impact on the Bank's equity of a 1% upward shift in the relevant yield curve per time band:

As at 31 March 2019

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	(0.3)	(8.3)	(32.4)	(38.5)	(39.8)	(26.9)	(21.0)	(167.2)
Japanese yen	28.2	0.3	(0.1)	(0.2)	0.2	–	–	28.4
Pound sterling	(1.4)	(1.5)	(5.6)	(16.3)	(14.1)	(5.7)	–	(44.6)
Renminbi	(0.7)	(2.7)	(9.0)	(3.2)	(6.6)	(10.3)	(23.6)	(56.1)
Swiss franc	15.9	(0.1)	(0.5)	(0.5)	(0.3)	(0.4)	(3.2)	10.9
US dollar	(3.7)	(9.5)	(11.4)	(23.0)	(38.4)	(43.0)	(170.7)	(299.7)
Other currencies	0.6	(0.1)	–	0.4	(0.2)	–	–	0.7
Total	**38.6**	**(21.9)**	**(59.0)**	**(81.3)**	**(99.2)**	**(86.3)**	**(218.5)**	**(527.6)**

As at 31 March 2018

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	7.7	(12.7)	(24.7)	(29.1)	(48.6)	(12.2)	(17.4)	(137.0)
Japanese yen	11.4	0.9	0.1	(0.1)	0.1	(0.1)	–	12.3
Pound sterling	0.3	(2.0)	(3.7)	(15.4)	(13.8)	(6.2)	(0.4)	(41.2)
Renminbi	(2.7)	(6.0)	(6.9)	(1.2)	–	–	–	(16.8)
Swiss franc	12.6	(0.1)	(0.2)	(0.7)	(0.6)	(0.6)	(3.1)	7.3
US dollar	16.4	(14.5)	(33.8)	(42.7)	(66.1)	(60.0)	(10.7)	(211.4)
Other currencies	(0.5)	1.9	(0.2)	(0.4)	0.3	–	–	1.1
Total	45.2	(32.5)	(69.4)	(89.6)	(128.7)	(79.1)	(31.6)	(385.7)

C. Foreign exchange risk

The Bank's functional currency, the SDR, is a composite currency comprising fixed amounts of USD, EUR, JPY, GBP and Renminbi. Currency risk is the exposure of the Bank's financial condition to adverse movements in exchange rates. The Bank is exposed to foreign exchange risk primarily through the assets relating to the management of its equity. The Bank is also exposed to foreign exchange risk through managing its customer deposits and through acting as an intermediary in foreign exchange transactions. The Bank reduces its foreign exchange exposures by matching the relevant assets to the constituent currencies of the SDR on a regular basis, and by limiting currency exposures arising from customer deposits and foreign exchange transaction intermediation.

The following tables show the Bank's assets and liabilities by currency and gold exposure. The net foreign exchange and gold position in these tables therefore includes the Bank's gold investments. To determine the Bank's net foreign exchange exposure, the gold amounts need to be removed. The SDR-neutral position is then deducted from the net foreign exchange position excluding gold to arrive at the net currency exposure of the Bank on an SDR-neutral basis.

As at 31 March 2019

SDR millions	SDR	USD	EUR	GBP	JPY	RMB	CHF	Gold	Other currencies	Total
Assets										
Cash and cash equivalents	539.3	17.0	26,246.8	10.8	21,688.9	1.3	12,177.5	–	74.8	60,756.4
Securities purchased under resale agreements	–	11,372.1	35,926.9	11,054.1	4,551.3	–	–	–	–	62,904.4
Loans and advances	–	26,527.6	11,879.4	1,764.7	–	–	179.9	–	1,504.9	41,856.5
Government and other securities	–	33,830.8	18,535.6	4,770.4	29,262.1	4,930.5	325.0	–	5,401.2	97,055.6
Gold and gold loans	–	0.3	–	–	–	–	–	19,654.0	–	19,654.3
Derivative financial instruments	2,860.2	103,109.3	(62,017.1)	(1,013.7)	(36,313.4)	4,541.6	(2,844.4)	(3,170.7)	(2,586.9)	2,564.9
Accounts receivable and other assets	–	2,935.5	2,665.5	–	157.5	339.0	8.8	–	8.9	6,115.2
Land, buildings and equipment	178.3	–	–	–	–	–	10.0	–	–	188.3
Total assets	**3,577.8**	**177,792.6**	**33,237.1**	**16,586.3**	**19,346.4**	**9,812.4**	**9,856.8**	**16,483.3**	**4,402.9**	**291,095.6**
Liabilities										
Currency deposits	(2,039.9)	(190,841.5)	(23,764.7)	(13,122.0)	(717.6)	(6,219.1)	(357.8)	–	(4,452.0)	(241,604.6)
Securities sold under repurchase agreements	–	–	(441.2)	(107.9)	–	–	–	–	–	(549.1)
Gold deposits	–	–	–	–	–	–	–	(11,333.4)	–	(11,333.4)
Derivative financial instruments	8.4	20,807.2	7,527.8	(1,650.5)	(15,690.8)	(1,651.6)	(8,874.8)	(2,078.4)	147.3	(1,455.4)
Accounts payable	–	(1,013.5)	(11,651.4)	(434.7)	(1,783.1)	(218.6)	–	–	(15.5)	(15,116.8)
Other liabilities	–	(0.5)	(0.3)	–	–	–	(1,084.9)	–	(1.3)	(1,087.0)
Total liabilities	**(2,031.5)**	**(171,048.3)**	**(28,329.8)**	**(15,315.1)**	**(18,191.5)**	**(8,089.3)**	**(10,317.5)**	**(13,411.8)**	**(4,411.5)**	**(271,146.3)**
Net currency and gold position	**1,546.3**	**6,744.3**	**4,907.3**	**1,271.2**	**1,154.9**	**1,723.1**	**(460.7)**	**3,071.5**	**(8.6)**	**19,949.3**
Adjustment for gold	–	–	–	–	–	–	–	(3,071.5)	–	(3,071.5)
Net currency position	**1,546.3**	**6,744.3**	**4,907.3**	**1,271.2**	**1,154.9**	**1,723.1**	**(460.7)**	**–**	**(8.6)**	**16,877.8**
SDR-neutral position	(1,546.3)	(6,436.8)	(4,797.1)	(1,237.7)	(1,186.3)	(1,673.6)	–	–	–	(16,877.8)
Net currency exposure on SDR-neutral basis	**–**	**307.5**	**110.2**	**33.5**	**(31.4)**	**49.5**	**(460.7)**	**–**	**(8.6)**	**–**

As at 31 March 2018

SDR millions	SDR	USD	EUR	GBP	JPY	RMB	CHF	Gold	Other currencies	Total
Assets										
Cash and cash equivalents	453.4	18.1	51,488.9	23.6	11,438.4	1.3	10,128.1	–	64.0	73,615.8
Securities purchased under resale agreements	–	2,871.3	25,685.3	12,905.7	2,650.6	–	–	–	–	44,112.9
Loans and advances	–	9,528.3	7,379.9	2,145.9	322.9	–	495.6	–	2,090.2	21,962.8
Government and other securities	–	27,848.7	20,660.0	5,532.9	19,873.5	4,734.4	568.0	–	5,424.4	84,641.9
Gold and gold loans	–	–	–	–	–	–	–	23,429.6	–	23,429.6
Derivative financial instruments	1,784.8	71,900.1	(57,189.0)	(340.2)	(6,693.8)	3,522.8	(9,449.1)	(2,309.5)	499.0	1,725.1
Accounts receivable and other assets	–	6,416.4	140.7	96.5	–	88.3	10.0	–	57.1	6,809.0
Land, buildings and equipment	179.1	–	–	–	–	–	13.2	–	–	192.3
Total assets	2,417.3	118,582.9	48,165.8	20,364.4	27,591.6	8,346.8	1,765.8	21,120.1	8,134.7	256,489.4
Liabilities										
Currency deposits	(2,095.9)	(177,118.3)	(5,666.6)	(16,193.3)	(886.5)	(2,670.9)	(357.1)	–	(6,677.0)	(211,665.6)
Securities sold under repurchase agreements	–	–	(1,436.7)	(658.3)	–	–	–	–	–	(2,095.0)
Gold deposits	–	–	–	–	–	–	–	(9,859.5)	–	(9,859.5)
Derivative financial instruments	201.5	65,581.6	(26,898.1)	(2,150.7)	(25,524.5)	(3,812.2)	(843.5)	(8,264.6)	(1,428.0)	(3,138.5)
Accounts payable	–	(391.0)	(8,918.0)	(28.4)	–	–	–	–	(43.8)	(9,381.2)
Other liabilities	–	(0.2)	–	–	–	–	(992.6)	–	(1.2)	(994.0)
Total liabilities	(1,894.4)	(111,927.9)	(42,919.4)	(19,030.7)	(26,411.0)	(6,483.1)	(2,193.2)	(18,124.1)	(8,150.0)	(237,133.8)
Net currency and gold position	522.9	6,655.0	5,246.4	1,333.7	1,180.6	1,863.7	(427.4)	2,996.0	(15.3)	19,355.6
Adjustment for gold	–	–	–	–	–	–	–	(2,996.0)	–	(2,996.0)
Net currency position	522.9	6,655.0	5,246.4	1,333.7	1,180.6	1,863.7	(427.4)	–	(15.3)	16,359.6
SDR-neutral position	(522.9)	(6,345.5)	(5,190.2)	(1,317.0)	(1,218.7)	(1,765.4)	–	–	–	(16,359.6)
Net currency exposure on SDR-neutral basis	–	309.5	56.2	16.7	(38.1)	98.3	(427.4)	–	(15.3)	–

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 99.995% 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	2019				2018			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Economic capital utilisation for market risk	3,344.7	3,636.7	3,176.5	**3,614.4**	3,253.2	3,397.5	3,181.2	3,286.5

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	2019				2018			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Gold price risk	2,246.2	2,407.3	2,109.1	**2,324.2**	2,284.3	2,391.7	2,195.5	2,276.8
Interest rate risk	2,187.5	2,573.2	1,949.7	**2,479.0**	2,039.3	2,151.7	1,944.4	2,094.9
Foreign exchange risk	699.0	754.0	575.2	**694.1**	728.3	782.9	679.8	736.5
Diversification effects	(1,788.0)	(1,920.3)	(1,663.2)	**(1,882.9)**	(1,798.7)	(1,874.4)	(1,717.8)	(1,821.7)
Total				**3,614.4**				3,286.5

E. Minimum capital requirements for market risk

For the calculation of minimum capital requirements for market risk under the Basel II 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.

The actual minimum capital requirement is derived as 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) 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	2019			2018		
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%	181.7	6,812.1	**545.0**	202.8	7,604.2	608.3

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 Risk Management 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 Monte Carlo simulation technique that is consistent with the advanced measurement approach proposed under the Basel II framework. In line with the assumptions of the Basel II framework, the quantification of operational risk does not take reputational risk into account. Internal and external loss data, scenario estimates and control self-assessments to reflect changes in the business and control environment of the Bank are key inputs in the calculations. In quantifying its operational risk, the Bank does not take potential protection it may obtain from insurance into account.

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 99.995% 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	2019				2018			
SDR millions	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Economic capital utilisation for operational risk	1,300.0	1,300.0	1,300.0	**1,300.0**	1,275.2	1,300.0	1,200.0	1,300.0

B. Minimum capital requirements for operational risk

In line with the key parameters of the Basel II framework, 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	2019			2018		
SDR millions	VaR	Risk-weighted assets (A)	Minimum capital requirement (B)	VaR	Risk-weighted assets (A)	Minimum capital requirement (B)
Operational risk, where (A) is derived as (B) / 8%	802.5	10,031.1	**802.5**	798.5	9,981.4	798.5

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 93% (2018: 93%) of its total liabilities. At 31 March 2019, currency and gold deposits originated from 180 depositors (2018: 175 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 (2018: four 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 2019

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	60,756.4	–	–	–	–	–	–	–	60,756.4
Securities purchased under resale agreements	44,299.9	5,168.7	–	–	–	–	–	–	49,468.6
Loans and advances	12,602.0	7,539.2	12,663.3	9,249.7	–	–	–	–	42,054.2
Government and other securities	7,816.0	17,572.3	18,882.2	17,438.1	8,602.0	24,544.4	4,030.3	27.2	98,912.5
Gold and gold loans	19,271.7	84.0	–	299.0	–	–	–	–	19,654.7
Total assets	**144,746.0**	**30,364.2**	**31,545.5**	**26,986.8**	**8,602.0**	**24,544.4**	**4,030.3**	**27.2**	**270,846.4**
Liabilities									
Currency deposits									
Deposit instruments repayable at 1–2 days' notice	(15,728.8)	(24,586.9)	(30,931.7)	(21,417.8)	(17,758.0)	(10,397.3)	–	–	(120,820.5)
Other currency deposits	(76,301.3)	(20,561.1)	(14,118.0)	(6,724.5)	–	–	–	–	(117,704.9)
Securities sold under repurchase agreements	(549.0)	–	–	–	–	–	–	–	(549.0)
Gold deposits	(11,333.4)	–	–	–	–	–	–	–	(11,333.4)
Total liabilities	**(103,912.5)**	**(45,148.0)**	**(45,049.7)**	**(28,142.3)**	**(17,758.0)**	**(10,397.3)**	**–**	**–**	**(250,407.8)**
Derivatives									
Net settled cash flows									
Options and interest rate contracts	(67.9)	(63.4)	(46.3)	26.7	79.6	(141.0)	(0.4)	–	(212.7)
Gross settled cash flows									
Interest rate contracts									
Inflows	56.9	8.8	3.0	60.7	150.1	137.6	–	–	417.1
Outflows	(59.5)	(8.5)	(2.2)	(61.1)	(149.5)	(137.3)	–	–	(418.1)
Subtotal	(2.6)	0.3	0.8	(0.4)	0.6	0.3	–	–	(1.0)
Currency and gold contracts									
Inflows	99,932.5	48,181.8	24,913.2	17,338.0	18.7	–	–	–	190,384.2
Outflows	(99,036.6)	(47,816.5)	(24,541.6)	(16,964.8)	(18.8)	–	–	–	(188,378.4)
Subtotal	895.9	365.3	371.6	373.2	(0.1)	–	–	–	2,005.9
Total derivatives	**825.4**	**302.2**	**326.1**	**399.5**	**80.1**	**(140.7)**	**(0.4)**	**–**	**1,792.2**
Total future undiscounted cash flows	**41,658.9**	**(14,481.6)**	**(13,178.1)**	**(756.0)**	**(9,075.9)**	**14,006.4**	**4,029.9**	**27.2**	**22,230.8**

Annual Report

As at 31 March 2018

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	73,615.8	–	–	–	–	–	–	–	73,615.8
Securities purchased under resale agreements	25,825.2	9,844.3	–	–	–	–	–	–	35,669.5
Loans and advances	7,605.2	8,061.1	5,865.8	210.0	–	–	–	–	21,742.1
Government and other securities	7,007.2	19,365.3	10,720.8	15,425.5	10,068.8	21,994.2	1,280.3	–	85,862.1
Gold and gold loans	23,429.6	–	–	–	–	–	–	–	23,429.6
Total assets	137,483.0	37,270.7	16,586.6	15,635.5	10,068.8	21,994.2	1,280.3	–	240,319.1
Liabilities									
Gold deposits	(9,859.5)	–	–	–	–	–	–	–	(9,859.5)
Currency deposits									
Deposit instruments repayable at 1–2 days' notice	(29,438.0)	(16,215.2)	(9,053.4)	(8,509.1)	(24,412.2)	(21,372.3)	–	–	(109,000.2)
Other currency deposits	(68,689.4)	(22,337.4)	(5,059.1)	(2,297.4)	–	–	–	–	(98,383.3)
Securities sold under repurchase agreements	(2,094.8)	–	–	–	–	–	–	–	(2,094.8)
Total liabilities	(110,081.7)	(38,552.6)	(14,112.5)	(10,806.5)	(24,412.2)	(21,372.3)	–	–	(219,337.8)
Derivatives									
Net settled cash flows									
Options and interest rate contracts	(16.6)	(5.1)	(134.6)	38.8	(3.4)	(4.1)	(0.1)	–	(125.1)
Gross settled cash flows									
Interest rate contracts									
Inflows	192.7	346.7	0.7	69.1	34.5	–	–	–	643.7
Outflows	(217.8)	(380.8)	–	(77.9)	(39.4)	–	–	–	(715.9)
Subtotal	(25.1)	(34.1)	0.7	(8.8)	(4.9)	–	–	–	(72.2)
Currency and gold contracts									
Inflows	129,074.2	48,660.6	18,162.8	14,819.4	419.3	–	–	–	211,136.3
Outflows	(129,102.2)	(49,106.9)	(18,225.5)	(14,894.3)	(419.2)	–	–	–	(211,748.1)
Subtotal	(28.0)	(446.3)	(62.7)	(74.9)	0.1	–	–	–	(611.8)
Total derivatives	(69.7)	(485.5)	(196.6)	(44.9)	(8.2)	(4.1)	(0.1)	–	(809.1)
Total future undiscounted cash flows	27,331.6	(1,767.4)	2,277.5	4,784.1	(14,351.6)	617.8	1,280.2	–	20,172.2

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 2019	–	–	–	216.2	–	–	–	–	**216.2**
As at 31 March 2018	–	2,215.2	236.2	220.9	–	–	–	–	2,672.3

B. Liquidity ratio

The Bank has adopted a liquidity risk framework taking into account regulatory guidance issued by the Basel Committee on Banking Supervision 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 Basel III liquidity 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	**2019**				2018			
Percentages	Average	High	Low	At 31 March	Average	High	Low	At 31 March
Liquidity ratio	139.6%	163.6%	117.5%	**142.1%**	143.9%	175.3%	126.6%	128.8%

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 2019, the estimated outflow of currency deposits in response to the stress scenario amounted to 50.4% (2018: 56.3%) 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*	2019	2018
Liquidity available		
Estimated cash inflows	127.8	116.9
Estimated liquidity from sales of highly liquid securities	40.9	32.3
Estimated sale and repurchase agreements	2.8	5.2
Total liquidity available (A)	**171.5**	154.4
Liquidity required		
Estimated withdrawal of currency deposits	118.6	115.3
Estimated drawings of facilities	2.1	2.1
Estimated other outflows	0.1	2.4
Total liquidity required (B)	**120.8**	119.8
Liquidity ratio (A) / (B)	**142.1%**	128.8%

For reference, the Bank also calculates an LCR following the principles set out in the guidance issued by the BCBS. At 31 March 2019, the Bank's LCR stood at 196.2% (2018: 141.9%).

Independent auditor's report

To the Board of Directors and to the General Meeting
of the Bank for International Settlements, Basel

Report on the audit of the financial statements

Opinion

We have audited the financial statements of the Bank for International Settlements, which comprise the statement of financial position as at 31 March 2019, the profit and loss account, the statement of comprehensive income, movement in shareholders' equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Bank for International Settlements as at 31 March 2019 and of its financial performance and its cash flows for the year then ended in accordance with the accounting principles 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 standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Bank for International Settlements in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) together with the ethical requirements that are relevant to our audit of the financial statements in Switzerland, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

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 principles 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 Settlement or to cease operations, or has no realistic alternative but to do so.

The Board of Directors are responsible for overseeing the Bank for International Settlement's financial reporting process.

Those charged with governance are 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 management's 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 Board of Directors 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.

Basel, 13 May 2019

Ernst and Young Ltd

Victor Veger Partner	John Alton Partner

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