HSBC Bank Canada

Annual Report and Accounts 2020

HSBC

Opening up a world of opportunity

Our ambition is to be the preferred international banking partner for our customers.

We aim to deliver long-term value for our stakeholders through…

…our international network…

HSBC is one of the world's largest banking and financial services organizations, and the leading international bank in Canada.

…our access to high growth markets…

Our network provides exceptional access to high-growth developing markets in Asia, the Middle East and Latin America.

….and our balance sheet strength.

We continue to maintain a strong capital, funding and liquidity position with a diversified business model.

Total assets

$117.3bn

(2019: $106.6bn)

Common equity tier 1 ratio[1]

13.7%

(2019: 11.3%)

Contents

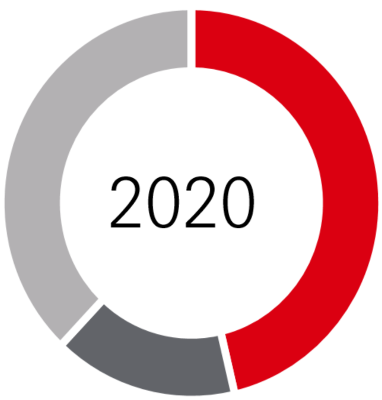
1. *Refer to the 'Use of non-IFRS financial measures' section of the Management's Discussion and Analysis ('MD&A') for a discussion of non-IFRS financial measures.*

Highlights

Financial performance in 2020 was heavily impacted by the COVID-19 pandemic and market factors. Nevertheless, performance remained resilient with our universal banking model and capital strength delivering long-term value to our customers and our shareholder.

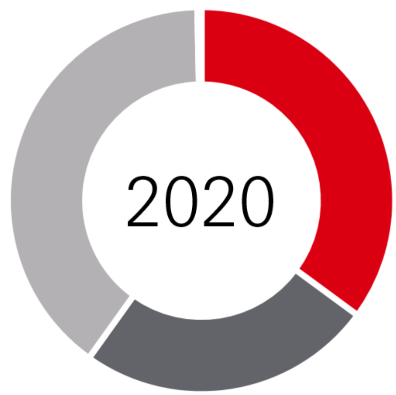
Total operating income and assets by global business at 31 December 2020

Total operating income by global business



- Commercial Banking **$949m**
- Global Banking and Markets **$322m**
- Wealth and Personal Banking **$777m**
- Corporate Centre **$(24)m**

Total assets by global business



- Commercial Banking **$41.2bn**
- Global Banking and Markets **$29.1bn**
- Wealth and Personal Banking **$46.7bn**
- Corporate Centre **$0.3bn**

Financial performance for the year ended 31 December 2020

Total operating income

$2,024m ↓ 7.4%

(2019: $2,185m)

Profit before income tax expense

$404m ↓ 50%

(2019: $816m)

Profit attributable to the common shareholder

$260m ↓ 53%

(2019: $555m)

At 31 December 2020

Total assets

$117.3bn ↑ 10%

(At 31 Dec 2019: $106.6bn)

Common equity tier 1 ratio[1]

13.7% ↑ 240 bps

(At 31 Dec 2019: 11.3%)

Return on average common equity[1]

4.7% ↓ 660 bps

(At 31 Dec 2019: 11.3%)

1. Refer to the 'Use of non-IFRS financial measures' section of the Management's Discussion and Analysis ('MD&A') for a discussion of non-IFRS financial measures.

HSBC at a glance

HSBC is one of the largest banking and financial services organizations in the world, with operations in 64 countries and territories.

About HSBC

HSBC Holdings plc, the parent company of HSBC Bank Canada, is headquartered in London. With total assets of US$2,984bn at 31 December 2020, the HSBC Group services customers worldwide from offices in 64 countries and territories in its geographical regions: Europe, Asia, North America, Latin American, and Middle East and North Africa.

HSBC in Canada

With more than 135 branches and total assets of $117bn, HSBC is Canada's leading international bank. No international bank has our Canadian presence and no domestic bank has our international reach.

No one is better placed to serve Canadian companies that are doing business here at home and internationally, or individuals with a global outlook. We have unique expertise in trade and receivables finance, renminbi, emerging markets funds and sustainable finance; and offer a unique take on infrastructure financing; and offer unique banking solutions for internationally minded individuals and businesses. We aim to be the leader in managing financial crime risk. We have set plans to prioritize sustainable financing and investment that supports the global transition to a net zero carbon economy.

Canada is an important contributor to the HSBC Group strategy and a key player in the Group's work to support customers and drive growth, leveraging our footprint across all key trade corridors.

Our values

Our values help define who we are as an organization, and are key to our long-term success.

We value difference
Seeking out different perspectives

We succeed together
Collaborating across boundaries

We take responsibility
Holding ourselves accountable and taking the long view

We get it done
Moving at pace and making things happen

For more details on our strategy, see page 14.

Awards

Selected awards and recognitions

Below are some examples of the awards received in the year. More details can be found on page 15.

Canada's #1 Trade Finance Bank and Best Bank for Service Quality
Euromoney (2019 - 2020)

Best RMB Bank in Canada for the 3rd year in a row
The Asset Triple A Treasury, Trade, Supply Chain and Risk Management Awards (2018-2020)

Best Credit Card for Paying Down Your Balance
Rates.ca (2020)

Sector Distinction, Employment Equity Awards
Government of Canada (2016 - 2019)

Best 50 Corporate Citizens in Canada
Corporate Knights (2012 - 2020)

Best Domestic Cash Manager and Best for Service in Canada
Euromoney (2020)

Our global businesses[1,2]

Our operating model consists of three global businesses and a Corporate Centre, supported by a number of corporate functions and our Digital Business Services teams, formerly known as HSBC Operations Services and Technology. On pages 24 to 27 we provide an overview of our performance in 2020 for each of these global businesses, as well as our Corporate Centre.

Commercial Banking ('CMB')

We support business customers with banking products and services to help them operate and grow. Our customers range from small enterprises, through to large companies that operate globally.

Global Banking and Markets ('GBM')

We provide financial services and products to corporates, governments and institutions. Our comprehensive range of products and solutions can be combined and customized to meet our customers' specific objectives - from primary equity and debt capital to global trade and receivables finance.

Wealth and Personal Banking ('WPB')[2]

We offer a full range of competitive banking products and services for all Canadians to help them manage their finances, buy their homes, and save and invest for the future. Our business also has an international flavour with a large suite of global investment products and other specialized services available.

Year ended 31 December 2020

Total operating income

CMB		GBM		WPB	
$949m (2019: $1,023m)	↓ 7.2%	$322m (2019: $361m)	↓ 11%	$777m (2019: $803m)	↓ 3.2%

Profit before income tax expense

CMB		GBM		WPB	
$297m (2019: $567m)	↓ 48%	$135m (2019: $190m)	↓ 29%	$70m (2019: $93m)	↓ 25%

At 31 December 2020

Customer assets[3]

CMB		GBM		WPB	
$28.3bn (At 31 Dec 2019: $30.2bn)	↓ 6.3%	$5.1bn (At 31 Dec 2019: $5.7bn)	↓ 9.7%	$31.6bn (At 31 Dec 2019: $29.5bn)	↑ 7.1%

1. *We manage and report our operations around three global businesses and the results presented are for these businesses. The consolidated HSBC Bank Canada results presented on the previous page also include the Corporate Centre (see page 27 of the MD&A for more information). The equivalent results for the Corporate Centre were: Total operating loss of $24m (2019 total operating loss of $2m), profit/(loss) before income tax expense was a loss of $98m (2019 was a loss of $34m) and customer assets nil (2019: nil).*
2. *Effective from the second quarter of 2020, we made two changes to reportable segments. Firstly, the reallocation of Balance Sheet Management from Corporate Centre to the global businesses to better align the income and expenses to the businesses generating or utilizing these activities and as a result Corporate Centre is no longer considered an operating segment. All comparatives have been restated. Secondly, to simplify our matrix organizational structure, HSBC Holdings Group ('HSBC Group') merged Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking. Therefore, going forward, our global business Retail Banking and Wealth Management ('RBWM') has been renamed to Wealth and Personal Banking ('WPB'). HSBC Bank Canada did not have a separate business line for Global Private Banking and there have been no changes in assets or liabilities nor any changes in the income or expenses that were previously attributable to the RBWM business line as a result of the change in structure. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*
3. *Customer assets includes loans and advances to customers and customers' liability under acceptances.*

Message from the President and Chief Executive Officer

Linda Seymour
President and Chief Executive Officer

As we saw across the world, the lives of Canadians and the Canadian economy were shaped in 2020 by COVID-19. A historic drop in GDP in the first half was only somewhat offset by GDP growth in the second half and many of our customers are facing headwinds they never imagined possible. We take great pride in the fact that throughout 2020 we served our customers well as they met these extraordinary circumstances, we took care of our employees and continued to build for a more sustainable future even as these same factors played out in HSBC Bank Canada's results. Increased expected credit losses and decreased operating income resulted in profit before tax of $404m, for a decline of 50% from 2019. This is despite strong cost discipline, an improved economic outlook in the second half which led to lower expected credit losses, and steady increases in non-interest income. Performance in the fourth quarter improved, with profit before tax increasing in two of our three global businesses compared to the third quarter.

I became CEO in September and this year has deepened my appreciation for just how fantastic Team HSBC is. While working from kitchen tables and living rooms as they help their children with online school, or with masks and Plexiglas between them and our branch customers, they have shown incredible resilience, pulling together as one bank with persistence and dedication to serve our customers. Seamlessly, we:

- put the support in place to keep customers and employees safe and keep our branches, digital platforms and contact centres fully operational
- set up new systems to facilitate government loan programs for our business customers and loan deferral programs for individuals that were struggling financially because of the lockdowns
- accelerated the availability of the digital services that are now truly essential
- moved 95% of office-based employees to remote working virtually over night –
- all while showing excellent cost discipline, resulting in essentially flat costs compared to 2019.

With our reporting year starting January 1st, COVID-19 impacted every quarter while it hit our competitors beginning in the second quarter. In every business line, forward looking expected credit losses, lower margins from interest rate decreases

"As the world opens up, we'll be there to support our customers, just as we have been through this most challenging of times."

and higher liquidity costs had a negative impact on profits. Nevertheless, Commercial Banking delivered $297m profit before tax with more customers using our full suite of services. In Global Banking and Markets profit before tax was $135m as client activity and income increased across all products – most notably in Markets trading and sales, lending and underwriting. And Wealth and Personal Banking, delivered $70m in profit before tax with strong growth in total relationship balances, healthy non-interest income and growth in our international client base.

Despite the resurgence in COVID-19 cases, we choose to look confidently forward to a time when this is a distant memory. We expect continued policy support, and a rebound in optimism to help lift economic activity – bringing economic activity almost back to it's pre-pandemic level by the end of 2021. Canadian companies are telling us that they expect international trade to have a positive impact on their businesses over the next two years – eyeing opportunities in European, Asian and Latin American markets. While many Canadian families have focussed on projects close to home, individuals are looking forward to gathering with friends, travelling and all the many other activities that they've given up in the fight against COVID-19. This includes our 5,000 plus staff across the country. On behalf of our entire management team, our deepest thanks to them for their dedication, and perseverance, and for the extreme care they have taken to maintain relationships with our customers and each other through this time.

Thank you also to our customers for their continued trust and partnership. As the world opens up, we'll be there to support them, just as we have been through this most challenging of times – with the global experience and perspective on evolving trends and issues that they have come to rely on. Until then, stay safe.

Linda Seymour

President and Chief Executive Officer
HSBC Bank Canada
19 February 2021

How we do business

We conduct our business intent on supporting the sustained success of our customers, people and communities.

Our approach

Our purpose is 'Open up a world of opportunity' and we aim to be the preferred international banking partner for our customers. To achieve this in a way that is sustainable, we are guided by our values: we value difference; we succeed together; we take responsibility; and we get it done.

We also need to build strong relationships with all of our stakeholders, including customers, employees and the communities in which we operate. This will help us deliver our strategy and operate our business in a way that is sustainable.

In 2020, our ability to help our stakeholders was more important than ever, as we continued to promote and encourage good conduct through our people's behaviours and the decisions we take during these unprecedented times. We define conduct as delivering fair outcomes for our customers and not disrupting the orderly and transparent operation of financial markets. This is central to our long-term success and ability to serve customers. We have clear policies, frameworks and governance in place to protect them. For further information on conduct, see page 8.

In the following subsections, we provide information about how we are working to meet the needs of our customers, employees, environment and our approach to creating a responsible business culture.

Our COVID-19 actions

The COVID-19 pandemic is testing us all in ways we could never have anticipated. We want to do what we can to support our customers, employees and communities during this period. We are striving to use our international network and resources to support growth and recovery. To find out more about the impact and our response to COVID-19 in our Management's Discussion and Analysis ('MD&A') on page 15.

Our approach to diversity

Our customers, employees and communities span many cultures and continents. We believe this diversity makes us stronger, and we are dedicated to building a diverse and connected workforce where everyone feels a sense of belonging.

In Canada, HSBC employs 5,499 people. We work hard to build and maintain our inclusive, positive and performance-oriented culture. Our actions are focussed on ensuring our people are valued, respected and supported to fulfil their potential and thrive. In 2020, we were recognized as one of Canada's Best Diversity Employers. Our Board of Directors and Executive Committee of HSBC Bank Canada are gender balanced and have been since 2013. For further information on diversity, see page 10.

Supporting sustainable growth

We are committed to building a business for the long term, developing relationships that last. We want to be a well-managed organization that people are proud to work for, has the trust of our customers and the communities we serve, and minimizes its impact on the environment. To find out more about our climate strategy, which forms part of our wider focus on environmental, social and governance issues, see page 11.

Customers

We aim to grow in a way that puts the customer at the centre by improving performance with digital enhancements while maintaining financial crime standards.

At a glance

Our relationship
We create value by providing the products and services our customers need and aim to do so in a way that fits seamlessly into their lives. This helps us to build long-lasting relationships with our customers. We maintain trust by delivering fair outcomes for our customers, and protecting our customers' data and information. If things go wrong, we aim to take action in a timely manner.

Our customers consist of the following main groups: individuals; small businesses; medium and large-sized businesses; global businesses and institutions. These groups are served by our three global business, respectively: Wealth and Personal Banking ('WPB'), Commercial Banking ('CMB') and Global Banking and Markets ('GBM').

Find out more

Details on our Conduct Framework are available at www.hsbc.com.

Digital and technology

Our retail and wholesale customers are using digital services more than ever before, with COVID-19 accelerating the shift. The investments we have made in digital and technology have made banking simpler and safer through COVID-19 and beyond. We have made it easier for our customers to access our services remotely through video meetings, online platforms and mobile applications.

Customer satisfaction

To improve our services, we must be open to feedback and acknowledge when things go wrong. We listen to complaints to address customers' concerns and understand where we can improve process, procedures and systems. We focus on staff training to improve our complaint handling expertise and ensure our customers are provided with fair outcomes. This was even more essential in the past year as our customers encountered COVID-19 related challenges and we needed to adapt quickly. Complaints are reported to governance forums and senior executives are measured against complaint handling performance.

Conduct

We responded rapidly to the changing environment caused by the COVID-19 pandemic and helped our customers with payment relief programs, lending support and digital solutions. We sought to address our customers needs in a responsible way - fairly and safely. Conduct principles are embedded into the way we work and the way we develop and sell our products and services.

Digital and technology

We continue to invest in digital and technology to help make banking simpler and safer for customers, especially prioritizing assistance during the COVID-19 pandemic, as well as digital solutions to support their growth ambitions.

We have focussed our technology efforts on online banking platforms and mobile apps, enabling us to improve features faster for our retail customers. We have also enabled video consultations and chat services to help customers with their queries to support our customers through COVID-19 and beyond.

For our Corporate Banking platform, mobile remote deposit capture was introduced in early 2020 which allows customers to remotely deposit cheques using the HSBCnet mobile app.

Customer satisfaction

Acting on feedback
Below we have highlighted some examples of how customer feedback has driven improvements across our global businesses in Canada.

Supporting our customers through COVID-19
The COVID-19 pandemic has posed significant challenges for our customers. Our immediate priority was to do what we could to provide them with support and flexibility. We supported our retail and corporate customers through the pandemic, by providing financial relief through various initiatives including payment deferral and government lending schemes. HSBC's digital solutions helped customers navigate through the challenges of the pandemic. We added new features in our mobile banking app and introduced mobile remote deposit capture which allows customers to remotely deposit cheques. While keeping our branches and other customers channels operational through the pandemic, we also made it easier for our customers to bank from home by using customer video meetings and increasing digital transaction limits. Our priority to make banking simpler and safer, was reflected in the scores for Commercial Banking domestic account opening where over 80% of customers rated our onboarding experience as 'Excellent'.

Making banking accessible
We continued to expand our distribution network by opening new branches where our customers live. We invested in our digital technologies including the launch of a new Fusion Mobile App for small business banking customers and HSBC EasyID™ a digital identification and verification tool to capture new to bank customer information. We added multiple new features to mobile banking app for retail customers, enhanced digital capabilities of Wealth Compass and introduced new account opening application for HSBC +Rewards MasterCard. Our investments in our distribution channels helped us grow our retail and small business banking customers. These investments have also enabled us to deepen our relationship with our existing customers and improve the customer experience.

Provide competitive products and services
We introduced new Wealth products, such as HSBC T Series funds, to meet the retirement and saving needs of our customers. We launched WPB Professional Banking Program to offer competitive pricing to HSBC Professional customers on retail and small business banking products and services. We enhanced creditor insurance coverage for mortgages and provided competitive offers for new-to-Canada immigrants and customers with international needs. We continued to provide highly competitive rates on mortgages and deposit products.

Our approach to conduct

Operating with high standards of conduct is central to our long-term success and underpins our ability to serve our customers.

We are committed to delivering fair outcomes for our customers and doing our part to ensure the orderly and transparent financial markets. We have clear policies, frameworks and governance in place to help us achieve these goals. These underpin the way we behave, design products and services, train and incentivize employees, and interact with customers and each other. Our Conduct Framework guides activities to strengthen our business and increases our understanding of how the decisions we make affect customers and other stakeholders.

We consider our customers' financial needs and personal circumstances to make suitable product recommendations. This is supported by:

– global advisory standards and local regulations;
– a robust customer risk profiling methodology to help assess customers' financial objectives, investing knowledge and experiences, attitude towards risk, and ability to bear risk; and
– tools and calculators to help customers plan for their future.

Employees

We are opening up a world of opportunity for our people by building an inclusive organization that prioritizes well-being, invests in learning and careers and prepares our people for the future of work.

At a glance

Our culture
Our success is built on our ability to attract, develop and retain a diverse workforce comprised of the best and brightest talent. With a footprint that spans the globe, diversity of thought, perspective and experience is part of our DNA.

This year demonstrated our people's ability to adapt and adopt new technologies as we faced the challenges brought by the COVID-19 pandemic. We continued in 2020, both virtually and in person at our branches, to foster a culture that encourages speaking up, promotes the right behaviours, where diversity is celebrated and where people feel empowered to voice their opinions and concerns. We focussed our efforts on supporting flexible working arrangements that accommodated our people's personal challenges through the pandemic, supporting our customer facing employees, listening to our people, and rolling out tools focussed on well-being and mental health, while staying on track of our diversity and inclusion goals.

Find out more

To learn more about our approach to diversity and inclusion, our values and career opportunities, visit www.hsbc.ca/careers.

Listening to our people

We believe in the importance of listening to our people and seek new and innovative ways to encourage employees to speak up. We monitor how we perform on metrics that we value and benchmark against our peers.

Supporting our people

We have continued to find new ways to support colleagues' learning and growth, transitioning to on-demand and remote learning experiences and career development and using digital technologies to collaborate across boundaries more than ever before.

The future of work

The COVID-19 pandemic taught us many roles can be undertaken effectively outside of our branches and offices, accelerating our focus on enabling greater flexibility in how our people will work in the future. It also showed us that we can respond to change rapidly.

Diversity and inclusion

While there have been many new challenges, during the COVID-19 pandemic this year we have renewed our emphasis on inclusion, mental health and well-being. We are committed to foster a thriving environment where people are valued, respected and supported to fulfill their potential. By leveraging the extraordinary range of ideas, backgrounds, styles and perspectives of our employees to effectively meet the needs of our different stakeholder groups, we can drive better business outcomes for all.

How we listen

Listening to our people
Understanding how our people feel about HSBC helps us give them the right support to achieve their potential and serve our customers well. In the past year we have surveyed employees about working styles, the pandemic, our strategy, culture and customer experience. The results are shared with our Board of Directors and Executive Committee and help shape the future of how and where we work. We also held HSBC Exchange sessions – meetings where leaders listen and employees share their views on any issue – including one specifically about race in response to the growth of the Black Lives Matter movement.

Finding ways to speak up
Having a culture where our people feel able to speak up is critical to our success and for many years we have had multiple easily accessible whistleblowing channels to report concerns at different severity levels. In 2020, we refreshed communications to employees about how to speak up and enabled investigators to better assess how to handle cases.

When things go wrong
The bank does not tolerate acts of retaliation against anyone who reasonably believes the concern they have raised is true. When despite our best efforts, concerns are raised, we investigate them thoroughly and independently. To ensure clarity over standards of expected behaviour, we trained people managers on bullying and workplace harassment in 2020.

The Group Audit Committee has responsibility for reviewing the Group's whistleblowing policy and procedures, and receives regular updates on concerns raised and management actions taken in response. The Canada Board of Directors also receives a quarterly report of conduct issues, trends and resulting actions.

Supporting our people

Adapting through COVID-19
This year posed unforeseen changes to the way we work and the way we do business. We responded to close to 1,100 enquiries regarding COVID-19 and listened to our employees' valuable suggestions, adapting to emerging needs. In branches we worked to keep everyone safe and informed, and provided additional pay and vacation time to employees required to work on site in the early phase of the pandemic. We identified a need to improve accessibility for those with hearing disabilities - prompting us to make transparent masks available and to explore closed captioning for video meetings.

See more on HSBC's response to COVID-19 on page 15.

Supporting self-development
To create more open dialogue on mental health in the workplace, we rolled out a global program which helps to identify signs of poor mental health and build confidence in holding healthier conversations while equipping everyone with tools to help colleagues where needed.

Our existing Employee Assistance Program, a new telemedicine platform, and mindfulness resources provided mental and physical health and financial well-being resources. We also hosted several well-being webinars for employees and their families.

The Future of Work

Adapting how we work - COVID-19 and beyond
While HSBC already had flexible working arrangements for many of our employees, the COVID-19 pandemic gave us a new appreciation of the scope of roles that can be performed effectively outside of our offices.

As a result of the implementation of our business continuity plan, the majority of our non-customer facing employees worked from home through most of 2020. The closure of day cares and schools required us to be even more flexible and understanding with schedules. And we adopted platforms that enabled communication and fast decision making in a changing environment.

Recognizing the work-life balance and environmental benefits of increased flexibility in working arrangements, we are reviewing how we will work when offices reopen – reconsidering the need for roles to be office-based, and thinking about new ways to use the office space that we have.

Building the skills of the future
This year we moved in-classroom learning to interactive virtual delivery, allowing us to reach larger groups of employees.

Reskilling is a key priority for us and we are investing substantially in building future skills as we transform our business to best meet the changing needs of the customers and communities that we serve. This year we adopted the global HSBC Future Skills program and invested in enhanced tools, technology platforms and partnerships to help our employees take greater ownership of their development. We are also creating an innovative internal talent marketplace that helps improve career development by matching the skills and aspirations of our people with business needs and opportunities.

Diversity and inclusion

Our commitment
HSBC Bank Canada is considered a leader in employment equity and has received an Employment Equity Award from the Canadian government for four consecutive years. In 2020, we were recognized as an inspirational role model in the sector and our former Chief Operating Officer was recognized as an Employment Equity Champion.

This year we refreshed our Diversity and Inclusion ('D&I') strategy with a new three-year plan to align with the Global D&I Benchmarks which help to measure progress and provide standards to support organizations in realizing the depth, breadth, and integrated scope of D&I practices. Highlights include:

Leadership & Accountability: We're offering more tools, training and resources to our leaders and people managers including Inclusive Leadership and Leading Change programs to help people managers embed psychological safety within their teams, lead with curiosity, humility and a willingness to hear other perspectives and implement change within their teams.

Workforce Composition: Building on our long standing gender balanced Board of Directors and Executive Committee, we are removing barriers to diverse representation at senior levels, and hiring across all levels focussing on the most under-represented groups. In 2020, HSBC launched the Global Disability Confidence Program. It includes 17 disability smart guides on how to support colleagues with different disabilities and a disability confidence assessment tool. We are also exploring improvements to our self-identification technology so that we have the best possible understanding of our people.

Cultural and Market Place Presence
In 2020, HSBC has made a global commitment to improve opportunities for Black and ethnic minority employees and boost the diversity of our senior leadership. In Canada, we reaffirmed our commitment to stand against all forms of racism and discrimination in a message to all employees; held Exchange sessions; signed the BlackNorth Initiative CEO Pledge; and partnered with the Black Business and Professional Association to support their mentorship programs.

We again, in 2020, marked PRIDE month, International Women's Day, National Indigenous History Day, and International Day for Persons with Disabilities. For the first time we also marked International Day of Pink to reinforce our commitment to stand up against all forms of bullying, discrimination, homophobia and transphobia. And we continue to support the work of our eight employee resource groups – an important space where colleagues can speak up about internal and commercial issues and opportunities, create connections and learn from others. The groups focus on gender, age, ethnicity and culture, LGBT+ and ability.

Climate

We are powering new solutions to the climate crisis and supporting the transition to a low-carbon future, moving to carbon neutrality ourselves and helping others to do so too.

At a glance

Our climate ambition

We believe that finance has a crucial role to play in tackling climate change – and HSBC is recognized as a leading partner in the transition to a low-carbon future. We are committed to supporting responsible economic growth and enabling the low-carbon transition using sustainable finance.

Achieving the scale of change required for the world to meet the Paris Agreement goal of net zero by 2050 will require us to go further and faster. As such, in October 2020, HSBC Group has set forth the next stage of our climate strategy which includes becoming a net zero bank, supporting our customers on their unique transition journeys and unlocking new climate solutions.

Find out more

Our climate strategy is part of our broader commitment to environmental, social and governance ('ESG') issues. You can find more information about our approach to ESG issues on our global corporate website at www.hsbc.com/our-approach/esg-information and in our Group Annual Report and Accounts. We also report against the Task Force on Climate-related Financial Disclosures ('TCFD') in our Group Annual Report and Accounts.

HSBC Bank Canada also publishes a Public Accountability Statement, called 'HSBC Bank Canada in the Community' which details our sustainable finance progress, community investment programs, contribution to the economy and initiatives that are making it easier for our customers to reach their financial goals. This can be accessed on our website at: www.about.hsbc.ca/hsbc-in-canada/community.

Becoming a net zero bank

We aim to reduce carbon emissions from our operations and supply chains to net zero by 2030 or sooner, and to align financed emissions from our portfolio of customers to the Paris Agreement goal of net zero by 2050 or sooner.

HSBC has been actively managing its environmental performance for many years, and was recognized by Corporate Knights as one of Canada's Best 50 Corporate Citizens in 2020. Since launching our global Reduce Program in 2012, we have reduced our greenhouse gas emissions by more than 65% in Canada.

Supporting our customers to thrive in transition

We help customers cut carbon while ensuring they continue to prosper. HSBC Group's ambition is to provide between USD750 billion and USD1 trillion in sustainable financing and investment by 2030 to support them as they switch to more sustainable ways of doing business.

Here in Canada, HSBC is a trusted partner to our clients in advancing their sustainability ambitions. We have been active in the green, social and sustainable bond market since its arrival in Canada, and offer a suite of green and sustainable products and solutions across capital markets, commercial banking, asset management and trade finance. In 2020, we inked Canada's first Green Loan Principles-aligned loan for a commercial client.

Unlocking climate solutions and innovations

The transition to a net zero economy requires radical new solutions. We are finding new ways to support the acceleration of nature-based solutions and renewables, and helping to scale promising and innovative clean technologies.

In Canada, we announced a new partnership with MaRS Cleantech, to support their ground-breaking new program 'Mission from MaRS: Climate Action', which accelerates the adoption and commercialization of clean technologies, propelling Canada's most promising clean technology entrepreneurs to success.

Sustainability risk management

Strong governance and sustainability risk management underpin our climate ambition. Sustainability and climate-related risks are managed through our global enterprise risk management framework, and we support and contribute to HSBC Group's Task Force on Climate-related Financial Disclosures ('TCFD') reporting.

Doing business responsibly

We remain committed to high standards of governance. We work alongside our regulators and recognize our contribution to building healthy and sustainable societies.

At a glance

We act on our responsibility to run our business in a way that upholds high standards of corporate governance.

We are committed to working with our regulators to manage the safety of the financial system, adhering to the spirit and the letter of the rules and regulations governing our industry. We aim to act with courageous integrity and learn from past events to prevent their recurrence. We meet our responsibility to society through paying taxes and being transparent in our approach to this. We continually work to improve our compliance management capabilities.

Non-Financial Risk

We use a range of tools to monitor and manage our non-financial risks including our risk appetite, risk map, top and emerging risks and stress testing processes. During 2020, we continued to strengthen our approach to managing non-financial risk as set out in the risk management framework. The approach sets out governance, appetite and provides an end-to-end view of non-financial risks, enhancing focus on the risks that matter the most and associated controls.

Find out more

Further details on our non-financial risks may be found in the Risk section on page 34.

Financial crime risk management

The HSBC Group, including HSBC Bank Canada, has a responsibility to help protect the integrity of the global financial system. We have continued our efforts to combat financial crime risks (including money laundering, sanctions breaches, fraud, bribery and corruption, tax evasion, and terrorist and proliferation financing) and reduce their impact on HSBC and the wider world. As part of this work, we have progressed a number of key initiatives, enabling us to manage and mitigate these risks more effectively, and further our pioneering work in financial crime risk management across the financial services industry. We take appropriate action where financial crime risk falls outside of our risk appetite and maintain an HSBC Affiliate review program so each Affiliate can adequately protect the Group.

We are also working with governments, law enforcement and other banks to advance our collective interests in this area. We continue to invest in technology and training. In 2020, 99% of our workforce in Canada received training on fighting financial crime. These steps are enabling us to reduce the risk of financial crime much more effectively.

Anti-bribery and corruption

We are committed to high standards of ethical behaviour and operate a zero-tolerance approach to bribery and corruption, which we consider unethical and contrary to good corporate governance. Our anti-bribery and corruption policy sets the framework for the Group, including HSBC Bank Canada, to comply with anti-bribery and corruption laws in all markets and jurisdictions in which we operate and gives practical effect to global initiatives such as the Organization of Economic Co-operation and Development ('OECD') Convention on Combating Bribery of Foreign Public Officials in International Business Transactions.

Tax

We are committed to follow the letter and spirit of tax laws in Canada. We aim to have an open and transparent relationship with the tax authorities, ensuring that any areas of uncertainty or dispute are agreed and resolved in a timely and effective manner. As a consequence, we pay our fair share of taxes in Canada. We manage our tax risk through a formal tax risk management framework and apply global initiatives to improve transparency including the U.S. Foreign Account Tax Compliance Act ('FATCA') and the OECD Standard for Automatic Exchange of Financial Account Information (also known as the Common Reporting Standard).

Management's discussion and analysis

Basis of preparation

HSBC Bank Canada and its subsidiary undertakings (together 'the bank', 'we', 'our') is an indirectly wholly-owned subsidiary of HSBC Holdings plc ('HSBC Holdings'). Throughout the Management's Discussion and Analysis ('MD&A'), the HSBC Holdings Group is defined as the 'HSBC Group' or the 'Group'.

The MD&A is provided to enable readers to assess our financial condition and results of operations for the quarter and year ended 31 December 2020, compared to the same periods in the preceding year. The MD&A should be read in conjunction with our 2020 consolidated financial statements and related notes for the year ended 31 December 2020 ('consolidated financial statements'). This MD&A is dated 19 February 2021, the date that our consolidated financial statements and MD&A were approved by our Board of Directors ('the Board'). The references to 'notes' throughout this MD&A refer to notes on the consolidated financial statements for the year ended 31 December 2020.

The bank has prepared its consolidated financial statements in accordance with International Financial Reporting Standards ('IFRS') and in consideration of the accounting guidelines as issued by the Office of the Superintendent of Financial Institutions Canada ('OSFI'), as required under Section 308(4) of the Bank Act. Certain sections within the MD&A, that are marked with an asterisk (*), form an integral part of the accompanying consolidated financial statements. The abbreviations '$m' and '$bn' represent millions and billions of Canadian dollars, respectively. All tabular amounts are in millions of dollars except where otherwise stated.

Our continuous disclosure materials, including interim and annual filings, are available through a link on the bank's website at www.hsbc.ca. These documents, together with the bank's *Annual Information Form*, are also available on the Canadian Securities Administrators' website at www.sedar.com. Complete financial, operational and investor information for HSBC Holdings and the HSBC Group, including HSBC Bank Canada, can be obtained from its website, www.hsbc.com, including copies of *HSBC Holdings Annual Report and Accounts 2020*. Information contained in or otherwise accessible through the websites mentioned does not form part of this report.

Caution regarding forward-looking statements

This document contains forward-looking information, including statements regarding the business and anticipated actions of the bank. These statements can be identified by the fact that they do not pertain strictly to historical or current facts. Forward-looking statements often include words such as 'anticipates', 'estimates', 'expects', 'projects', 'intends', 'plans', 'believes' and words and terms of similar substance in connection with discussions of future operating or financial performance. Examples of forward-looking statements in this document include, but are not limited, to statements made in 'Message from the President and Chief Executive Officer' on page 4, 'Our strategic priorities' on page 14, 'Economic review and outlook' on page 29, 'Regulatory developments' on page 30, and 'Employee compensation and benefits' on page 86. By their very nature, these statements require us to make a number of assumptions and are subject to a number of inherent risks and uncertainties that may cause actual results to differ materially from those contemplated by the forward-looking statements. We caution you to not place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. The risk management section of the MD&A describes the most significant risks to which the bank is exposed and, if not managed appropriately, could have a material impact on our future financial results. These risk factors include: credit risk, capital management, liquidity and funding risk, market risk, resilience risk, regulatory compliance risk, financial crime risk, model risk and pension risk. Refer to the 'Risk management' section of this report for a description of these risks. Additional factors that may cause our actual results to differ materially from the expectations expressed in such forward-looking statements include: general economic and market conditions, fiscal and monetary policies, changes in laws, regulations and approach to supervision, level of competition and disruptive technology, cyber threat and unauthorized access to systems, changes to our credit rating, climate change risk, IBOR transition, changes in accounting standards, changes in tax rates, tax law and policy, and its interpretation of taxing authorities, risk of fraud by employees or others, unauthorized transactions by employees and human error. Our success in delivering our strategic priorities and proactively managing the regulatory environment depends on the development and retention of our leadership and high-performing employees. The ability to continue to attract, develop and retain competent individuals in an employment market impacted by the COVID-19 pandemic proves challenging. We are monitoring people risks with attention to employee mental health and well-being, particularly in the face of the pandemic. Despite contingency plans we have in place for resilience in the event of sustained and significant operational disruption, our ability to conduct business may be adversely affected by disruption in the infrastructure that supports both our operations and the communities in which we do business, including but not limited to disruption caused by public health emergencies, pandemics, environmental disasters and terrorist acts. Refer to the 'Factors that may affect future results' section of this report for a description of these risk factors. We caution you that the risk factors disclosed above are not exhaustive, and there could be other uncertainties and potential risk factors not considered here which may adversely affect our results and financial condition. Any forward-looking statements in this document speak only as of the date of this document. We do not undertake any obligation to, and expressly disclaim any obligation to, update or alter our forward-looking statements, whether as a result of new information, subsequent events or otherwise, except as required under applicable securities legislation.

Who we are

HSBC Bank Canada is the leading international bank in the country. We help companies and individuals across Canada to do business and manage their finances here and internationally through three global businesses: Commercial Banking, Global Banking and Markets, and Wealth and Personal Banking[1]. No international bank has our Canadian presence and no domestic bank has our international reach.

Canada is an important contributor to the HSBC Group growth strategy and a key player in the Group's work to support customers and drive growth, leveraging its footprint across all key trade corridors, including in North America, alongside the United States and Mexico, Europe and with China.

HSBC Holdings plc, the parent company of HSBC Bank Canada, is headquartered in London. HSBC serves customers worldwide from offices in 64 countries and territories in its geographical regions: Europe, Asia, North America, Latin America, and Middle East and North Africa. With assets of US$2,984bn at 31 December 2020, HSBC is one of the world's largest banking and financial services organizations.

Throughout our history we have been where the growth is, connecting customers to opportunities, enabling businesses to thrive and economies to prosper, helping people fulfill their hopes and dreams and realize their ambitions.

Shares in HSBC Holdings are listed on the London, Hong Kong, New York and Bermuda stock exchanges. The HSBC Holdings shares are traded in New York in the form of American Depositary Receipts.

1. *Effective from the second quarter of 2020, HSBC Holdings Group ('HSBC Group') merged Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking. Therefore, going forward, our global business Retail Banking and Wealth Management ('RBWM') has been renamed to Wealth and Personal Banking ('WPB'). HSBC Bank Canada did not have a separate business line for Global Private Banking and there have been no changes in assets or liabilities nor any changes in the income or expenses that were previously attributable to the RBWM business line as a result of the change in structure. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*

Our strategy

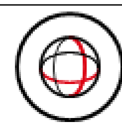
Our long-term strategy positions us to be the preferred international finance partner for our customers, capitalizing on our unique combination of strategic advantages.

Strategic advantages

 **World's leading international bank**	HSBC Bank Canada is an integral part of one of the most international banking and financial services organizations in the world. The value of our international network comes from our connections to the people and companies that drive economic activity across the globe. We provide products and services to meet diverse financial needs - from purchasing a new home to financing large infrastructure projects such as expansion of a regional port terminal. Our relationships reflect the geographic reach of our network and the range of customers we support.
Unparalleled access to international network	Our network of customers provides us with significant insight into trade and capital flows across supply chains. When we bank customers on both sides of a transaction, we can help them overcome obstacles and operate more efficiently. We are uniquely positioned to be the bridge for customers, both large and small, between Canada and the rest of the world.
Business management	HSBC Bank Canada is focussed on growth, with a strong capital, funding and liquidity position and a diversified business model.

Our strategic priorities

HSBC Bank Canada refreshed our Country Strategic Plan in 2019 which sets out our strategic priorities for the next three years. In 2020, the COVID-19 pandemic has dramatically impacted the global macroeconomic environment. Whilst our ambitions remain unchanged and our strategic priorities remain relevant, we have identified additional areas of focus in response to the changing environment. Some of these include accelerating the roll out of digital capabilities to better serve our customers, and supporting our colleagues through implementing new ways of working. We will continue to monitor changes in the external environment and re-evaluate our strategy where relevant.

 **Optimize value of our international network and universal banking capabilities**	The HSBC Group's international network of 64 markets covers approximately 90% of global GDP, trade and capital flows. Our global network and expertise in international markets has enabled us to build deep and enduring relationships with businesses and individuals with international needs, and to create a competitive advantage in serving Canadian retail and wealth management customers. We continue to realize value from the network across North America and other regions where HSBC has presence. We collaborate with colleagues across HSBC's network to fulfil our customers' cross border banking needs, including cross border product and sales initiatives and improvements in systems and processes to provide efficient cross border service. Identifying new opportunities where the Group is present in Greater China and its ability to undertake transactions in the RMB currency can add value for our customers. We continue to work closely with our colleagues in Greater China to assist our clients in conducting business in this key trade corridor. HSBC was named 'Best RMB Bank in Canada' for three consecutive years by The Asset as part of their Triple A Treasury, Trade, Supply Chain and Risk Management Awards.

Tap into emerging opportunities in fast growing segments and offer best in class products and services

We continue to invest in growth opportunities to create value for all of our stakeholders. We are investing in fast growing segments, such as building out digital capabilities to serve our small-to-medium enterprises and enhancing our wealth proposition to capture growth opportunities within this segment.

HSBC Bank Canada is committed to supporting our customers transition to a low-carbon economy. We work with our customers to advance their sustainability ambitions, and offer a suite of green and sustainable products and solutions across capital markets, commercial banking, asset management and trade finance. To help deliver on the HSBC Group's climate ambitions, we will continue to work closely with our customers to develop tailored solutions to reduce emissions, taking into account the unique challenges for individual businesses, sectors, and geographies.

Commercialize our investments in digital capabilities, people and products to deliver improved customer service

We are investing in technology to make it easier for customers to bank with us and for our colleagues to support our customers. In response to the COVID-19 pandemic, we accelerated the roll-out of digital self-service tools (e.g. electronic signature, digital account opening journeys, digital identity validation and authentication) to reduce the number of branch visits. In addition, we continued to deliver enhancements across our HSBC mobile and online banking channels to improve access, navigation and usability for all of our customers across our businesses, driven by customer needs and feedback.

Create capacity for investments through efficiency

We are building a simpler, more efficient and empowered organization through initiatives to reduce our cost base and simplify the organization. We will sustain cost discipline and control by continuing to benchmark our costs with the market, leveraging technology to realize efficiency gains, and re-engineering processes to take out costs and improve customer and employee experience.

Develop and empower our people

By focussing on employee well-being, diversity, inclusion and engagement, as well as building our peoples' skills and capabilities for now and for the future, we aim to create an environment where our people can fulfil their potential.

We will continue to invest in training and development focussed on leadership, technical capabilities and future skills to ensure our talent is empowered to shape and develop their own career paths.

Selected awards and recognition

Award	Awarded by
HSBC Bank Canada awards	
Best 50 Corporate Citizens in Canada	Corporate Knights (2020)
Sector Distinction, Employment Equity Awards	Government of Canada (2019)
Canada's #1 Trade Finance Bank and Best Bank for Service Quality	Euromoney (2020)
Canada's Best RMB Bank	The Asset Triple A Treasury, Trade, Supply Chain and Risk Management Awards (2020)
Best Credit Card for Paying Down Your Balance	Rates.ca (2020)
Best Domestic Cash Manager and Best for Service in Canada	Euromoney (2020)
Best Global Cash Manager	Euromoney (2020)
Gold Award for Innovative Media for Adpointment	2020 Canadian Marketing Association Awards
Silver Award for Customer Experience at the Mid-Autumn Festival	2020 Canadian Marketing Association Awards
HSBC Group awards	
Global Excellence in Leadership, World's Best Bank for Sustainable Finance, Word's Best Bank for Transaction Services	Euromoney Awards for Excellence (2020)
Best Global Trade Finance ('GTR') Bank	GTR Leaders in Trade Awards (2020)
#1 Standout Dealer for supporting Global Corporates through COVID-19	Greenwich Associates (2020)
Top Global Employers List	Stonewall (2020)

Impact of COVID-19 and our response

The COVID-19 pandemic has had and continues to have a significant impact on people, businesses, societies and economies around the world. As we continue to prioritize the safety of our employees and customers there are a number of factors associated with the pandemic and its impact on global economies that are having a material adverse effect on financial institutions such as HSBC Bank Canada.

In Canada, government imposed restrictions on mobility and social interaction beginning in March have had a significant impact on economic activity. While some restrictions eased over the summer, this pandemic is not static. There has been a resurgence in COVID-19 cases in late 2020 that led authorities to re-impose restrictions on some non-essential businesses. Across Canada, local and provincial governments continue to adapt their restrictions in response to fluctuating COVID-19 case counts. On a positive note, on 9 December, Health Canada approved its first COVID-19 vaccine, with the first doses administered before the year-end.

Customers, employees and communities

Banking in Canada is deemed an essential service and we have been operating within our Business Continuity Plan ('BCP') to maintain services for customers across all of our lines of business since mid-March. To reduce the risk and play our part in limiting the spread and impact of this public health crisis, and by implementing new technology solutions, approximately 95% of non-branch staff are working from home and we expect this to continue for the foreseeable future.

To address the additional stress on our people created by the isolation in this extreme environment, we have significantly increased wellness supports including for mental health. Where employees must be on site to perform critical roles, we continue to have precautionary measures in place including enhanced cleaning, protective acrylic shields, and control and screening of customer entry. Our branches operated on reduced hours from mid-March to mid-September, when they returned to normal operating hours to meet customer demand. While provisioning for our physical sites, we are also accommodating the significant increase in customer use of our digital channels and call centres and introduced new digital products and services throughout the year. We continue to communicate frequently with all customers to update them on our service plans and help them manage the impacts to their finances.

We place great importance on supporting our customers who may be experiencing financial hardship and are working across all of our lines of business to offer them flexible solutions. For further details on customer relief programs, see Credit risk section on page 38.

Finally, our COVID-19 response included a $500,000 donation to Food Banks Canada, Breakfast Club of Canada and United Way, targeting areas of need that emerged almost immediately including food insecurity and support for the most vulnerable members of society. We have also donated $500,000 to support health research, patient care and urgent needs related to COVID-19 at BC Children's Hospital Foundation, Alberta Children's Hospital Foundation, The Hospital for Sick Children ('SickKids') and Montreal Children's Hospital Foundation.

Regulators and governments

Many programs have been initiated by the Bank of Canada and Federal government to provide financial support to parts of the economy most impacted by COVID-19. We are committed to playing our part in the country's economic recovery and are actively participating in these programs and helping our customers to do so wherever it is appropriate. Programs include:

- The Canada Emergency Business Account ('CEBA') relief program, where funding from Export Development Canada ('EDC') provides interest-free loans of up to $60,000 to qualifying small businesses and not-for-profits to help cover COVID-19 related revenue loss. The loans are funded by the Government of Canada and the bank retains no credit risk. As at 31 December 2020, customers were provided with loans through the CEBA program with outstanding balances of $202m.
- The Business Credit Availability Program ('BCAP'), comprised of the Business Development Bank of Canada ('BDC') and Export Development Canada ('EDC') relief programs.
    - Under the EDC program, the bank will provide eligible mid-size and large businesses loans of up to $6.25m (80% guarantee), or between $12.5m and $80m (75% guarantee) of new operating credit and cash flow term loans to support short-term liquidity needs. These loans must be used to fund certain operating costs and are 75% or 80% guaranteed by the EDC (depending on loan size). Loans under this program are recognized on our consolidated balance sheet. As at 31 December 2020, customers were provided with loans totalling $103m.
    - Under the BDC program, the bank and the BDC will jointly provide loans to eligible businesses of up to $6.25m to meet their operational and liquidity needs. The BDC will purchase an 80% participation in these loans and this portion has been derecognized from our consolidated balance sheet as they meet the IFRS 9 criteria for derecognition of financial assets. As at 31 December 2020, customers were provided with loans totalling $139m.

For further details of the regulatory developments, see the Regulatory development section of the MD&A on page 30.

Impact on risk environment

The impact on financial crime risk and regulatory compliance has also been considered, and the bank remains vigilant regarding the effectiveness of our risk controls during this challenging period when malicious activities — such as cyber-attacks and fraud — tend to increase.

Refer to the 'Risk Management' section of this report for a description of how the bank manages risk across the organization and across all risk types, outlining the key principles, policies and practices that we employ in managing material risks, both financial and non-financial.

Impact on financial results

For the year ended 31 December 2020, the charges for expected credit losses ('ECL') of $327m were primarily driven by the significant deterioration in forward-looking economic guidance in the first half of 2020 due to the pandemic. This resulted in charges of $140m in the first quarter, followed by $190m in the second quarter. A modest improvement in the forward macro-economic outlook in the second half of the year resulted in a releases of $2m in the third quarter and $1m in the fourth quarter. There remains significant uncertainty over the ECL charge for the near term given the ongoing economic impact of the COVID-19 pandemic, including further waves, spread of new COVID-19 variants and the unwinding of government support schemes. This is described in more detail in the Credit risk section of the MD&A on page 38. As well, lower interest rates continue to impact net interest income. The COVID-19 pandemic is expected to continue to disrupt economic activities globally well into 2021 and there could be further adverse impact to HSBC Bank Canada's business and results of operations.

In response, the bank increased its capital and liquidity levels. These ratios remain well in excess of the bank's minimum regulatory requirements. As a result, our common equity tier 1 ratio increased to 13.7% at 31 December 2020, compared to 11.3% at 31 December 2019 and our average liquidity coverage ratio for the quarter ended 31 December 2020 increased to 188%, compared to 140% for the quarter ended 31 December 2019.

HSBC Bank Canada is part of one of the world's largest banking groups. Canada is a key global market for HSBC, with total assets in Canada of $117bn and US$2,984bn globally as of 31 December 2020. HSBC has a strong capital, funding and liquidity position and we are looking to continue to support the Canadian economy, our customers and wider society through this challenge and through the recovery beyond.

Use of non-IFRS financial measures

In measuring our performance, the financial measures that we use include those which have been derived from our reported results. However, these are not presented within the consolidated financial statements and are not defined under IFRS. These are considered non-IFRS financial measures and are unlikely to be comparable to similar measures presented by other companies. The following non-IFRS financial measures are used throughout this document.

Return on average common shareholder's equity is calculated as profit attributable to the common shareholder for the period divided by average[1] common equity.

Return on average risk-weighted assets is calculated as profit before income tax expense divided by the average[1] risk-weighted assets.

Operating leverage ratio is calculated as the difference between the rates of change for revenue and operating expenses.

Net interest margin is net interest income expressed as a percentage of average[1] interest earning assets.

Change in expected credit losses to average gross loans and advances and acceptances is calculated as the change in expected credit losses[2] as a percentage of average[1] gross loans and advances to customers and customers' liabilities under acceptances.

Change in expected credit losses on stage 3 loans and advances and acceptances to average gross loans and advances and acceptances is calculated as the change in expected credit losses[2] on stage 3 assets as a percentage of average[1] gross loans and advances to customers and customers' liabilities under acceptances.

Total stage 3 allowance for expected credit losses to gross stage 3 loans and advances and acceptances is calculated as the total allowance for expected credit losses[2] relating to stage 3 loans and advances to customers and acceptances as a percentage of stage 3 loans and advances to customers and customers' liabilities under acceptances.

Net write-offs as a percentage of average customer advances and acceptances is calculated as net write-offs as a percentage of average[1] net customer advances and customers' liabilities under acceptances.

The following supplementary financial measure calculated from IFRS figures as noted is used throughout this document.

Cost efficiency ratio is calculated as total operating expenses as a percentage of total operating income.

1. *The net interest margin is calculated using daily average balances. All other financial measures use average balances that are calculated using quarter-end balances.*
2. *Change in expected credit losses relates primarily to loans, acceptances and commitments.*

Financial highlights

Financial performance and position

($millions, except where otherwise stated)	Footnote	Year ended 31 Dec 2020	31 Dec 2019	31 Dec 2018
Financial performance for the year ended 31 December				
Total operating income		**2,024**	2,185	2,264
Change in expected credit losses and other credit impairment charges - (charge)/release		**(327)**	(78)	27
Operating expenses		**(1,293)**	(1,291)	(1,300)
Profit before income tax expense		**404**	816	991
Profit attributable to the common shareholder		**260**	555	681
Basic and diluted earnings per common share ($)		**0.48**	1.11	1.36

($millions, except where otherwise stated)	Footnote	At 31 Dec 2020	31 Dec 2019	31 Dec 2018
Financial position at 31 December				
Total assets		**117,347**	106,571	103,406
Loans and advances to customers		**61,002**	61,922	57,123
Customer accounts		**71,950**	62,889	59,812
Ratio of customer advances to customer accounts (%)	1	**84.8**	98.5	95.5
Common shareholder's equity		**5,782**	5,009	4,733

Financial and capital measures

	Footnotes	Year ended 31 Dec 2020	31 Dec 2019
Financial measures %	1		
Return on average common shareholder's equity		**4.7**	11.3
Return on average risk-weighted assets	2	**1.0**	2.0
Cost efficiency ratio		**63.9**	59.1
Operating leverage ratio		**(7.5)**	(2.8)
Net interest margin		**1.03**	1.38
Change in expected credit losses to average gross loans and advances and acceptances		**0.49**	0.12
Change in expected credit losses on stage 3 loans and advances and acceptances to average gross loans and advances and acceptances		**0.17**	0.10
Total stage 3 allowance for expected credit losses to gross stage 3 loans and advances and acceptances		**31.1**	34.9
Net write-offs as a percentage of average loans and advances and acceptances		**0.18**	0.07

		At 31 Dec 2020	31 Dec 2019
Capital measures	2		
Common equity tier 1 capital ratio (%)		**13.7**	11.3
Tier 1 ratio (%)		**16.4**	13.9
Total capital ratio (%)		**19.0**	16.4
Leverage ratio (%)		**6.0**	4.9
Risk-weighted assets ($m)		**40,014**	42,080
Liquidity coverage ratio (%)	3	**188**	140

1. *Refer to the 'Use of non-IFRS financial measures' section of this document for a discussion of non-IFRS financial measures.*
2. *The bank assesses capital adequacy against standards established in guidelines issued by OSFI in accordance with the Basel III capital adequacy framework.*
3. *The liquidity coverage ratio ('LCR') in this table has been calculated using averages of the three month-end figures in the quarter.*

Financial performance

Summary consolidated income statement

	Quarter ended		Year ended	
	31 Dec 2020	31 Dec 2019	**31 Dec 2020**	31 Dec 2019
	$m	$m	**$m**	$m
Net interest income	**275**	313	**1,086**	1,268
Net fee income	**185**	179	**713**	677
Net income from financial instruments held for trading	**30**	48	**132**	165
Other items of income	**14**	21	**93**	75
Total operating income	**504**	561	**2,024**	2,185
Change in expected credit losses and other credit impairment charges - (charge)/release	**1**	(33)	**(327)**	(78)
Net operating income	**505**	528	**1,697**	2,107
Total operating expenses	**(345)**	(315)	**(1,293)**	(1,291)
Profit before income tax expense	**160**	213	**404**	816
Income tax expense	**(35)**	(56)	**(96)**	(221)
Profit for the period	**125**	157	**308**	595

For the quarter and year ended 31 December 2020 compared with the same periods in the prior year, unless otherwise stated.

Our financial performance in 2020 was heavily impacted by COVID-19 and market factors which has led to increased expected credit losses and decreased operating income resulting in a decline in profit before income tax expense. However, as the forward-looking macro-economic variables improved in the latter part of the year, we began to see steady increases in non-interest income and a modest improvement to the outlook for expected credit losses, with profit before tax increasing in two of our three global businesses from the third quarter. Nonetheless, the impacts from the pandemic continue to be felt across our people, customers, businesses and communities.

Q4 2020 vs. Q4 2019

HSBC Bank Canada reported operating income for the quarter of $504m, a decrease of $57m or 10%. The impact of central bank rate cuts and maintaining elevated levels of liquidity at lower yields continue to have a negative impact on net interest income in all our global businesses compared to the prior year. Trading income decreased for the quarter compared to the prior year, mainly in lower net interest from trading activities due to lower interest rates in Global Banking and Markets. Other items of income also decreased as a result of lower gains on the disposal of financial investments. These decreases are partly offset by increases in net fee income from cards and activity from online brokerage business in Wealth and Personal Banking, and an increase in credit facility fees from higher volumes of bankers’ acceptances in Commercial Banking.

The change in expected credit losses for the quarter resulted in a release of $1m, as forward-looking macro-economic variables improved on performing loans, partly offset by impairment charges from non-performing loans in energy and various other sectors. The charge of $33m in the prior year’s quarter was related to impairment charges from non-performing loans in the wholesale and retail trade sector and the impact of changes in macro-economic variables on performing loans at that time.

Total operating expenses increased by $30m or 9.5% for the quarter mainly due to investment in streamlining initiatives in our support functions and the timing of certain employee compensation and benefit costs.

As a result, profit before income tax expense was down $53m or 25% for the quarter.

2020 vs. 2019

HSBC Bank Canada reported operating income for the year of $2.0bn, a decrease of $161m or 7.4%. The impact of central bank rate cuts and maintaining elevated levels of liquidity at lower yields had a negative impact on net interest income in all our global businesses. Trading income in Global Banking and Markets also declined due to lower interest rates and unfavourable movements in certain credit spreads driven by market volatility. These decreases were partly offset by increases in net fee income from cards and increased online brokerage activity in Wealth and Personal Banking, and increased credit facility fees from higher volumes of bankers' acceptances in Commercial Banking. Other items of income increased mainly due to higher gains on the disposal of financial investments.

The change in expected credit losses for the year was a charge of $327m, compared to the charge of $78m experienced in 2019. The charge in 2020 was mainly driven by impairment charges on performing loans as forward-looking economic guidance significantly deteriorated as result of the COVID-19 pandemic. This, together with impairment charges from non-performing loans from the weakened energy sector in first half of the year and other various sectors in the second half of the year resulted in the charge in expected credit losses for the year. Prior year charges were primarily related to an expected slowdown in GDP growth at that time.

Total operating expenses increased marginally by $2m or 0.2% for the year. We continued to strategically invest to grow our businesses, streamline our processes and prioritize digital solutions to assist our customers during the COVID-19 pandemic and beyond. This was balanced with prudent management of costs in response to the current economic environment.

As a result, profit before income tax expense was $404m, down $412m or 50% for the year.

Performance by income and expense item

For the quarter and year ended 31 December 2020 compared with the same periods in the prior year, unless otherwise stated.

Net interest income

Net interest income decreased by $38m or 12% for the quarter compared to the prior year. This reflects the impact of margin compression due to central bank rate cuts and maintaining elevated levels of liquidity at lower yields.

Net interest income decreased by $182m or 14% for the year due to the same factors as described for the quarter.

Summary of interest income by types of assets

		Quarter ended						Year ended					
		31 Dec 2020			31 Dec 2019			**31 Dec 2020**			31 Dec 2019		
	Footnotes	**Average balance**	**Interest income**	**Yield**	Average balance	Interest income	Yield	**Average balance**	**Interest income**	**Yield**	Average balance	Interest income	Yield
		$m	**$m**	**%**	$m	$m	%	**$m**	**$m**	**%**	$m	$m	%
Short-term funds and loans and advances to banks		**16,489**	**10**	**0.25**	992	2	0.63	**12,077**	**29**	**0.24**	914	6	0.64
Loans and advances to customers		**61,660**	**428**	**2.76**	59,098	528	3.55	**62,242**	**1,826**	**2.93**	56,971	2,097	3.68
Reverse repurchase agreements - non-trading		**7,406**	**6**	**0.33**	7,345	43	2.31	**7,573**	**60**	**0.79**	7,821	174	2.22
Financial investments		**20,008**	**33**	**0.66**	25,165	114	1.79	**22,153**	**247**	**1.11**	25,362	492	1.94
Other interest-earning assets		**620**	**—**	**0.16**	748	3	1.51	**1,000**	**3**	**0.37**	765	16	2.03
Total interest-earning assets (A)		**106,183**	**477**	**1.78**	93,348	690	2.93	**105,045**	**2,165**	**2.06**	91,833	2,785	3.03
Trading assets and financial assets designated at fair value	1	**2,425**	**5**	**0.81**	5,840	25	1.69	**3,478**	**36**	**1.04**	6,144	110	1.79
Non-interest-earning assets		**11,549**	**—**	**—**	11,338	—	—	**12,837**	**—**	**—**	12,089	—	—
Total		**120,157**	**482**	**1.59**	110,526	715	2.57	**121,360**	**2,201**	**1.81**	110,066	2,895	2.63

Summary of interest expense by type of liability and equity

		Quarter ended						Year ended					
		31 Dec 2020			31 Dec 2019			**31 Dec 2020**			31 Dec 2019		
	Footnotes	**Average balance**	**Interest expense**	**Cost**	Average balance	Interest expense	Cost	**Average balance**	**Interest expense**	**Cost**	Average balance	Interest expense	Cost
		$m	**$m**	**%**	$m	$m	%	**$m**	**$m**	**%**	$m	$m	%
Deposits by banks	2	**1,095**	**—**	**0.02**	1,005	—	0.23	**1,233**	**2**	**0.18**	964	2	0.24
Customer accounts	3	**65,383**	**96**	**0.59**	56,525	212	1.49	**63,256**	**575**	**0.91**	54,865	851	1.55
Repurchase agreements - non-trading		**4,166**	**3**	**0.32**	8,379	43	2.04	**5,615**	**50**	**0.89**	9,302	192	2.06
Debt securities in issue and subordinated debt		**18,647**	**88**	**1.87**	15,988	107	2.64	**19,565**	**387**	**1.98**	15,291	412	2.69
Other interest-bearing liabilities		**2,502**	**15**	**2.40**	2,029	15	2.93	**2,616**	**65**	**2.48**	2,163	60	2.76
Total interest bearing liabilities (B)		**91,793**	**202**	**0.87**	83,926	377	1.78	**92,285**	**1,079**	**1.17**	82,585	1,517	1.84
Trading liabilities	1	**2,286**	**5**	**0.78**	2,997	12	1.67	**2,673**	**25**	**0.92**	3,484	60	1.73
Non-interest bearing current accounts		**7,184**	**—**	**—**	5,680	—	—	**6,425**	**—**	**—**	5,770	—	—
Total equity and other non-interest bearing liabilities		**18,894**	**—**	**—**	17,923	—	—	**19,977**	**—**	**—**	18,227	—	—
Total		**120,157**	**207**	**0.68**	110,526	389	1.4	**121,360**	**1,104**	**0.91**	110,066	1,577	1.43
Net interest income (A-B)			**275**			313			**1,086**			1,268	

1. *Interest income and expense on trading assets and liabilities is reported in `Net income from financial instruments held for trading' in the consolidated income statement.*
2. *Includes interest-bearing bank deposits only.*
3. *Includes interest-bearing customer accounts only.*

Net fee income

	Quarter ended		Year ended	
	31 Dec 2020	31 Dec 2019	**31 Dec 2020**	31 Dec 2019
	$m	$m	**$m**	$m
Account services	**15**	17	**62**	64
Broking income	**5**	2	**15**	8
Cards	**18**	18	**63**	66
Credit facilities	**83**	82	**318**	309
Funds under management	**49**	50	**193**	193
Imports/exports	**2**	2	**9**	11
Insurance agency commission	**1**	1	**5**	5
Guarantee and other	**11**	9	**47**	46
Remittances	**11**	9	**39**	35
Underwriting	**10**	14	**45**	42
Fee income	**205**	204	**796**	779
Less: fee expense	**(20)**	(25)	**(83)**	(102)
Net fee income	**185**	179	**713**	677

Net fee income increased by $6m or 3.4% for the quarter. This increase was driven by higher net fee income from cards and an increase in customer activity from our online brokerage business in Wealth and Personal Banking. Commercial Banking increased net fee income from remittances, higher customer activity on other fee income and an increase in credit facility fees from higher volumes of bankers' acceptances. This was partly offset by lower underwriting fees in Global Banking and Markets for the quarter.

Net fee income increased by $36m or 5.3% for the year. This increase was driven by higher net fee income from cards and increased activity in our online brokerage business in Wealth and Personal Banking. Commercial Banking increased in credit facility fees from higher volumes of bankers' acceptances and higher remittances partly offset by lower credit card fees. Also contributing to the increase were higher underwriting fees in Global Banking and Markets.

Net income from financial instruments held for trading

	Quarter ended		Year ended	
	31 Dec 2020	31 Dec 2019	**31 Dec 2020**	31 Dec 2019
	$m	$m	**$m**	$m
Trading activities	**27**	32	**116**	103
Credit valuation, debit valuation and funding fair value adjustments	**2**	3	**(2)**	10
Net interest from trading activities	**—**	13	**11**	50
Hedge ineffectiveness	**1**	—	**7**	2
Net income from financial instruments held for trading	**30**	48	**132**	165

Net income from financial instruments held for trading for the quarter decreased by $18m or 38%. Lower net interest from trading activities due to lower interest rates and change in product mix, as well as lower trading activities, contributed to the decrease.

Net income from financial instruments held for trading for the year decreased by $33m or 20% as a result of lower net interest from trading activities due to lower interest rates and change in product mix. Also contributing to the decrease were unfavourable movements in credit and funding fair value adjustments mainly from increases in certain credit spreads driven by market volatility, which have not yet returned to pre-COVID-19 levels. This was partly offset by strong Markets sales and trading activities in the first half of 2020 from increased Rates trading and balance sheet management activities.

Other items of income

	Quarter ended		Year ended	
	31 Dec 2020	31 Dec 2019	**31 Dec 2020**	31 Dec 2019
	$m	$m	**$m**	$m
Gains less losses from financial investments	**2**	10	**50**	38
Other operating income	**12**	11	**43**	37
Other items of income	**14**	21	**93**	75

Other items of income decreased by $7m or 33% for the quarter driven by lower gains on the disposal of financial investments from re-balancing the bank's liquid asset portfolio.

Other items of income increased by $18m or 24% for the year driven by higher gains on the disposal of financial investments from re-balancing the bank's liquid asset portfolio and gains in other operating income related to the extinguishment of repurchased subordinated debentures.

Change in expected credit losses

	Quarter ended		Year ended	
	31 Dec 2020	31 Dec 2019	**31 Dec 2020**	31 Dec 2019
	$m	$m	**$m**	$m
Change in expected credit loss and other credit impairment charges - performing loans (stage 1 and 2) - charge/(release)	**(11)**	5	**178**	8
Change in expected credit loss and other credit impairment charges - non-performing loans (stage 3) - charge/(release)	**10**	28	**149**	70
Change in expected credit loss - charge/(release)	**(1)**	33	**327**	78

The change in expected credit losses for the quarter was a release of $1m compared with a charge of $33m for the same period in the prior year. The release for the current quarter was primarily driven by improvement in forward-looking macro-economic variables on performing loans, partly offset by impairment charges from non-performing loans in energy and various other sectors.

The charge in the fourth quarter of 2019 was primarily related to impairment charges from non-performing loans in the wholesale and retail trade sector and the impact of changes in macroeconomic variables on performing loans forecasted at the time.

The change in expected credit losses for the year resulted in a charge of $327m. The charge for the year was primarily driven by the significant deterioration in forward-looking economic guidance related to COVID-19 on performing loans, coupled with impairments from non-performing loans in the energy sector in the first half of 2020. In the second half of 2020, modest improvements in forward-looking marco-economic variables driven by vaccine development balanced against the backdrop of second wave infections resulted in moderate releases. These releases were partly offset by impairment charges from non-performing loans in the energy, agriculture and various other sectors.

The change in expected credit losses for the prior year resulted in a charge of $78m. The charge was driven by the same factors as described in the quarter, partly offset by a release during the first quarter of 2019 relating to the outlook of certain customers in the energy sector at that time.

Total operating expenses

	Quarter ended		Year ended	
	31 Dec 2020	31 Dec 2019	**31 Dec 2020**	31 Dec 2019
	$m	$m	**$m**	$m
Employee compensation and benefits	**159**	144	**630**	658
General and administrative expenses	**150**	144	**545**	533
Depreciation of property, plant and equipment	**23**	19	**78**	72
Amortization of intangible assets	**13**	8	**40**	28
Total operating expenses	**345**	315	**1,293**	1,291

Total operating expenses increased by $30m or 9.5% for the quarter mainly due to investment in streamlining initiatives in our support functions including costs associated with a program to optimize our overhead and the timing of certain employee compensation and benefit costs.

Total operating expenses increased slightly by $2m or 0.2% for the year primarily due to strategic investments to grow our business, simplify our processes and provide the digital services our customers are asking for, partly offset by lower staff costs and reduced discretionary costs in response to this year’s economic environment.

Income tax expense

The effective tax rate for the quarter was 21.9%, compared with 25.9% for the same period in the prior year. The effective tax rate for the year was 23.7%, compared with 27.0% for 2019. The difference for both the quarter and the year was due to a decrease in tax provisions.

Movement in financial position

Summary consolidated balance sheet

	31 Dec 2020 $m	31 Dec 2019 $m
Assets		
Cash and balances at central bank	**15,750**	54
Trading assets	**1,719**	4,322
Derivatives	**5,447**	3,267
Loans and advances	**62,272**	63,091
Reverse repurchase agreements – non-trading	**5,996**	6,269
Financial investments	**19,879**	23,645
Customers' liability under acceptances	**4,043**	3,500
Other assets	**2,241**	2,423
Total assets	**117,347**	106,571
Liabilities and equity		
Liabilities		
Deposits by banks	**1,139**	1,036
Customer accounts	**71,950**	62,889
Repurchase agreements – non-trading	**3,227**	7,098
Trading liabilities	**1,831**	2,296
Derivatives	**5,647**	3,431
Debt securities in issue	**17,387**	14,594
Acceptances	**4,062**	3,505
Other liabilities	**5,222**	5,613
Total liabilities	**110,465**	100,462
Total equity	**6,882**	6,109
Total liabilities and equity	**117,347**	106,571

Assets

Total assets at 31 December 2020 were $117.3bn, an increase of $10.8bn, or 10%, from 31 December 2019. Due to the impact of COVID-19, the bank strengthened its liquidity position to support our customers. Placement of these funds increased our cash and balances at central banks to $15.7bn. Derivatives increased by $2.2bn as a result of the mark-to-market changes from both foreign exchange and interest rates due to market volatility mainly from the impact of COVID-19. This was partly offset by a decrease of $3.8bn in financial investments as a result of balance sheet management investment and cash management activities. Trading assets also decreased by $2.6bn with decreased volume of trading activities.

Liabilities

Total liabilities at 31 December 2020 were $110.5bn, an increase of $10bn, or 10%, from 31 December 2019. Customer accounts increased by $9.1bn as result of deposit growth in all global businesses. Increased term and wholesale funding contributed to an increase of $2.8bn in debt securities in issue. Derivatives increased by $2.2bn which corresponds with the movement within derivative assets. This was partly offset by a decrease in non-trading repurchase agreements of $3.9bn from balance sheet management activities.

Equity

Total equity at 31 December 2020 was $6.9bn, an increase of $0.8bn or 13%, from 31 December 2019. The increase represents profits after tax of $0.3bn generated in the year, gains of $0.2bn recorded on account of financial assets at fair value through other comprehensive income and cash flow hedges and $0.5bn from the issuance of common shares. The increase was offset by dividends on common shares of $0.2bn declared in the year.

Global businesses

We manage and report our operations around the following global businesses: Commercial Banking, Global Banking and Markets, and Wealth and Personal Banking.

Commercial Banking

Commercial Banking ('CMB') offers a full range of commercial financial services and tailored solutions to customers ranging from small enterprises to large corporates operating internationally. The HSBC Group serves approximately 1.4 million CMB customers globally in 53 countries and territories. Canada is an important market for HSBC's CMB business and in 2020 was the third largest contributor to CMB profits. We connect businesses to opportunities through our relationship managers and digital channels, meeting our customers' financial needs by providing cross-border trade and treasury services, by helping them become more sustainable, and by giving them access to products and services offered by other parts of the HSBC Group.

Our customers are segmented based on their needs and degree of complexity ranging from Business Banking for small enterprises to Corporate Banking for companies with complex banking needs and a global footprint. Our front line is represented in four regions, British Columbia, Prairies, Ontario and Atlantic, and Quebec with dedicated relationship managers supporting customers in both segments.

Products and services

- *Credit and Lending:* we offer a broad range of domestic and cross-border financing solutions, including overdrafts, corporate cards, term loans, syndications and project finance.
- *Global Trade and Receivables Finance ('GTRF')*: as a leading bank in international trade, we provide services and financing for buyers and suppliers throughout the trade cycle, helping them to use working capital efficiently, manage trade risk and fund their supply chains.
- *Global Liquidity and Cash Management ('GLCM')*: with a global network strategically located where most of the world's payments and capital flows originate, we give businesses greater control over their cash and collections, and help them to manage their liquidity efficiently. Our digital platforms enable customers to make seamless payments between countries and currencies.
- *Global Banking & Markets ('GBM')*: we provide commercial clients with access to a wide range of investment banking and local and global capital financing solutions including debt, equity and advisory services in addition to services in credit, rates and foreign exchange.

Strategic direction

We support our customers with tailored relationship management and financial solutions to allow them to operate efficiently and to grow. Our network of businesses covers the world's largest and fastest growing trade corridors and economic zones. Building long term relationships with reputable customers is core to our growth strategy and organizational values. In 2020, we continued to invest in our business while supporting customers throughout the pandemic with payment deferrals and access to government schemes. Our investments are aimed at enhancing customer experience, reducing risk and improving efficiencies whilst developing market leading solutions. Our investments support our efforts to put our customers first and resulted in GLCM being voted the number one Domestic Cash Manager and best for service in Canada in the Euromoney Cash Management Survey. In addition, GTRF was named #1 trade finance bank and #1 in service quality in Canada in the Euromoney Trade Finance Survey.

In Canada, our strategic plan is focussed on continuing to put customers at the heart of everything we do, developing our coverage in under served segments, delivering more of the bank to our customers through optimizing our universal bank and enhancing our digital offering. This will allow us to build on our position as the leading international bank, leveraging our differentiated product suite in GTRF and GLCM, and granting our customers enhanced access to key trade corridors.

Review of financial performance[1,2]

Summary income statement

	Year ended	
	31 Dec 2020	31 Dec 2019
	$m	$m
Net interest income	**525**	628
Non-interest income	**424**	395
Total operating income	**949**	1,023
Change in expected credit losses - charge	**(256)**	(47)
Net operating income	**693**	976
Total operating expenses	**(396)**	(409)
Profit before income tax expense	**297**	567

Overview

Total operating income in CMB decreased by $74m or 7.2% for the year. The impact of central bank rate cuts and maintaining elevated levels of liquidity at lower yields have negatively impacted net interest income. Despite market volatility, CMB continued to support our customers throughout this period offering payment deferrals along with government lending schemes. Deposits saw strong growth, with year-end balances increasing by $3.5bn. Loan balances declined by $1.9bn for the year as the pandemic impacted customers' demand for credit.

Profit before income tax was lower by $270m or 48%, primarily due to the impact of COVID-19 which significantly increased charges in expected credit losses and lowered net interest income. This was partly offset by higher non-interest income and lower operating expenses.

Financial performance by income and expense item[1]

Net interest income decreased by $103m or 16%. The decrease reflects lower margins as a result of central bank rate decreases and higher liquidity costs.

Non-interest income increased by $29m or 7.3%. This was mainly due to higher average bankers' acceptance balances during the period.

Change in expected credit losses resulted in a charge of $256m driven by the significant deterioration in forward-looking economic guidance related to COVID-19 on performing loans, coupled with impairments from non-performing loans, largely from the decline in oil prices in the first half of the year. The third and fourth quarter charges were lower than the first two quarters, as forward-looking economic scenarios improved and oil prices increased, decreasing the probability of default in certain sectors.

Total operating expenses decreased by $13m or 3.2% as we prudently managed costs in response to the current economic environment.

1. *For the year ended 31 December 2020 compared with the same period in the prior year, unless otherwise stated.*
2. *Effective from the second quarter of 2020, we have made a change in reportable segments by reallocating Balance Sheet Management from Corporate Centre to the global businesses to better align the income and expenses to the businesses generating or utilizing these activities and as a result Corporate Centre is no longer considered an operating segment. All comparatives have been restated. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*

Global Banking and Markets

Global Banking and Markets ('GBM') provides tailored financial services and products to major government, corporate and institutional customers worldwide. Our comprehensive range of products and solutions across capital financing, advisory and transaction banking services, can be combined and customized to meet clients' specific objectives.

Products and services

GBM takes a long-term relationship management approach to build a full understanding of customers' financial requirements and strategic goals. Customer coverage is centralized in Banking, under relationship managers who work to understand customer needs and provide holistic solutions by bringing together our broad array of products and extensive global network.

Our customer coverage and product teams are supported by a unique customer relationship management platform and a comprehensive customer planning process. Our teams use these platforms to better serve global customers and help connect them to international growth opportunities.

GBM provides wholesale capital markets and transaction banking services through the following businesses.

- *Credit and Rates:* sells, trades and distributes fixed income securities to customers including corporates, financial institutions, sovereigns, agencies and public sector issuers. We assist customers in managing risk via interest rate derivatives and facilitate customer facing financing activities.
- *Foreign Exchange:* provides spot and derivative products to meet the investment demands of institutional investors, the hedging needs of businesses of all sizes as well as the needs of customers.
- *Capital Financing and Investment Banking Coverage:* provides clients with a single integrated financing business, focussed across a client's capital structure. Our expertise ranges from primary equity and debt capital markets, specialized structured financing solutions such as asset finance, leveraged and acquisition finance, infrastructure project and export finance, transformative merger and acquisition advisory and execution, and relationship-based credit and lending.
- *Global Liquidity and Cash Management:* helps customers move, control, access and invest their cash. Products include non-retail deposit taking and international, regional and domestic payments and cash management services.
- *Global Trade and Receivables Finance* provides trade services to support customers throughout their trade cycle.

Strategic direction

GBM continues to pursue its well-established strategy to provide tailored, wholesale banking solutions, leveraging the HSBC Group's extensive distribution network.

We focus on four strategic initiatives:

- leveraging our distinctive geographical network which connects developed and faster-growing regions;
- connecting customers to global growth opportunities;
- being well positioned in products that will benefit from global trends; and
- enhancing collaboration with other global businesses to serve the needs of our international customers.

Operating with high standards of conduct is central to our long-term success and ability to serve customers, and we have clear policies, frameworks and governance in place to support our delivery of that commitment. Our management of financial crime and other risks, and simplifying processes also remain top priorities for GBM.

Review of financial performance[1,2]

Summary income statement

	Year ended	
	31 Dec 2020	31 Dec 2019
	$m	$m
Net interest income	**124**	129
Non-interest income	**198**	232
Total operating income	**322**	361
Change in expected credit losses - charge	**(34)**	(13)
Net operating income	**288**	348
Total operating expenses	**(153)**	(158)
Profit before income tax expense	**135**	190

Overview

Total operating income in GBM decreased by $39m or 11%. Income was negatively impacted by unfavourable movements in certain credit spreads driven by market volatility, decreases in central bank rates and the higher costs of maintaining increased liquidity. This is partly offset by strong performance in Market & Securities Services sales and trading activities.

Throughout the COVID-19 related disruptions and volatile market conditions, the Banking and Markets teams worked closely with our clients to understand their unique challenges and to support them through the crisis. This increased client activity and income across our products, mainly from Markets trading and sales activities, lending activities and underwriting fees as we continue to leverage the Group's global network to provide products and solutions to meet our global clients' needs.

Profit before income tax decreased by $55m or 29% primarily a result of unfavourable movements in certain credit spreads, as discussed above, coupled with higher charges in expected credit losses in the first two quarters due to the deterioration in forward-looking economic guidance.

Financial performance by income and expense item[1]

Net interest income decreased by $5m or 3.9% due to higher costs associated with maintaining increased liquidity and the negative impact from central bank rate decreases.

Non-interest income decreased by $34m or 15% primarily due to unfavourable movements in credit and funding valuations. This was partly offset by higher underwriting fees.

Change in expected credit losses resulted in an increase of $21m compared to the prior year primarily driven by an adverse shift in forward-looking economic scenarios related to COVID-19 in the first half of 2020.

Total operating expenses decreased by $5m or 3.2% mainly due to lower staff costs.

1. *For the year ended 31 December 2020 compared with the same period in the prior year, unless otherwise stated.*
2. *Effective from the second quarter of 2020, we have made a change in reportable segments by reallocating Balance Sheet Management from Corporate Centre to the global businesses to better align the income and expenses to the businesses generating or utilizing these activities and as a result Corporate Centre is no longer considered an operating segment. All comparatives have been restated. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*

Wealth and Personal Banking[1]

Wealth and Personal Banking ('WPB') offers a full range of competitive banking products and services for all Canadians to help them manage their finances, buy their homes, and save and invest for the future. Our business also has an international flavor with a large suite of global investment products and other specialized services available.

HSBC Premier and Advance propositions are aimed at mass affluent and emerging affluent customers who value a relationship based approach to banking. In addition, HSBC Jade offers an exclusive service for high-net-worth customers and HSBC Fusion helps our customers manage their small business and personal accounts in one place.

These services are offered by a skilled and dedicated team through our national network of branches, and via telephone, online and mobile banking.

Products and services

We accept deposits and provide transactional banking services to enable customers to manage their day-to-day finances and save. We offer credit facilities to assist customers with their borrowing requirements, and we provide wealth advisory and investment services to help them manage, protect and grow their wealth.

Strategic direction

In delivering a full range of banking and wealth products and services through our branches and direct channels to individuals and business owners we focus on:

- building a consistent, high standard wealth management service for retail customers drawing on our wealth advisory and asset management businesses, putting the customer at the heart of what we do;
- leveraging global expertise to efficiently provide a high standard of banking solutions and service to our customers;
- leveraging our international capabilities to differentiate our offering; and
- investing in processes, distribution capabilities and product offerings across wealth, retail and small business to improve the customer experience.

As a result of these initiatives, WPB achieved record net sales[2] in total relationship balances[3] during the year while continuing to deepen customer relationships. Our management of financial crime and other risks also remain a top priority for WPB.

Review of financial performance[4,5]

Summary income statement

	Year ended	
	31 Dec 2020	31 Dec 2019
	$m	$m
Net interest income	**486**	541
Non-interest income	**291**	262
Total operating income	**777**	803
Change in expected credit losses - charge	**(37)**	(18)
Net operating income	**740**	785
Total operating expenses	**(670)**	(692)
Profit before income tax expense	**70**	93

Overview

Total operating income in WPB decreased by $26m or 3.2%. Higher net fee income and strong volume growth in total relationship balances[3] were more than offset by lower net interest income due to the central bank rate decreases and higher costs associated with maintaining increased liquidity.

We achieved record growth[2] in total relationship balances[3] and grew our overall and international client base as we invested in our branches and digital technologies, along with competitive products. Despite the challenging environment under COVID-19, we have continued to serve our clients and support them by keeping our branches, digital platforms and contact centres operational, and by providing financial relief through various initiatives including payment deferral and government lending schemes. We also made it easier for our customers to bank from home and reduce contact through digital enhancements and increasing digital transaction limits.

Profit before income tax expense decreased by $23m or 25% due to lower net interest income as noted above and an increase in expected credit losses due to the impact of COVID-19, partly offset by lower operating expenses and higher net fee income.

Financial performance by income and expense item[1]

Net interest income decreased by $55m or 10% primarily due to lower spreads as a result of central bank rate decreases and higher costs associated with maintaining increased liquidity, partly offset by volume growth in lending and deposits.

Non-interest income increased by $29m or 11% primarily due to higher net fee income from cards, higher activity in our online broker business and higher treasury-related income.

Change in expected credit losses resulted in a charge of $37m, an increase of $19m compared to the prior year, primarily driven by an adverse shift in forward-looking economic scenarios related to COVID-19.

Total operating expenses decreased by $22m or 3.2%. This was primarily due to streamlining initiatives and prudent management of costs, partly offset by strategic investments to grow our business.

1. *Effective from the second quarter of 2020, HSBC Holdings Group ('HSBC Group') merged Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking. Therefore, going forward, our global business Retail Banking and Wealth Management ('RBWM') has been renamed to Wealth and Personal Banking ('WPB'). HSBC Bank Canada did not have a separate business line for Global Private Banking and there have been no changes in assets or liabilities nor any changes in the income or expenses that were previously attributable to the RBWM business line as a result of the change in structure. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*
2. *Record year since inception of WPB (previously RBWM) as a single global business in 2011.*
3. *Total relationship balances includes lending, deposits and wealth balances.*
4. *For the year ended 31 December 2020 compared with the same period in the prior year, unless otherwise stated.*
5. *Effective from the second quarter of 2020, we have made a change in reportable segments by reallocating Balance Sheet Management from Corporate Centre to the global businesses to better align the income and expenses to the businesses generating or utilizing these activities and as a result Corporate Centre is no longer considered an operating segment. All comparatives have been restated. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*

Corporate Centre

Corporate Centre contains other transactions which do not directly relate to our global businesses.

Review of financial performance[1,2]

Summary income statement

	Year ended	
	31 Dec 2020	31 Dec 2019
	$m	$m
Net interest income	**(49)**	(30)
Non-interest income	**25**	28
Net operating income/(loss)	**(24)**	(2)
Total operating expenses	**(74)**	(32)
Profit/(loss) before income tax expense	**(98)**	(34)

Overview

Net operating income decreased by $22m mainly due to a decrease in net interest income as liquidity costs increased. Operating expenses increased by $42m primarily due to investment in streamlining initiatives in our support functions. The impact of these movements decreased profit before income tax by $64m for the year.

1. *For the year ended 31 December 2020 compared with the same period in the prior year, unless otherwise stated.*
2. *Effective from the second quarter of 2020, we have made a change in reportable segments by reallocating Balance Sheet Management from Corporate Centre to the global businesses to better align the income and expenses to the businesses generating or utilizing these activities and as a result Corporate Centre is no longer considered an operating segment. All comparatives have been restated. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately. For further details, see note 9 of the consolidated financial statements for the year ended 31 December 2020.*

Summary quarterly performance

Summary consolidated income statement

	Quarter ended							
	2020				2019			
	Dec 31	**Sep 30**	**Jun 30**	**Mar 31**	Dec 31	Sep 30	Jun 30	Mar 31
	$m	**$m**	**$m**	**$m**	$m	$m	$m	$m
Net interest income	**275**	**244**	**249**	**318**	313	313	319	323
Net fee income	**185**	**172**	**178**	**178**	179	168	174	156
Net income from financial instruments held for trading	**30**	**29**	**47**	**26**	48	36	33	48
Other items of income	**14**	**27**	**28**	**24**	21	17	19	18
Total operating income	**504**	**472**	**502**	**546**	561	534	545	545
Change in expected credit losses and other credit impairment charges - (charge)/release	**1**	**2**	**(190)**	**(140)**	(33)	(17)	(40)	12
Net operating income	**505**	**474**	**312**	**406**	528	517	505	557
Total operating expenses	**(345)**	**(317)**	**(304)**	**(327)**	(315)	(311)	(337)	(328)
Profit before income tax expense	**160**	**157**	**8**	**79**	213	206	168	229
Income tax expense	**(35)**	**(45)**	**(3)**	**(13)**	(56)	(56)	(47)	(62)
Profit for the period	**125**	**112**	**5**	**66**	157	150	121	167
Profit/(loss) attributable to:								
– common shareholder	**113**	**101**	**(8)**	**54**	144	141	112	158
– preferred shareholder	**12**	**11**	**13**	**12**	13	9	9	9
Basic and diluted earnings per common share ($)	**0.21**	**0.18**	**(0.01)**	**0.11**	0.29	0.28	0.22	0.32

Comments on trends over the past eight quarters

Net interest income increased in the fourth quarter due to improvements in net interest margin from improved spread and reduced volumes in deposits. Net interest income decreased in the third and second quarter of 2020 due to the negative impact of central bank rate cuts and maintaining elevated levels of liquidity at lower yields. Balance sheet management activities drove net interest income higher in the first quarter of 2020. In 2019, net interest income declined as a result of higher costs of liabilities to fund the growth in average interest earning assets, and lower income from balance sheet management activities.

Net fee income is comprised of income from several sources that can fluctuate from quarter to quarter and are impacted by business activity, number of days in the quarter and seasonality. The largest driver of fluctuation from quarter to quarter is underwriting fees which are event driven. Otherwise, there is an underlying trend of growth in fees from credit facilities related to higher volumes of bankers' acceptances, funds under management and credit cards. However, during the third and second quarters of 2020, customer activity decreased due to COVID-19, decreasing net fee income.

Net income from financial instruments held for trading is, by its nature, subject to fluctuations from quarter to quarter. It remained relatively flat in the fourth quarter of 2020, and decreased in the third quarter due to unfavourable credit and funding fair value adjustments. In the second quarter of 2020, the increase was related to favourable movements in credit and funding fair value adjustments driven by reduced credit spreads and lower market volatility, as well as increased Rates trading and balance sheet management activities. In the first quarter, the decrease was a result of increases in certain credit spreads and market volatility related to COVID-19 which led to unfavourable credit and funding valuation movements. This was partly offset by strong Markets trading and sales activities. In the third and fourth quarter of 2019, net income from financial instruments held for trading increased mainly due to higher fixed income trading activities. In the second quarter of 2019, the decrease was mainly due to lower Rates trading activities.

Other items of income include gains and losses from the sale of financial investments, which can fluctuate quarterly due to underlying balance sheet management activities. Notwithstanding this, during the second quarter of 2020, other items of income increased from a gain related to the extinguishment of repurchased subordinated debentures.

For the fourth and the third quarters of 2020, expected credit losses resulted in moderate releases, which were materially lower than the charges during the first two quarters. Forward-looking macro-economic variables modestly improved, and were partly offset by an increase in impairment charges from non-performing loans mainly in the energy, transportation and construction sectors. Deterioration in forward-looking economic guidance as a result of the COVID-19 pandemic coupled with the weakened energy sector primarily due to declines in oil prices resulted in the increase in charges for expected credit losses both in the first and second quarters of 2020. The charges for expected credit losses in 2019 were driven by ongoing normalization of credit losses mainly from the change in the economic forecast reflecting a slowdown in GDP growth compared to the prior year. As well, 2019 saw impairment charges spike in the second and fourth quarters from non-performing loans in the wholesale and retail trade, mining and agriculture sectors. The reversal in the first quarter of 2019 was driven by the release of provisions as the outlook for certain customers in the energy service sector improved at that time.

Our focus has been on growing our business in support of our strategic plan, and we continued to strategically make these investments in 2020. In 2020, we continued to streamline our processes and prioritize digital solutions to assist our customers during the COVID-19 pandemic and beyond. This was balanced with prudent management of costs in response to the current economic environment.

Economic review and outlook

The predictions and forecasts in this section are based on information and assumptions from sources we consider reliable. If this information or these assumptions are not accurate, actual economic outcomes may differ materially from the outlook presented in this section.

Toward the end of 2020 the economy was buffeted by several cross currents, some positive, some negative. A positive development is the earlier than expected roll out of COVID-19 vaccines, which provides some assurance the pandemic will pass.

Health Canada approved a COVID-19 vaccine on 9 December, with the first doses administered before year-end 2020. Through the first quarter of 2021, vaccinations will initially be targeted toward the most vulnerable individuals and health care workers.

The World Health Organization says that herd immunity will not be reached until between 50% and 90% of the population is vaccinated. Health Canada expects between 40% and 50% of Canadians to be vaccinated by the end of June 2021, with all who wish to be, vaccinated by the end of September. Herd immunity might thus be reached during the third quarter. However, herd immunity might occur later in 2021 given that the rollout of the vaccination program has been slow and Canada lags behind many industrialized countries in its vaccination rate per 100 inhabitants.

There was also some good news on the economy toward year-end 2020, even though there was a resurgence in COVID-19 cases that led authorities to re-impose restrictions on some non-essential businesses. Specifically, economic activity expanded in October and November, and Statistics Canada projected another increase in December. Thus, following a record economic expansion in the third quarter (40.2% annualized), Statistics Canada suggested that GDP growth could be almost 8% in the fourth quarter.

Nonetheless, we expect GDP to decline by 5.4% in 2020. While this will be a record annual drop, it is smaller than we had earlier anticipated, in large part thanks to the rapid and large policy response to cushion the blow of the pandemic that helped support the economy in the second half of the year.

Vaccines do not yet offset economic risks from COVID-19

In 2021, the rise in COVID-19 cases will weigh on economic growth early in the year, until herd immunity is reached. As a result, despite the better economic momentum toward the year-end 2020, downside economic risks dominate in early 2021. Given increasingly stringent restrictions to slow the pace of COVID-19 infections, we look for GDP to decline by 0.8% in the first quarter of 2021, with growth to resume in the second quarter as restrictions are eased once again.

Policy stimulus to remain firmly in place

Given lingering negative economic effects due to the pandemic, there is still a need for substantial policy stimulus to help the economy. Hence, in its November 2020 Fall Economic Statement, the federal government confirmed that it will continue to provide substantial support through the pandemic and the recovery.

Thus far, federal, provincial and territorial governments have provided $593.5bn in direct support, payment deferrals, and credit support due to the pandemic. Most of that support ($490.7bn, 82.7%) has come from the federal government.

The federal government's response to the pandemic and the impact of the pandemic on the economy will lift the budget deficit to a record $381.6bn, or 17.5% of GDP in 2020/21. The large deficit will lift the federal debt-to-GDP ratio over 50% in 2020/21. In addition, with some support programs to continue through 2021, the budget deficit is projected to remain elevated at $121.bn or 5.2% of GDP in 2021/22, boosting the debt-to-GDP ratio to a peak at 52.7%. Looking further ahead, the federal debt-to-GDP ratio is likely to remain above 50% until 2025/26.

The federal government also announced several small investments, called "down payments", on a larger planned spending program to build the economy back better. This additional planned stimulus was not included in the fiscal projections. Additional details are anticipated in the spring 2021 federal budget.

Policy support and a rebound in optimism as COVID-19 risks abate and vaccination numbers rise are expected to help lift GDP by 4% in 2021. By the end of 2021, economic activity will be almost back to its pre-pandemic level. However, the slow rollout of COVID-19 vaccinations points toward a risk of a slower than forecasted pick-up in growth in the second half of 2021. In 2022, we look for GDP growth to slow to 3.6%, as scarring from the pandemic on economic potential, more moderate policy support, and structural headwinds limit growth.

Household consumption and economic growth

There are a number of competing factors that might affect the household sector's ability to support economic growth in 2021 and 2022. From one perspective, households are well positioned, with the savings rate historically elevated. In the third quarter, the savings rate was 14.6%, which, while down from 27.5% in the second quarter, remains far above pre-pandemic readings of around 2%. Running down excess savings could support economic growth through 2021 and 2022.

However, lower savings might not provide a significant economic lift. First, households might decide to hold higher precautionary savings given elevated economic uncertainty. Second, households might pay down some of their outstanding debt. Third, key factors boosting savings will unwind and weigh on savings. For example, the increase in savings was largely due to a sharp increase in government transfers to the household sector, and a decline in transfers paid to government. The former largely reflects government stimulus payments through the Canada Emergency Response Benefit ('CERB'), while the latter is due to lower personal tax payments.

Going forward support payments will decline as the economy rebounds and individuals return to paid employment. Meanwhile, tax payments will rise, in part because no income tax was deducted from CERB payments. However, those payments are taxable. Hence, some past CERB recipients will face a tax liability in 2021, although some will see tax payments deferred. Tax payments will also rise as individuals return to paid employment, and past tax deferrals expire. The increase in transfers to governments could absorb a significant amount of the excess savings of the household sector.

Some households might also face other financial challenges that could curtail spending growth during the recovery. For example, mortgage payments will resume, deferred payments will need to be repaid, as might other deferred credit and tax payments. While this might be a smooth process for most, some might struggle to adapt due to lingering aftereffects of the pandemic on economic activity. As a result, as pre-pandemic financial challenges arise as government support measures retreat, mortgage arrears and consumer insolvencies could rise in 2021, albeit from very low levels in 2020.

Interest rates to remain low

Despite some concerns about high debt levels, interest rates are expected to remain low. First, the Bank of Canada ('BoC') recently reiterated that its policy rate will remain at 0.25% until economic slack has been absorbed and inflation is sustainably at 2%, a situation not projected to happen until "into 2023." Second, the BoC's quantitative easing program (purchasing at least $4bn of Government of Canada bonds per week), will help keep interest rates low across the yield curve, and will continue until the recovery is "well underway." However, the BoC is prepared to adjust its quantitative easing program as it gains confidence in the strength of the recovery.

Regulatory developments

Like all Canadian financial institutions, we face an increasing pace of regulatory change. The following is a summary of some key regulatory changes with the potential to impact our results or operations:

Regulatory response to COVID-19

In the face of the COVID-19 pandemic, the Government of Canada and financial institutions regulators introduced temporary measures to maintain the resilience of the financial system throughout the year.

Office of the Superintendent of Financial Institutions ('OSFI')

OSFI announced a suite of temporary adjustments to existing capital, leverage, and liquidity requirements. These adjustments include:

- From the end of the first quarter to the third quarter, loans subject to mortgage payment deferrals were not considered past due and were treated as performing loans under the Capital Adequacy Requirements ('CAR') Guideline. On 31 August, OSFI announced it was gradually phasing out the special capital treatment of loan payment deferrals that was provided to banks at the start of the COVID-19 pandemic;
- New transitional arrangements for capital treatment of expected loss provisioning;
- Covered bond limit temporarily increased to enable greater access to Bank of Canada facilities;
- OSFI encouraged deposit taking institutions to use their Leverage Ratio Buffers that are held above the authorized leverage ratio of the institution;
- For leverage ratio, central bank reserves and sovereign-issued securities that qualify as High Quality Liquid assets ('HQLA') under the Liquidity Adequacy Requirements ('LAR') Guideline can be temporarily excluded from the leverage ratio exposure measure, until 31 December 2021;
- Allowing the use of banks' HQLA, thereby falling below 100% level in the LAR guideline, as maintaining the Liquidity Coverage Ratio ('LCR') at 100% under such circumstances could produce undue negative effects on the institution and other market participants;
- Lowering the capital floor factor from 75% to 70%, which is expected to stay in place until the domestic implementation of the capital floor as part of Basel III reforms in first quarter of 2023;
- Delaying the domestic implementation of the remaining measures of the Basel III international capital standard until 2023 and 2024; and
- Advising that the ability to use Pillar II capital buffers applies to all Deposit Taking Institutions ('DTIs'), including those using the Standardized Approach to credit risk.

Government of Canada

In response to the COVID-19 pandemic, the Government of Canada announced a number of new economic relief programs. HSBC has actively participated and where applicable continues to actively participate in these programs and assisting our customers wherever possible. Programs include:

- A revised 'Insured Mortgage Purchase Program', through which the government will purchase up to $150bn of insured mortgage pools through the Canada Mortgage and Housing Corporation;
- The 'Canada Emergency Business Account' implemented by eligible financial institutions, including HSBC, with funding from Export Development Canada to provide interest-free, partially forgivable, loans of up to $60,000 to qualifying small businesses and not-for-profits to help cover COVID-19 related revenue loss;
- The 'Small and Medium-sized Enterprise Loan Guarantee', through which up to $6.25m of new operating credit and cash flow term loans made by financial institutions to small and medium-sized businesses will be guaranteed by Export Development Canada;
- The 'Small and Medium-sized Enterprise Co-Lending Program', through which Business Development Canada is working with financial institutions to co-lend term loans of up to $6.25m to small and medium-sized businesses for their operational cash flow requirements;
- The Canada Emergency Response Benefit ('CERB'), which gives financial support to employed and self-employed individuals who are directly affected by COVID-19;
- With the CERB program having ended on 27 September, a simplified Employment Insurance ('EI') program to provide income support to those who remain unable to work and are eligible;
- The Canada Recovery Benefit ('CRB'), delivered by the Canada Revenue Agency, which provides $500 per week for up to 26 weeks to workers who have stopped working or had their employment or self-employment income reduced by at least 50% due to COVID-19 and who are not eligible for employment insurance benefits, starting 12 October;
- The Canada Emergency Wage Subsidy ('CEWS'), which extends a wage subsidy of up to 65% (75% for earlier periods) to eligible employers affected by COVID-19;
- The expansion of the Export Development Canada ('EDC') Business Credit Availability Program ('BCAP') to include support for medium- to larger-sized businesses, providing a AAA-rate EDC guarantee to banks on new loans between $16.7m to $80m and is available to Canadian businesses in need of additional credit to finance operational costs; and
- The expansion of the Business Development Canada Business Credit Availability Program ('BCAP') to create the 'Mid-Market Financing Program', which provides commercial loans of $12.5m to $60m to medium-sized businesses whose credit needs exceed what is already available through the BCAP and other measures.

Bank of Canada

The Bank of Canada provided additional liquidity support to financial institutions by establishing a new Standing Term Liquidity Facility ('STLF') and Bankers' Acceptance Purchase Facility to help banks better manage their liquidity risks and continue to provide their customers with access to credit.

Other regulators and governments

The bank's other regulators, including the Canada Deposit Insurance Corporation ('CDIC'), Financial Consumer Agency of Canada ('FCAC'), Securities regulators and Financial Transactions and Reports Analysis Centre of Canada ('FINTRAC') have offered financial institutions relief from and flexibility in meeting certain day-to-day compliance obligations which have arisen as a result of COVID-19.

Many have delayed the implementation of previously planned regulatory changes, such as the new Financial Consumer Framework and the second phase of CDIC's modernization initiative. These measures have allowed financial institutions, including HSBC, to focus resources on responding to the needs of customers during the pandemic.

Other Key Regulatory Changes

With emergency programs and adjustments in response to COVID-19 substantially in place, regulators resumed pre-pandemic priorities:

Consumer Protection

Certain amendments to the Bank Act and the Financial Consumer Agency of Canada Act ('FCAC') made by Bill C-86 were declared in force 30 April 2020. These amendments expand the powers of the FCAC.

Self-Regulatory Framework Reform

The Canadian Securities Administrators ('CSA') launched their consultation on the framework for self-regulatory organizations ('SROs'), requesting comment on the benefits and challenges of the current two-SRO framework. Potential impact of a consolidated SRO is the centralization of operations, and compliance and supervisory staff for certain lines of business.

Capital Markets

The Government of Ontario's Capital Markets Modernization Taskforce published a consultation report, seeking input on ways to improve Ontario's capital markets in a post-pandemic economy, including streamlining regulatory governance structure and framework, reducing regulatory burden, enhancing investor protection, and encouraging competition for market participants.

Anti-Money Laundering and Terrorist Financing Supervision

OSFI provided an update on its revised approach to supervising Anti-Money Laundering and Terrorist Financing ('AML/ATF') programs. Going forward, FINTRAC will be the primary agency ensuring compliance with the Proceeds of Crime (Money Laundering) and Terrorist Financing Act ('PCMLTFA') and associated regulations, while OSFI will focus on the prudential implications of AML/ATF compliance. As a result of this transition, OSFI is considering changes to certain guidelines and is seeking views on any potential amendments.

Privacy Framework Reform

On 17 November 2020, the Government of Canada introduced Bill C-11, entitled the Digital Charter Implementation Act, 2020. If passed, the Bill would establish a new private sector privacy law in Canada, the Consumer Privacy Protection Act ('CPPA'), and a new Personal Information and Data Protection Tribunal. Some key changes to the federal privacy legislative framework include modernizing consent rules, introducing data portability rights for individuals, and new transparency requirements for automated decision-making systems such as algorithms and artificial intelligence ('AI'). As well, the legislation would provide administrative monetary penalties of up to 3% of global revenue or $10m for non-compliant organizations, and an expanded range of offences for certain serious contraventions of the law, subject to a maximum fine of 5% of global revenue or $25m.

Prudential Regulatory Reform

Liquidity Risk

The Office of the Superintendent of Financial Institutions ('OSFI') published revisions to its Liquidity Adequacy Requirements ('LAR') Guideline to ensure its liquidity metrics remain sound and prudent. Key changes include targeted revisions to the treatment of certain retail deposits in the Liquidity Coverage Ratio and Net Cumulative Cash Flow. Financial institutions need to comply with the new requirements with effect from 1 January 2020. For further details, refer to the 'liquidity and funding risk' section of the MD&A.

Interest Rate Risk Management

Revisions to OSFI Guideline B-12 Interest Rate Risk Management have been made to incorporate Basel Committee standards for expected methods to be used by banks to measure, manage and monitor Interest Rate Risk on the Banking Book. HSBC will need to implement the new standards by 1 January 2022.

Basel III Reforms

In December 2017, the Basel Committee ('Basel') published revisions to the Basel III framework with the key objectives to reduce variability of Risk Weighted Assets and provide a regulatory foundation for a resilient Banking System. The final package includes widespread changes to the risk weights under the standardized approach to credit risk; a change in the scope of application of the internal ratings based ('IRB') approach to credit risk; revisions to the IRB methodology, operational risk and credit valuation adjustment ('CVA') capital framework; aggregate output capital floor; and changes to the exposure measure for the leverage ratio.

In January 2019, Basel published its final standard on the Minimum capital requirements for market risk, upon the completion of the fundamental review of the trading book ('FRTB') project. The standard specified stricter criteria for the assignment of instruments to the trading book; overhauled the internal models approach to better address risks; reinforced the supervisory approval process; and introduced a new, more risk-sensitive standardized approach.

On 8 July 2020, Basel published the final revised standard for CVA which replaces the above earlier version of the standard. The revisions include recalibrated risk weights, and an overall recalibration of the Standardized Approach CVA as well as the Basic Approach CVA.

The application of the above standards to the bank will be informed by how OSFI will implement the revised framework as part of its Basel III Reforms Package.

Canada

OSFI expressed its support for implementing the Basel III reforms published by Basel in December 2017. However, in July 2018, OSFI proposed to make certain modifications to the reforms for implementation in Canada, with the objective to accommodate the unique characteristics of the Canadian market. We have provided a response to the consultation paper through Canadian Bankers' Association in October 2018. We have been participating in OSFI's domestic consultations on the revised Basel III reforms rules in 2019 and 2020.

In July 2019, OSFI announced it is revising its capital requirements for Operational Risk to require the use of Basel III standardized approach for calculation of operational risk capital, the use of internal loss data will be part of the calculation. OSFI also published a discussion paper on 'Advancing Proportionality: Tailoring Capital and Liquidity Requirements for Small and Medium-Sized Banks ('SMSBs'), which mostly has application to the smaller banks. We will be assessing the impact based on the final requirements.

On 28 September 2020, OSFI posted on its website the policy development plans for the next few quarters focussing on elements of risk management and compliance, capital and accounting. For capital, the following timeframe was announced for DTIs:

- Fourth quarter 2020 – second quarter 2021: Expected Credit Loss Accounting Framework for inclusion in OSFI's CAR Guideline, exploring implications of the Expected Credit Loss Accounting Framework and the interaction with DTI regulatory capital.
- First quarter 2021: Domestic implementation of the Basel III Reforms Package covering potential changes to credit risk, operational risk, market risk, the output floor, the leverage ratio and the definition of capital, as well as Pillar 3 disclosure expectations. Proportionality requirements for SMSBs will also be

covered. A public consultation process on proposals in these areas will start in early 2021.

We expect OSFI's expectations regarding prudent capital management to continue to evolve and will closely monitor any changes.

Critical accounting estimates and judgments*

The preparation of financial information requires the use of estimates and judgments about future conditions.

In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items discussed below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based, resulting in materially different conclusions from those reached by management for the purposes of the 2020 consolidated financial statements. Management's selection of the bank's accounting policies which contain critical estimates and judgments are discussed below; it reflects the materiality of the items to which the policies are applied and the high degree of judgment and estimation uncertainty involved.

Expected credit loss

The bank's accounting policy for determining expected credit loss ('ECL') is described in note 2. The most significant judgments relate to defining what is considered to be a significant increase in credit risk, determining the lifetime and point of initial recognition of revolving facilities and in making assumptions and estimates to incorporate relevant information about past events, current conditions and forecasts of economic conditions. A high degree of uncertainty is involved in making estimations using assumptions which are highly subjective and very sensitive to the risk factors.

The probability of default ('PD'), loss given default ('LGD'), and exposure at default ('EAD') models which support these determinations are reviewed regularly in light of differences between loss estimates and actual loss experience. Judgment is required in selecting and calibrating the PD, LGD, and EAD models, which support the calculations, including making reasonable and supportable judgments about how models react to current and future economic conditions.

Additionally, judgment is required in selecting model inputs and economic forecasts, including determining whether sufficient and appropriately weighted forecasts are incorporated to calculate unbiased expected loss. The 'measurement uncertainty and sensitivity analysis of ECL estimates' section of this report sets out the assumptions used in determining ECL and provides an indication of different weightings being applied to different economic assumptions.

Valuation of financial instruments

The bank's accounting policy for determining the fair value of financial instruments is described in note 2. The best evidence of fair value is a quoted price in an actively traded principal market. In the event that the market for a financial instrument is not active, a valuation technique is used.

The majority of valuation techniques employ only observable market data. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, where the measurement of fair value is more judgmental. An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, a significant proportion of the instrument's inception profit or greater than 5% of the instrument's valuation is driven by unobservable inputs. 'Unobservable' in this context means that there is little or no current market data available from which to determine the price at which an arm's length transaction would be likely to occur. It generally does not mean that there is no data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used).

Income taxes and deferred tax assets

The bank's accounting policy for the recognition of income taxes and deferred tax assets is described in note 2. Tax laws are complex and can be subject to interpretation. Management applies its own judgment to the application and interpretation of tax laws, but the interpretation by the relevant tax authorities may differ. Tax liabilities are recognized based on best estimates of the probable outcome. If the final outcome is in favor of the decisions made by the relevant tax authorities, additional liabilities and expense in excess of the amounts recorded may result.

The recognition of a deferred tax asset relies on an assessment of the probability and sufficiency of future taxable profits, future reversals of existing taxable temporary differences and ongoing tax planning strategies. The most significant judgments relate to expected future profitability and to the applicability of tax planning strategies, including corporate reorganizations.

Defined benefit obligations

The bank's accounting policy for the recognition of defined benefit obligations is described in note 2. As part of employee compensation, the bank provides certain employees with pension and other post-retirement benefits under defined benefit plans which are closed to new entrants. In consultation with its actuaries, the bank makes certain assumptions in measuring its obligations under these defined benefit plans as presented in note 5.

The principal actuarial financial assumptions used in calculation of the bank's obligations under its defined plans are in respect of discount rate and rate of pay increase that form the basis for measuring future costs under the plans. The discount rates to be applied to its obligations are determined on the basis of the current and approximate average yield of high quality Canadian corporate bonds, with maturities consistent with those of the defined benefit obligations. Assumptions regarding future mortality are based on published mortality tables.

Changes in accounting policy during 2020

Interest Rate Benchmark Reform Phase 2: Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 issued in August 2020 represents the second phase of the IASB's project on the effects of interest rate benchmark reform, addressing issues affecting financial statements when changes are made to contractual cash flows and hedging relationships as a result of the reform.

Under these amendments, changes made to a financial instrument that are economically equivalent and required by interest rate benchmark reform do not result in the derecognition or a change in the carrying amount of the financial instrument, but instead require the effective interest rate to be updated to reflect the change in the interest rate benchmark. In addition, hedge accounting will not be discontinued solely because of the replacement of the interest rate benchmark if the hedge meets other hedge accounting criteria.

These amendments apply from 1 January 2021 with early adoption permitted. In the fourth quarter of 2020 the bank adopted the amendments effective from 1 January 2020 and has made the additional disclosures as required by the amendments. Further information on the IBOR reform impact can be found in the 'IBOR transition' section of this report and in Note 12.

In addition, the bank has also adopted a number of interpretations and amendments to standards which have had an insignificant effect on the consolidated financial statements of the bank.

Future accounting developments

The International Accounting and Standards Board ('IASB') has issued standards on insurance contracts in 2017, with amendments to the standards issued in 2020, which is discussed below and which may represent significant changes to accounting requirements in the future.

Major new IFRSs

IFRS 17 'Insurance contracts'

The IASB issued IFRS 17 'Insurance contracts' in May 2017, with amendments to the standards issued in June 2020. The standard sets out the requirements that an entity should apply in accounting for insurance contracts it issues and reinsurance contracts it holds. Following the amendments, IFRS 17 is effective from 1 January 2023. The bank has assessed the impact of this standard and it is not expected to have a material impact to these financial statements.

Minor amendments to IFRSs

The IASB has published a number of minor amendments to IFRSs which are effective from 1 January 2021. We expect they will have an insignificant effect, when adopted, on our consolidated financial statements.

Off-balance sheet arrangements

As part of our banking operations, we enter into a number of off-balance sheet financial transactions that have a financial impact, but may not be recognized in our financial statements. These types of arrangements are contingent and may not necessarily, but in certain circumstances could, involve us incurring a liability in excess of amounts recorded in our consolidated balance sheet. These arrangements include guarantees and letters of credit.

Guarantees and letters of credit

We routinely issue financial and performance guarantees and documentary and commercial letters of credit on behalf of our customers to meet their banking needs. Guarantees are often provided on behalf of customers' contractual obligations, particularly providing credit facilities for customers' overseas trading transactions and in construction financings. Letters of credit are often used as part of the payment and documentation process in international trade arrangements.

Although guarantees and letters of credit are financial instruments, they are considered contingent obligations and the notional amounts are not included in our financial statements, as there are no actual advances of funds. Any payments actually made under these obligations are recorded as loans and advances to our customers. In accordance with accounting standards for financial instruments, we record the fair value of guarantees made on behalf of customers.

For credit risk management purposes, we consider guarantees and letters of credit to be part of our customers' credit facilities, which are subject to appropriate risk management procedures. Guarantees and letters of credit are considered to be part of our overall credit exposure, as set out in the analysis of our loan portfolio of the MD&A.

Further details on off-balance sheet arrangements can be found in note 26.

Financial instruments

Due to the nature of the bank's business, financial instruments compose a large proportion of our Balance Sheet, from which the bank can earn profits in trading, interest, and fee income. Financial instruments include, but are not limited to, cash, customer accounts, securities, loans, acceptances, hedging and trading derivatives, repurchase agreements, securitization liabilities and subordinated debt. We use financial instruments for both non-trading and trading activities. Non-trading activities include lending, investing, hedging and balance sheet management. Trading activities include the buying and selling of securities and dealing in derivatives and foreign exchange as part of facilitating client trades and providing liquidity and, to a lesser extent, market making activity.

Financial instruments are accounted for according to their classification and involves the use of judgment. A detailed description of the classification and measurements of financial instruments is included in note 2.

The use of financial instruments has the potential of exposing the bank to, or mitigating against, market, credit and/or liquidity risks. A detailed description of how the bank manages these risks can be found on page 34 of the MD&A.

Disclosure controls and procedures, and internal control over financial reporting

Disclosure controls and procedures are designed to provide reasonable assurance that all relevant information required to be disclosed in reports filed or submitted under Canadian securities laws is recorded, processed, summarized and reported within the time periods specified under those laws. These include controls and procedures that are designed to ensure that information is accumulated and communicated to management, including the Chief Executive Officer ('CEO') and the Chief Financial Officer ('CFO'), to allow timely decisions regarding required disclosure.

Internal control over financial reporting is designed to provide reasonable assurance that the financial reporting is reliable and that consolidated financial statements are prepared in accordance with IFRS. Management is responsible for establishing and maintaining adequate internal control over financial reporting. These controls include those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the bank;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of the consolidated financial statements in accordance with IFRS and that receipts and expenditures of the bank are being made only in accordance with authorizations of management; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the bank's assets that could have a material effect on the consolidated financial statements.

Because of the inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. Furthermore, projections of any evaluation of the effectiveness of internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

During 2020, management has evaluated, with the participation of, or under the supervision of, the CEO and the CFO, the effectiveness of our disclosure controls and procedures and the design and effectiveness of the internal control over financial reporting as required by the Canadian securities regulatory authorities under National Instrument 52-109. The evaluation of internal control over financial reporting was performed using the framework and criteria established in the Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway

Commission in May 2013. Based on these evaluations, management has concluded that the design and operation of these disclosure controls and procedures and internal control over financial reporting were effective as at 31 December 2020.

Changes in internal control over financial reporting

There were no changes in our internal control over financial reporting during the year ended 31 December 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

We enter into transactions with other HSBC affiliates, as part of the normal course of business, such as banking and operational services. In particular, as a member of one of the world's largest financial services organizations, we share in the expertise and economies of scale provided by the HSBC Group. We provide and receive services or enter into transactions with a number of HSBC Group companies, including sharing in the cost of development for technology platforms used around the world and benefit from worldwide contracts for advertising, marketing research, training and other operational areas. These related party transactions are on terms similar to those offered to non-related parties and are subject to formal approval procedures that have been approved by the bank's Conduct Review Committee. Further details can be found in note 28.

On 30 March 2020, the bank issued an additional 50 million common shares to HSBC Overseas Holding (UK) Limited. Further details can be found in the 'Outstanding shares and dividends' section of the MD&A.

On 30 June 2020, HSBC Overseas Holdings (UK) Limited, holder of the preferred shares Series G, exercised its option to convert the preferred shares Series G into preferred shares Series H in accordance with their terms.

All of our common shares are indirectly held by HSBC Holdings as a wholly-owned subsidiary.

Risk

Our approach to risk

Our risk appetite

We recognize the importance of a strong culture, which refers to our shared attitudes, values and standards that shape behaviours related to risk awareness, risk taking and risk management. All our people are responsible for the management of risk, with the ultimate accountability residing with the Board.

We seek to build our business for the long term by balancing social, environmental and economic considerations in the decisions we make. Our strategic priorities are underpinned by our endeavour to operate in a sustainable way. This helps us to carry out our social responsibility and manage the risk profile of the business. We are committed to managing and mitigating climate-related risks, both physical and transition, and continue to incorporate consideration of these into how we manage and oversee risks internally and with our customers.

The following principles guide the Group's overarching appetite for risk and determine how our businesses and risks are managed.

Financial position

- We aim to maintain a strong capital position, defined by regulatory and internal capital ratios.

Operating model

- We seek to generate returns in line with a conservative risk appetite and strong risk management capability.
- We aim to deliver sustainable earnings and consistent returns for our shareholder.

Business practice

- We have zero tolerance for any of our people to knowingly engage in any business, activity or association where foreseeable reputational risk or damage has not been considered and/or mitigated.
- We have no appetite for deliberately or knowingly causing detriment to consumers, or incurring a breach of the letter or spirit of regulatory requirements.
- We have no appetite for inappropriate market conduct by a member of staff or by any business.

Enterprise-wide application

Our risk appetite encapsulates consideration of financial and non-financial risks. We define financial risk as the risk of a financial loss as a result of business activities. We actively take these types of risks to maximize shareholder value and profits. Non-financial risk is defined as the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events.

Our risk appetite is expressed in both quantitative and qualitative terms. Every three years, the Global Risk function commissions an external independent firm to review the Group's approach to risk appetite and to help ensure that it remains in line with market best practice and regulatory expectations. The exercise carried out in 2019 confirmed the Group's risk appetite statement ('RAS') remains aligned to best practices, regulatory expectations and strategic goals. Our risk appetite continues to evolve and expand its scope as part of our regular review process.

The Board reviews and approves the risk appetite semi-annually to make sure it remains fit for purpose. The risk appetite is considered, developed and enhanced through:

- an alignment with our strategy, purpose, values and customer needs;
- trends highlighted in other risk reports;
- communication with risk stewards on the developing risk landscape;
- strength of our capital, liquidity and balance sheet;
- compliance with applicable laws and regulations;
- effectiveness of the applicable control environment to mitigate risk, informed by risk ratings from risk control assessments;
- functionality, capacity and resilience of available systems to manage risk; and
- the level of available staff with the required competencies to manage risks.

We formally articulate our risk appetite through our RAS, which is approved by the Board on the recommendation of the Audit, Risk and Conduct Review Committee ('ARC'). Setting out our risk appetite ensures that planned business activities provide an appropriate balance of return for the risk we are taking, and that we agree a suitable level of risk for our strategy.

The RAS consists of qualitative statements and quantitative metrics, covering financial and non-financial risks. It is fundamental to the development of business line strategies, strategic and business planning, and senior management balanced scorecards.

Performance against the RAS is reported to the Risk Management Meeting ('RMM') on a monthly basis so that any actual performance that falls outside the approved risk appetite is discussed and appropriate mitigating actions are determined. This reporting allows risks to be promptly identified and mitigated, and informs risk-adjusted remuneration to drive a strong risk culture.

Risk management

We recognize that the primary role of risk management is to protect our business, customers, colleagues, shareholder and the communities that we serve, while ensuring we are able to support our strategy and provide sustainable growth. This is supported by our three lines of defence model described on page 36.

We are focussed on implementation of our business strategy, as part of which, we are carrying out a major change program, and it is critical that we use active risk management to manage the execution risks.

We use a comprehensive risk management framework across the organization and across all risk types, underpinned by HSBC culture and values. This outlines the key principles, policies and practices that we employ in managing material risks, both financial and non-financial.

The framework fosters continual monitoring, promotes risk awareness and encourages sound operational and strategic decision making. It also ensures a consistent approach to identifying, assessing, managing and reporting the risks we accept and incur in our activities.

Our risk management framework

The following diagram and descriptions summarize key aspects of the risk management framework, including governance and structure, our risk management tools and our risk culture, which together help align employee behaviour with our risk appetite.

Key components of our risk management framework

HSBC values and risk culture		
Risk governance	**Non-executive risk governance**	The Board approves the bank's risk appetite, plans and performance targets. It sets the tone from the top and is advised by the Audit, Risk and Conduct Review Committee of the Board.
	Executive risk governance	Our executive risk governance structure is responsible for the enterprise-wide management of all risks, including key policies and frameworks for the management of risk.
Roles and responsibilities	**Three lines of defence model**	Our 'three lines of defence model' defines roles and responsibilities for risk management. An independent Risk function helps ensure the necessary balance in risk/return decisions.
Processes and tools	**Risk appetite**	The bank has processes to identify/assess, monitor, manage and report risks to ensure we remain within our risk appetite.
	Enterprise-wide risk management tools	
	Active risk management: identification/assessment, monitoring, management and reporting	
Internal controls	**Policies and procedures**	Policies and procedures define the minimum requirements for the controls required to manage our risks.
	Control activities	The operational and resilience risk management defines minimum standards and processes for managing operational risks and internal controls.
	Systems and infrastructure	The bank has systems and/or processes that support the identification, capture and exchange of information to support risk management activities.
Systems and tools		

Risk Governance

The Board has ultimate responsibility for the effective management of risk and approves our risk appetite. It is advised on risk-related matters by the ARC.

The Chief Risk Officer, supported by the RMM of the bank's senior executives, holds executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of the risk management framework.

The Chief Risk Officer is responsible for oversight of reputational risk and is supported by Reputational Risk and Client Selection Committees ('RRCSC') for each line of business. The RRCSCs consider matters arising from customers, transactions and third parties that either present a serious potential reputational risk to the bank or merit an entity-led decision to ensure a consistent group risk management approach throughout the bank.

The management of financial crime risk resides with the Chief Compliance Officer supported by the Financial Crime Risk Management Meeting.

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. All our people have a role to play in risk management. These roles are defined using the three lines of defence model, which takes into account our business and functional structures as described in the following commentary, under 'Our responsibilities'.

We use a defined executive risk governance structure to help ensure appropriate oversight and accountability of risk, which facilitates reporting and escalation to the RMM. This structure is summarized in the following table.

Governance structure for the management of risk

Authority	Membership	Responsibilities include:
Risk Management Meeting	Chief Risk Officer Chief Executive Officer Chief Finance Officer Chief Operating Officer Chief Compliance Officer Head of Human Resources Head of Communications General Counsel Heads of the three lines of business	• Supporting the Chief Risk Officer in exercising Board-delegated risk management authority • Overseeing the implementation of risk appetite and the risk management framework • Forward-looking assessment of the risk environment, analyzing possible risk impacts and taking appropriate action • Monitoring all categories of risk and determining appropriate mitigating action • Promoting a supportive culture in relation to risk management and conduct

Our responsibilities

All our people are responsible for identifying and managing risk within the scope of their roles as part of the three lines of defence model.

Three lines of defence

To create a robust control environment to manage risks, we use an activity-based three lines of defence model.

The model underpins our approach to risk management by clarifying responsibility, encouraging collaboration, and enabling efficient coordination of risk and control activities. The three lines of defence are summarized below:

- The first line of defence owns the risks and is responsible for identifying, recording, reporting and managing them in line with risk appetite, and ensuring that the right controls and assessments are in place to mitigate them.
- The second line of defence sets the policy and control standards for managing specific risk areas, provides advice and guidance in relation to the risk, and challenges the first line of defence on effective risk management.
- The third line of defence is our Internal Audit function, which provides independent assurance that our risk management, governance and internal control processes are designed effectively.

Risk function

Our Risk function, headed by the Chief Risk Officer, is responsible for the bank's risk management framework. This responsibility includes establishing policy, monitoring risk profiles, and forward-looking risk identification and management. The Risk function is made up of sub-functions covering all risks to our operations. It forms part of the second line of defence and is independent from the businesses, including sales and trading functions, to provide challenge, appropriate oversight and balance in risk/return decisions.

Responsibility for minimizing both financial and non-financial risk lies with our people. They are required to manage the risks of the business and operational activities for which they are responsible. We maintain adequate oversight of our non-financial risks through our various specialist Risk Stewards, along with our aggregate overview through the Chief Risk Officer.

Non-financial risk includes some of the most material risks HSBC faces, such as the risk of cyber-attacks, the loss of data and poor customer outcomes. Actively managing non-financial risk is crucial to serving our customers effectively and having a positive impact on society. During 2020 we continued to strengthen the control environment and our approach to the management of non-financial risk, as set out in our Operational Risk Management Framework. The approach outlines non-financial risk governance and risk appetite, and provides a single view of the non-financial risks that matter the most along with the associated controls. It incorporates a risk management system designed to enable the active management of non-financial risk. Our ongoing focus is on simplifying our approach to non-financial risk management, while driving more effective oversight and better end-to-end identification and management of non-financial risks. This is overseen by the Operational and Resilience Risk function, headed by the Head of Operational and Resilience Risk.

Stress testing

We operate a wide-ranging stress testing program that is a key part of our risk management and capital planning. Stress testing provides management with key insights into the impact of severely adverse events on the bank and provides confidence to our regulator on the bank's financial stability.

Our stress testing program assesses our capital strength through a rigorous examination of our resilience to external shocks. As well as undertaking regulatory-driven stress tests, we conduct our own internal stress tests, in order to understand the nature and level of all material risks, quantify the impact and develop plausible business as usual mitigating actions.

Our internal capital assessment uses a range of stress scenarios that explore risks identified by management. They include potential adverse macroeconomic, geopolitical and operational risk events, as well as other potential events specific to HSBC.

The selection of stress scenarios is based upon the output of our top and emerging risks identified and our risk appetite. Stress testing analysis helps management understand the nature and extent of vulnerabilities to which the bank is exposed. Using this information, management decides whether risks can or should be mitigated through management actions, or, if they were to crystallize, should be absorbed through capital. This in turn informs decisions about preferred capital levels.

Recovery and resolution plans

Recovery and resolution plans form an integral framework in the safeguarding of the bank's financial stability. Together with stress testing, it helps us understand the outcomes of adverse business or economic conditions and the identification of mitigating actions.

Key developments in 2020

We have actively managed the risks resulting from the COVID-19 pandemic and its impacts on our customers and operations during 2020, as well as other key risks described in this section.

In addition, we enhanced our risk management in the following areas:

- In January 2020, we simplified our approach and articulation of risk management through the combination of our enterprise risk management framework and our operational risk management framework.
- The global model risk policy and associated standards were revised to improve how we manage model risk and meet enhanced external expectations.
- We continued to focus on simplifying our approach to non-financial risk management. We are driving more effective oversight and better end-to-end identification and management of non-financial risks.

- We continue to support the business and our customers throughout the global pandemic, while continuing to manage financial crime risk. We continued to invest in both advanced analytics and artificial intelligence, which remain key components of our next generation of tools to fight financial crime. In 2021, we will combine our RMM and Financial Crime Risk Management Meetings to ensure a holistic view of all risks.
- In line with the increasing threat landscape that the industry faces within non-financial risk, we formed a new Operational and Resilience Risk combined sub-function. By bringing the two teams together, we expect to benefit from improved stewardship, better risk management capabilities and better outcomes for our customers.

Our material banking risks

The material risk types associated with our banking operations are described in the following tables:

Description of risks - banking operations

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk (see page 38)		
Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and derivatives.	Credit risk is: • measured as the amount that could be lost if a customer or counterparty fails to make repayments; • monitored using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities; and • managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers.
Liquidity and funding risk (see page 54)		
Liquidity risk is the risk that we do not have sufficient financial resources to meet our obligations as they fall due or that we can only do so at an excessive cost. Funding risk is the risk that funding considered to be sustainable, and therefore used to fund assets, is not sustainable over time.	Liquidity risk arises from mismatches in the timing of cash flows. Funding risk arises when illiquid asset positions cannot be funded at the expected terms and when required.	Liquidity and funding risk is: • measured using a range of metrics including liquidity coverage ratio and net stable funding ratio; • assessed through the internal liquidity adequacy assessment process; • monitored against the bank's liquidity and funding risk framework; and • managed on a stand-alone basis with no reliance on any HSBC Group entity (unless pre-committed) or central bank unless this represents routine established business-as-usual market practice.
Market risk (see page 56)		
Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.	Exposure to market risk is separated into two portfolios: trading and non-trading.	Market risk is: • measured using sensitivities, value at risk ('VaR') and stress testing, giving a detailed picture of potential gains and losses for a range of market movements and scenarios, as well as tail risks over specified time horizons; • monitored using VaR, stress testing and other measures including the sensitivity of net interest income and the sensitivity of structural foreign exchange; and • managed using risk limits approved by the RMM.
Resilience risk (see page 59)		
Resilience risk is the risk that we are unable to provide critical services to our customers, affiliates, and/or counterparties as a result of sustained and significant operational disruption.	Resilience risk arises from failures or inadequacies in processes, people, systems or external events. These may be driven by rapid technological innovation, changing behaviours of our consumers, cyber threats and attacks and dependence on third party relationships.	Resilience risk is: • measured through a range of metrics with defined maximum acceptable impact tolerances and against our agreed risk appetite; • monitored through oversight of enterprise processes, risks, controls and strategic change program; and • managed by continuous monitoring and thematic reviews.
Regulatory compliance risk (see page 60)		
Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.	Regulatory compliance risk arises from the risks associated with breaching our duty to our customers and other counterparties, inappropriate market conduct and breaching other regulatory requirements.	Regulatory compliance risk is: • measured by reference to identified metrics, incident assessments, regulatory feedback and the judgment and assessment of our regulatory compliance teams; • monitored against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.
Financial crime risk (see page 60)		
Financial crime risk is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity including both internal and external fraud.	Financial crime and fraud risk arises from day-to-day banking operations.	Financial crime risk is: • measured by reference to identified metrics, incident assessments, regulatory feedback and the judgment and assessment of our financial crime risk teams; • monitored against our financial crime risk appetite statements and metrics, the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.

Description of risks - banking operations (continued)

Risks	Arising from	Measurement, monitoring and management of risk
Model risk (see page 61)		
Model risk is the potential for adverse consequences from business decisions informed by models, which can be exacerbated by errors in methodology, design or the way they are used.	Model risk arises in both financial and non-financial context whenever business decision making includes reliance on models.	Model risk is: • measured by reference to model performance tracking and the output of detailed technical reviews, with key metrics including model review statuses and findings; • monitored against model risk appetite statements, insight from the independent review function, feedback from internal and external audits, and regulatory reviews; and • managed by creating and communicating appropriate policies, procedures and guidance, training colleagues in their application, and supervising their adoption to ensure operational effectiveness.
Pension risk		
Pension risk is the risk of increased costs to the bank from offering post-employment benefit plans to its employees.	Pension risk arises from investments delivering an inadequate return, adverse changes in interest rates or inflation, or members living longer than expected. Pension risk also includes operational and reputational risk of sponsoring pension plans.	Pension risk is: • measured in terms of the scheme's ability to generate sufficient funds to meet the cost of their accrued benefits; • monitored through the specific risk appetite that has been developed at both Group and Canadian levels; and • managed locally through the appropriate pension risk governance structure.

Credit Risk

Overview

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under contract. Credit risk arises principally from direct lending, trade finance and the leasing business, but also from other products such as guarantees and credit derivatives.

Credit risk management

Key developments in 2020

There were no material changes to the policies and practices for the management of credit risk in 2020. We continued to apply the requirements of IFRS 9 'Financial Instruments' within Credit Risk.

During the year, due to the unique market conditions in the COVID-19 pandemic, we expanded operational practices to provide support to customers under the current policy framework.

Governance and structure

We have established credit risk management and related IFRS 9 processes and we actively assess the impact of economic developments on specific customers, customer segments or portfolios. As credit conditions change, we take mitigating action, including the revision of risk appetites or limits and tenors, as appropriate. In addition, we continue to evaluate the terms under which we provide credit facilities within the context of individual customer requirements, the quality of the relationship, regulatory requirements, market practices and our market position.

Credit risk sub-function*

Credit risk is managed in accordance with the bank's credit policy, which is established in consultation with HSBC Group and the key elements are approved by the Audit, Risk and Conduct Review Committee. Risk limits and credit authorities are delegated to senior credit management staff. Credit exposures in excess of certain levels or other specific risk attributes are referred for concurrence to HSBC Group to ensure they remain within HSBC Group's global risk limits.

The principal objectives of our credit risk management framework are:

- to maintain a strong culture of responsible lending, and robust risk policies and control frameworks;
- to partner and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

Key risk management processes

IFRS 9 'Financial Instruments' process

The IFRS 9 process comprises three main areas: modelling and data, implementation and governance.

Modelling and data

We have established modelling and data processes which are subject to appropriate governance and independent review.

Implementation

A centralized impairment engine performs the expected credit loss ('ECL') calculation using data, which is subject to a number of validation checks and enhancements, from a variety of client, finance and risk systems. Where possible, these checks and processes are performed in a consistent and centralized manner.

Governance

A series of management review forums has been established in order to review and approve the impairment results. The management review forums have representatives from Risk and Finance.

Concentration of exposure*

Concentrations of credit risk arise when a number of counterparties or exposures have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors so that their collective ability to meet contractual obligations is uniformly affected by changes in economic, political or other conditions. We use a number of controls and measures to minimize undue concentration of exposure in our portfolios across industries and businesses. These include portfolio and counterparty limits, approval and review controls, and stress testing.

Credit quality of financial instruments*

Our risk rating system facilitates the internal ratings-based approach under the Basel framework adopted by the bank to support the calculation of our minimum credit regulatory capital requirement.

The five credit quality classifications each encompasses a range of granular internal credit rating grades assigned to the wholesale and personal lending businesses, and the external ratings attributed by external agencies to debt securities.

For debt securities and certain other financial instruments, external ratings have been aligned to the five quality classifications based upon the mapping of related customer risk rating ('CRR') to external credit rating.

Wholesale lending

The CRR 10-grade scale summarizes a more granular underlying 23-grade scale of obligor probability of default ('PD'). All corporate customers are rated using the 10- or 23-grade scale, depending on the degree of sophistication of the Basel approach adopted for the exposure.

Each CRR band is associated with an external rating grade by reference to long-run default rates for that grade, represented by the average of issuer-weighted historical default rates. This mapping between internal and external ratings is indicative and may vary over time.

Personal lending

Personal lending credit quality is based on a 12-month point-in-time ('PIT') probability-weighted probability of default ('PD').

Credit quality classification

	Debt securities and other bills	Wholesale lending		Personal lending	
	External credit rating	Internal credit rating	12-month Basel probability of default %	Internal credit rating	12-month Basel probability-weighted PD %
Quality classification					
Strong	**A– and above**	**CRR 1 to CRR 2**	**0.000 - 0.169**	**Band 1 and 2**	**0.000 - 0.500**
Good	**BBB+ to BBB-**	**CRR 3**	**0.170 - 0.740**	**Band 3**	**0.501 - 1.500**
Satisfactory	**BB+ to B and unrated**	**CRR 4 to CRR 5**	**0.741 - 4.914**	**Band 4 and 5**	**1.501 - 20.000**
Sub-standard	**B- to C**	**CRR 6 to CRR 8**	**4.915 - 99.999**	**Band 6**	**20.001 - 99.999**
Credit-impaired	**Default**	**CRR 9 to CRR 10**	**100.000**	**Band 7**	**100.000**

Quality classification definitions

'Strong' exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss.

'Good' exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk.

'Satisfactory' exposures require closer monitoring and demonstrate an average-to-fair capacity to meet financial commitments, with moderate default risk.

'Sub-standard' exposures require varying degrees of special attention and default risk is of greater concern.

'Credit-impaired' exposures have been assessed as impaired, as described on note 2(i) on the Consolidated Financial Statements.

Renegotiated loans and forbearance*

'Forbearance' describes concessions made on the contractual terms of a loan in response to an obligor's financial difficulties.

A loan is classed as 'renegotiated' when we modify the contractual payment terms, on concessionary terms, because we have significant concerns about the borrowers' ability to meet contractual payments when due.

Non-payment related concessions (e.g. covenant waivers), while potential indicators of impairment, do not trigger identification as renegotiated loans.

Loans that have been identified as renegotiated retain this designation until maturity or derecognition.

For details of our policy on derecognized renegotiated loans, see note 2(i) on the Financial Statements.

Credit quality of renegotiated loans

On execution of a renegotiation, the loan will also be classified as credit-impaired if it is not already so classified. In wholesale lending, all facilities with a customer, including loans which have not been modified, are considered credit-impaired following the identification of a renegotiated loan.

Those loans that are considered credit-impaired retain this classification for a minimum of one year. Renegotiated loans will continue to be disclosed as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows (the evidence typically comprises a history of payment performance against the original or revised terms), and there is no other objective evidence of credit-impairments. For personal lending, renegotiated loans remain in stage 3 until maturity or write-off.

Renegotiated loans and recognition of expected credit losses

For personal lending, unsecured renegotiated loans are generally separated from other parts of the loan portfolio. Renegotiated expected credit loss assessments reflect the higher rates of losses typically encountered with renegotiated loans.

For wholesale lending, renegotiated loans are typically assessed individually. Credit risk ratings are intrinsic to the impairment assessments. The individual impairment assessment takes into account the higher risk of the future non-payment inherent in renegotiated loans.

Impairment assessment*

For details of our impairment policies on loans and advances and financial investments, see note 2(i) on the Financial Statements.

Write-off of loans and advances*

For details of our policy on the write-off of loans and advances, see note 2(i) on the Financial Statements.

Unsecured personal lending facilities, including credit cards, are generally written off when payments are between 150 and 210 days past due. The standard period runs until the end of the month in which the account becomes 180 days contractually delinquent. Write-off periods may be extended, generally to no more than 360 days past due. In exceptional circumstances, they may be extended further.

For secured facilities, write-off occurs upon repossession of collateral, receipt of proceeds via settlement or determination that recovery of the collateral will not be pursued.

Any secured assets maintained on the balance sheet beyond 60 months of consecutive delinquency driven default require additional monitoring and review to assess the prospect of recovery.

In the event of bankruptcy or analogous proceedings, write-off may occur earlier than the maximum periods stated above. Collection procedures may continue after write-off.

Summary of credit risk

The following disclosure presents the gross carrying/nominal amount of financial instruments to which the impairment requirements in IFRS 9 are applied and the associated allowance for ECL.

The allowance for ECL at 31 December 2020 comprised of $449m in respect of assets held at amortized cost, $45m in respect of loans and other credit related commitments and financial guarantees, $1m in respect of debt instruments measured at fair value through other comprehensive income (‘FVOCI’), and $10m in respect of performance guarantee contracts.

Summary of financial instruments to which the impairment requirements in IFRS 9 are applied*

		31 December 2020		31 December 2019	
	Footnotes	**Gross carrying/ nominal amount**	**Allowance for ECL**	Gross carrying/ nominal amount	Allowance for ECL
		$m	**$m**	$m	$m
Loans and advances to customers at amortized cost		**61,410**	**(408)**	62,164	(242)
– personal		**31,131**	**(87)**	29,192	(60)
– corporate and commercial		**30,279**	**(321)**	32,972	(182)
Loans and advances to banks at amortized cost		**1,270**	**—**	1,169	—
Other financial assets measured at amortized costs		**27,443**	**(41)**	11,662	(30)
– cash and balances at central banks		**15,750**	**—**	54	—
– items in the course of collection from other banks		**13**	**—**	15	—
– reverse repurchase agreements non - trading		**5,996**	**—**	6,269	—
– customers’ liability under acceptances		**4,062**	**(19)**	3,505	(5)
– other assets, prepayments and accrued income	1	**1,622**	**(22)**	1,819	(25)
Total gross carrying amount on-balance sheet		**90,123**	**(449)**	74,995	(272)
Loans and other credit related commitments		**44,426**	**(42)**	42,700	(22)
– personal		**7,734**	**(1)**	7,444	(1)
– corporate and commercial		**36,692**	**(41)**	35,256	(21)
Financial guarantees	2	**1,985**	**(3)**	2,124	(2)
– personal		**7**	**—**	7	—
– corporate and commercial		**1,978**	**(3)**	2,117	(2)
Total nominal amount off-balance sheet	3	**46,411**	**(45)**	44,824	(24)

		Fair value	**Allowance for ECL**	Fair value	Allowance for ECL
		$m	**$m**	$m	$m
Debt instruments measured at fair value through other comprehensive income (‘FVOCI’)	4	**19,873**	**(1)**	23,625	(1)

1. *Includes only those financial instruments which are subject to the impairment requirements of IFRS 9. ‘Other assets’ and ‘Prepayments and accrued income’ as presented within the consolidated balance sheet includes both financial and non-financial assets.*
2. *Excludes performance guarantee contracts.*
3. *Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.*
4. *Debt instruments measured at FVOCI continue to be measured at fair value with the allowance for ECL as a memorandum item. Change in ECL is recognized in ‘Change in expected credit losses and other credit impairment charges’ in the income statement.*

The following disclosure provides an overview of the bank’s credit risk by stage and customer type, and the associated ECL coverage. The financial assets recorded in each stage have the following characteristics:

Stage 1: These financial assets are unimpaired and without significant increase in credit risk on which a 12-month allowance for ECL is recognized.

Stage 2: A significant increase in credit risk has been experienced on these financial assets since initial recognition on which a lifetime ECL is recognized.

Stage 3: There is objective evidence of impairment and the financial assets are therefore considered to be in default or otherwise credit-impaired on which a lifetime ECL is recognized.

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage*

	Gross carrying/nominal amount[1]				Allowance for ECL				ECL coverage %			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
	$m	$m	$m	$m	$m	$m	$m	$m	%	%	%	%
Loans and advances to customers at amortized cost	**49,642**	**11,292**	**476**	**61,410**	**(45)**	**(215)**	**(148)**	**(408)**	**0.1**	**1.9**	**31.1**	**0.7**
– personal	**29,163**	**1,866**	**102**	**31,131**	**(15)**	**(53)**	**(19)**	**(87)**	**0.1**	**2.8**	**18.6**	**0.3**
– corporate and commercial	**20,479**	**9,426**	**374**	**30,279**	**(30)**	**(162)**	**(129)**	**(321)**	**0.1**	**1.7**	**34.5**	**1.1**
Loans and advances to banks at amortized cost	**1,270**	**—**	**—**	**1,270**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Other financial assets measured at amortized cost	**26,536**	**885**	**22**	**27,443**	**(3)**	**(16)**	**(22)**	**(41)**	**—**	**1.8**	**100.0**	**0.1**
Loan and other credit-related commitments	**35,262**	**9,019**	**145**	**44,426**	**(10)**	**(32)**	**—**	**(42)**	**—**	**0.4**	**—**	**0.1**
– personal	**7,652**	**66**	**16**	**7,734**	**(1)**	**—**	**—**	**(1)**	**—**	**—**	**—**	**—**
– corporate and commercial	**27,610**	**8,953**	**129**	**36,692**	**(9)**	**(32)**	**—**	**(41)**	**—**	**0.4**	**—**	**0.1**
Financial guarantees[2]	**1,834**	**149**	**2**	**1,985**	**(1)**	**(2)**	**—**	**(3)**	**0.1**	**1.3**	**—**	**0.2**
– personal	**6**	**1**	**—**	**7**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
– corporate and commercial	**1,828**	**148**	**2**	**1,978**	**(1)**	**(2)**	**—**	**(3)**	**0.1**	**1.4**	**—**	**0.2**
At 31 Dec 2020	**114,544**	**21,345**	**645**	**136,534**	**(59)**	**(265)**	**(170)**	**(494)**	**0.1**	**1.2**	**26.4**	**0.4**
Loans and advances to customers at amortized cost	57,168	4,662	334	62,164	(40)	(85)	(117)	(242)	0.1	1.8	35.0	0.4
– personal	28,536	569	87	29,192	(14)	(31)	(15)	(60)	—	5.4	17.2	0.2
– corporate and commercial	28,632	4,093	247	32,972	(26)	(54)	(102)	(182)	0.1	1.3	41.3	0.6
Loans and advances to banks at amortized cost	1,169	—	—	1,169	—	—	—	—	—	—	—	—
Other financial assets measured at amortized cost	11,305	331	26	11,662	(2)	(3)	(25)	(30)	—	0.9	96.2	0.3
Loan and other credit-related commitments	38,620	4,014	66	42,700	(6)	(15)	(1)	(22)	—	0.4	1.5	0.1
– personal	7,268	164	12	7,444	(1)	—	—	(1)	—	—	—	—
– corporate and commercial	31,352	3,850	54	35,256	(5)	(15)	(1)	(21)	—	0.4	1.9	0.1
Financial guarantees[2]	1,921	201	2	2,124	(1)	(1)	—	(2)	0.1	0.5	—	0.1
– personal	6	1	—	7	—	—	—	—	—	—	—	—
– corporate and commercial	1,915	200	2	2,117	(1)	(1)	—	(2)	0.1	0.5	—	0.1
At 31 Dec 2019	110,183	9,208	428	119,819	(49)	(104)	(143)	(296)	—	1.1	33.4	0.2

1. *Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.*
2. *Excludes performance guarantee contracts.*

Credit exposure

Maximum exposure to credit risk*

This section provides information on balance sheet items, loan and other credit-related commitments and the associated offsetting arrangements.

Commentary on consolidated balance sheet movements in 2020 is provided on page 23.

'Maximum exposure to credit risk' table
The following table presents our maximum exposure before taking account of any collateral held or other credit enhancements (unless such enhancements meet accounting offsetting requirements). The table excludes financial instruments whose carrying amount best represents the net exposure to credit risk and it excludes equity securities as they are not subject to credit risk. For the financial assets recognized on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and similar contracts granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments, it is generally the full amount of the committed facilities.
The offset in the table relates to amounts where there is a legally enforceable right of offset in the event of counterparty default and where, as a result, there is a net exposure for credit risk purposes. However, as there is no intention to settle these balances on a net basis under normal circumstances, they do not qualify for net presentation for accounting purposes. No offset has been applied to off-balance sheet collateral. In the case of derivatives, the offset column also includes collateral received in cash and other financial assets.

Other credit risk mitigants

While not disclosed as an offset in the following 'Maximum exposure to credit risk' table, other arrangements are in place which reduce our maximum exposure to credit risk. These include a charge over collateral on borrowers' specific assets such as residential properties, collateral held in the form of financial instruments that are not held on balance sheet and short positions in securities.

The collateral available to mitigate credit risk is disclosed in the collateral section on page 54.

Maximum exposure to credit risk*

	2020			2019		
	Maximum exposure	Offset	Net	Maximum exposure	Offset[1]	Net
	$m	$m	$m	$m	$m	$m
Loans and advances to customers held at amortized cost	**61,002**	**(748)**	**60,254**	61,922	(788)	61,134
– personal	**31,044**	**–**	**31,044**	29,132	–	29,132
– corporate and commercial	**29,958**	**(748)**	**29,210**	32,790	(788)	32,002
Derivatives	**5,447**	**(4,856)**	**591**	3,267	(2,793)	474
On-balance sheet exposure to credit risk	**66,449**	**(5,604)**	**60,845**	65,189	(3,581)	61,608
Off-balance sheet exposure to credit risk	**50,239**	**–**	**50,239**	48,190	–	48,190
– financial guarantees and similar contracts	**5,797**	**–**	**5,797**	5,469	–	5,469
– loan and other credit-related commitments	**44,442**	**–**	**44,442**	42,721	–	42,721
At 31 Dec	**116,688**	**(5,604)**	**111,084**	113,379	(3,581)	109,798

1. *Certain prior year amounts have been reclassified to conform to the current year presentation.*

Measurement uncertainty and sensitivity analysis of ECL estimates*

The recognition and measurement of expected credit loss (‘ECL’) involves the use of significant judgment and estimation. We form multiple economic scenarios based on economic forecasts, apply these assumptions to credit risk models to estimate future credit losses, and probability-weight the results to determine an unbiased ECL estimate.

Methodology

Four economic scenarios have been used to capture the exceptional nature of the current economic environment and to articulate management’s view of the range of potential outcomes. Three of these scenarios are drawn from consensus forecasts and distributional estimates. These include a central scenario, representing a most likely outcome, a downside and an upside scenario that represent meaningfully different outcomes from the central. The central scenario is created using the average of a panel of external forecasters (‘the consensus’) while consensus upside and downside scenarios are created with reference to distributions that capture forecasters views of the entire range of outcomes. Management have chosen to use a fourth scenario to represent their view of severe downside risks. The use of an additional scenario is in line with the Bank’s forward economic guidance methodology and has been regularly used over the course of 2020. Management may include additional scenarios if they feel that the consensus scenarios do not adequately capture the risks. Unlike the consensus scenarios, these additional scenarios are driven by narrative assumptions and may result in shocks that drive economic activity permanently away from trend.

Description of consensus economic scenarios

The economic assumptions presented in this section have been formed by the bank with reference to external forecasts specifically for the purpose of calculating ECL.

The world economy experienced a deep economic shock in 2020. As COVID-19 spread globally, governments sought to limit the human impact by imposing significant restrictions on mobility, in turn driving the deep falls in activity that were observed in the first half of the year. Restrictions were eased as cases declined in response to the initial measures which in turn supported an initial rebound in economic activity by the third quarter of 2020. This increase in mobility unfortunately led to renewed transmission of the virus in several countries, such that by year-end, infection rates, hospitalizations and deaths had reached dangerously high levels, placing an enormous burden on health-care systems and leading governments to re-impose restrictions on mobility and causing economic activity to decline once more.

Economic forecasts are subject to a high degree of uncertainty in the current environment. Limitations of forecasts and economic models require a greater reliance on management judgement in addressing both the error inherent in economic forecasts and in assessing associated ECL outcomes. The scenarios used to calculate ECL in the *Annual Report and Accounts 2020* are described below.

The consensus central scenario

The Bank’s central scenario features an improvement in economic growth in 2021 as activity and employment gradually return to the levels experienced prior to the pandemic of COVID-19.

Despite the sharp contraction in activity, government fiscal support played a crucial role in averting significant financial distress. At the same time, the Bank of Canada implemented a variety of measures which included lowering policy interest rates, implementing emergency support measures for funding, and either restarting or increasing quantitative easing programs in order to support the economy and the financial system. The Bank of Canada is expected to continue to work to ensure that households and firms receive an appropriate level of financial support until restrictions on economic activity and mobility can be materially eased. Such support will ensure that labour and housing markets do not experience abrupt, negative corrections and will also limit the extent of long term structural damage to economy.

Our central scenario incorporates expectations that government and public health authorities will implement a large vaccination program, first by inoculating critical groups and then increasing coverage to include the wider population. The deployment of a mass vaccination program marks a significant step forward in combating the virus and we expect will ease the burden on the healthcare system. We expect the vaccination program to contribute positively to recovery prospects and our central scenario assumes a steady increase in the proportion of the population inoculated against COVID-19 over the course of 2021.

The key features of our central scenario are:

- Growth in economic activity in 2021, supported by a successful rollout of a vaccination program. We expect the vaccination program, coupled with effective non-pharmacological measures to contain the virus (‘track and trace’ systems and restrictions to mobility) to lead to a significant decline in infections by the end of the third quarter in 2021.
- Government support programs will continue to provide support to labour markets and households in 2021. We expect a gradual reversion of the unemployment rate to pre-crisis levels over the course of the projection period as a result of economic recovery and due to the orderly withdrawal of fiscal support.
- Inflation will converge towards central bank targets.
- Fiscal support in 2020 led to large deficits and a significant increase in public debt. Fiscal support is expected to continue as needed and deficits are expected to reduce gradually over the

projection period. Sovereign debt levels will remain high and our central scenario does not assume fiscal austerity.

- We expect the Bank of Canada will remain prepared to provide further support as required.
- Policy interest rates will remain at current levels for an extended period and will increase very modestly towards the end of our projection period. The Bank of Canada will continue to provide assistance through their asset purchase programs as needed.
- The Brent oil price is forecast to average USD47 per barrel over the projection period.

The following tables disclose key macroeconomic variables and the probabilities assigned in the consensus central scenario. Comparative information is provided as it was published in *Annual Report and Accounts 2019*.

Consensus central scenario (1Q2021-4Q2025)

	2020
GDP growth rate (%)	
2020: Annual average growth rate	**(6.1)**
2021: Annual average growth rate	**5.0**
2022: Annual average growth rate	**3.1**
2023: Annual average growth rate	**2.4**
5 Year Average	**2.9**
Unemployment rate (%)	
2020: Annual average rate	**9.6**
2021: Annual average rate	**7.9**
2022: Annual average rate	**6.8**
2023: Annual average rate	**6.5**
5 Year Average	**6.8**
House price growth (%)	
2020: Annual average growth rate	**5.7**
2021: Annual average growth rate	**2.1**
2022: Annual average growth rate	**2.0**
2023: Annual average growth rate	**3.1**
5 Year Average	**2.7**
Brent oil prices (US$/barrel)	
2020: Annual average rate	**42.2**
2021: Annual average rate	**44.3**
2022: Annual average rate	**45.7**
2023: Annual average rate	**47.0**
5 Year Average	**46.6**
Probability (%)	**70**

Consensus central scenario (1Q2020-4Q2024)

	2019
GDP growth rate (%)	1.8
Inflation (%)	2.0
Unemployment (%)	6.0
Short-term interest rate (%)	1.6
10 year Treasury bond yields (%)	2.2
House price growth (%)	2.6
Equity price growth (%)	3.8
Probability	80

The consensus upside scenario

Compared to the consensus central scenario, the consensus upside scenario features a faster recovery in economic activity during the first two years, before converging to long-run trends.

The scenario is consistent with a number of key upside risk themes. These include the orderly and rapid global abatement of COVID-19 via successful containment and prompt deployment of a vaccine; de-escalation of tensions between the US and China; de-escalation of political tensions in Hong Kong; continued support from fiscal and monetary policy and smooth relations between the UK and the EU which enables the two parties to swiftly reach a comprehensive agreement on trade and services.

The following tables disclose key macroeconomic variables and the probabilities assigned in the consensus upside scenario. Comparative information is provided as it was published in *Annual Report and Accounts 2019*.

Consensus upside scenario best outcome[1]

	2020
GDP growth rate[2] (%)	**15.8 (2Q21)**
Unemployment (%)	**5.3 (3Q22)**
House price growth (%)	**5.2 (1Q21)**
Brent oil prices (US$/barrel)	**81.0 (4Q21)**
Probability (%)	**10**

1. *Extreme point in the consensus upside is 'best outcome' in the scenario, i.e. highest GDP growth, lowest unemployment rate etc, in first two years of the scenario (1Q2021-4Q2022).*
2. *Annual GDP growth rate compared to same period of prior year.*

Consensus upside scenario (1Q2020-4Q2024)

	2019
GDP growth rate (%)	1.9
Inflation (%)	2.2
Unemployment (%)	5.7
Short-term interest rate (%)	1.6
10 year Treasury bond yields (%)	2.2
House price growth (%)	5.7
Equity price growth (%)	6.7
Probability	10

The consensus downside scenario

2021 is expected to be a year of economic recovery, but the progression and management of the pandemic presents a key risk to global growth. A new and more contagious strain of the virus increased the transmission rate in the UK and resulted in stringent restrictions to mobility towards the year-end. This viral strain observed in the UK together with a second, similarly aggressive strain observed in South Africa, introduce the risk that transmission may increase significantly within the national borders of a number of countries in 2021 and also raise concerns around the efficacy of vaccines as the virus mutates. Some countries may keep significant restrictions to mobility in place for an extended period of time and at least until critical segments of the population can be inoculated. Further risks to international travel also arise.

A number of vaccines have been developed and approved for use at a rapid pace and plans to inoculate significant proportions of the national population in 2021 are a clear positive for economic recovery. While we expect vaccination program to be successful, government and healthcare authorities face specific challenges that could affect the speed and spread of vaccinations. These challenges include the logistics of inoculating a significant proportion of national population within a limited time-frame and the public acceptance of vaccines. On a global level, supply challenges could affect the pace of roll out and the efficacy of vaccines is yet to be determined.

Expansionary fiscal policy in 2020 was supported by accommodative actions taken by the Bank of Canada. This fiscal-monetary nexus has provided households and firms with significant support. An inability or unwillingness to continue with such support or the untimely withdrawal of support present a downside risk to growth.

While COVID-19 and related risks dominate the economic outlook, geo-political risks also present a threat. These risks include:

- The potential for increased tensions between the US and Mainland China: the outcome of the 2020 Presidential election in the US signals a more orderly conduct of relations between the US and Mainland China in the future but long term differences between the two nations remain, which could affect sentiment and restrict global economic activity.

- Social and political unrest in Hong Kong: mobility restrictions to combat the spread of COVID-19 and the passage of the National Security Law in 2020 significantly reduced the scale of protests. As COVID-19 diminishes as a threat, such unrest has the potential to return.
- Disorderly relations between the UK and the EU. The Trade and Co-operation Agreement between the two parties averted a disorderly Brexit but the risk of future disagreements between the UK and the EU remain which may hinder the ability to reach a more comprehensive agreement on trade and services.

In the consensus downside scenario, economic recovery is considerably weaker compared to the central scenario. GDP growth remains weak, unemployment rates stay elevated and asset and commodity prices fall before gradually recovering towards their long-run trends.

The scenario is consistent with the key downside risks articulated above. Further outbreaks of COVID-19, coupled with delays in vaccination programs lead to longer lasting restrictions on economic activity. Other global risks also increase and drive increased risk-aversion in asset markets.

The following tables provide key macroeconomic variables and the probabilities assigned in the consensus downside scenario. Comparative information is provided as it was published in *Annual Report and Accounts 2019*.

Consensus downside scenario worst outcome[1]

	2020
GDP growth rate (%)	**(3.6) (1Q21)**
Unemployment (%)	**9.2 (1Q21)**
House price growth (%)	**(1.3) (1Q22)**
Brent oil prices (US$/barrel)	**26.3 (4Q21)**
Probability (%)	**10**

1. *Extreme point in the consensus downside is 'worst outcome' in the scenario, i.e. lowest GDP growth, highest unemployment rate etc, in first two years of the scenario (1Q2021-4Q2022).*

Consensus downside scenario (1Q2020-4Q2024)

	2019
GDP growth rate (%)	1.5
Inflation (%)	1.8
Unemployment (%)	6.4
Short-term interest rate (%)	0.8
10 year Treasury bond yields (%)	1.4
House price growth (%)	(0.8)
Equity price growth (%)	0.6
Probability	10

Additional downside scenario

An additional downside scenario that features a global recession has been created to reflect management's view of severe risks. Infections rise in 2021 and setbacks to vaccine programs imply that successful roll out of vaccines only occurs towards the end of 2021 and it takes until the end of 2022 for the pandemic to come to an end. The government and Bank of Canada are unable to significantly increase fiscal and monetary programs which results in abrupt corrections in labour and asset markets.

The following table discloses key macroeconomic variables and the probabilities assigned in the additional downside scenario.

Additional downside scenario worst outcome[1]

	2020
GDP growth rate (%)	**(5.0) (1Q21)**
Unemployment (%)	**11.3 (1Q21)**
House price growth (%)	**(10.4) (4Q21)**
Brent oil prices (US$/barrel)	**17.3 (1Q22)**
Probability (%)	**10**

1. *Extreme point in the additional downside is 'worst outcome' in the scenario, i.e. lowest GDP growth, highest unemployment rate etc, in first two years of the scenario (1Q2021-4Q2022).*

Scenario probabilities

Management have assigned probability weights to scenarios that reflect their view of the distribution of risks. The central scenario has been assigned 70% weight and rest of the scenarios have been assigned 10% weight each.

Critical accounting estimates and judgments

The calculation of ECL under IFRS 9 involves significant judgements, assumptions and estimates. The level of estimation uncertainty and judgement has increased during 2020 as a result of the economic effects of the COVID-19 pandemic, including significant judgements relating to:

- the selection and weighting of economic scenarios, given rapidly changing economic conditions in an unprecedented manner, uncertainty as to the effect of government and central bank support measures designed to alleviate adverse economic impacts, and a widening in the distribution of economic forecasts than before the pandemic. The key judgments are the length of time over which the economic effects of the pandemic will occur, the speed and the shape of recovery. The main factors include the effectiveness of pandemic containment measures, the pace of roll-out and effectiveness of vaccines, and the emergence of new variants of the virus, plus a range of geo-political uncertainties, which together represent a very high degree of estimation uncertainty, particularly in assessing downside scenarios;
- estimating the economic effects of those scenarios on ECL, where there is no observable historical trend that can be reflected in the models that will accurately represent the effects of the economic changes of the severity and speed brought about by COVID-19. Modelled assumptions and linkages between economic factors and credit losses may underestimate or overestimate ECL in these conditions, and there is significant uncertainty in the estimation of parameters such as collateral values and loss severity; and
- the identification of customers experiencing significant increases in credit risk and credit impairment, particularly where those customers have accepted payment deferrals and other reliefs designed to address short-term liquidity issues given muted default experience to date. The use of segmentation techniques for indicators of significant increases in credit risk involves significant estimation uncertainty.

How economic scenarios are reflected in the wholesale lending calculation of ECL

The bank has developed a methodology for the application of forward economic guidance into the calculation of ECL by incorporating forward economic guidance into the estimation of the term structure of Probability of Default ('PD') and Loss Given Default ('LGD'). For PDs, we consider the correlation of forward economic guidance to default rates. For LGD calculations we consider the correlation of forward economic guidance to collateral values and realization rates. PDs and LGDs are estimated for the entire term structure of each instrument.

For impaired loans, LGD estimates take into account independent recovery valuations provided by external consultants where available, or internal forecasts corresponding to anticipated economic conditions and individual company conditions. In estimating the ECL on impaired loans that are individually considered not to be significant, the bank incorporates forward economic guidance proportionate to the probability-weighted outcome and the central scenario outcome for non-stage 3 populations.

How economic scenarios are reflected in the personal lending calculation of ECL

The bank has developed a methodology for incorporating forecasts of economic conditions into ECL estimates. The impact of economic scenarios on PD is modelled at a portfolio level. Historic relationships between observed default rates and macro-economic variables are integrated into IFRS 9 ECL estimates by leveraging economic response models. The impact of these scenarios on PD is modelled over a period equal to the remaining maturity of underlying asset or assets. The impact on LGD is modelled for mortgage portfolios by forecasting future loan-to-value ('LTV') profiles for the remaining maturity of the asset by using forecasts of the house price index and applying the corresponding LGD expectation.

Management judgemental adjustments

In the context of IFRS 9, management judgemental adjustments are short-term increases or decreases to the ECL at either a customer or portfolio level to account for late breaking events, model deficiencies and expert credit judgement applied following management review and challenge.

The complexities of governmental support programs and regulatory guidance on treatment of customer impacts (such as forbearance and payment holidays) and the unpredictable pathways of the pandemic have never been modelled. Consequently, the Bank's IFRS 9 models, in some cases, generate outputs that appear overly sensitive when compared with other economic and credit metrics. Management judgemental adjustments are required to ensure that an appropriate amount of ECL impairment is recognized.

We have internal governance in place to regularly monitor management judgemental adjustments and, where possible, to reduce the reliance on these through model recalibration or redevelopment, as appropriate. During 2020 the composition of modelled ECL and management judgemental adjustments changed significantly, reflecting the path of the pandemic, containment efforts and government support measures, and this is expected to continue to be the case until GDP growth resumes and the uncertainty over long-term unemployment abates.

Management judgemental adjustments made in estimating the reported ECL at 31 December 2020 are set out in the following table. The table includes adjustments in relation to data and model limitations resulting from the pandemic, late outbreak events, and as a result of the model development and implementation. It shows the adjustments applicable to the scenario-weighted ECL numbers. Adjustments in relation to downside scenarios are more significant as results are subject to greater uncertainty.

Management judgemental adjustments to ECL[1]

	Personal	Wholesale	Total
Expert credit and model adjustments	**28**	**30**	**58**
Adjustments for FEG and late breaking events	**26**	**16**	**42**
Total	**54**	**46**	**100**

1. *Management judgemental adjustments presented in the table reflect increases to ECL.*

Management judgemental adjustments at 31 December 2019 were a decrease to ECL of $10m for the wholesale portfolio and an increase to ECL of $24m for the personal portfolio. This excludes adjustments for alternative scenarios.

When we apply these management judgemental adjustments, we assess whether a significant change in credit risk has occurred. In such instances on an individual or portfolio basis where a significant change in credit risk has been identified, we have migrated the related exposures between stages 1 and 2 based on whether the change is positive or negative from the model. The corresponding ECL adjustment is based on the stage distribution of the portfolio with stage 1 exposures measured on a 12-month ECL and stage 2 exposures measured on a lifetime ECL basis.

Economic scenarios sensitivity analysis of ECL estimates

Management considered the sensitivity of the ECL outcome against the economic forecasts as part of the ECL governance process by recalculating the ECL under each scenario described above for selected portfolios, applying a 100% weighting to each scenario in turn. The weighting is reflected in both the determination of significant increase in credit risk as well as the measurement of the resulting ECL.

The ECL calculated for the upside and downside scenarios should not be taken to represent the upper and lower limits of possible actual ECL outcomes. The impact of defaults that might occur in the future under different economic scenarios is captured by recalculating ECL for loans in stages 1 and 2 at the balance sheet date. The population of stage 3 loans (in default) at the balance sheet date is unchanged in these sensitivity calculations. Stage 3 ECL would only be sensitive to changes in forecasts of future economic conditions if the LGD of a particular portfolio was sensitive to these changes.

For wholesale credit risk exposures, the sensitivity analysis excludes ECL and financial instruments related to defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios, and it is impracticable to separate the effect of macroeconomic factors in individual assessments.

For retail credit risk exposures, the sensitivity analysis includes ECL for loans and advances to customers related to defaulted obligors. This is because the retail ECL for secured mortgage portfolios including loans in all stages is sensitive to macroeconomic variables.

Wholesale portfolio analysis

The portfolios below were selected based on contribution to ECL and sensitivity to macro-economic factors.

IFRS 9 ECL sensitivity to future economic conditions[1]

ECL of financial instruments subject to significant measurement uncertainty at 31 December[2]

	2020	2019
	$m	$m
Reported ECL	**252**	105
Consensus central scenario	**195**	103
Consensus upside scenario	**115**	83
Consensus downside scenario	**347**	141
Additional downside scenario	**715**	n/a
Gross carrying amount/nominal amount[3]	**111,095**	96,846

1. *Excludes ECL and financial instruments relating to defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios.*
2. *Includes off-balance sheet financial instruments that are subject to significant measurement uncertainty.*
3. *Includes low credit-risk financial instruments such as debt instruments at FVOCI, which have high carrying amounts but low ECL under all the above scenarios.*

Personal portfolio analysis

Exposures modelled using small portfolio approach were excluded from the sensitivity analysis.

IFRS 9 ECL sensitivity to future economic conditions[1]

ECL of loans and advances to customers at 31 December[2]

	2020	2019
	$m	$m
Reported ECL	78	50
Consensus central scenario	76	50
Consensus upside scenario	72	47
Consensus downside scenario	81	53
Additional downside scenario	92	n/a
Gross carrying amount	31,154	28,999

1. *ECL sensitivities exclude portfolios utilizing less complex modelling approaches.*
2. *ECL sensitivity includes only on-balance sheet financial instruments to which IFRS 9 impairment requirements are applied.*

Reconciliation of allowances for loans and advances to banks and customers including loan commitments and financial guarantees

The following disclosure provides a reconciliation of the bank's allowances for loans and advances to banks and customers including loan commitments and financial guarantees.

The transfers of financial instruments represents the impact of stage transfers upon the gross carrying/nominal amount and associated allowance for ECL. The net remeasurement of ECL arising from stage transfers represents the change in ECL due to these transfers.

Reconciliation of allowances for loans and advances to banks and customers including loan commitments and financial guarantees*[1]

		2020				2019			
		Non-credit impaired		Credit-impaired		Non-credit impaired		Credit-impaired	
		Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
	Footnote	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan		47	101	118	266	43	99	89	231
Transfers of financial instruments:	2	68	(98)	30	—	36	(44)	8	—
– transfers from stage 1 to stage 2		(35)	35	—	—	(6)	6	—	—
– transfers from stage 2 to stage 1		101	(101)	—	—	41	(41)	—	—
– transfers to stage 3		—	(35)	35	—	—	(12)	12	—
– transfers from stage 3		2	3	(5)	—	1	3	(4)	—
Net remeasurement of ECL arising from transfer of stage	2	(53)	66	—	13	(30)	14	—	(16)
New financial assets originated or purchased		13	—	—	13	9	—	—	9
Changes to risk parameters		(14)	193	127	306	(8)	38	88	118
Asset derecognized (including final repayments)		(4)	(9)	(7)	(20)	(3)	(6)	(15)	(24)
Assets written off		—	—	(118)	(118)	—	—	(48)	(48)
Foreign exchange		(1)	(4)	(2)	(7)	—	—	(4)	(4)
At 31 Dec		56	249	148	453	47	101	118	266
ECL income statement change for the period		(58)	250	120	312	(32)	46	73	87
Recoveries		—	—	(12)	(12)	—	—	(10)	(10)
Total ECL income statement change for the period		(58)	250	108	300	(32)	46	63	77

1. *Excludes performance guarantee contracts.*
2. *Transfers of financial instruments represent stage movements of prior period ECL allowances to the current period stage classification. Net remeasurement line represents the current period change in ECL allowances for transfers, without considering changes to credit or other risk parameters.*

	At	Year ended	At	Year ended
	31 December 2020	31 December 2020	31 December 2019	31 December 2019
	Allowance for ECL/ Other credit loss provisions	ECL charge	Allowance for ECL/ Other credit loss provisions	ECL charge
	$m	$m	$m	$m
As above	453	300	266	77
Other financial assets measured at amortized cost	41	21	30	—
Performance guarantee contracts	10	6	3	1
Debt instruments measured at FVOCI	1	—	1	—
Total allowance for ECL / Total income statement ECL charge for the period	505	327	300	78

Credit quality of financial instruments*

We assess the credit quality of all financial instruments that are subject to credit risk. The credit quality of financial instruments is a point-in-time assessment of the probability of default ('PD') of financial instruments, whereas IFRS 9 stages 1 and 2 are determined based on relative deterioration of credit quality since initial recognition. Accordingly, for non-credit impaired financial instruments there is no direct relationship between the credit quality assessment and IFRS 9 stages 1 and 2, though typically the lower credit quality bands exhibit a higher proportion in stage 2.

The five credit quality classifications, as defined in earlier section, each encompasses a range of granular internal credit rating grades assigned to wholesale and personal lending businesses and the external ratings attributed by external agencies to debt securities.

The information on credit quality classifications is provided on page 39.

Distribution of financial instruments by credit quality and stage allocation*

	Gross carrying/notional amount						Allowance for ECL/ other credit loss provisions	
	Strong	Good	Satisfactory	Sub-standard	Credit-impaired	Total		Net
	$m	$m	$m	$m	$m	$m	$m	$m
In-scope for IFRS 9								
Debt instruments at fair value through other comprehensive income[1]	19,325	—	—	—	—	19,325	(1)	19,324
– stage 1	19,325	—	—	—	—	19,325	(1)	19,324
– stage 2	—	—	—	—	—	—	—	—
– stage 3	—	—	—	—	—	—	—	—
Loans and advances to customers at amortized cost	29,753	14,679	14,357	2,145	476	61,410	(408)	61,002
– stage 1	29,590	12,284	7,624	144	—	49,642	(45)	49,597
– stage 2	163	2,395	6,733	2,001	—	11,292	(215)	11,077
– stage 3	—	—	—	—	476	476	(148)	328
Loans and advances to banks at amortized cost	1,270	—	—	—	—	1,270	—	1,270
– stage 1	1,270	—	—	—	—	1,270	—	1,270
– stage 2	—	—	—	—	—	—	—	—
– stage 3	—	—	—	—	—	—	—	—
Other financial assets at amortized cost	23,143	2,231	1,894	153	22	27,443	(41)	27,402
– stage 1	23,107	2,004	1,412	13	—	26,536	(3)	26,533
– stage 2	36	227	482	140	—	885	(16)	869
– stage 3	—	—	—	—	22	22	(22)	—
Out-of-scope for IFRS 9								
Trading assets	1,712	7	—	—	—	1,719	—	1,719
Other financial assets mandatorily measured at fair value through profit or loss	9	—	—	—	—	9	—	9
Derivatives	4,981	268	187	11	—	5,447	—	5,447
Total gross carrying amount on-balance sheet	80,193	17,185	16,438	2,309	498	116,623	(450)	116,173
Percentage of total credit quality	68.8 %	14.7 %	14.1 %	2.0 %	0.4 %	100.0 %		
Loan and other credit-related commitments	16,325	16,224	10,436	1,296	145	44,426	(42)	44,384
– stage 1	15,554	13,773	5,861	74	—	35,262	(10)	35,252
– stage 2	771	2,451	4,575	1,222	—	9,019	(32)	8,987
– stage 3	—	—	—	—	145	145	—	145
Financial guarantees	1,163	477	264	79	2	1,985	(3)	1,982
– stage 1	1,163	469	192	10	—	1,834	(1)	1,833
– stage 2	—	8	72	69	—	149	(2)	147
– stage 3	—	—	—	—	2	2	—	2
In-scope: Loan and other credit-related commitments and financial guarantees	17,488	16,701	10,700	1,375	147	46,411	(45)	46,366
Out-of-scope: Performance guarantee contracts	1,661	981	1,043	116	11	3,812	(10)	3,802
At 31 Dec 2020	99,342	34,867	28,181	3,800	656	166,846	(505)	166,341

1. *For the purposes of this disclosure gross carrying value is defined as the amortized cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Distribution of financial instruments by credit quality and stage allocation (continued)*

	Gross carrying/notional amount						Allowance for ECL/other credit loss provisions	Net
	Strong	Good	Satisfactory	Sub-standard	Credit-impaired	Total		
	$m	$m	$m	$m	$m	$m	$m	$m
In-scope for IFRS 9								
Debt instruments at fair value through other comprehensive income[1]	23,480	—	—	—	—	23,480	(1)	23,479
– stage 1	23,480	—	—	—	—	23,480	(1)	23,479
– stage 2	—	—	—	—	—	—	—	—
– stage 3	—	—	—	—	—	—	—	—
Loans and advances to customers at amortized cost	30,152	17,813	12,304	1,561	334	62,164	(242)	61,922
– stage 1	30,082	17,292	9,620	174	—	57,168	(40)	57,128
– stage 2	70	521	2,684	1,387	—	4,662	(85)	4,577
– stage 3	—	—	—	—	334	334	(117)	217
Loans and advances to banks at amortized cost	1,169	—	—	—	—	1,169	—	1,169
– stage 1	1,169	—	—	—	—	1,169	—	1,169
– stage 2	—	—	—	—	—	—	—	—
– stage 3	—	—	—	—	—	—	—	—
Other financial assets at amortized cost	7,513	2,401	1,647	75	26	11,662	(30)	11,632
– stage 1	7,513	2,373	1,401	18	—	11,305	(2)	11,303
– stage 2	—	28	246	57	—	331	(3)	328
– stage 3	—	—	—	—	26	26	(25)	1
Out-of-scope for IFRS 9								
Trading assets	4,157	165	—	—	—	4,322	—	4,322
Other financial assets mandatorily measured at fair value through profit or loss	5	—	—	—	—	5	—	5
Derivatives	3,065	133	67	2	—	3,267	—	3,267
Total gross carrying amount on-balance sheet	69,541	20,512	14,018	1,638	360	106,069	(273)	105,796
Percentage of total credit quality	65.6 %	19.3 %	13.2 %	1.5 %	0.3 %	100.0 %		
Loan and other credit-related commitments	16,851	16,796	8,208	779	66	42,700	(22)	42,678
– stage 1	16,831	15,908	5,772	109	—	38,620	(6)	38,614
– stage 2	20	888	2,436	670	—	4,014	(15)	3,999
– stage 3	—	—	—	—	66	66	(1)	65
Financial guarantees	1,151	610	241	120	2	2,124	(2)	2,122
– stage 1	1,151	610	151	9	—	1,921	(1)	1,920
– stage 2	—	—	90	111	—	201	(1)	200
– stage 3	—	—	—	—	2	2	—	2
In-scope: Loan and other credit-related commitments and financial guarantees	18,002	17,406	8,449	899	68	44,824	(24)	44,800
Out-of-scope: Performance guarantee contracts	1,179	1,164	891	89	22	3,345	(3)	3,342
31 December 2019	88,722	39,082	23,358	2,626	450	154,238	(300)	153,938

1. *For the purposes of this disclosure gross carrying value is defined as the amortized cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Concentration of credit risk

Concentration of credit risk may arise when the ability of a number of borrowers or counterparties to meet their contractual obligations are similarly affected by external factors. Diversification of credit risk is a key concept by which we are guided. In assessing and monitoring for credit risk concentration, we aggregate exposures by industry and geographic area as presented in the following tables.

Large customer concentrations

We monitor and manage credit risk from large customer concentrations, which we define as borrowing groups where approved facilities exceed 10% of our regulatory capital base, or $759m at 31 December 2020 (2019: $690m). At 31 December 2020, the aggregate approved facilities from large customers was $26,805m (2019: $27,041m), an average of $1,117m (2019: $1,082m) per customer. The increase in total approved facilities from large customers is primarily comprised of increased facilities to Canadian provinces, existing corporate customers and to Canadian chartered banks.

Wholesale lending

Wholesale loans are money lent to sovereign borrowers, banks, non-bank financial institutions and corporate entities.

This section provides further detail on the industries driving the movement in wholesale loans and advances to customers. Additionally, it provides a reconciliation of the opening 1 January 2020 allowance for ECL to the 31 December 2020 balance.

Total wholesale lending for loans and advances to customers at amortized cost

		2020		2019	
		Gross carrying amount	**Allowance for ECL**	Gross carrying amount	Allowance for ECL
	Footnote	**$m**	**$m**	$m	$m
Corporate and commercial					
– agriculture, forestry and fishing		**474**	**(6)**	446	(9)
– mining and quarrying	*1*	**1,464**	**(95)**	1,878	(42)
– manufacturing		**4,448**	**(43)**	5,505	(27)
– electricity, gas, steam and air-conditioning supply		**355**	**(1)**	336	(1)
– water supply, sewerage, waste management and remediation		**115**	**—**	101	—
– construction		**864**	**(11)**	963	(11)
– wholesale and retail trade, repair of motor vehicles and motorcycles		**4,663**	**(39)**	5,728	(42)
– transportation and storage		**2,723**	**(21)**	2,829	(14)
– accommodation and food		**1,375**	**(28)**	1,167	(1)
– publishing, audiovisual and broadcasting		**891**	**(6)**	1,040	(6)
– real estate		**8,454**	**(34)**	8,509	(12)
– professional, scientific and technical activities		**1,028**	**(5)**	1,181	(6)
– administrative and support services		**770**	**(20)**	1,090	(5)
– education		**148**	**—**	171	—
– health and care		**219**	**—**	244	—
– arts, entertainment and recreation		**298**	**(1)**	294	—
– other services		**133**	**—**	195	(1)
– government		**25**	**—**	25	—
– non-bank financial institutions		**1,832**	**(11)**	1,270	(5)
At 31 Dec		**30,279**	**(321)**	32,972	(182)
By geography	*2*				
Canada		**28,435**	**(304)**	30,547	(171)
– British Columbia		**8,819**	**(56)**	9,309	(27)
– Ontario		**10,247**	**(88)**	10,486	(49)
– Alberta		**4,820**	**(115)**	5,562	(59)
– Quebec		**3,247**	**(29)**	3,812	(21)
– Saskatchewan and Manitoba		**904**	**(13)**	896	(10)
– Atlantic provinces		**398**	**(3)**	482	(5)
United States of America		**1,119**	**(8)**	1,437	(4)
Other		**725**	**(9)**	988	(7)
At 31 Dec		**30,279**	**(321)**	32,972	(182)

1. *Mining and quarrying includes energy related exposures which constitute approximately 86% of the gross carrying amount and 92% of the allowance for ECL at 31 December 2020.*
2. *Provincial geographic distribution is based on the address of originating branch and foreign geographic distribution is based on the country of incorporation.*

Wholesale lending reconciliation of allowances for loans and advances to banks and customers including loan commitments and financial guarantees*[1]

		2020				2019			
		Non-credit impaired		Credit-impaired		Non-credit impaired		Credit-impaired	
		Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
		Allowance for ECL	Allowance for ECL	Allowance for ECL	Allowance for ECL	Allowance for ECL	Allowance for ECL	Allowance for ECL	Allowance for ECL
	Footnote	$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan		**32**	**70**	**103**	**205**	29	74	73	176
Transfers of financial instruments:	2	**36**	**(64)**	**28**	**—**	7	(13)	6	—
– transfers from stage 1 to stage 2		**(31)**	**31**	**—**	**—**	(5)	5	—	—
– transfers from stage 2 to stage 1		**66**	**(66)**	**—**	**—**	12	(12)	—	—
– transfers to stage 3		**—**	**(29)**	**29**	**—**	—	(6)	6	—
– transfers from stage 3		**1**	**—**	**(1)**	**—**	—	—	—	—
Net remeasurement of ECL arising from transfer of stage	2	**(33)**	**57**	**—**	**24**	(7)	8	—	1
New financial assets originated or purchased		**9**	**—**	**—**	**9**	6	—	—	6
Changes to risk parameters		**(2)**	**140**	**108**	**246**	(2)	3	65	66
Asset derecognized (including final repayments)		**(1)**	**(3)**	**(4)**	**(8)**	(1)	(2)	(5)	(8)
Assets written off		**—**	**—**	**(104)**	**(104)**	—	—	(32)	(32)
Foreign exchange		**(1)**	**(4)**	**(2)**	**(7)**	—	—	(4)	(4)
At 31 Dec		**40**	**196**	**129**	**365**	32	70	103	205
ECL income statement change for the period		**(27)**	**194**	**104**	**271**	(4)	9	60	65
Recoveries		**—**	**—**	**(2)**	**(2)**	—	—	(3)	(3)
Total ECL income statement change for the period		**(27)**	**194**	**102**	**269**	(4)	9	57	62

1. Excludes performance guarantee contracts.
2. Transfers of financial instruments represent stage movements of prior period ECL allowances to the current period stage classification. Net remeasurement line represents the current period change in ECL allowances for transfers, without considering changes to credit or other risk parameters.

The wholesale allowance for ECL increased by $160m or 78% as compared to 31 December 2019, and the wholesale lending change in ECL for the period resulted in an income statement charge of $269m, primarily driven by an adverse shift in forward-looking economic scenarios related to COVID-19.

The ECL charge for the period of $269m presented in the above table consisted of $246m relating to underlying risk parameter changes, including the credit quality impact of financial instruments transferring between stage, $24m relating to the net remeasurement impact of stage transfers and $1m relating to underlying net book volume movement. There were recoveries of $2m during the year.

The total ECL coverage for loans and advances to customers for corporate and commercial at 31 December 2020 was 1.1%, an increase of 0.5% as compared to 31 December 2019.

Personal lending

Personal loans are money lent to individuals rather than institutions. This includes both secured and unsecured loans such as mortgages and credit card balances.

This section presents further disclosures related to personal lending. Additionally, it provides a reconciliation of the opening 1 January 2020 to 31 December 2020 closing allowance for ECL.

Total personal lending for loans and advances to customers at amortized cost

	Footnote	2020 Gross carrying amount	2020 Allowance for ECL	2019 Gross carrying amount	2019 Allowance for ECL
		$m	$m	$m	$m
Residential mortgages		**28,129**	**(42)**	25,855	(23)
Home equity lines of credit		**1,550**	**(5)**	1,664	(4)
Personal revolving loan facilities		**533**	**(16)**	610	(14)
Other personal loan facilities		**543**	**(5)**	665	(4)
Retail card		**331**	**(13)**	341	(9)
Run-off consumer loan portfolio		**45**	**(6)**	57	(6)
At 31 Dec		**31,131**	**(87)**	29,192	(60)
By geography	1				
Canada		**30,947**	**(85)**	29,009	(58)
– British Columbia		**15,220**	**(36)**	14,327	(22)
– Ontario		**12,018**	**(29)**	11,161	(18)
– Alberta		**1,747**	**(9)**	1,663	(7)
– Quebec		**1,374**	**(5)**	1,327	(6)
– Saskatchewan and Manitoba		**338**	**(2)**	304	(2)
– Atlantic provinces		**243**	**(4)**	220	(3)
– Territories		**7**	**—**	7	—
Other		**184**	**(2)**	183	(2)
At 31 Dec		**31,131**	**(87)**	29,192	(60)

1. Geographic distribution is based on the customer address.

Personal lending reconciliation of allowances for loans and advances to banks and customers including loan commitments and financial guarantees*[1]

	Footnote	2020 Non-credit impaired Stage 1	2020 Non-credit impaired Stage 2	2020 Credit-impaired Stage 3	2020 Total	2019 Non-credit impaired Stage 1	2019 Non-credit impaired Stage 2	2019 Credit-impaired Stage 3	2019 Total
		$m	$m	$m	$m	$m	$m	$m	$m
At 1 Jan		**15**	**31**	**15**	**61**	14	25	16	55
Transfers of financial instruments:	2	**32**	**(34)**	**2**	**—**	29	(31)	2	—
– transfers from stage 1 to stage 2		**(4)**	**4**	**—**	**—**	(1)	1	—	—
– transfers from stage 2 to stage 1		**35**	**(35)**	**—**	**—**	29	(29)	—	—
– transfers to stage 3		**—**	**(6)**	**6**	**—**	—	(6)	6	—
– transfers from stage 3		**1**	**3**	**(4)**	**—**	1	3	(4)	—
Net remeasurement of ECL arising from transfer of stage	2	**(20)**	**9**	**—**	**(11)**	(23)	6	—	(17)
New financial assets originated or purchased		**4**	**—**	**—**	**4**	3	—	—	3
Changes to risk parameters		**(12)**	**53**	**19**	**60**	(6)	35	23	52
Asset derecognized (including final repayments)		**(3)**	**(6)**	**(3)**	**(12)**	(2)	(4)	(10)	(16)
Assets written off		**—**	**—**	**(14)**	**(14)**	—	—	(16)	(16)
At 31 Dec		**16**	**53**	**19**	**88**	15	31	15	61
ECL income statement change for the period		**(31)**	**56**	**16**	**41**	(28)	37	13	22
Recoveries		**—**	**—**	**(10)**	**(10)**	—	—	(7)	(7)
Total ECL income statement change for the period		**(31)**	**56**	**6**	**31**	(28)	37	6	15

1. Excludes performance guarantee contracts.
2. Transfers of financial instruments represent stage movements of prior period ECL allowances to the current period stage classification. Net remeasurement line represents the current period change in ECL allowances for transfers, without considering changes to credit or other risk parameters.

The total personal lending allowance for ECL increased by $27m or 44% during 2020, primarily driven by an adverse shift in forward-looking economic scenarios related to COVID-19.

The total personal lending ECL income statement change for the year was a charge of $31m. This was driven by an increase in the allowance for ECL on the residential mortgages, retail card and personal revolving loan facilities portfolios.

The write-offs are mainly from personal revolving loan facilities, other personal loan facilities and retail card.

Mortgages and home equity lines of credit

The bank's mortgage and home equity lines of credit portfolios are considered to be low-risk since the majority are secured by a first charge against the underlying real estate.

The following tables detail how the bank mitigates risk further by diversifying the geographical markets in which it operates as well as benefiting from borrower default insurance. In addition, the bank maintains strong underwriting and portfolio monitoring standards to ensure the quality of its portfolio is maintained.

Insurance and geographic distribution[1]

	Year ended						
	Residential mortgages[5]					HELOC[2, 5]	
	Insured[3]		Uninsured[3]		Total	Uninsured	
	$m	%	$m	%	$m	$m	%
British Columbia	**1,302**	**9 %**	**12,926**	**91 %**	**14,228**	**766**	**100 %**
Western Canada[4]	**684**	**40 %**	**1,009**	**60 %**	**1,693**	**170**	**100 %**
Ontario	**2,090**	**18 %**	**9,395**	**82 %**	**11,485**	**543**	**100 %**
Quebec and Atlantic provinces	**525**	**38 %**	**867**	**62 %**	**1,392**	**78**	**100 %**
At 31 Dec 2020	**4,601**	**16 %**	**24,197**	**84 %**	**28,798**	**1,557**	**100 %**

Insurance and geographic distribution[1]

	Year ended						
	Residential mortgages[5, 6]					HELOC[2, 5, 6]	
	Insured[3]		Uninsured[3]		Total	Uninsured	
	$m	%	$m	%	$m	$m	%
British Columbia	960	7 %	12,393	93 %	13,353	822	100 %
Western Canada[4]	476	30 %	1,103	70 %	1,579	190	100 %
Ontario	1,298	13 %	8,919	87 %	10,217	589	100 %
Quebec and Atlantic provinces	384	29 %	933	71 %	1,317	88	100 %
At 31 Dec 2019	3,118	12 %	23,348	88 %	26,466	1,689	100 %

1. *Geographic distribution is based on the property location.*
2. *HELOC is an abbreviation for Home Equity Lines of Credit, which are lines of credit secured by equity in real estate.*
3. *Insured mortgages are protected from potential losses caused by borrower default through the purchase of insurance coverage, either from the Canadian Housing and Mortgage Corporation or other accredited private insurers.*
4. *Western Canada excludes British Columbia.*
5. *Residential mortgages and HELOC include Wholesale lending and Personal lending exposures.*
6. *Certain prior year amounts have been reclassified to conform to the current year presentation.*

Amortization period[1]

	Year ended		
	Residential mortgages		
	≤ 20 years	> 20 years ≤ 25 years	> 25 years ≤ 30 years
At 31 Dec 2020	**20.1 %**	**56.0 %**	**23.9 %**
At 31 Dec 2019	20.1 %	48.0 %	31.9 %

1. *Amortization period is based on the remaining term of residential mortgages.*

Average loan-to-value ratios of new originations[1,2]

	Quarter ended	
	Uninsured % LTV[3]	
	Residential mortgages	HELOC
	%	%
British Columbia	**60.7 %**	**54.2 %**
Western Canada[4]	**66.6 %**	**66.4 %**
Ontario	**63.2 %**	**58.4 %**
Quebec and Atlantic provinces	**65.0 %**	**60.4 %**
Total Canada for the three months ended 31 Dec 2020	**62.8 %**	**57.5 %**
Total Canada for the three months ended 31 Dec 2019	61.1 %	57.1 %

1. *All new loans and home equity lines of credit were originated by the bank; there were no acquisitions during the period.*
2. *New originations exclude existing mortgage renewals.*
3. *Loan-to-value ratios are simple averages, based on property values at the date of mortgage origination.*
4. *Western Canada excludes British Columbia.*

Potential impact of an economic downturn on residential mortgage loans and home equity lines of credit

The bank performs stress testing on its personal lending portfolio to assess the impact of increased levels of unemployment, rising interest rates, reduction in property values and changes in other relevant macro-economic variables. Potential increase in losses in the mortgage portfolio under downturn economic scenarios are considered manageable given the composition of the portfolio, the low Loan-to-Value in the portfolio and risk mitigation strategies in place.

Credit-impaired loans*

The bank determines that a financial instrument is credit-impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay such as that a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default. If such unlikeliness to pay is not identified at an earlier stage, it is

deemed to occur when an exposure is 90 days past due. The definitions of credit-impaired and default are aligned as far as possible so that stage 3 represents all loans which are considered defaulted or otherwise credit-impaired.

The following table provides an analysis of the gross carrying value of loans and advances to banks and customers that are determined to be impaired (stage 3 financial assets).

Credit-impaired loans and advances to banks and customers*

		2020		2019	
		Gross carrying amount	**Allowance for ECL**	Gross carrying amount	Allowance for ECL
	Footnotes	**$m**	**$m**	$m	$m
Corporate and commercial		**374**	**(129)**	247	(102)
– agriculture, forestry and fishing		**6**	**(4)**	10	(5)
– mining and quarrying	*1*	**137**	**(56)**	62	(24)
– manufacture		**119**	**(16)**	39	(13)
– construction		**10**	**(4)**	13	(8)
– wholesale and retail trade, repair of motor vehicles and motorcycles		**53**	**(19)**	51	(29)
– transportation and storage		**7**	**(6)**	7	(5)
– accommodation and food		**5**	**(4)**	—	—
– publishing, audiovisual and broadcasting		**12**	**(4)**	15	(4)
– real estate		**13**	**(5)**	8	(7)
– professional, scientific and technical activities		**—**	**—**	37	(3)
– administrative and support services		**11**	**(10)**	4	(3)
– non-bank financial institutions		**1**	**(1)**	1	(1)
Households	*2*	**102**	**(19)**	87	(15)
Loans and advances to banks		**—**	**—**	—	—
At 31 Dec		**476**	**(148)**	334	(117)

1. *Mining and quarrying includes energy related exposures which constitute approximately 99% of the gross carrying amount and 97% of the allowance for ECL at 31 December 2020.*
2. *Households includes the personal lending portfolio.*

The increase in allowance for ECL from credit-impaired loans during 2020 was primarily driven by the deterioration across various sectors, predominantly in the energy sector.

Renegotiated loans

The gross carrying amount of renegotiated loans was $289m at 31 December 2020 (2019: $135m) and the allowance for ECL was $30m (2019: $17m).

Payment relief options

In response to COVID-19, we continue to work with our wholesale and personal customers who might need additional assistance to manage their working capital cycle, or supply chain and other risks, or who might need flexibility in managing their loans.

We have launched flexible solutions for our impacted customers, including payment deferral for mortgages and relief on other credit products as needed. These payment relief options allow customers to temporarily stop making their regular payments.

For the contracts that are modified, we have performed an assessment to consider reasonable and supportable information at an individual level and/or at a collective level in order to identify customers at higher susceptibility of long term economic impacts which might indicate a significant increase in credit risk. Payment deferrals are not considered to automatically trigger a significant increase in credit risk or result in the loans involved being moved into stage 2 or stage 3 for the purposes of calculating ECL, all things being equal.

The assessment not only considered reliefs, where relevant, but also other available reasonable and supportable information about lifetime risk of default.

The following table presents the number of accounts and drawn loan balances of accounts under payment relief options implemented by the bank at 31 December 2020.

		At		
		31 Dec 2020	30 Sep 2020	30 Jun 2020
Personal lending				
Number of residential mortgages and home equity lines of credit accounts under payment relief	**Thousands**	**0.4**	4.0	5.0
Drawn loan balance of residential mortgages and home equity lines of credit accounts under payment relief	**$m**	**206**	2,174	2,467
Total residential mortgages and home equity lines of credit balance	**$m**	**29,679**	29,050	28,491
Payment relief as a proportion of total residential mortgages and home equity lines of credit	**%**	**0.7**	7.5	8.7
Number of other personal lending accounts under payment relief	**Thousands**	**0.1**	1.0	1.0
Drawn loan balance of other personal lending accounts under payment relief	**$m**	**1**	11	27
Total other personal lending balance	**$m**	**1,452**	1,780	1,408
Payment relief as a proportion of total other personal lending	**%**	**0.1**	0.6	1.9
Wholesale lending				
Number of accounts under payment relief	**Thousands**	**0.1**	1.0	2.0
Drawn loan balance of accounts under payment relief	**$m**	**152**	1,058	2,430
Total wholesale lending balance	**$m**	**30,279**	31,481	32,850
Payment relief as a proportion of total wholesale lending	**%**	**0.5**	3.4	7.4

Collateral and other credit enhancements

Although collateral can be an important mitigant of credit risk, it is the bank's practice to lend on the basis of the customer's ability to meet their obligations out of cash flow resources rather than rely on the value of security offered. Depending on the customer's standing and the type of product, some facilities may be unsecured. However, for other lending a charge over collateral is obtained and considered in determining the credit decision and pricing. In the event of default, the bank may utilize the collateral as a source of repayment.

The principal collateral types are as follows:

- in the personal sector, mortgages over residential properties or charges over other personal assets being financed;
- in the commercial and industrial sector, charges over business assets such as land, buildings and equipment, inventory and receivables;
- in the commercial real estate sector, charges over the properties being financed; and
- in the financial sector, charges over financial instruments such as debt and equity securities in support of trading facilities.

Our credit risk management policies include appropriate guidelines on the acceptability of specific classes of collateral or credit risk mitigation. Valuation parameters are updated periodically depending on the nature of the collateral. Full covering corporate guarantees as well as bank and sovereign guarantees are recognized as credit mitigants for capital purposes.

Collateral held as security for financial assets other than loans is determined by the nature of the instrument. Government and other debt securities, including money market instruments, are generally unsecured, with the exception of asset-backed securities and similar instruments, which are secured by pools of financial assets.

The bank has policies in place to monitor the existence of undesirable concentration of the collateral supporting our credit exposures.

For credit-impaired loans, the collateral values cannot be directly compared with impairment allowances recognized. The collateral figures are based on latest assessment performed of the collateral. Impairment allowances are calculated on a different basis, by considering other cash flows and adjusting collateral values for costs of realizing collateral.

Collateral information for credit-impaired loans and advances to customers including loan commitments*

	2020				2019			
	Gross carrying amount	Allowance for ECL	Net carrying amount	Collateral	Gross carrying amount	Allowance for ECL	Net carrying amount	Collateral
	$m	$m	$m	$m	$m	$m	$m	$m
Stage 3								
Corporate and commercial	503	(129)	374	699	301	(103)	198	329
Personal - Residential mortgages	73	(11)	62	139	66	(10)	56	125

Derivative portfolio

The bank participates in transactions exposing us to counterparty credit risk. Counterparty credit risk is the risk of financial loss if the counterparty to a transaction defaults before satisfactorily settling it. It arises principally from over-the-counter ('OTC') derivatives and securities financing transactions and is calculated in both the trading and non-trading books. Transactions vary in value by reference to a market factor such as an interest rate, exchange rate or asset price.

The credit equivalent amount of derivative exposure comprises the current replacement cost of positions plus an allowance for potential future fluctuation of derivative contracts. We enter into derivatives primarily to support our customers' requirements and to assist us in the management of assets and liabilities, particularly relating to interest and foreign exchange rate risks.

A more detailed analysis of our derivative portfolio is presented in note 12.

Liquidity and funding risk

Liquidity and funding risk is the potential for loss if the bank is unable to generate sufficient cash or its equivalents to meet financial commitments in a timely manner at reasonable prices as they become due. Financial commitments include liabilities to depositors and suppliers, lending, investment and pledging commitments.

Liquidity and funding risk management

The objective of our liquidity and funding risk management framework is to ensure that all foreseeable funding commitments, including deposit withdrawals, can be met when due, and that access to the wholesale markets is coordinated and cost-effective. It is designed to allow us to withstand very severe liquidity stresses and be adaptable to changing business models, markets and regulations.

Governance

The Audit Risk and Conduct Review Committee ('ARC') is responsible for defining the bank's liquidity risk tolerances within the HSBC Group's liquidity and funding risk management framework, which mandates that each site manages its liquidity and funding on a self-sustaining basis. The ARC also reviews and approves the bank's liquidity and funding policy and is responsible for its oversight.

The bank's Asset and Liability Committee ('ALCO') is responsible for the development of policies and procedures to manage liquidity and funding risk including establishing liquidity risk parameters, monitoring metrics against risk appetite, funding costs, and early warning indicators of a liquidity stress. ALCO is also responsible for ensuring the operational effectiveness of the bank's contingency funding plan. Its mandate is established by HSBC Group policy, the ARC, and the bank's Executive Committee. ALCO supports the Chief Financial Officer's executive accountability for the oversight of liquidity and funding risk management.

The Asset, Liability and Capital Management ('ALCM') team is responsible for the application of the liquidity and funding risk management framework.

Effective 31 December 2020, the Balance Sheet Management function was renamed as Markets Treasury to reflect the activities it undertakes more accurately. Markets Treasury has responsibility for cash and liquidity management in accordance with practices and limits approved by ALCO, the ARC and HSBC Group. Compliance with policies is monitored by ALCO.

In 2020, second line of defence liquidity risk management activities in the bank were transferred to an independent risk oversight team, Treasury Risk Management. This function carries out independent review, challenge and assurance of the appropriateness of the risk management activities undertaken by ALCM and Markets Treasury. Their work includes setting control standards, advice on policy implementation, and review and challenge of reporting.

Internal Audit provides independent assurance that risk is managed effectively.

The bank continues to monitor liquidity and funding risk within our stated risk tolerance and management framework.

The critical Board-level appetite measures are the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR'). An appropriate funding and liquidity profile is managed through a wider set of measures:

- liquidity to be managed on a stand-alone basis with no implicit reliance on HSBC Group or central banks;
- minimum liquidity coverage ratio ('LCR') requirement;
- minimum net stable funding ratio ('NSFR') requirement;
- depositor concentration limit;
- three-month and twelve-month cumulative rolling term contractual maturity limits covering deposits from banks, deposits from non-bank financial institutions and securities issued;
- annual internal liquidity adequacy assessment process;
- minimum LCR requirement by currency;
- management and monitoring of intra-day liquidity;
- liquidity funds transfer pricing; and
- forward-looking funding assessments.

The LCR and NSFR metrics are to be supplemented by an internal liquidity metric in 2021.

The internal liquidity and funding risk management framework and the risk limits were approved by the ARC.

The internal liquidity adequacy assessment, approved by the ARC, is to identify risks that are not reflected in the bank's internal liquidity and funding risk management framework and, where required, to assess additional limits. As well, it validates risk tolerance through the use of stress testing and verifies that the bank maintains liquidity resources which are adequate in both amount and quality at all times, ensuring that there is no significant risk that its liabilities cannot be made as they fall due, maintaining a prudent funding profile.

Management of liquidity and funding risk

In accordance with OSFI's Liquidity Adequacy Requirements guideline, which incorporates Basel liquidity standards, the bank is required to maintain a LCR above 100% as well as monitor the Net Cumulative Cash Flow. The LCR estimates the adequacy of liquidity over a 30 day stress period while the Net Cumulative Cash Flow calculates a horizon for net positive cash flows in order to capture the risk posed by funding mismatches between assets and liabilities. As at 31 December 2020, the bank was compliant with both requirements.

In March 2020, the financial markets became extremely volatile as the COVID-19 pandemic accelerated, causing severe disruption to business and economic activity. The bank had a strong liquidity position at the start of the disruption and took action early and throughout to further strengthen the bank's liquidity position. The bank actively raised customer deposits and accessed the wholesale term market to raise long-term funding with a covered bond issuance to meet potential future funding needs. The bank's liquidity metrics, including the LCR and liquid assets, strengthened further. As a result, compared to the previous year the bank's average LCR increased to 188% from 140%.

The bank's LCR is summarized in the following table. For the quarter ended 31 December 2020, the bank's average LCR of 188% is calculated as the ratio of the stock of High-Quality Liquid Assets ('HQLA') to the total net stressed cash outflows over the next 30 calendar days.

OSFI liquidity coverage ratio[1]

	Average for the three months ended[1]	
	31 Dec 2020	31 Dec 2019
Total HQLA[2] ($m)	**38,352**	24,434
Total net cash outflows[2] ($m)	**20,463**	17,450
Liquidity coverage ratio (%)	**188**	140

1. *The data in this table has been calculated using averages of the three month-end figures in the quarter. Consequently, the LCR is an average ratio for the three months of the quarter and might not equal the LCR ratios calculated dividing total weighted HQLA by total weighted net cash outflows.*
2. *These are weighted values and are calculated after the application of the weights prescribed under the OSFI LAR Guideline for HQLA and cash inflows and outflows.*

As a basis to determine the bank's stable funding requirement, the bank calculates the NSFR according to Basel Committee on Banking Supervision publication number 295, pending its implementation. OSFI implemented the NSFR on 1 January 2020 for domestic systemically important banks ('D-SIBs') only. OSFI is conducting further work to assess requirements for non D-SIBs, which includes the bank. In the UK, implementation of NSFR is expected in 2022. The NSFR requires institutions to maintain sufficient stable funding relative to required stable funding, and reflects a bank's long-term funding profile (funding with a term of more than a year). It is designed to complement the LCR.

Liquid assets

Liquid assets are held and managed on a stand-alone operating entity basis. Most are held directly by the Markets Treasury department, primarily for the purpose of managing liquidity risk in line with the internal liquidity and funding risk management framework. Liquid assets also include any unencumbered liquid assets held outside Markets Treasury departments for any other purpose. To qualify as part of the liquid asset buffer, assets must have a deep and liquid repo market in the underlying security. The internal liquidity and funding risk management framework gives ultimate control of all unencumbered assets and sources of liquidity to Markets Treasury.

The table below shows the estimated liquidity value unweighted (before assumed haircuts) of assets categorized as liquid and used for the purpose of calculating the OSFI LCR metric. The level of liquid assets reported reflects the stock of unencumbered liquid assets at the reporting date, using the regulatory definition of liquid assets. The increase in liquid assets is mainly to position the bank for future growth. HQLA is substantially comprised of Level 1 assets such as cash, deposits with central banks and highly rated securities issued or guaranteed by governments, central banks and supranational entities.

Liquid assets[1]

	2020	2019
	$m	$m
Level 1	**35,684**	18,969
Level 2a	**3,061**	4,603
Level 2b	**10**	98
As at 31 Dec	**38,755**	23,670

1. *The liquid asset balances stated here are as at the above dates (spot rate) and are unweighted and therefore do not match the liquid asset balances stated in the LCR ratio calculations which are the average for the quarter and are weighted.*

Sources of funding

Current accounts and savings deposits, payable on demand or on short notice, form a significant part of our funding. We place considerable importance on maintaining the stability and growth of these deposits, which provide a diversified pool of funds.

We also access wholesale funding markets (secured and unsecured) across diversified terms, funding types, and currencies, to ensure low exposure to a sudden contraction of wholesale funding capacity and to minimize structural liquidity gaps. As part of our wholesale funding arrangements we use a number of programs to raise funds so that undue reliance is not placed on any one source of funding.

No reliance is placed on unsecured money market wholesale funding as a source of core funding. Only wholesale funding with a residual term to maturity of one year or greater is counted towards the core funding base. In addition, our stress testing assumptions require an equivalent amount of liquid assets to be held against wholesale funding maturing within the relevant stress testing horizon.

Contractual maturity of financial liabilities

The table below shows, on an undiscounted basis, all cash flows relating to principal and future coupon payments (except for trading liabilities and derivatives not treated as hedging derivatives). For this reason, balances in the table below do not agree directly with those in our consolidated balance sheet. Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Trading liabilities and derivatives not treated as hedging derivatives are included in the 'On demand' time bucket and not by contractual maturity.

In addition, loans and other credit-related commitments, financial guarantees and similar contracts are generally not recognized on our balance sheet. The undiscounted cash flows potentially payable under loan and other credit-related commitments, and financial guarantees and similar contracts are classified on the basis of the earliest date they can be called. Application of this policy was improved in 2018, and therefore comparative information has been represented.

Cash flows payable by the bank under financial liabilities by remaining contractual maturities*

	Footnote	On demand	Due within 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
		$m	$m	$m	$m	$m	$m
Deposits by banks		**1,139**	**—**	**—**	**—**	**—**	**1,139**
Customer accounts		**54,230**	**6,120**	**10,601**	**1,156**	**—**	**72,107**
Repurchase agreements - non-trading		**—**	**3,229**	**—**	**—**	**—**	**3,229**
Trading liabilities		**1,831**	**—**	**—**	**—**	**—**	**1,831**
Derivatives		**5,232**	**2**	**7**	**442**	**29**	**5,712**
Debt securities in issue		**—**	**3,747**	**4,059**	**10,295**	**36**	**18,137**
Subordinated liabilities	1	**—**	**6**	**18**	**96**	**1,084**	**1,204**
Lease liabilities		**—**	**11**	**33**	**128**	**61**	**233**
Other financial liabilities		**773**	**4,368**	**383**	**1,817**	**—**	**7,341**
Total on-balance sheet financial liabilities		**63,205**	**17,483**	**15,101**	**13,934**	**1,210**	**110,933**
Loan and other credit-related commitments		**44,442**	**—**	**—**	**—**	**—**	**44,442**
Financial guarantees		**1,985**	**—**	**—**	**—**	**—**	**1,985**
At 31 Dec 2020		**109,632**	**17,483**	**15,101**	**13,934**	**1,210**	**157,360**
Proportion of cash flows payable in period		**70 %**	**11 %**	**9 %**	**9 %**	**1 %**	
Deposits by banks		1,036	—	—	—	—	1,036
Customer accounts		43,974	5,907	11,418	1,928	—	63,227
Repurchase agreements - non-trading		—	7,108	—	—	—	7,108
Trading liabilities		2,296	—	—	—	—	2,296
Derivatives		3,149	640	328	175	99	4,391
Debt securities in issue		—	2,316	2,022	10,918	127	15,383
Subordinated liabilities	1	—	10	31	163	1,202	1,406
Lease liabilities		—	—	2	59	271	332
Other financial liabilities		1,355	4,333	389	1,461	—	7,538
Total on-balance sheet financial liabilities		51,810	20,314	14,190	14,704	1,699	102,717
Loan and other credit-related commitments		42,721	—	—	—	—	42,721
Financial guarantees		2,124	—	—	—	—	2,124
At 31 Dec 2019		96,655	20,314	14,190	14,704	1,699	147,562
Proportion of cash flows payable in period		66 %	14 %	10 %	10 %	1 %	

1. *Excludes interest payable exceeding 15 years.*

Encumbered assets

In the normal course of business, the bank will pledge or otherwise encumber assets. The pledging of assets will occur to meet the bank's payments and settlement system obligations, as security in a repurchase transaction, to support secured debt instruments or as margining requirements. Limits are in place to control such pledging.

The bank actively monitors its pledging positions. Encumbered assets are not counted towards the bank's liquid assets used for internal stress testing scenarios. We further estimate the impact of credit rating downgrade triggers, and exclude the estimated impact from liquid assets within the bank's liquidity stress testing scenarios.

Market Risk

Market risk is the risk that movements in market risk factors, including interest rates, foreign exchange rates, credit spreads, commodity prices and equity prices, which will adversely affect our income or the value of our assets and liabilities.

Market risk management

Market risk management is independent of the business and acts as the second line of defence who oversees the market risk of the bank. The team is responsible for establishing the policies, procedures and limits that align with the risk appetite of the bank. The objective of market risk management is to identify, measure and control market risk exposures in order to optimize return on risk and remain within the bank's risk appetite.

We separate exposures to market risk into trading and non-trading portfolios. Trading portfolios include those positions arising from market-making and other positions designated as held-for-trading.

Market risk is managed and controlled in accordance with policies and risk limits set out by the RMM and approved by the Board as well as centrally by HSBC Group Risk Management. We set risk limits for each of our trading operations dependent upon the size, financial and capital resources of the operations, market liquidity of the instruments traded, business plan, experience and track record of management and dealers, internal audit ratings, support function resources and support systems. Risk limits are reviewed and set by the RMM on an annual basis at a minimum.

We use a range of risk metrics to monitor and limit market risk exposures. These include: present value of a basis point, Value at Risk ('VaR'), foreign exchange exposure limits, maximum loss limits, credit spread limits, and issuer limits.

Value at Risk*

VaR is a technique that estimates the potential losses that could occur on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and calculated for all trading and non-trading portfolios to have a complete picture of risk.

The VaR models used are predominantly based on historical simulation that incorporates the following features:

- potential market movements are calculated with reference to data from the past two years;
- historical market rates and prices are calculated with reference to foreign exchange rates, credit spreads, and interest rates;
- VaR is calculated to a 99% confidence level; and
- VaR is calculated for a one-day holding period.

These models derive plausible future scenarios from past series of recorded market rates and prices, taking account of inter-relationships between different markets and rates such as interest rates and foreign exchange rates. The models also incorporate the effect of option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions. Statistically, we would expect to see losses in excess of VaR only one percent of the time.

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly extreme ones;
- the use of a holding period assumes that all positions can be liquidated or the risk offset during that period, which may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99% confidence level, by definition, does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

VaR disclosed in the following tables and graph is the bank's total VaR for both trading and non-trading books and remained within the bank's limits.

Global financial conditions worsened rapidly with the onset of the COVID-19 pandemic from mid-February. Market volatility reached extreme levels across most asset classes from the previous historical peak levels. In credit markets, spreads and yields reached multi-year highs. Oil prices collapsed due to rising oversupply as demand reduced materially from the economic slowdown. Financial markets tended to stabilize from April onwards, as governments announced economic recovery programs and key central banks intervened to provide liquidity and support asset prices.

Total VaR of $20.5m at the year ended 31 December 2020 increased by $11.2m from the prior year, largely due to non-trading VaR that was impacted by the COVID-19 market volatility included in the historical VaR periods. Over the same period, the average VaR of $14.3m increased by $2.2m.

We managed market risk appropriately and prudently in accordance with the bank's risk appetite. Sensitivity exposures remained within appetite as the business pursued its core market-making activity in support of our customers during the pandemic. We also undertook hedging activities to protect the business from potential future deterioration in credit conditions. Market risk continued to be managed and the average trading VaR remained relatively stable at $1.5m.

Total VaR*

	Year ended	
	31 Dec 2020	31 Dec 2019
	$m	$m
Year end	**20.5**	9.3
Average	**14.3**	12.1
Minimum	**7.2**	7.7
Maximum	**22.9**	15.7

Non-trading VaR*

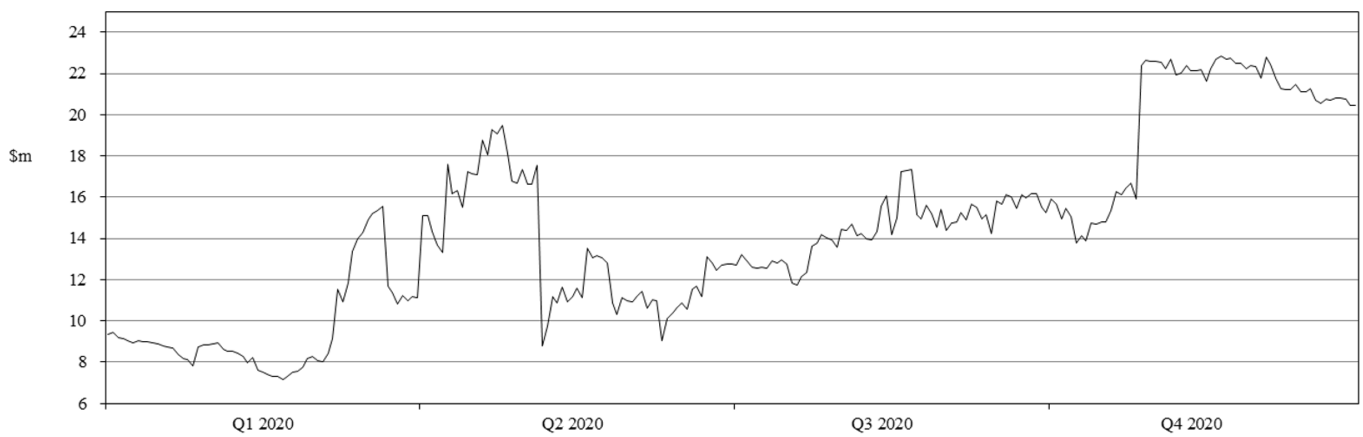
	Year ended	
	31 Dec 2020	31 Dec 2019
	$m	$m
Year end	**21.2**	9.2
Average	**14.5**	12.1
Minimum	**7.0**	8.6
Maximum	**22.2**	15.5

Trading VaR (by risk type)*[1]

	Footnote	Foreign exchange and commodity	Interest rate	Equity	Credit spread	Portfolio diversification[2]	Total[4]
		$m	$m	$m	$m	$m	$m
January - December 2020							
At year-end		**—**	**1.4**	**—**	**0.6**	**(0.7)**	**1.3**
Average		**—**	**1.3**	**—**	**0.7**	**(0.5)**	**1.5**
Minimum	3	**—**	**0.5**	**—**	**0.2**		**0.6**
Maximum	3	**0.3**	**2.6**	**—**	**2.1**		**3.3**
January - December 2019							
At year-end		—	0.7	—	0.3	(0.2)	0.8
Average		—	1.3	—	0.8	(0.5)	1.6
Minimum	3	—	0.7	—	0.3		0.8
Maximum	3	0.1	2.0	—	2.5		3.2

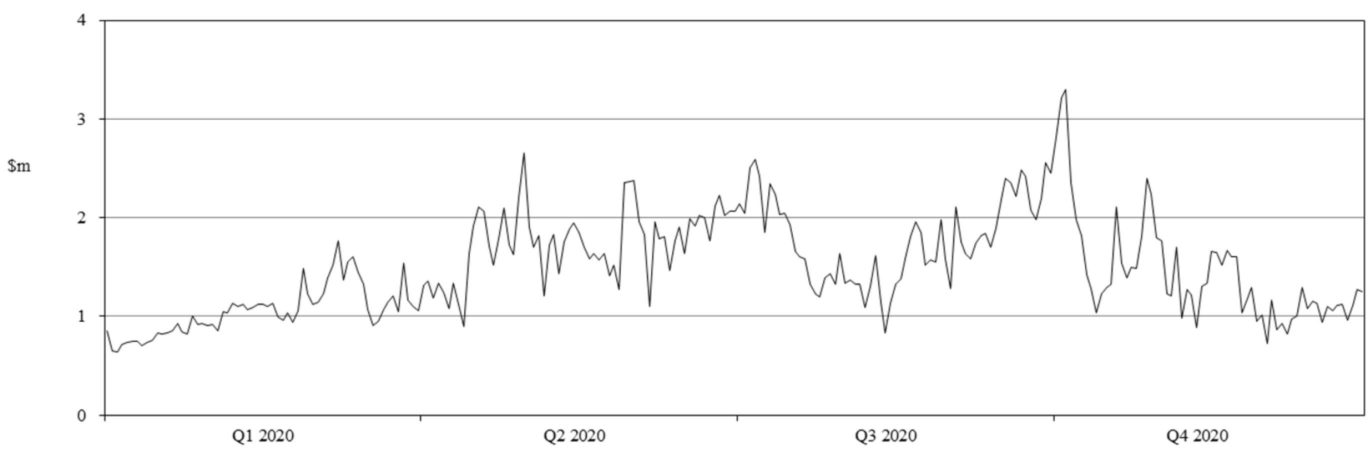
1. Trading portfolios comprise positions arising from the market-making of financial instruments and customer-driven derivatives positions.
2. Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types - such as interest rate and foreign exchange - together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification.
3. As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.
4. The total VaR is non-additive across risk types due to diversification effects.

Daily total VaR. 1 year history of daily figures



1. The total VaR increase in the fourth quarter of 2020 was largely due to an increase of granularity in credit spread scenario, which reflects COVID-19 market volatility more accurately.
2. The total VaR fluctuation in the second quarter of 2020 was driven by credit spread scenarios, which reflects the market volatility observed during the COVID-19 pandemic.

Daily trading VaR. 1 year history of daily figures



1. The trading VaR decrease in the fourth quarter of 2020 as large client driven trades were hedged by the trading desk over the following days.

Structural interest rate risk

Interest rate risk is the risk of an adverse impact to earnings or capital due to changes in market interest rates. Structural interest rate risk is that which originates from the bank's non-trading assets and liabilities and shareholder's funds.

There are three main sub-categories of structural interest rate risk. Interest rate mismatch risk arises when there are differences in term to maturity or repricing of our assets and liabilities, both on- and off-balance sheet. Basis risk arises from the relative changes in interest rates for financial instruments that have similar tenors but are priced using different interest rate indices. Option risk arises from optionality embedded in product features which allow customers to alter cash flows, such as scheduled maturities or repricing dates.

The ARC is responsible for setting the structural interest rate risk policy and risk limits. ALCO is responsible for the development of policies and procedures to manage structural interest rate risk and supports the Chief Financial Officer's executive accountability for oversight. In 2020, second line of defence for structural interest rate risk management activities in the bank was transferred to an independent risk oversight team, Treasury Risk Management.

We use a variety of cash and derivative instruments to manage our interest rate risk within prescribed limits. We use derivatives to modify the interest rate characteristics of related balance sheet instruments and to hedge anticipated exposures when market conditions are considered beneficial.

The risk is measured based on contractual re-pricing, as well as incorporating embedded optionality of early redemption, prepayment or re-pricing (such as redeemable deposit products, mortgages with prepayment options and fixed rate mortgage commitments). Non-maturity products are laddered out over an assumed maturity profile, based on historical behaviour.

We use two primary interest rate risk metrics to monitor and control the risk:

- Economic value of equity sensitivity - the change in the notional equity (or market) value of the non-trading portfolio under different interest rate scenarios, with the balance sheet valued on a run off basis.
- Earnings at risk sensitivity - the change in projected net interest income over the next 12 months across a range of interest rate scenarios based on a static balance sheet.

The following table shows structural interest rate sensitivities; earnings at risk is the impact over the next 12 months whereas economic value of equity is a balance sheet valuation on a run off basis. At 31 December 2020, an immediate +100 basis points shock would have a negative impact to the bank's economic value of equity of $444m, up from $280m last year. An immediate -25 basis points shock at 31 December 2020 would have a negative impact to earnings of $60m, a decrease from $143m last year. Relative to last year, the decreased earnings and economic value sensitivity to falling rates is due to the reduced extent rates can fall further following the decline in rates during 2020.

Sensitivity of structural interest rate risk in the non-trading portfolio

(Before-tax impact resulting from an immediate and sustained shift in interest rates):

		Year ended			
		31 Dec 2020		31 Dec 2019	
		Economic value of equity	**Earnings at risk**	Economic value of equity	Earnings at risk
	Footnote	**$m**	**$m**	$m	$m
100 basis point increase		**(444)**	**212**	(280)	137
25 / 100 basis point decrease	*1*	**95**	**(60)**	212	(143)

1. *Due to the current low interest rate environment, starting in the second quarter of 2020, economic value of equity and earnings at risk sensitivity for a down shock scenario are measured using a 25 basis point decrease, prior period reflects a 100 basis points decrease.*

Resilience risk

Overview

Resilience risk is the risk that we are unable to provide critical services to our customers, affiliates and counterparties, during sustained and significant operational disruption. Sustained and significant operational disruptions are events that effect:

- the stability of the wider financial system;
- the viability of the bank and our industry peers;
- the ability of our customers to access critical services; and
- the underlying trust of our customers, shareholder and regulators as a result of a poorly managed operational event.

Resilience risk management

Key developments in 2020

In line with the increasing expectations from customers, regulators and our Board, and in response to a continually evolving threat landscape that the industry faces, we formed a new Operational and Resilience Risk sub-function. This provides robust non-financial risk steward oversight of the bank's business, functions and critical business services management of risk, supported by effective and timely independent challenge. In 2020 we have:

- Implemented business and function aligned teams focussed on emerging risks as well as material products and services.
- Created a standalone assurance capability providing independent review and evaluation of end to end processes, risks and key controls.

We prioritize our efforts on material risks and areas undergoing strategic growth.

Governance and structure

The Operational and Resilience Risk target operating model provides a view across resilience risks, strengthening risk management oversight while operating effectively as part of a simplified non-financial risk structure.

We view resilience risk across seven different risk lenses:

- Third parties / supply-chain
- Information, Technology and Cyber Security
- Payments and manual processing
- Physical security
- Business Interruption / Contingency Risk
- Building unavailability

- Workplace safety.

The most senior management meeting for Operational and Resilience Risk governance is Risk Management Meeting chaired by the Chief Risk Officer.

Key risk management processes

Operational resilience is our ability to anticipate, prevent, adapt, respond to, recover, and learn from internal or external disruption, protecting customers, the markets we operate in and economic stability. Resilience is determined by assessing whether we are able to continue to perform our most important services within an agreed level. We accept that we will not be able to prevent all disruption but prioritize investment to continuously improve the response and recovery strategies for our most important business services.

Continuity of business operations during COVID-19 pandemic

As a result of COVID-19, business continuity responses have been successfully implemented and the majority of service level agreements have been maintained. We have not experienced any major impacts to the supply chain from our third party service providers due to COVID-19. The risk of damage or theft to our physical assets or criminal injury to our employees remains unchanged and no significant incidents have impacted our buildings or staff.

Regulatory compliance risk

Overview

Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.

Regulatory compliance risk arises from the risks associated with breaching our duty to our customers, inappropriate market conduct and breaching other regulatory requirements.

Regulatory compliance risk management

Key developments in 2020

The key developments in the policies and practices for the management of regulatory compliance risk in 2020 included changes to our wider approach to the governance and structure of the compliance function with the combination of the Regulatory Compliance and Financial Crime sub-functions into a single Compliance sub-function led by the Chief Compliance Officer.

Governance and structure

Regulatory Compliance escalates into the RMM chaired by the Chief Risk Officer. In 2021, the Financial Crime Risk Management Meeting will cease and matters previously covered in this forum will also be addressed and escalated to the RMM.

Regulatory Compliance provides independent, objective oversight and challenge, and promotes a compliance-orientated culture that supports the business in delivering fair outcomes for customers, maintaining the integrity of financial markets and achieving our strategic objectives.

Key risk management processes

We regularly review our policies and procedures. Policies and procedures require the prompt identification and escalation of any actual or potential regulatory breach to Regulatory Compliance. Reportable events are escalated to the Risk Management Meeting and the Audit, Risk and Conduct Review Committee.

Conduct of business

In 2020, we continued to promote and encourage good conduct through people's behaviour and decision making in order to deliver fair outcomes for our customers, and to maintain financial market integrity. During 2020:

- We continued to champion a strong conduct and customer-focussed culture. We implemented a number of measures throughout the COVID-19 pandemic to support our customers in financial difficulties, and have maintained services and supported colleagues in unprecedented conditions.
- We continue to focus on culture and behaviours, adapting our controls and risk management processes to reflect significant levels of remote working throughout the year.
- We continue to emphasize and work to create an environment in which employees are encouraged and feel safe to speak up and have placed a particular focus on the importance of well-being during the current pandemic, through regular top down communications, virtual town halls, videos and podcasts.
- We continue to embed conduct within our business line processes and work closely to consider and mitigate the conduct impacts of the strategic transformation program and in key business change programs such as IBOR transition.

The Board continues to maintain oversight of conduct matters through the ARC.

Financial crime risk

Overview

Financial crime and fraud risk is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity, including money laundering, fraud, bribery and corruption, tax evasion, sanctions breaches, and terrorist and proliferation financing. Financial crime and fraud risk arises from day-to-day banking operations.

Financial crime and fraud risk management

Key developments in 2020

In 2020, we continued to strengthen our fight against financial crime and to enhance our financial crime risk management capability. Along with all other parts of the bank, we have faced challenges posed by COVID-19, and a number of measures were introduced during this period to support the business and our customers. These included:

- Supporting the most vulnerable customers and those in financial difficulty, including the raising of fraud awareness during this period.
- Proactive engagement with the business to ensure financial crime risks were considered as part of COVID-19 related decisions.
- Supporting customers and the business through policy exception, including the allowance of email instructions instead of face-to-face, and the introduction of virtual onboarding.

We continued to progress several key financial crime risk management initiatives, including:

- We continued to strengthen our anti-fraud capabilities, focussing on threats posed by new and existing technologies, and have delivered a comprehensive fraud training program across the bank.
- We benefited from our continued investment in the use of artificial intelligence ('AI') and advanced analytics techniques to manage financial crime risk.
- We continued to work on strengthening our ability to combat money laundering and terrorist financing. In particular, we focussed on the use of technology to enhance our risk management processes while minimizing the impact to the customer. We also continued to develop our approach of intelligence led financial crime risk management, in part, through

enhancements to our automated transaction monitoring systems.

Governance and structure

During 2020, an integrated operating model for the Compliance function was implemented. The Regulatory Compliance and Financial Crime risk teams are led by the Chief Compliance Officer.

Key risk management processes

We continued to deliver a program to further enhance the policies and controls around identifying and managing the risks of bribery and corruption across our business. Recognizing that the fight against financial crime is a constant challenge, we maintained our investment in operational controls and new technology to deter and detect criminal activity in the banking system. We continued to simplify our governance and policy frameworks, and our management information reporting process which demonstrates the effectiveness of our financial crime controls. We remain committed to enhancing our risk assessment capabilities and to delivering more proactive risk management, including our ongoing investment in the next generation of capabilities to fight financial crime by applying advanced analytics and AI.

We are committed to working in partnership with the wider industry and the public sector in managing financial crime risk, protecting the integrity of the financial system, and helping to protect the communities we serve. HSBC is a strong proponent of public-private partnerships and participates in information-sharing initiatives around the world to better understand these risks so that they can be mitigated more effectively.

Model Risk

Overview

Model risk is the potential for adverse consequences from business decisions informed by models, which can be exacerbated by errors in methodology, design or the way they are used. Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.

Key developments in 2020

In 2020, we carried out a number of initiatives to further develop and embed the Model Risk Management sub-function, including:

- We updated the model risk policy and introduced model risk standards to enable a more risk-based approach to model risk management while retaining a consistent approach and ensuring compliance with regulatory requirements.
- We developed new model risk controls in the Risk Control Library. These controls formed the basis for Model Risk Control Assessment that have been implemented for businesses and functions.
- We introduced new risk appetite measures and metrics that provide forward looking measures of model risk.
- The Independent Model Validation team has begun a transformation program that will use advanced analytics and new workflow tools with the objective of providing a more risk based, efficient and effective management of model validation processes.

Governance and structure

During 2020 Model Risk Management was elevated to a function in its own right within the Risk structure. The Head of Model Risk Management reports to the Chief Risk Officer.

Key risk management processes

We use a variety of modelling approaches, including regression, simulation, sampling, machine learning and judgmental scorecards for a range of business applications, in activities such as customer selection, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting. Responsibility for managing model risk is delegated from the RMM to the Model Risk Committee chaired by the Chief Risk Officer. The committee regularly reviews our model risk management policies and procedures and, and requires the first line of defence to demonstrate comprehensive and effective controls based on a library of model risk controls provided by Model Risk Management.

Model Risk Management also reports on model risk to senior management on a regular basis through the use of the risk map, risk appetite metrics and top and emerging risks.

We regularly review the effectiveness of these processes, including the model oversight committee structure, to help ensure appropriate understanding and ownership of model risk is embedded in the businesses and functions.

Factors that may affect future results

The risk management section of the MD&A describes the most significant risks to which the bank is exposed and if not managed appropriately could have a material impact on our future financial results. This section outlines additional factors which may affect future financial results. Please be aware that the risks discussed below, many of which are out of our control, are not exhaustive and there may be other factors that could also affect our results.

General economic and market conditions

Factors such as the general health of capital and/or credit markets, including liquidity, level of activity, volatility and stability, could have a material impact on our business. As well, interest rates, foreign exchange rates, consumer saving and spending, housing prices, consumer borrowing and repayment, business investment, government spending and the rate of inflation affect the business and economic environment in which we operate.

In addition, the financial services industry is characterized by interrelations among financial services companies. As a result, defaults by other financial services companies could adversely affect our earnings. Given the interconnectedness of global financial markets and the importance of trade flows, changes in the global economic and political environment, such as the UK's exit from the European Union ('EU'), could affect the pace of economic growth in Canada.

Fiscal and monetary policies

Our earnings are affected by fiscal, monetary and economic policies that are adopted by Canadian regulatory authorities. Such policies can have the effect of increasing or reducing competition and uncertainty in the markets. Such policies may also adversely affect our customers and counterparties, causing a greater risk of default by these customers and counterparties. In addition, expectations in the bond and money markets about inflation and central bank monetary policy have an impact on the level of interest rates. Changes in market expectations and monetary policy are difficult to anticipate and predict. Fluctuations in interest rates that result from these changes can have an impact on our earnings. Future changes to such policies will directly impact our earnings.

Changes in laws, regulations and approach to supervision

Regulators in Canada are actively considering legislation on a number of fronts, including consumer protection, data protection and privacy, capital markets activities, anti-money laundering, and the oversight and strengthening of risk management. Regulations are in place to protect our customers and the public interest. Considerable changes have been made to laws and regulations that relate to the financial services industry, including changes related to capital and liquidity requirements. Changes in laws and regulations, including their interpretation and application, and changes in approaches to supervision could adversely affect our earnings.

Failure to comply with laws and regulations could result in sanctions, financial penalties and/or reputational damage that could adversely affect our strategic flexibility and earnings.

Level of competition and disruptive technology

The level of competition among financial services companies is high. Customer loyalty and retention can be influenced by a number of factors, including service levels, prices for products or services, our reputation and the actions of our competitors. Changes in these factors or any subsequent loss of market share could adversely affect our earnings. Furthermore, non-financial companies (such as financial technology ('fintech') companies) have increasingly been offering services traditionally provided by banks. While this presents a number of opportunities that we are actively engaging in, there is also a risk that it could disrupt financial institutions' traditional business model.

Cyber threat and unauthorized access to systems

We and other organizations continue to operate in an increasingly hostile cyber threat environment, which requires ongoing investment in business and technical controls to defend against these threats. Key threats include unauthorized access to online customer accounts, advanced malware attacks and attacks on third party suppliers and security vulnerabilities being exploited.

Changes to our credit rating

Credit ratings are important to our ability to raise both capital and funding to support our business operations. Maintaining strong credit ratings allows us to access the capital markets at competitive pricing. Should our credit ratings experience a material downgrade, our costs of funding would likely increase significantly and our access to funding and capital through capital markets could be reduced.

Climate change risk

Climate change can have an impact across HSBC's risk taxonomy through both transition and physical channels. Transition risk can arise from the global move to a low-carbon economy, such as through policy, regulatory and technological changes. Physical risk can arise through increasing severity and/or frequency of severe weather or other climatic events such as rising sea levels, wild fires and flooding.

These have the potential to cause both idiosyncratic and systemic risks, resulting in potential financial and non-financial impacts for HSBC. Financial impacts could materialize, for example, through higher risk-weighted assets over the longer term, greater transactional losses and increased capital requirements. Non-financial impacts could materialize, for example, if our own assets or operations are impacted by extreme weather or chronic changes in weather patterns, or as a result of business decisions to achieve our climate ambition.

We are integrating climate risk into the Risk Management Framework and starting to develop quantitative risk appetite metrics to support our qualitative statement and better articulate the impact of climate change risks on the bank. Leveraging HSBC Group resources, our Transition Risk Framework continues to mature, improving our understanding of our exposure to the highest transition risk sectors. We continue to engage proactively with our customers to understand and support their low-carbon strategies. We are committed to managing and mitigating climate related risks, both physical and transition.

IBOR transition

Interbank offered rates ('IBORs') are used to set interest rates on hundreds of trillions of US dollars and other currencies for different types of financial transactions and are used extensively for valuation purposes, risk measurement and performance benchmarking.

The UK's Financial Conduct Authority announced, in July 2017, that it will no longer persuade or require banks to submit rates for the London interbank offered rate ('LIBOR') after 2021, and national working groups have been actively discussing the mechanisms for an orderly transition of the five relevant LIBORs to their chosen replacement rates. Other regulators globally continue to assess their benchmarks with proposals to demise or reform them with specific timelines emerging.

Substantial change has been undertaken to develop products that reference the replacement rates and enable the transition of legacy IBOR contracts which expose HSBC to material execution, financial and non-financial risks, in line with its existing risk management framework. These risks include: the regulatory compliance, legal and conduct risks arising from the sale of IBOR and near Risk Free Rate ('RFR') referencing products, the potential for market loan convention differences and the enforceability of fallbacks; interest rate basis risk and portfolio transfer impacts on hedge accounting; and the resilience risks associated with rollout of new products, migration of legacy contracts, systems change and new product sales.

Throughout 2020, the IBOR transition program has continued to implement the required IT and operational changes necessary for an orderly transition from demising IBORs to alternative rates, including the replacement RFRs. The continued orderly transition from IBORs is the program's key objective and can be broadly grouped into two streams of work: development of alternative rate product capabilities; and transition of legacy contracts.

Development of alternative rate product capabilities

All global businesses have actively developed and implemented system and operational capabilities for alternative rates products during 2020 in key sites. In Canada, the global businesses will be able to offer core RFR products in USD and CAD by the end of the first quarter of 2021, including RFR corporate loans and interest rate swaps.

As the RFR products have been developed, the bank has also begun to limit the sale of IBOR products. For example, LIBOR-linked loan products have been demised for the Business Banking segment in Canada.

While IBOR sales do continue for a number of product lines, IBOR exposures that have post-2021 maturities are reducing, aided by market compression of IBOR trades and transacting new activities in alternative RFR products as market liquidity builds.

Transition legacy contracts

In addition to offering new alternative and replacement rate-based products, the development of new product capabilities will also help facilitate the transition of legacy IBOR and Eonia products. The bank has begun to engage clients to determine their ability to transition in line with the readiness of the alternative rate product availability. The COVID-19 pandemic and the interest rate environment may have affected the ability of clients to transition early and has resulted in compressed timelines for IBOR transition. However, this may be mitigated in part by the recent LIBOR benchmark administrator announcement to consult on the extension of USD LIBOR publication for the legacy book transition to end of 30 June 2023. Industry work continues at a global level on the development and use of appropriate migration tools, including legislative approaches, to enable a more ordered transition.

The bank has IBOR and Eonia derivatives exposures maturing beyond 2021, however, the adoption of the International Swaps and Derivatives Association ('ISDA') protocol which comes into effect in the first quarter of 2021 and the successful moves to clearing houses discounting in euro short-term rate and secured overnight funding rate aid in reducing the risk of a non-orderly transition of the derivative market.

For the bank's loan book, there is active client engagement which will increase in 2021 to detail the risks, provide alternative products, and determine the client's ability to transition to an alternative rate. Facility repapering and operational loan booking will be coordinated and driven by the client's willingness, with a defined commercial strategy in place for each global business. Dedicated teams are in place to support the client engagement and facilitate the transition, and specific training helps to further mitigate risk.

Mitigating actions

The global IBOR transition program is in place to facilitate an orderly transition to replacement rates for our business and our clients and is overseen by the Group Chief Risk Officer and in Canada, the bank's Chief Risk Officer.

Development of, and transition to, alternative rate products is supported by training, communication and client engagement to facilitate an appropriate selection of products.

IT and operational change is being implemented to enable a longer transition window.

Business line risks have been assessed and are monitored and overseen, with specific mitigation linked to program deliverables.

We continue to actively engage with regulatory and industry bodies to mitigate risks relating to hedge accounting changes, multiple loan conventions, and contracts that are unable to transition.

Financial instruments impacted by IBOR reform*

Amendments to IFRSs issued in August 2020 (Interest Rate Benchmark Reform Phase 2) represents the second phase of the IASB's project on the effects of interest rate benchmark reform, addressing issues affecting financial statements when changes are made to contractual cash flows and hedging relationships as a result of reform.

Under these amendments, changes made to financial instrument measured at other than fair value through profit or loss that are economically equivalent and required by interest rate benchmark reform do not result in the derecognition or a change in the carrying amount of the financial instrument, but instead require the effective interest rate to be updated to reflect the change in the interest rate benchmark. In addition, hedge accounting will not be discontinued solely because of the replacement of the interest rate benchmark if the hedge meets other hedge accounting criteria.

These amendments apply from 1 January 2021 with early adoption permitted. The bank has adopted the amendments from 1 January 2020.

	Financial instruments yet to transition to alternative benchmarks, by main benchmark*			
	CDOR[1]	USD LIBOR	GBP LIBOR	EUR LIBOR
At 31 Dec 2020	**$m**	**$m**	**$m**	**$m**
Non-derivative financial assets	3,644	3,121	115	8
Non-derivative financial liabilities	1,591	—	—	—
Derivative notional contract amount	180,035	13,828	70	1,015

1. *CDOR will co-exist with the new overnight risk-free rate, an enhanced version of Canadian Overnight Repo Rate Average.*

The amounts in the above table provide an indication of the extent of the bank's exposure to the IBOR benchmarks which are due to be replaced or will survive to co-exist with another risk-free rate. Amounts are in respect of financial instruments that:

- contractually reference an interest rate benchmark that is planned to transition to an alternative benchmark or will survive to co-exist;
- have a contractual maturity date after 31 December 2021, the date by which LIBOR is expected to cease;
- are recognized on the bank's consolidated balance sheet.

The administrator of LIBOR, ICE Benchmark Administration, has announced a proposal to extend the publication date of most USD LIBOR tenors until 30 June 2023. Publication of one week and two month tenors will cease after 31 December 2021. This proposal, if endorsed, would moderately reduce the amounts presented in the above table as some financial instruments included will reach their contractual maturity date prior to 30 June 2023.

CORRA and CDOR

The Bank of Canada has stated that the country will be a dual-rate jurisdiction where the Canadian Dollar Offered Rate ('CDOR') will co-exist with the new overnight risk-free rate, an enhanced version of Canadian Overnight Repo Rate Average ('CORRA') that began its daily publishing on 15 June 2020. The Bank of Canada expects the market to adopt CORRA in a wide range of products, although there is no requirement to transition CDOR-linked products to CORRA. The bank will continue to monitor the situation closely.

Currently, the bank offers products referencing a range of interest rates and plans to include a wider range CORRA-linked products to the existing product line in the future.

Other risks

Other factors that may impact our results include changes in accounting standards, including their effect on our accounting policies, estimates and judgments; changes in tax rates, tax law and policy, and its interpretation by taxing authorities; risk of fraud by employees or others; unauthorized transactions by employees and human error.

Our success in delivering our strategic priorities and proactively managing the regulatory environment depends on the development and retention of our leadership and high-performing employees. The ability to continue to attract, develop and retain competent individuals in an employment market impacted by the COVID-19 pandemic proves challenging. We are monitoring people risks with attention to employee mental health and well-being, particularly in the face of the pandemic.

Despite the contingency plans we have in place for resilience in the event of sustained and significant operational disruption, our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports both our operations and the communities in which we do business, including but not limited to disruption caused by public health emergencies, pandemics, environmental disasters or terrorist acts.

The impact of COVID-19 is also described in more detail in the Impact of COVID-19 and our response section on page 15 and the Credit risk section on page 38 of the MD&A.

Capital

Our objective in the management of capital is to maintain appropriate levels of capital to support our business strategy and meet our regulatory requirements.

Capital management*

The bank manages its capital in accordance with the principles contained within its capital management policy and its annual capital plan, which include the results of its internal capital adequacy assessment process ('ICAAP'). The bank determines an optimal amount and composition of regulatory and working capital required to support planned business growth, taking into consideration economic capital and the costs of capital, accepted market practices and the volatility of capital and business levels in its annual operating plan.

The bank maintains a capital position commensurate with its overall risk profile and control environment as determined by the ICAAP.

The ICAAP supports capital management and ensures that the bank carries sufficient capital to meet regulatory requirements and internal targets to cover current and future risks; and, survive periods of severe economic downturn (stressed scenarios). The key elements of the bank's ICAAP include: a risk appetite framework; the identification and assessment of the risks the bank is exposed to; and, an assessment of capital adequacy against regulatory requirements as well as under stressed scenarios.

Management has established appropriate governance structures and internal controls to ensure the ICAAP remains effective in supporting the bank's capital management objectives.

The bank remained within its required regulatory capital limits throughout 2020.

Basel III capital and leverage rules

The bank assesses capital adequacy against standards established in guidelines issued by OSFI in accordance with the Basel III capital adequacy framework.

The Basel III capital adequacy framework significantly revised the definitions of regulatory capital and introduced the requirement that all regulatory capital must be able to absorb losses in a failed financial institution. Capital instruments issued prior to the adoption of the existing requirements in 2013 that do not meet these requirements are being phased out as regulatory capital over a ten year period from 2013 to 2022.

The framework emphasizes common equity as the predominant component of tier 1 capital by adding a minimum common equity tier 1 ('CET1') capital ratio. The Basel III rules also require institutions to hold capital buffers designed to avoid breaches of minimum regulatory requirements during periods of stress.

OSFI has established capital targets (including capital conservation buffer) that all institutions are expected to attain or exceed, as follows: CET1 capital ratio of 7.0%, tier 1 capital ratio of 8.5% and total capital ratio of 10.5%.

Regulatory capital

Total regulatory capital and risk-weighted assets*

	Footnotes	Year ended 31 Dec 2020	Year ended 31 Dec 2019
		$m	$m
Gross common equity	1	**5,782**	5,009
Regulatory adjustments		**(308)**	(246)
Common equity tier 1 capital	2	**5,474**	4,763
Additional tier 1 eligible capital		**1,100**	1,100
Tier 1 capital		**6,574**	5,863
Tier 2 capital	2, 3	**1,015**	1,037
Total capital		**7,589**	6,900

1. *Includes common share capital, retained earnings and accumulated other comprehensive income.*
2. *As part of the new transitional arrangements, effective 31 March 2020, a portion of allowances that would otherwise be included in tier 2 capital has instead been included in common equity tier 1 ('CET 1') capital. The impact is $14m as at 31 December 2020.*
3. *Includes a capital instrument subject to phase out and allowances.*

Regulatory capital ratios

Risk-weighted assets

	Footnote	Year ended 31 Dec 2020	Year ended 31 Dec 2019
		$m	$m
Risk-weighted assets ('RWA') used in the calculation	1		
– common equity tier 1 capital RWA		**40,014**	42,080
– tier 1 capital RWA		**40,014**	42,080
– total capital RWA		**40,014**	42,080

1. *In April 2020, OSFI announced certain regulatory flexibility measures to support COVID-19 efforts in light of the current evolving situation. Effective 31 March 2020, OSFI lowered the capital floor factor from 75% to 70%. The revised floor factor is expected to stay in place until the first quarter 2023.*

Actual regulatory capital ratios and capital requirements

	Footnotes	Year ended 31 Dec 2020	Year ended 31 Dec 2019
Actual regulatory capital ratios	1		
– common equity tier 1 capital ratio		**13.7%**	11.3%
– tier 1 capital ratio		**16.4%**	13.9%
– total capital ratio		**19.0%**	16.4%
– leverage ratio		**6.0%**	4.9%
Regulatory capital requirements	2		
– minimum common equity tier 1 capital ratio		**7.0%**	7.0%
– minimum tier 1 capital ratio		**8.5%**	8.5%
– minimum total capital ratio		**10.5%**	10.5%

1. *Presented under a Basel III basis with non-qualifying capital instruments phased out over 10 years starting 1 January 2013.*
2. *OSFI target capital ratios including mandated capital conservation buffer.*

In response to the COVID-19 pandemic, the bank increased its capital level notably with the issuance of $0.5bn common shares, the capital and leverage ratios remain well in excess of the bank's minimum regulatory requirements. Also contributing to the increase in capital ratios was the net reduction in RWA impacted by the decrease in standardized floor factor from 75% to 70% for banks using the internal ratings based approach to credit risk and the decline in loan balances as the pandemic impacted customers' demand for credit, partly offset by the impact of deterioration in Basel probability of default.

Also contributing to the increase in leverage ratio was the reduction in exposure measures from the temporary exclusion of sovereign-issued securities that qualify as High Quality Liquid assets, and from the reduction in financial investments and trading assets.

Outstanding shares and dividends

Outstanding shares and dividends declared and paid on our shares in each of the last three years were as follows:

		Year ended 31 December 2020			Year ended 31 December 2019			Year ended 31 December 2018		
	Footnotes	Dividend	Number of issued shares	Carrying value	Dividend	Number of issued shares	Carrying value	Dividend	Number of issued shares	Carrying value
		$ per share	'000's	$m	$ per share	'000's	$m	$ per share	'000's	$m
Common shares	1, 2	0.32085	548,668	1,725	0.86230	498,668	1,225	1.62433	498,668	1,225
Class 1 preferred shares	3									
– Series G	4	0.50000	—	—	1.00000	20,000	500	1.00000	20,000	500
– Series H	4	0.39471	20,000	500	—	—	—	—	—	—
– Series I	5	1.15000	14,000	350	1.15000	14,000	350	1.23250	14,000	350
– Series K	6	1.36252	10,000	250	0.35560	10,000	250	—	—	—

1. *Dividends recorded in the financial statements are dividends per ordinary share declared in a year and are not dividends in respect of, or for, that year.*
2. *Common shares were issued on 30 March 2020.*
3. *Cash dividends on preferred shares are non-cumulative and are payable quarterly.*
4. *Holder of the preferred shares Series G exercised their option to convert the preferred shares Series G into preferred shares Series H on 30 June 2020 in accordance with their terms; initial dividends were declared during the third quarter of 2020 and paid in accordance with their terms in the usual manner on 30 September 2020 or the first business day thereafter.*
5. *Preferred shares - Class 1, Series I were issued on 7 December 2017; initial dividends were declared during the first quarter of 2018 and paid in accordance with their terms in the usual manner on 31 March 2018 or the first business day thereafter.*
6. *Preferred shares - Class 1, Series K were issued on 27 September 2019; initial dividends were declared during the fourth quarter of 2019 and paid in accordance with their terms in the usual manner on 31 December 2019 or the first business day thereafter.*

Dividends declared in 2020

During the year, the bank declared and paid $48m in dividends on all series of HSBC Bank Canada Class 1 preferred shares. The bank also declared and paid $160m in dividends on HSBC Bank Canada common shares during the first quarter. No dividends were declared or paid on HSBC Bank Canada common shares for the remainder of the year.

Dividends declared in 2021

On 19 February 2021, the bank declared regular quarterly dividends for the first quarter of 2021 on all series of HSBC Bank Canada Class 1 preferred shares, to be paid in accordance with their terms in the usual manner on 31 March 2021 or the first business day thereafter to the shareholder of record on 15 March 2021.

On 19 February 2021, the bank also declared a final dividend of $195m on HSBC Bank Canada common shares in respect of the financial year ending 31 December 2020, which will be paid on or before 30 March 2021 to the shareholder of record on 19 February 2021.

As the quarterly dividends on preferred shares for the first quarter of 2021 and the final dividend on common shares for 2020 were declared after 31 December 2020, the amounts have not been included in the balance sheet of the bank as a liability.

Statement of Management's Responsibility for Financial Information

The presentation and preparation of the annual consolidated financial statements, Management's Discussion and Analysis ('MD&A') and all other information in the *Annual Report and Accounts 2020* is the responsibility of the management of HSBC Bank Canada ('the bank'). The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards. The consolidated financial statements and information in the MD&A include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality.

In meeting its responsibility for the reliability of financial information, management relies on comprehensive internal accounting, operating and system controls. The bank's overall controls include: an organizational structure providing for effective segregation of responsibilities; delegation of authority and personal accountability; written communication of policies and procedures of corporate conduct throughout the bank; careful selection and training of personnel; regular updating and application of written accounting and administrative policies and procedures necessary to ensure adequate internal control over transactions, assets and records; and a continuing program of extensive internal audit covering all aspects of the bank's operations. These controls are designed to provide reasonable assurance that financial records are reliable for preparing the consolidated financial statements and maintaining accountability for assets that assets are safeguarded against unauthorized use or disposition and that the bank is in compliance with all regulatory requirements. Management has a process in place to evaluate internal control over financial reporting based on the criteria established in the Internal Control - Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of the Treadway Commission ('COSO').

At least once a year, the Office of the Superintendent of Financial Institutions Canada ('OSFI'), makes such examination and enquiry into the affairs of the bank as deemed necessary to ensure that the provisions of the Bank Act, having reference to the rights and interests of the depositors and the creditors of the bank, are being complied with and that the bank is in a sound financial condition.

The bank's Board of Directors oversees management's responsibilities for financial reporting through the Audit, Risk and Conduct Review Committee, which is composed of Directors who are not officers or employees of the bank. The Audit, Risk and Conduct Review Committee reviews the bank's interim and annual consolidated financial statements and MD&A, and recommends for approval by the Board of Directors. Other key responsibilities of the Audit, Risk and Conduct Review Committee include monitoring the bank's system of internal control, monitoring its compliance with legal and regulatory requirements, considering the appointment of the Shareholder's auditors and reviewing the qualifications, independence and performance of Shareholder's auditors and internal auditors.

As at 31 December 2020, we, the bank's Chief Executive Officer and Chief Financial Officer, have certified the design and effectiveness of our internal control over financial reporting as defined by the Canadian Securities Administrators under National Instrument 52-109 (Certification of Disclosure in Issuers' Annual and Interim Filings).

The Shareholder's auditors, the bank's Chief Internal Auditor and OSFI have full and free access to the Board of Directors and its committees to discuss audit, financial reporting and related matters.

Linda Seymour
President and Chief Executive Officer
HSBC Bank Canada

Gerhardt Samwell
Chief Financial Officer
HSBC Bank Canada

Vancouver, Canada

19 February 2021

Our opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of HSBC Bank Canada and its subsidiaries (together, the Bank) as at December 31, 2020 and 2019, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS).

What we have audited

The Bank's consolidated financial statements comprise:

- the consolidated income statements for the years ended December 31, 2020 and 2019;
- the consolidated statements of comprehensive income for the years ended December 31, 2020 and 2019;
- the consolidated balance sheets as at December 31, 2020 and 2019;
- the consolidated statements of cash flows for the years ended December 31, 2020 and 2019;
- the consolidated statements of changes in equity for the years ended December 31, 2020 and 2019; and
- the notes to the consolidated financial statements, which include significant accounting policies and other explanatory information.

Certain required disclosures have been presented elsewhere in the Management's Discussion and Analysis, rather than in the notes to the consolidated financial statements. These disclosures are cross-referenced from the consolidated financial statements and are identified as audited.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Bank in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada. We have fulfilled our other ethical responsibilities in accordance with these requirements.

Other information

Management is responsible for the other information. The other information obtained prior to the date of this auditor's report comprises the Management's Discussion and Analysis.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Bank'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 or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Bank's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated 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 Canadian generally accepted auditing standards 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 consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated 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'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'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 consolidated 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 to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Bank to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PricewaterhouseCoopers LLP

Chartered Professional Accountants

Vancouver, Canada
February 19, 2021

Consolidated Financial Statements

Consolidated income statement

for the year ended 31 December

	Notes	2020 $m	2019 $m
Net interest income		**1,086**	1,268
– interest income		**2,165**	2,785
– interest expense		**(1,079)**	(1,517)
Net fee income	3	**713**	677
– fee income		**796**	779
– fee expense		**(83)**	(102)
Net income from financial instruments held for trading		**132**	165
Gains less losses from financial investments		**50**	38
Other operating income		**43**	37
Total operating income		**2,024**	2,185
Change in expected credit losses and other credit impairment charges		**(327)**	(78)
Net operating income	4	**1,697**	2,107
Employee compensation and benefits	5, 6	**(630)**	(658)
General and administrative expenses		**(545)**	(533)
Depreciation and impairment of property, plant and equipment		**(78)**	(72)
Amortization and impairment of intangible assets		**(40)**	(28)
Total operating expenses		**(1,293)**	(1,291)
Profit before income tax expense		**404**	816
Income tax expense	7	**(96)**	(221)
Profit for the year		**308**	595
Attributable to:			
– the common shareholder		**260**	555
– the preferred shareholder		**48**	40
Profit for the year		**308**	595
Average number of common shares outstanding (000's)		**536,510**	498,668
Basic and diluted earnings per common share ($)		**$ 0.48**	$ 1.11

Certain sections within the Management's Discussion and Analysis, that are marked with an asterisk (*), and the accompanying notes form an integral part of these consolidated financial statements.

Consolidated statement of comprehensive income

for the year ended 31 December

	Notes	2020 $m	2019 $m
Profit for the year		**308**	595
Other comprehensive income			
Items that will be reclassified subsequently to profit or loss when specific conditions are met:			
Debt instruments at fair value through other comprehensive income		**74**	130
– fair value gains		**151**	215
– fair value gains transferred to the income statement on disposal		**(50)**	(38)
– income taxes		**(27)**	(47)
Cash flow hedges		**138**	21
– fair value gains		**324**	103
– fair value gains reclassified to the income statement		**(136)**	(75)
– income taxes		**(50)**	(7)
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement of defined benefit plans		**(39)**	(16)
– before income taxes	5	**(53)**	(23)
– income taxes	7	**14**	7
Equity instruments designated at fair value through other comprehensive income		**(2)**	(1)
– fair value loss		**(3)**	(1)
– income taxes		**1**	—
Other comprehensive income for the year, net of tax		**171**	134
Total comprehensive income for the year		**479**	729
Attributable to:			
– the common shareholder		**431**	689
– the preferred shareholder		**48**	40
Total comprehensive income for the year		**479**	729

Certain sections within the Management's Discussion and Analysis, that are marked with an asterisk (*), and the accompanying notes form an integral part of these consolidated financial statements.

Consolidated balance sheet

at 31 December

	Notes	2020 $m	2019 $m
Assets			
Cash and balances at central banks		**15,750**	54
Items in the course of collection from other banks		**13**	15
Trading assets	11	**1,719**	4,322
Other financial assets mandatorily measured at fair value through profit or loss		**9**	5
Derivatives	12	**5,447**	3,267
Loans and advances to banks		**1,270**	1,169
Loans and advances to customers		**61,002**	61,922
Reverse repurchase agreements – non-trading		**5,996**	6,269
Financial investments	13	**19,879**	23,645
Other assets	17	**1,430**	1,580
Prepayments and accrued income		**196**	241
Customers' liability under acceptances		**4,043**	3,500
Current tax assets		**28**	26
Property, plant and equipment	14	**277**	339
Goodwill and intangible assets	18	**167**	155
Deferred tax assets	7	**121**	62
Total assets		**117,347**	106,571
Liabilities and equity			
Liabilities			
Deposits by banks		**1,139**	1,036
Customer accounts		**71,950**	62,889
Repurchase agreements – non-trading		**3,227**	7,098
Items in the course of transmission to other banks		**181**	225
Trading liabilities	19	**1,831**	2,296
Derivatives	12	**5,647**	3,431
Debt securities in issue	20	**17,387**	14,594
Other liabilities	21	**3,097**	3,384
Acceptances		**4,062**	3,505
Accruals and deferred income		**523**	600
Retirement benefit liabilities	5	**310**	265
Subordinated liabilities	22	**1,011**	1,033
Provisions		**81**	41
Current tax liabilities		**19**	65
Total liabilities		**110,465**	100,462
Equity			
Common shares	25	**1,725**	1,225
Preferred shares	25	**1,100**	1,100
Other reserves		**249**	39
Retained earnings		**3,808**	3,745
Total shareholder's equity		**6,882**	6,109
Total liabilities and equity		**117,347**	106,571

Certain sections within the Management's Discussion and Analysis, that are marked with an asterisk (*), and the accompanying notes form an integral part of these consolidated financial statements.

Approved on behalf of the Board of Directors:

Samuel Minzberg
Chairman
HSBC Bank Canada

Linda Seymour
President and Chief Executive Officer
HSBC Bank Canada

Consolidated statement of cash flows

for the year ended 31 December

	Footnote	2020 $m	2019 $m
Profit before income tax expense		**404**	816
Adjustments for non-cash items:			
Depreciation and amortization		**118**	100
Share-based payment expense		**7**	12
Change in expected credit losses		**327**	78
Charge for defined benefit pension plans		**15**	15
Changes in operating assets and liabilities			
Change in prepayment and accrued income		**45**	(7)
Change in net trading securities and net derivatives		**2,346**	(247)
Change in loans and advances to customers		**643**	(4,877)
Change in reverse repurchase agreements – non-trading		**371**	(314)
Change in other assets		**(485)**	1,085
Change in accruals and deferred income		**(77)**	26
Change in deposits by banks		**103**	(112)
Change in customer accounts		**9,061**	3,077
Change in repurchase agreements – non-trading		**(3,871)**	(1,126)
Change in debt securities in issue		**2,793**	731
Change in other liabilities		**365**	744
Tax paid		**(264)**	(214)
Net cash from operating activities		**11,901**	(213)
Purchase of financial investments		**(8,565)**	(12,885)
Proceeds from the sale and maturity of financial investments		**12,429**	13,470
Purchase of intangibles and property, plant and equipment		**(62)**	(83)
Net cash from investing activities		**3,802**	502
Issuance of preferred shares		**—**	250
Issuance of common shares		**500**	—
Dividends paid to shareholder		**(208)**	(470)
Repurchase of subordinated debentures	1	**(22)**	(6)
Lease principal payments		**(51)**	(39)
Net cash from financing activities		**219**	(265)
Net increase in cash and cash equivalents		**15,922**	24
Cash and cash equivalents at 1 Jan		**1,357**	1,333
Cash and cash equivalents at 31 Dec		**17,279**	1,357
Cash and cash equivalents comprise:			
Cash and balances at central bank		**15,750**	54
Items in the course of collection from other banks and Items in the course of transmission to other banks		**(168)**	(210)
Loans and advances to banks of one month or less		**1,270**	1,169
Non-trading reverse repurchase agreements with banks of one month or less		**420**	321
T-Bills and certificates of deposits less than three months		**7**	23
Cash and cash equivalents at 31 Dec		**17,279**	1,357
Interest:			
Interest paid		**(1,140)**	(1,479)
Interest received		**2,214**	2,790

1. Changes to subordinated liabilities during the year are attributed to cash outflow from the repurchase of $22m (2019: $6m) of subordinated debentures. Non-cash changes during the year were nil (2019: nil).

Certain sections within the Management's Discussion and Analysis, that are marked with an asterisk (*), and the accompanying notes form an integral part of these consolidated financial statements.

Consolidated statement of changes in equity

for the year ended 31 December

	Share capital[1]	Retained earnings	Other reserves: Financial assets at FVOCI reserve	Other reserves: Cash flow hedging reserve	Other reserves: Total other reserves	Total equity
	$m	$m	$m	$m	$m	$m
At 1 Jan 2020	**2,325**	**3,745**	**36**	**3**	**39**	**6,109**
Profit for the year	—	308	—	—	—	308
Other comprehensive income/(loss), net of tax	—	(39)	72	138	210	171
– debt instruments at fair value through other comprehensive income	—	—	74	—	74	74
– equity instruments designated at fair value through other comprehensive income	—	—	(2)	—	(2)	(2)
– cash flow hedges	—	—	—	138	138	138
– remeasurement of defined benefit asset/liability	—	(39)	—	—	—	(39)
Total comprehensive income for the year	—	269	72	138	210	479
Dividends paid on common shares	—	(160)	—	—	—	(160)
Dividends paid on preferred shares	—	(48)	—	—	—	(48)
Issuance of common shares	500	—	—	—	—	500
Shares issued under employee remuneration and share plan	—	2	—	—	—	2
At 31 Dec 2020	**2,825**	**3,808**	**108**	**141**	**249**	**6,882**

	Share capital[1]	Retained earnings	Other reserves: Financial assets at FVOCI reserve	Other reserves: Cash flow hedging reserve	Other reserves: Total other reserves	Total equity
	$m	$m	$m	$m	$m	$m
At 1 Jan 2019	2,075	3,619	(93)	(18)	(111)	5,583
Profit for the year	—	595	—	—	—	595
Other comprehensive income/(loss), net of tax	—	(16)	129	21	150	134
– debt instruments at fair value through other comprehensive income	—	—	130	—	130	130
– equity instruments designated at fair value through other comprehensive income	—	—	(1)	—	(1)	(1)
– cash flow hedges	—	—	—	21	21	21
– remeasurement of defined benefit asset/liability	—	(16)	—	—	—	(16)
Total comprehensive income for the year	—	579	129	21	150	729
Deemed contribution	—	13	—	—	—	13
Dividends paid on common shares	—	(430)	—	—	—	(430)
Dividends paid on preferred shares	—	(40)	—	—	—	(40)
Issuance of preferred shares	250	—	—	—	—	250
Shares issued under employee remuneration and share plan	—	4	—	—	—	4
At 31 Dec 2019	2,325	3,745	36	3	39	6,109

1. *Share capital is comprised of common shares $1,725m and preferred shares $1,100m (2019: common shares $1,225m and preferred shares $1,100m).*

Certain sections within the Management's Discussion and Analysis, that are marked with an asterisk (*), and the accompanying notes form an integral part of these consolidated financial statements.

1 Basis of preparation

(a) Compliance with International Financial Reporting Standards

International Financial Reporting Standards ('IFRSs') comprise accounting standards as issued or adopted by the International Accounting Standards Board ('IASB') as well as interpretations issued or adopted by the IFRS Interpretations Committee.

HSBC Bank Canada and its subsidiary undertakings (together 'the bank', 'we', 'our', 'HSBC') is an indirectly wholly-owned subsidiary of HSBC Holdings plc ('the Parent', 'HSBC Holdings'). In these consolidated financial statements, HSBC Group means the Parent and its subsidiary companies.

The consolidated financial statements of the bank have been prepared in accordance with IFRSs and in consideration of the accounting guidelines as issued by the Office of the Superintendent of Financial Institutions Canada ('OSFI'), as required under Section 308(4) of the Bank Act. Section 308 (4) states that except as otherwise specified by OSFI, the financial statements shall be prepared in accordance with IFRS.

(b) Standards adopted during the year ended 31 December 2020

Interest Rate Benchmark Reform Phase 2: Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 issued in August 2020 represents the second phase of the IASB's project on the effects of interest rate benchmark reform, addressing issues affecting financial statements when changes are made to contractual cash flows and hedging relationships as a result of the reform.

Under these amendments, changes made to a financial instrument that are economically equivalent and required by interest rate benchmark reform do not result in the derecognition or a change in the carrying amount of the financial instrument, but instead require the effective interest rate to be updated to reflect the change in the interest rate benchmark. In addition, hedge accounting will not be discontinued solely because of the replacement of the interest rate benchmark if the hedge meets other hedge accounting criteria.

These amendments apply from 1 January 2021 with early adoption permitted. During the fourth quarter of 2020 the bank adopted the amendments effective from 1 January 2020 and has made the additional disclosures as required by the amendments. Further information is included in the 'IBOR transition' section of Management's Discussion and Analysis.

In addition, the bank has also adopted a number of interpretations and amendments to standards which have had an insignificant effect on the consolidated financial statements of the bank.

(c) Future accounting developments

Major new IFRSs

IFRS 17 'Insurance contracts'

The IASB issued IFRS 17 'Insurance contracts' in May 2017, with amendments to the standards issued in June 2020. The standard sets out the requirements that an entity should apply in accounting for insurance contracts it issues and reinsurance contracts it holds. Following the amendments, IFRS 17 is effective from 1 January 2023. The bank has assessed the impact of this standard and it is not expected to have a material impact to these financial statements.

Minor amendments to IFRSs

The IASB has published a number of minor amendments to IFRSs which are effective from 1 January 2021. We expect they will have an insignificant effect, when adopted, on our consolidated financial statements.

(d) Foreign currencies

The bank's consolidated financial statements are presented in Canadian dollars which is also its functional currency. The abbreviation '$m' represents millions of dollars. All tabular amounts are in millions of dollars except where otherwise noted.

Transactions in foreign currencies are recorded at the rate of exchange on the date of the transaction. Assets and liabilities denominated in foreign currencies are translated at the rate of exchange at the balance sheet date except non-monetary assets and liabilities measured at historical cost that are translated using the rate of exchange at the initial transaction date. Exchange differences are included in other comprehensive income or in the income statement depending on where the gain or loss on the underlying item is recognized.

(e) Presentation of information

Certain sections within the accompanying Management's Discussion and Analysis, that are marked with an asterisk (*), form an integral part of these consolidated financial statements.

(f) Critical accounting estimates and assumptions

The preparation of financial information requires the use of estimates and judgments about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items listed below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based. This could result in materially different estimates and judgments from those reached by management for the purposes of these Financial Statements. Management's selection of the bank's accounting policies which contain critical estimates and judgments are listed below and discussed in the 'Critical accounting estimates and judgments' section of Management's Discussion and Analysis. It reflects the materiality of the items to which the policies are applied and the high degree of judgment and estimation uncertainty involved.

- Expected credit loss;
- Valuation of financial instruments;
- Income taxes and deferred tax assets; and

- Defined benefit obligations.

(g) Segmental analysis

The bank's chief operating decision maker is the Chief Executive Officer, supported by the Executive Committee. Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Executive Officer and the Executive Committee. Global businesses are our reportable segments under IFRS 8 'Operating Segments'. The three global businesses are Commercial Banking, Global Banking and Markets, and Wealth and Personal Banking. The bank made changes to the operating segments during the year, the details of which can be found in note 9.

Measurement of segmental assets, liabilities, income and expenses is in accordance with the bank's accounting policies. Segmental income and expenses include transfers between segments and these transfers are conducted at arm's length. Shared costs are included in segments on the basis of the actual recharges made. Various estimate and allocation methodologies are used in the preparation of the segment financial information. We allocate expenses directly related to earning income to the segment that earned the related income. Expenses not directly related to earning income, such as overhead expenses, are allocated using appropriate methodologies. Segments' net interest income reflects internal funding charges and credits on the global businesses' assets, liabilities and capital, at market rates, taking into account relevant terms.

(h) Going concern

The financial statements are prepared on a going concern basis, as the Directors are satisfied that the bank has the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows and capital resources.

2 Summary of significant accounting policies

(a) Consolidation and related policies

Investments in subsidiaries

The bank controls and consequently consolidates an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Control is initially assessed based on consideration of all facts and circumstances, including the purpose and design of the entity, the facts and circumstances relating to decision making rights and the rights to returns and/or the ability of the bank to vary the returns. Control is subsequently reassessed when there are significant changes to the initial setup, taking into account any changes in these facts and circumstances, significant changes in the rights to returns and/or the ability of the bank to vary the returns.

Where an entity is governed by voting rights, the bank would consolidate when it holds, directly or indirectly, the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgment of other factors, including having exposure to variability of returns, power over the relevant activities or holding the power as agent or principal.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured at the fair value of the consideration, including contingent consideration, given at the date of exchange. Acquisition-related costs are recognized as an expense in the income statement in the period in which they are incurred. The acquired identifiable assets, liabilities and contingent liabilities are generally measured at their fair values at the date of acquisition. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. This election is made for each business combination.

All intra-bank transactions are eliminated on consolidation.

Business combinations of entities under common control

Business combinations between the bank and other entities under the common control of HSBC Holdings plc are accounted for using predecessor accounting. The assets and liabilities are transferred at their existing carrying amount and the difference between the carrying value of the net assets transferred and the consideration received is recorded directly in equity.

Goodwill

Goodwill is measured as the excess of the aggregate of the consideration transferred, the amount of non-controlling interest and the fair value of the bank's previously held equity interest, if any, over the net of the amounts of the identifiable assets acquired and the liabilities assumed.

Goodwill is allocated to cash-generating units ('CGU's) for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. Impairment testing is performed at least annually, or whenever there is an indication of impairment, by comparing the recoverable amount of a CGU with its carrying amount.

Structured entities

The bank is considered to sponsor another entity if, in addition to ongoing involvement with the entity, it had a key role in establishing that entity or in bringing together the relevant counterparties so the transaction that is the purpose of the entity could occur. The bank is not considered to be a sponsor if the only involvement with the entity is to provide services at arm's length and it ceases to be a sponsor once it has no ongoing involvement with the structured entity.

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, for example when any voting rights relate to administrative tasks only, and key activities are directed by contractual arrangements. Structured entities often have restricted activities and a narrow and well defined objective.

Structured entities are assessed for consolidation in accordance with the accounting policy as set out above.

Interests in associates

The bank classifies investments in entities over which it has significant influence, and that are not subsidiaries (note 15), as associates.

Investments in associates are recognized using the equity method. Under this method, such investments are initially stated at cost, including attributable goodwill, and are adjusted thereafter for the post-acquisition change in the bank's share of net assets.

Profits on transactions between the bank and its associates are eliminated to the extent of the bank's interest in the respective associates. Losses are also eliminated to the extent of the bank's interest in the associates unless the transaction provides evidence of an impairment of the asset transferred.

(b) Operating income

Interest income and expense

Interest income and expense for all financial instruments, except for those classified as held for trading or designated at fair value are recognized in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial instrument or, where appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability.

Interest on impaired financial assets is recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Fee Income and expense

The recognition of revenue can be either over time or at a point in time depending on when the performance obligation is satisfied. When control of a good or service is transferred over time, if the customer simultaneously receives and consumes the benefits provided by the bank's performance as we perform, the bank satisfies the performance obligation and recognizes revenue over time. Otherwise, revenue is recognized at the point in time at which we transfer control of the good or service to the customer. Variable fees are recognized when all uncertainties are resolved.

For all fee types, where there is a single performance obligation, the transaction price is allocated in its entirety to that performance obligation. Where there are multiple performance obligations, the transaction price is allocated to the performance obligation to which it relates based on stand-alone selling prices.

Income which forms an integral part of the effective interest rate of a financial instrument (for example, certain loan commitment fees) is recognized as an adjustment to the effective interest rate and recorded in 'Interest income'.

The main types of fee income arising from contracts with customers, including information about performance obligations, determining the timing and satisfaction of performance obligations and determining the transaction price and the amounts allocated to performance are as follows:

Credit facilities

Credit facility fees include fees generated from providing a credit facility that are not included within the Effective Interest Rate ('EIR'), such as annual facility fees (commitment fees), standby fees and other transaction based fees charged for late payments, return payments, over credit charges and foreign usage. Fees associated with loan commitments and standby letters of credit are billed upfront and recognized on a straight-line basis over the period the service is performed and the performance obligation is met (e.g. the commitment period). In the event a loan commitment or standby letter of credit is exercised, the remaining unamortized fee is recognized as an adjustment to yield over the loan term. The transaction price (excluding any interest element) usually includes an annual facility fee, which could be a fixed charge or a percentage of the approved credit limit, and other transaction-based charges, which could be either a fixed price or a percentage of the transaction value. Although fees charged can be variable (percentage of credit limit or transaction value), the uncertainty is resolved by the time the revenue is recognized as the credit limit or transaction value is known on the contract or transaction date. Therefore, there is no need to estimate the variable consideration or apply the variable consideration constraint. On the basis that the services are provided evenly over the term of the agreement, the fee is recognized on a straight line basis over the commitment period.

Funds under management

Funds under management include management fees, administration fees and transaction based fees.

Management fees are generally percentage based and therefore represent variable consideration. This amount is subject to the variable consideration constraint and is only included in the transaction price to the extent that it is highly probable that a significant reversal of cumulative revenue will not occur when the uncertainty associated with the variable consideration is subsequently resolved. At the end of each payment period, or at each reporting date, the management fee is allocated to the distinct management services that have been provided during that period. Fee income from management fees is recognized evenly over time on a straight-line basis as the services are provided and the related performance obligations are satisfied evenly over time. The fee percentage and payment period are agreed with the customer upfront. Generally, payment periods are monthly or quarterly and coincide with our reporting periods, thereby resolving the uncertainty of the variable consideration by the reporting date. For payment periods that do not coincide with our reporting periods, judgment is required to estimate the fee and determine the amount to recognize as accrued income, accrued income is only recorded to the extent it is highly probably that a significant reversal of revenue will not occur. A significant reversal of accrued management fee revenue is not highly probable for most contracts.

Administration fees, where applicable, are agreed with the customer and based on the terms of each contract. These fees are either fixed upfront charges or percentage based fees calculated as a percentage of the average value of a customer's assets at the end of an agreed period. Percentage based administrative fees are included in the transaction price only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

Other fees are transaction based and are recognized and billed at the point in time the transaction occurs and the performance obligation is met.

Cards

Credit card arrangements involve numerous contracts between various parties. The bank has determined that the more significant contracts within the scope of IFRS 15 'Revenue from contracts with customers' are:

- the contract between the bank and the credit card holder ('Cardholder Agreement') under which we earn miscellaneous fees (e.g., late payment fees, over-limit fees, foreign exchange fees, etc.) and for some products annual fees; and
- an implied contract between the bank and merchants who accept our credit cards in connection with the purchase of their goods and/or services ('Merchant Agreement') under which we earn interchange fees.

The Cardholder Agreement obligates the bank, as the card issuer, to perform activities such as redeem loyalty points by providing goods, cash or services to the cardholder, provide ancillary services such as concierge services, travel insurance, airport lounge access and the like, process late payments, provide foreign exchange services, and others. The primary fees arising under cardholder agreements which are in scope of IFRS 15 include annual fees, transaction based fees, and penalty fees for late payments. The amount of each fee stated in the contract represents the transaction price for that performance obligation. Annual fees on credit cards are billed upfront and recognized on a straight-line basis. Other credit card fees, as noted above, are transaction based and are recognized and billed at the point in time the transaction occurs and the performance obligation is met.

Interchange fees

The implied contract between the bank and the merchant results in the bank receiving an interchange fee from the merchant. The interchange fee represents the transaction price associated with the implied contract between the bank and the merchant because it represents the amount of consideration to which the bank expects to be entitled in exchange for transferring the promised service (i.e., purchase approval and payment remittance) to the merchant. The performance obligation associated with the implied contract between the bank and the merchant is satisfied upon performance and simultaneous consumption by the customer of the underlying service (i.e. purchase approval and payment remittance). Therefore, the interchange fee is recognized as revenue each time the bank approves a purchase and remits payment to the merchant.

Account services

The bank provides services for current accounts that generate fees from various activities including: accounts statements, ATM transactions, cash withdrawals, wire transfers, utilization of cheques, debit cards and internet and phone banking. The fees for these services are established in the customer account agreement and are either billed individually at the time the service is performed and the performance obligation is met, or on a monthly basis for a package or bundle of services as the services are performed and the performance obligation is met. Customer account agreements typically include a package of services with multiple performance obligations or a bundle of services making up a single performance obligation. In the case of a package of services, the pattern of transfer to the customer is the same for all services (stand ready obligation) therefore, all the goods and services are treated as a single performance obligation. The transaction price is allocated in its entirety to the single performance obligation. The performance obligation associated with account services is satisfied as a stand ready obligation to provide services evenly over time, and therefore, the fee income from account services is recognized evenly over time.

Net income from financial instruments measured at fair value through profit or loss includes:

- 'Net income from financial instruments held for trading'. This element is comprised of the net trading income, which includes all gains and losses from changes in the fair value of financial assets and liabilities held for trading, together with the related interest income, expense and dividends; and it also includes all gains and losses from changes in the fair value of derivatives that are managed in conjunction with financial assets and liabilities measured at fair value through profit or loss.
- 'Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss'.

Dividend income is recognized when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders approve the dividend for unlisted equity securities.

(c) Valuation of financial instruments

All financial instruments are initially recognized at fair value. Fair value 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. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, sometimes the fair value will be based on other observable current market transactions in the same instrument, without modification or repackaging, or on a valuation technique whose variables include only data from observable markets, such as interest rate yield curves, option volatilities and currency rates. If there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, the bank recognizes the difference as a trading gain or loss at inception (a 'day 1 gain or loss'). In all other cases, the entire day 1 gain or loss is deferred and recognized in the income statement over the life of the transaction either until the transaction matures or is closed out, the valuation inputs become observable or the bank enters into an offsetting transaction.

(d) Financial instruments measured at amortized cost

Financial assets that are held to collect the contractual cash flows and that contain contractual terms that give rise on the specified dates to cash flows that are solely payments of principal and interest, such as most loans and advances to banks and customers and some debt securities, are measured at amortized cost. In addition, most financial liabilities are measured at amortized cost. The bank accounts for regular way amortized cost financial instruments using trade date accounting. The carrying value of these financial assets at initial recognition includes any directly attributable transaction costs. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognized over the life of the loan through the recognition of interest income.

The bank may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When the bank intends to hold the loan, the loan commitment is included in the impairment calculations set out below.

Non-trading reverse repurchase, repurchase and similar agreements

When debt securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognized on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading repos and reverse repos are measured at amortized cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest expense and interest income respectively, and recognized in net interest income over the life of the agreement.

(e) Financial assets measured at fair value through other comprehensive income ('FVOCI')

Financial assets held for a business model that is achieved by both collecting contractual cash flows and selling and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at FVOCI. These comprise primarily debt securities. They are recognized on trade date when the bank enters into contractual arrangements to purchase and are normally derecognized when they are either sold or redeemed. They are subsequently remeasured at fair value and changes therein (except for those relating to impairment, interest income and foreign currency exchange gains and losses which are recognized immediately in net income) are recognized in other comprehensive income until the assets are sold. Upon disposal, the cumulative gains or losses in other comprehensive income are recognized in the income statement as 'Gains less losses from financial investments'. Financial assets measured at FVOCI are included in the impairment calculations set out below and impairment is recognized in profit or loss.

(f) Equity securities measured at fair value with fair value movements presented in OCI

The equity securities for which fair value movements are shown in OCI are business facilitation and other similar investments where the bank holds the investments other than to generate a capital return. Gains or losses on the derecognition of these equity securities are not transferred to profit or loss. Otherwise equity securities are measured at fair value through profit or loss (except for dividend income which is recognized in profit or loss).

(g) Financial instruments designated and otherwise mandatorily measured at fair value through profit or loss ('FVPL')

Equity securities for which the fair value movements are not shown in OCI are mandatorily classified in this category.

Additionally, financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below and are so designated as irrevocably at inception:

- the use of the designation removes or significantly reduces an accounting mismatch;
- when a group of financial assets and liabilities or a group of financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy; and
- where the financial liability contains one or more non-closely related embedded derivatives.

Designated financial assets are recognized when the bank enters into contracts with counterparties, which is generally on trade date, and are normally derecognized when the rights to the cash flows expire or are transferred. Designated financial liabilities are recognized when the bank enters into contracts with counterparties, which is generally on settlement date, and are normally derecognized when extinguished. Subsequent changes in fair values are recognized in the income statement.

Under the above criterion, there are no such financial instruments designated at fair value by the bank at 31 December 2020.

(h) Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognized initially, and are subsequently re-measured, at fair value through profit or loss. Fair values of derivatives are obtained either from quoted market prices or by using valuation techniques. Derivatives are only offset for accounting purposes if the offsetting criteria are met.

Embedded derivatives in financial liabilities are treated as separate derivatives ('bifurcated') when their economic characteristics and risks are not closely related to those of the host non-derivative contract, their contractual terms would otherwise meet the definition of a stand-alone derivative and the combined contract is not measured at fair value through profit or loss.

Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative. Derivative assets and liabilities arising from different transactions are only offset if the transactions are with the same counterparty, a legal right of offset exists, and the parties intend to settle the cash flows on a net basis.

Gains and losses from changes in the fair value of derivatives, including the contractual interest, that do not qualify for hedge accounting are reported in 'Net income from financial instruments held for trading'.

When derivatives are designated as hedges, the bank classifies them as either: (i) hedges of the change in fair value of recognized assets or liabilities or firm commitments ('fair value hedges'); or (ii) hedges of the variability in highly probably future cash flows attributable to a recognized asset or liability, or a forecast transaction ('cash flow hedges').

Hedge accounting

As permitted by IFRS 9 'Financial instruments', the bank has exercised an accounting policy choice to remain with IAS 39 hedge accounting. At the inception of a hedging relationship, the bank documents the relationship between the hedging instruments and the hedged items, its risk management objective and its strategy for undertaking the hedge. The bank requires a documented assessment, both at hedge inception and on an ongoing basis, of whether or not the hedging instruments are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

Fair value hedge

Fair value hedge accounting does not change the recording of gains and losses on derivatives and other hedging instruments, but results in recognizing changes in the fair value of the hedged assets or liabilities attributable to the hedged risk that would not otherwise be recognized in the income statement. If a hedging relationship no longer meets the criteria for hedge accounting, the hedge accounting is discontinued; the cumulative adjustment to the carrying amount of the hedged item is amortized to the income statement on a recalculated effective interest rate over the residual period to maturity, unless the hedged item has been derecognized, in which case it is recognized to the income statement immediately.

Cash flow hedge

The effective portion of gains and losses on hedging instruments is recognized in other comprehensive income; the ineffective portion of the change in fair value of derivative hedging instruments that are part of a cash flow hedge relationship is recognized immediately in the income statement within 'Net income from financial instruments held for trading'.

The accumulated gains and losses recognized in other comprehensive income are reclassified to the income statement in the periods in which the hedged item affects profit or loss. In hedges of forecast transactions that result in recognition of a non-financial asset or liability, previous gains and losses recognized in other comprehensive income are included in the initial measurement of the asset or liability.

When a hedge relationship is discontinued, any cumulative gain or loss recognized in other comprehensive income remains in equity until the forecast transaction is recognized in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognized in other comprehensive income is immediately reclassified to the income statement.

Hedge effectiveness testing

To qualify for hedge accounting, the bank requires that, at the inception of the hedge and throughout its life, each hedge must be expected to be highly effective both prospectively and retrospectively, on an ongoing basis.

The documentation of each hedging relationship sets out how the effectiveness of the hedge is assessed and the method adopted by an entity to assess hedge effectiveness will depend on its risk management strategy. For prospective effectiveness, the hedging instrument must be expected to be highly effective in offsetting changes in fair value or cash flows attributable to the hedged risk during the period for which the hedge is designated, with the effectiveness range being defines at 0.8 to 1.25. Hedge ineffectiveness is recognized in the income statement in 'Net income from financial instruments held for trading'.

Derivatives that do not qualify for hedge accounting

Non-qualifying hedges are derivatives entered into as economic hedges of assets and liabilities for which hedge accounting was not applied.

(i) Impairment of amortized cost and FVOCI financial assets

Expected credit losses ('ECL') are recognized for loans and advances to banks and customers, non-trading reverse repurchase agreements, other financial assets held at amortized cost, debt instruments measured at fair value through other comprehensive income, and certain loan commitments and financial guarantee contracts. At the end of the first reporting period after initial recognition, an allowance (or provision in the case of some loan commitments and financial guarantees) is required for ECL resulting from default events that are possible within the next 12 months (or less, where the remaining life is less than 12 months) ('12-month ECL'). In the event of a significant increase in credit risk, an allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instruments ('lifetime ECL'). Financial assets where 12-month ECL is recognized are considered to be 'stage 1'; financial assets which are considered to have experienced a significant increase in credit risk are in 'stage 2'; financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit-impaired are in 'stage 3'.

Credit-impaired (stage 3)

The bank determines that a financial instrument is credit-impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay such as that a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default.

If such unlikeliness to pay is not identified at an earlier stage, it is deemed to occur when a exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore, the definition of credit-impaired and default are aligned as far as possible so that stage 3 represents all loans which are considered defaulted or otherwise credit-impaired.

Interest income is recognized by applying the effective interest rate to the amortized cost amount, i.e. gross carrying amount less ECL allowance.

Write-off

Financial assets (and the related impairment allowances) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realization of security. In circumstances where the net realizable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Renegotiation

Loans are identified as renegotiated and classified as credit impaired when we modify the contractual payment terms due to significant credit distress of the borrower. Renegotiated loans remain classified as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows and retain the designation of renegotiated until maturity or derecognition.

A loan that is renegotiated is derecognized if the existing agreement is canceled and a new agreement is made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is a substantially different financial instrument. Any new loans that arise following derecognition events in these circumstances are considered to be purchased or originated credit-impaired financial assets and will continue to be disclosed as renegotiated loans.

Other than originated credit-impaired loans, all other modified loans could be transferred out of stage 3 if they no longer exhibit any evidence of being credit-impaired and, in the case of renegotiated loans, there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, over the minimum observation period, and there are no other indicators of impairment. These loans could be transferred to stage 1 or 2 based on the mechanism as described below by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms). Any amount written off as a result of the modification of contractual terms would not be reversed.

Loan modifications that are not credit-impaired

In most circumstances, loan modifications that are not identified as renegotiated are considered to be commercial restructuring. Where a commercial restructuring results in a modification (whether legalized through an amendment to the existing terms or the issuance of a new loan contract) such that the bank's rights to the cash flows under the original contract have expired, the loan is derecognized and a new loan is recognized at fair value. The rights to cash flows are generally considered to have expired if the commercial restructure is at market rates and no payment-related concession has been provided. In certain circumstances, modifications to loans are made that are not considered to be renegotiated or commercial restructuring. Such loans are not derecognized and will continue to be subject to the impairment policy.

Significant increase in credit risk (stage 2)

An assessment of whether credit risk has increased significantly since initial recognition is performed at each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument. The assessment explicitly or implicitly compares the risk of default occurring at the reporting date compared to that at initial recognition, taking into account reasonable and supportable information, including information about past events, current conditions and future economic conditions. The assessment is unbiased, probability-weighted, and to the extent relevant, uses forward-looking information consistent with that used in the measurement of ECL. The analysis of credit risk is multi-factor. The determination of whether a specific factor is relevant and its weight compared with other factors depends on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk and these criteria will differ for different types of lending, particularly between retail and wholesale. However, unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when payments are 30 days past due. In addition, wholesale loans that are individually assessed, typically corporate and commercial customers, and included on a watch or worry list are included in stage 2.

For wholesale portfolios, the quantitative comparison assesses default risk using a lifetime probability of default which encompasses a wide range of information including the obligor's customer risk rating, macroeconomic condition forecasts and credit transition probabilities. Significant increase in credit risk is measured by comparing the average PD for the remaining term estimated at origination with the equivalent estimation at reporting date. The significance of changes in PD was informed by expert credit risk judgment, referenced to historical credit migrations and to relative changes in external market rates.

For loans originated prior to the implementation of IFRS 9, the origination PD does not include adjustments to reflect expectations of future macroeconomic conditions since these are not available without the use of hindsight. In the absence of this data, the origination PD is approximated assuming through-the-cycle ('TTC') PDs and TTC migration probabilities, consistent with the instrument's underlying modeling approach and the credit risk rating ('CRR') at origination. For these loans, the quantitative comparison is supplemented with additional CRR deterioration- based thresholds, as set out in the table below:

Origination CRR	Additional significance criteria - number of CRR grade notches deterioration required to identify as significant credit deterioration (stage 2) (> or equal to)
0.1	5 notches
1.1 - 4.2	4 notches
4.3 - 5.1	3 notches
5.2 - 7.1	2 notches
7.2 - 8.2	1 notch
8.3	0 notch

Further information about the 23-grade scale used for CRR can be found on page 39.

For certain portfolios of debt securities where external market ratings are available and credit ratings are not used in credit risk management, the debt securities will be in stage 2 if their credit risk increases to the extent they are no longer considered investment grade. Investment grade is where the financial instrument has a low risk of incurring losses, the structure has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfill their contractual cash flow obligations.

For retail portfolios, default risk is assessed using a reporting date 12-month PD derived from credit scores which incorporate all available information about the customer. This PD is adjusted for the effect of macroeconomic forecasts for periods longer than 12 months and is considered to be a reasonable approximation of a lifetime PD measure. Retail exposures are first segmented into homogeneous portfolios, generally by product and brand. Within each portfolio, the stage 2 accounts are defined as accounts with an adjusted 12-month PD greater than the average 12-month PD of loans in that portfolio 12 months before they become 30 days past due. The expert credit risk judgment is that no prior increase in credit risk is significant. This portfolio-specific threshold identifies loans with a PD higher than would be expected from loans that are performing as originally expected and higher than that which would have been acceptable at origination. It therefore approximates a comparison of origination to reporting date PDs.

Unimpaired and without significant increase in credit risk (stage 1)

ECL resulting from default events that are possible within the next 12 months ('12- month ECL') are recognized for financial instruments that remain in stage 1.

Movement between stages

Financial assets can be transferred between the different categories depending on their relative increase or decrease in credit risk since initial recognition. Financial instruments are transferred out of stage 2 if their credit risk is no longer considered to be significantly increased since initial recognition based on the assessments described above. Except for renegotiated loans, financial instruments are transferred out of stage 3 when they no longer exhibit any evidence of credit impairment as described above. Renegotiated loans will continue to be in stage 3 until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period and there are no other indicators of impairment. For loans that are assessed for impairment on a portfolio basis, the evidence typically comprises a history of payment performance against the original or revised terms, as appropriate to the circumstances. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case-by-case basis.

Measurement of ECL

The assessment of credit risk, and the estimation of ECL, are unbiased and probability-weighted, and incorporate all available information which is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money.

In general, the bank calculates ECL using three main components, a probability of default, a loss given default and the exposure at default ('EAD').

The 12-month ECL is calculated by multiplying the 12-month PD, LGD, and EAD. Lifetime ECL is calculated using the lifetime PD instead. The 12-month and lifetime PDs represent the probability of default occurring over the next 12 months and the remaining maturity of the instrument respectively.

The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdowns of committed facilities. The LGD represents expected losses on the EAD given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realized and the time value of money.

The bank leverages the Basel II IRB framework where possible, with recalibration to meet the differing IFRS 9 requirements as follows:

Model	Regulatory capital	IFRS 9
PD	• Through the cycle (represents long-run average PD through a full economic cycle) • The definition of default includes a backstop of 90+ days past due	• Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD) • Default backstop of 90+ days past due
EAD	• Cannot be lower than current balance	• Amortization captured for term products
LGD	• Downturn LGD (consistent losses expected to be suffered during a severe but plausible economic downturn) • Regulatory floors may apply to mitigate risk of underestimating downturn LGD due to lack of historical data • Discounted using cost of capital • All collection costs included	• Expected LGD (based on estimate of loss given default including the expected impact of future economic conditions such as the change in value of collateral) • No floors • Discounted using the original effective interest rate of the loan • Only costs associated with obtaining/selling collateral included
Other		• Discounted back from point of default to balance sheet date

While 12-month PDs are recalibrated from Basel models where possible, the lifetime PDs are determined by projecting the 12-month PD using a term structure. For the wholesale methodology, the lifetime PD also takes into account credit migration, i.e. a customer migrating through CRR bands over its life.

The ECL for wholesale stage 3 is determined on an individual basis using a discounted cash flows ('DCF') methodology. The expected future cash flows are based on the credit risk officer's estimates as at the reporting date, reflecting reasonable and supportable assumptions and projections of future recoveries and expected future receipts of interest. Collateral is taken into account if it is likely that the recovery of the outstanding amount will include realization of collateral based on its estimated fair value of collateral at the time of expected realization, less costs for obtaining and selling the collateral. The cash flows are discounted at a reasonable approximation of the original effective interest rate. For significant cases, cash flows using up to four different scenarios are probability-weighted by reference to the three economic scenarios applied more generally by the bank and the judgment of the credit risk officer in relation to the likelihood of the workout strategy succeeding or receivership being required. For less significant cases, the effect of different economic scenarios and work-out strategies is approximated and applied as an adjustment to the most likely outcome. The movements associated with these variables are referred to as 'Changes to risk parameters (model inputs)' in the 'Reconciliation of allowances for loans and advances to banks and customers including loan commitments and financial guarantees' section within Management's Discussion and Analysis.

Period over which ECL is measured

ECL is measured at each reporting date after the initial recognition of the financial asset. The maximum period considered when measuring ECL (be it 12-month or lifetime ECL) is the maximum contractual period over which the bank is exposed to credit risk. For wholesale overdrafts, credit risk management actions are taken no less frequently than on an annual basis and therefore this period is to the expected date of the next substantive credit review. The date of the substantive credit review also represents the initial recognition of the new facility. However, where the financial instrument includes both a drawn and undrawn commitment and the contractual ability to demand repayment and cancel the undrawn commitment does not serve to limit the bank's exposure to credit risk to the contractual notice period, the contractual period does not determine the maximum period considered. Instead, ECL is measured over the period the bank remains exposed to credit risk that is not mitigated by credit risk management actions. This applies to retail overdrafts and credit cards, where the period is the average time taken for stage 2 exposures to default or close as performing accounts, determined on a portfolio basis and ranging from between three and six years. In addition, for these facilities it is not possible to identify the ECL on the loan commitment component separately from the financial asset component. As a result, the total ECL is recognized in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognized as a provision.

Forward-looking economic inputs

Four forward-looking global economic scenarios have been used to capture the exceptional nature of the current economic environment and to articulate management's view of the range of potential outcomes. Three of these scenarios are drawn from consensus forecasts and distributional estimates. They represent a 'most likely outcome' (the Central scenario) and two, less likely, 'Outer' scenarios on either side of the Central, referred to as an Upside and a Downside scenario respectively. The Central scenario is used by the annual operating planning process and, with regulatory modifications, will also be used in enterprise-wide stress tests. During the year management have chosen to use a fourth scenario, the Alternative Downside scenario, to reflect management's view of severe downside risk. This is consistent with the forward economic guidance methodology which recognizes that the consensus scenarios will be insufficient in certain economic environments and that additional scenarios will be prepared at management's discretion.

Management have assigned probability weights to the scenarios that reflect their view of the distribution of risks. The Central scenario has been assigned a weighting of 70% and the other scenarios have been assigned a weighting of 10% each. The difference between the Central and Outer scenarios in terms of economic severity being informed by the spread of external forecast distributions among professional industry forecasts.

The Outer scenarios are economically plausible, internally consistent states of the world and will not necessarily be as severe as scenarios used in stress testing. The period of forecast is five years, after which the forecasts will revert to a view based on average past experience. The economic factors include, but are not limited to, gross domestic product, unemployment, interest rates, inflation and property prices.

(j) Employee compensation and benefits

Post-employment benefits

The bank operates a number of pension and other post-employment benefit plans. These plans include both defined benefit and defined contribution plans and various other post-employment benefits such as post-employment healthcare. Pension plans in which the risks are shared by entities under common control are considered group pension plans. As a result of a transfer of employees to HSBC Global Services (Canada) Limited ('ServCo'), a subsidiary of HSBC Holdings plc., as of 1 January 2019, one of the pension plans became a group pension plan. The pension plans are funded by contributions from the bank and ServCo and the employees of both entities. The bank and ServCo make contributions to the defined benefit plans in respect of their employees, based on actuarial valuation. The supplemental pension arrangements and post-employment benefits are not funded.

Payments to defined contribution plans are charged as an expense to the bank as the employees render service.

The defined benefit pension costs and the present value of defined benefit obligations are calculated at the reporting date by the schemes' actuaries using the Projected Unit Credit Method. The bank and Servco are charged defined benefit pension costs for their respective employees.

The net charge to the income statement mainly comprises the service cost and the net interest on the net defined benefit liability and is presented in operating expenses.

The past service cost which is charged immediately to the income statement, is the change in the present value of the defined benefit obligation for employee service in prior periods, resulting from a plan amendment (the introduction or withdrawal of, or changes to, a defined benefit plan) or curtailment (a significant reduction by the entity in the number of employees covered by a plan). A settlement is a transaction that eliminates all further legal and constructive obligations for part or all of the benefits provided under a defined benefit plan, other than a payment of benefits to, or on behalf of, employees that is set out in the terms of the plan and included in the actuarial assumptions.

Re-measurements of the net defined benefit liability, which comprise actuarial gains and losses, return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income.

Actuarial gains and losses comprise experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred), as well as the effects of changes in actuarial assumptions.

The net defined benefit asset or liability represents the present value of defined benefit obligations reduced by the fair value of plan assets, after applying the asset ceiling test, where the net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

The cost of obligations arising from other post-employment defined benefit plans, such as defined benefit health-care plans, are accounted for on the same basis as defined benefit pension plans.

Share-based payments

The bank enters into both equity-settled and cash-settled share-based payment arrangements with its employees as compensation for services provided by employees.

The vesting period for these schemes may commence before the grant date if the employees have started to render services in respect of the award before the grant date. Expenses are recognized when the employee starts to render service to which the award relates.

HSBC Holdings is the grantor of its equity instruments awarded to employees of the bank. The bank is required to partially fund share-based payment arrangements awarded to its employees. The cost of share-based payment arrangements with employees is measured by reference to the fair value of equity instruments on the date they are granted, and recognized as an expense on a straight-line basis over the vesting period. As a result of the bank's share-based payment arrangements being accounted for as equity-settled, the difference between the share-based payment expense, and the fair value of the equity instruments issued to satisfy those arrangements, is recognized in 'Retained Earnings' over the vesting period.

Fair value is determined by using appropriate valuation models, taking into account the terms and conditions of the award. Vesting conditions include service conditions and performance conditions; any other features of the arrangement are non-vesting conditions. Market performance conditions and non-vesting conditions are taken into account when estimating the fair value of the award at the grant date. Vesting conditions, other than market performance conditions, are not taken into account in the initial estimate of the fair value at the grant date. They are taken into account by adjusting the number of equity instruments included in the measurement of the transaction.

A cancellation that occurs during the vesting period is treated as an acceleration of vesting, and recognized immediately for the amount that would otherwise have been recognized for services over the vesting period. Failure to meet a vesting condition by the employee is not treated as a cancellation and the amount of expense recognized for the award is adjusted to reflect the number of awards expected to vest.

(k) Tax

Income tax comprises current tax and deferred tax. Income tax is recognized in the income statement except to the extent that it relates to items recognized in other comprehensive income or directly in equity, in which case it is recognized in the same statement in which the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year, calculated using tax rates enacted or substantively enacted by the balance sheet date, and any adjustment to tax payable in respect of previous years. The bank provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities. Current tax assets and liabilities are offset when the bank intends to settle on a net basis and the legal right to offset exists.

Tax laws are complex and can be subject to interpretation. Management applies its own judgment to the application and interpretation of tax laws, but the interpretation by the relevant tax authorities may differ. Tax liabilities are recognized based on best estimates of the probable outcome. If the final outcome is in favor of the decisions made by the relevant tax authorities, additional liabilities and expense in excess of the amounts recorded may result.

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the balance sheet and the amounts attributed to such assets and liabilities for tax purposes. Deferred tax liabilities are generally recognized for all taxable temporary differences and deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which deductible temporary differences can be utilized.

Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realized or the liabilities settled, based on tax rates and laws enacted, or substantively enacted, by the balance sheet date. Deferred tax assets and liabilities are offset when the bank has a legal right to offset.

Deferred tax relating to actuarial gains and losses on post-employment benefits is recognized in other comprehensive income. Deferred tax relating to share-based payment transactions is recognized directly in equity to the extent that the amount of the estimated future tax deduction exceeds the amount of the related cumulative remuneration expense. Tax relating to fair value re-measurements of debt instruments at fair value through other comprehensive income and cash flow hedging instruments which are charged or credited directly to other comprehensive income is recognized in the statement of comprehensive income and is subsequently recognized in the income statement when the deferred fair value gain or loss is recognized in the income statement.

(l) Provisions, contingent liabilities and guarantees

Provisions

Provisions represent liabilities of uncertain timing or amount and are recognized when the bank has a present legal or constructive obligation as a result of a past event which results in a probable outflow of resources to settle the obligation and when a reliable estimate can be made of the obligation at the reporting date. Provisions are measured based upon the best estimate of the amount that would be required to settle the provision at the reporting date. The bank makes provisions for undrawn commitments and guarantees to reflect the best estimate of losses incurred by the bank at the reporting date. In other instances the bank may periodically make provisions for other matters such as litigation in instances where the recognition criteria described above is met.

Contingent liabilities

Contingent liabilities are possible obligations that arise from past events whose existence will be confirmed by uncertain future events not wholly within the control of the bank; or are present obligations that have arisen from past events where it is not probable that settlement will require the outflow of economic benefits or where the amount of settlement cannot be reliably measured. Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security and contingent liabilities related to legal proceedings or regulatory matters, are not recognized in the financial statements but are disclosed unless the probability of settlement is remote.

Financial guarantee contracts

Financial guarantee contacts are contracts that require the bank to make specified payments to reimburse the holder for a loss incurred because a specified debtor fails to make payment when due. Liabilities under financial guarantee contracts are recorded initially at their fair value, which is generally the fee received or receivable. Subsequently, financial guarantee liabilities are measured at the higher of the initial fair value, less cumulative amortization, and the expected credit loss.

(m) Lease commitments

Agreements which convey the right to control the use of an identified asset for a period of time in exchange for consideration are classified as leases. As a lessee, the bank recognizes a right-of-use asset in 'Property, plant and equipment' and a corresponding liability in 'Other liabilities'. The asset will be amortized over the length of the lease, and the lease liability measured using a methodology similar to amortized cost. The lease liability is initially recognized as the net present value of the lease payments over the term of the lease. The lease term is considered to be the non-cancellable period of the lease together with the periods covered by an option to extend if the bank is reasonably certain to extend and periods covered by an option to terminate the lease if the bank is reasonably certain not to terminate early. In determining the lease term, the bank considers all relevant facts and circumstances that create an economic incentive for it to exercise an extension option or not to terminate early. The right-of-use asset is initially recognized at an amount equal to the lease liability adjusted by any lease incentives received.

The amortization charge of the right-of-use asset is included in 'Depreciation'. Interest on the lease liability is included in 'interest expense'. As permitted by IFRS 16, the bank has used the practical expedient of excluding lease payments for short-term leases and leases for which the underlying asset value is low when recognizing right-of-use assets and corresponding liabilities. These are recognized as an expense on a straight-line basis over the lease term.

As a lessor, leases which transfer substantially all the risks and rewards incidental to the ownership of assets, are classified as finance leases. Under finance leases, the bank presents the present value of the future finance lease payments receivable and residual value accruing to it in 'Loans and advances to banks' or 'Loans and advances to customers'. All other leases are classified as operating leases. The bank presents assets subject to operating leases in 'Property, plant and equipment'. Impairment losses are recognized to the extent that carrying values are not fully recoverable. Finance income on the finance lease are recognized in 'Net interest income' over the lease term so as to give a constant rate of return. Rentals receivable under operating leases are recognized on a straight-line basis over the lease term and are recognized in 'Other operating income'.

(n) Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the balance sheet when there is an unconditional legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

(o) Property, plant and equipment

Land and buildings are stated at historical cost, or fair value at the Parent's date of transition to IFRSs ('deemed cost'), less impairment losses and depreciation over their estimated useful lives, as follows:

- freehold land is not depreciated;
- freehold buildings are depreciated over their estimated useful lives, which are generally between 20 and 40 years; and
- leasehold improvements are depreciated over the shorter of their unexpired lease terms of the leases or their remaining useful lives.

Equipment, fixtures and fittings (including equipment on operating leases where the bank is the lessor) are stated at cost less impairment losses and depreciation over their useful lives, which are generally between 3 and 5 years.

Property, plant and equipment is subject to an impairment review if their carrying amount may not be recoverable.

(p) Intangible assets

The bank's intangible assets include both purchased and internally generated computer software. The cost of internally generated software comprises all directly attributable costs necessary to create, produce and prepare the software to be capable of operating in the manner intended by management. Costs incurred in the ongoing maintenance of software are expensed immediately as incurred.

Intangible assets are subject to impairment review if there are events or changes in circumstances that indicate that the carrying amount may not be recoverable. Computer software is stated at cost less amortization and accumulated impairment losses and is amortized over the estimated useful life of between 3 and 5 years.

(q) Share capital

Financial instruments issued are generally classified as equity when there is no contractual obligation to transfer cash or other financial assets. Incremental costs directly attributable to the issue of equity instruments are shown in equity as a deduction from the proceeds, net of tax.

(r) Cash and cash equivalents

Cash and cash equivalents include highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value. Such investments are normally those with less than three months' maturity from the date of acquisition, and include cash and cash balances at the central bank, debt securities, loans and advances to banks, items in the course of collection from or in transmission to other banks and certificates of deposit.

3 Net fee income

Net fee income by global business

	2020				2019			
	Commercial Banking	Global Banking and Markets	Wealth and Personal Banking[1]	Total	Commercial Banking	Global Banking and Markets	Wealth and Personal Banking[1]	Total
	$m	$m	$m	$m	$m	$m	$m	$m
Account services	40	7	15	62	42	7	15	64
Broking income	1	—	14	15	—	—	8	8
Cards	16	—	47	63	20	—	46	66
Credit facilities	261	57	—	318	242	67	—	309
Funds under management	—	—	193	193	—	—	193	193
Imports/exports	9	—	—	9	10	1	—	11
Insurance agency commission	—	—	5	5	—	—	5	5
Guarantee and other	30	13	4	47	24	16	6	46
Remittances	27	8	4	39	23	8	4	35
Underwriting	1	44	—	45	2	40	—	42
Fee income	385	129	282	796	363	139	277	779
Less: fee expense	(14)	(9)	(60)	(83)	(17)	(11)	(74)	(102)
Net fee income	371	120	222	713	346	128	203	677

1. *In the second quarter of 2020, HSBC Group combined Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking; therefore going forward, our global business Retail Banking and Wealth Management has been renamed to Wealth and Personal Banking. For further details, see note 9 of these consolidated financial statements.*

4 Operating profit

Operating profit is stated after the following items

	Footnote	2020 $m	2019 $m
Income			
Interest recognized on financial assets measured at amortized cost	1	1,918	2,293
Interest recognized on financial assets measured at FVOCI	1	247	492
Fees earned on financial assets that are not at fair value through profit and loss (other than amounts included in determining the effective interest rate)		402	418
Fees earned on trust and other fiduciary activities		196	198
Expense			
Interest on financial instruments, excluding interest on financial liabilities held for trading or otherwise mandatorily measured at fair value		(1,070)	(1,420)
Fees payable on financial liabilities that are not at fair value through profit and loss (other than amounts included in determining the effective interest rate)		(51)	(58)
Fees payable relating to trust and other fiduciary activities		(3)	(3)
Depreciation on the right-of-use assets		(47)	(40)
Interest expense recognized on lease liabilities		(9)	(9)

1. *Interest revenue calculated using the effective interest method comprises interest recognized on financial assets measured at either amortized cost or fair value through other comprehensive income.*

5 Employee compensation and benefits

Total employee compensation

	2020 $m	2019 $m
Wages and salaries	484	518
Post-employment benefits	59	52
Other	87	88
Year ended 31 Dec	630	658

Post-employment benefits

We sponsor a number of defined benefit and defined contribution plans providing pension, other retirement and post-employment benefits to eligible employees. Non-pension plans are comprised of healthcare and other post-employment benefits and are not funded.

Income statement charge

	2020	2019
	$m	$m
Defined benefit plans	**21**	13
– pension plans	**15**	15
– non-pension plans	**6**	(2)
Defined contribution pension plans	**38**	39
Year ended 31 Dec	**59**	52

Post-employment defined benefit plans

Principal actuarial assumptions

The principal actuarial financial assumptions used to calculate the bank's obligations under its defined benefit plans are presented in the table below. The 2020 and 2019 assumptions will also form and have formed the basis for measuring periodic costs under the plans in 2021 and 2020 respectively.

		Pension plans		Non-pension plans	
		2020	2019	**2020**	2019
	Footnote	**%**	%	**%**	%
Discount rate		**2.55**	3.05	**2.55**	3.05
Rate of pay increase		**2.75**	2.75	**2.75**	2.75
Healthcare cost trend rates – Initial rate		**n/a**	n/a	**7.00**	7.00
Healthcare cost trend rates – Ultimate rate	*1*	**n/a**	n/a	**5.00**	5.00

1. The non-pension 'Healthcare cost trend rates – Ultimate rate' is applied from 2024.

The bank determines the discount rates to be applied to its obligations in consultation with the plans' actuaries, on the basis of the current average yield of high quality Canadian corporate bonds, with maturities consistent with those of the defined benefit obligations. At 31 December 2020, the weighted average duration of the defined benefit obligation was 15.2 years (2019: 14.5 years).

Mortality assumption

Assumptions regarding future mortality have been based on published mortality tables. The life expectancies underlying the defined benefit obligation at the reporting dates are as follows:

	Average years from age 65	
	2020	2019
For a male currently aged 65	**24**	24
For a male currently aged 45	**25**	25
For a female currently aged 65	**25**	25
For a female currently aged 45	**27**	26

Actuarial assumption sensitivities

The following table shows the effect of a ¼ percentage point change ('25bps') in key assumptions on the present value of defined benefit obligation as at 31 December:

Pension plans

	2020	2019
	$m	$m
Discount rate		
Change in defined benefit obligation at year-end from a 25 bps increase	**(29)**	(27)
Change in defined benefit obligation at year-end from a 25 bps decrease	**32**	28
Rate of pay increase		
Change in defined benefit obligation at year-end from a 25 bps increase	**3**	4
Change in defined benefit obligation at year-end from a 25 bps decrease	**(3)**	(4)

Non-pension plans

	2020	2019
	$m	$m
Change in defined benefit obligation at year-end from a 25 bps increase in the discount rate	**(5)**	(5)
Change in defined benefit obligation at year-end from a 25 bps decrease in the discount rate	**5**	5

Fair value of plan assets and present value of defined benefit obligations

		Plans for the bank				Group plan[2]	
		Pension plans		Non-pension plans		Pension plan	
		2020	2019	2020	2019	2020	2019
	Footnote	$m	$m	$m	$m	$m	$m
Fair value of plan assets							
At 1 Jan		**644**	614	**–**	–	**39**	n/a
Transfer to group pension plan	1	**–**	(28)	**–**	–	**–**	28
Bank's share in group plan at 1 Jan 2019		**–**	(6)	**–**	n/a	**–**	6
Interest on plan assets		**20**	21	**–**	–	**1**	1
Contributions by the employer		**22**	21	**5**	4	**4**	2
Contributions by employees		**–**	1	**–**	–	**–**	–
Actuarial gains		**40**	55	**–**	–	**4**	3
Benefits paid		**(34)**	(33)	**(5)**	(4)	**–**	(1)
Non-investment expenses		**(1)**	(1)	**–**	–	**–**	–
At 31 Dec		**691**	644	**–**	–	**48**	39
Present value of defined benefit obligations							
At 1 Jan		**(754)**	(710)	**(134)**	(128)	**(50)**	n/a
Transfer to group pension plan	1	**–**	36	**–**	6	**–**	(36)
Bank's share in group plan at 1 Jan 2019		**–**	6	**–**	n/a	**–**	(6)
Current service cost		**(9)**	(8)	**(2)**	(2)	**(2)**	(1)
Interest cost		**(22)**	(24)	**(4)**	(4)	**(2)**	(2)
Contributions by employees		**–**	(1)	**–**	–	**–**	–
Actuarial gains/(losses) arising from changes in:		**(49)**	(85)	**(10)**	(19)	**(5)**	(6)
– demographic assumptions		**–**	(19)	**–**	(6)	**–**	–
– financial assumptions		**(53)**	(62)	**(10)**	(13)	**(4)**	(6)
– experience adjustments		**4**	(4)	**–**	–	**(1)**	–
Benefits paid		**34**	32	**5**	5	**–**	1
Past service cost		**–**	–		8	**–**	–
At 31 Dec		**(800)**	(754)	**(145)**	(134)	**(59)**	(50)
– funded		**(716)**	(674)	**–**	–	**(11)**	(11)
– unfunded		**(84)**	(80)	**(145)**	(134)	**–**	–
Other – effect of limit on plan surpluses		**(54)**	(21)	**–**	–	**(3)**	–
Net liability	3	**(163)**	(131)	**(145)**	(134)	**(14)**	(11)

1. *Effective 1 January 2019, 608 employees were transferred from the bank to the ServCo, a related party and entity under common control. Certain employees of ServCo are eligible to participate in a group plan. The bank and ServCo agreed that all costs and unfunded pension obligations up to the date of transfer would be borne by the bank.*
2. *The pension plan in which both ServCo and the bank employees actively participate is considered 'a group plan' as the risks are shared by entities under common control. The group plan is funded by contributions from the bank and ServCo and the employees of both entities. The bank and ServCo determine their respective contributions to the defined benefit plan in regards to their employees, based on actuarial valuation.*
3. *At 31 December 2020, the bank's share of net liability in the group plan was $2m (2019: nil).*

Pension plan assets

	Plans for the bank		Group plan	
	2020	2019	2020	2019
	$m	$m	$m	$m
Fair value of plan assets	**691**	644	**48**	39
– equities	**61**	55	**4**	4
– bonds[1]	**625**	586	**43**	35
– other – principally bank balances and short term investments	**5**	3	**1**	–

1. *The bank plans have a payable for transfers of $28m to the group plan with a corresponding receivable recognized as a group plan asset of $28m. These balances are expected to settle in early 2021.*

The actual return on plan assets for the year ended 31 December 2020 was $60m (2019: $76m).

Actuarial valuations for the majority of the bank's pension plans are prepared annually and for non-pension arrangements triennially. The most recent actuarial valuations of the defined benefit pension plans for funding purposes were conducted as at 31 December 2019 and the most recent actuarial valuation of the non-pension arrangements was as at 31 December 2017. Based on the most recent valuations of the plans, the bank expects to make $20.3m of contributions to defined benefit pension plans during 2021.

The defined benefit pension plans expose the bank to risks, including: interest rate risk to the extent that the assets are not invested in bonds that match the plans' obligations, general market risk in respect of its equity investments, and longevity risk in respect of pensioners and beneficiaries living longer than assumed. These risks would be realized through higher pension costs and a higher defined benefit liability.

The bank takes steps to manage these risks through an asset liability management program, which includes reducing interest rate and market risk over time by increasing its asset allocation to bonds that more closely match the plan's obligations.

Summary of remeasurement, net on defined benefit obligations

	Pension plans		Non-pension plans	
	2020	2019	**2020**	2019
	$m	$m	**$m**	$m
Actuarial gains on assets	**40**	55	**–**	–
Actuarial losses on liabilities	**(49)**	(85)	**(10)**	(19)
Actuarial gains on maximum balance sheet item	**(34)**	26	**–**	–
Net charge to the consolidated statement of comprehensive income	**(43)**	(4)	**(10)**	(19)

6 Share-based payments

Share-based payments income statement charge

	2020	2019
	$m	$m
Restricted share awards	**7**	12
Year ended 31 Dec	**7**	12

During 2020, $7m was charged to the income statement in respect of share-based payment transactions (2019: $12m) relating to restricted share awards. These awards are generally granted to employees early in the year following the year to which the award relates. The charge for these awards is recognized from the start of the period to which the service relates to the end of the vesting period. The vesting period is the period over which the employee satisfies certain service conditions in order to become entitled to the award. Due to the staggered vesting profile of certain deferred share awards, the employee becomes entitled to a portion of the award at the end of each year during the vesting period. The income statement charge reflects this vesting profile.

The purpose of restricted share awards is to support retention of key employees, and to reward employee performance and potential. Vesting of restricted share awards is generally subject to continued employment with a vesting period and may be subject to performance conditions.

The weighted average fair value of shares awarded by the HSBC Group for restricted share awards in 2020 was $9.47 per share (2019: $10.75 per share). Fair value is measured at the prevailing market price at the date of the share award.

The bank carries a liability in respect of restricted share awards of $6m as at 31 December 2020 (2019: $11m) to its parent, HSBC Holdings, for the funding of awards that will vest in the future.

7 Tax expense

Analysis of tax expense

	2020	2019
	$m	$m
Current taxation	**141**	208
– federal	**79**	117
– provincial	**62**	91
Deferred taxation	**(45)**	13
– origination and reversal of temporary differences	**(45)**	13
Year ended 31 Dec	**96**	221

The provision for income taxes shown in the consolidated income statement is at a rate that is different than the combined federal and provincial statutory income tax rate for the following reasons:

	2020	2019
	%	%
Combined federal and provincial income tax rate	**26.6**	26.8
Adjustments resulting from:		
– other, net	**(2.9)**	0.2
Effective tax rate	**23.7**	27.0

In addition to the amount charged to the income statement, the aggregate amount of current and deferred taxation relating to items that are taken directly to equity was a $62m decrease in equity (2019: $47m decrease in equity).

Deferred Taxation

Movement in deferred taxation during the year

	2020	2019
	$m	$m
At 1 Jan	62	75
Income statement credit/(charge)	45	(13)
Other comprehensive income:	14	—
– share-base payments	—	(2)
– actuarial gains and losses	14	7
– actuarial gains and losses transferred to ServCo	—	(5)
At 31 Dec	**121**	62

Deferred taxation accounted for in the balance sheet

	2020	2019
	$m	$m
Net deferred tax assets	121	62
– retirement benefits	83	71
– expected credit losses	71	43
– property, plant and equipment	(28)	(23)
– assets leased to customers	(46)	(74)
– share-based payments	5	4
– relief for tax losses carried forward	—	1
– other temporary differences	36	40

The amount of temporary differences for which no deferred tax asset is recognized in the balance sheet is $11.1m (2019: $11.7m). This amount is in respect of capital losses where the recoverability of potential benefits is not considered likely. The entire amount has no expiry date.

Deferred tax is not recognized in respect of the bank's investments in subsidiaries where remittance of retained earning is not contemplated, and for those associates where it has been determined that no additional tax will arise. The aggregate amount of temporary differences associated with investments where no deferred tax liability is recognized is $218m (2019: $209m).

On the evidence available, including management's updated analysis and projection of income, there will be sufficient taxable income generated by the bank to support the recognition of its net deferred tax asset.

8 Dividends

Dividends declared on our shares

		2020		2019	
	Footnotes	$ per share	$m	$ per share	$m
Common shares	1	0.3209	160	0.8623	430
Class 1 preferred shares:					
– Series G	2	0.5000	10	1.0000	20
– Series H	2, 3	0.3947	8	—	—
– Series I		1.1500	16	1.1500	16
– Series K	4	1.3625	14	0.3556	4

1. *On 30 March 2020, the bank issued an additional 50,000,000 common shares to HSBC Overseas Holdings (UK) Limited.*
2. *The holder of preferred shares Series G exercised their option to convert the preferred shares Series G into preferred shares Series H on 30 June 2020 in accordance with their terms.*
3. *Initial dividends on the preferred shares Series H were declared during the third quarter of 2020 and paid in accordance with their terms in the usual manner on 30 September 2020 or the first business day thereafter.*
4. *Preferred shares - Class 1, Series K were issued on 27 September 2019; initial dividends were declared during the fourth quarter of 2019 and paid in accordance with their terms in the usual manner on 31 December 2019 or the first business day thereafter.*

9 Segment analysis

Change in reportable segments

Effective from the second quarter of 2020, we have made two changes to reportable segments. Firstly, we reallocated Balance Sheet Management from Corporate Centre to the global businesses to better align the income and expenses to the businesses generating or utilizing these activities and as a result Corporate Centre is no longer considered an operating segment. All comparative periods have been restated. Secondly, to simplify its matrix organizational structure, HSBC Group merged Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking. Accordingly, going forward our global business Retail Banking and Wealth Management has been renamed to Wealth and Personal Banking. As HSBC Bank Canada did not have a separate business line for Global Private Banking, there have been no changes in assets or liabilities nor any changes in the income or expenses that were previously attributable to the Retail Banking and Wealth Management business line as a result of the change in structure. Effective 31 December 2020, we also renamed our Balance Sheet Management function as Markets Treasury to reflect the activities it undertakes more accurately.

Our global businesses

Commercial Banking

Commercial Banking serves customers ranging from small enterprises focussed primarily on domestic markets through to corporates operating globally. It supports customers with tailored financial products and services to allow them to operate efficiently and to grow. Services provided include working capital, term loans, payment services and international trade facilitation, among other services, as well as expertise in mergers and acquisitions, and access to financial markets.

Global Banking and Markets

Global Banking and Markets provides tailored financial solutions to major government, corporate and institutional clients worldwide. Managed as a global business, Global Banking and Markets operates a long-term relationship management approach to build a full understanding of clients' financial requirements. Sector-focussed client service teams comprising of relationship managers and product specialists develop financial solutions to meet individual client needs. Global Banking and Markets is managed as three principal business lines: Markets, Capital Financing and Banking.

Wealth and Personal Banking

Wealth and Personal Banking provides banking and wealth management services for our personal customers to help them to manage their finances and protect and build their financial future. Customer offerings include: liability-driven services (deposits and account services), asset-driven services (credit and lending), and fee-driven and other services (financial advisory and asset management).

Profit for the year

	2020				
	Commercial Banking	**Global Banking and Markets**	**Wealth and Personal Banking**	**Corporate Centre[1]**	**Total**
	$m	**$m**	**$m**	**$m**	**$m**
Net interest income	**525**	**124**	**486**	**(49)**	**1,086**
Net fee income	**371**	**120**	**222**	**—**	**713**
Net income from financial instruments held for trading	**36**	**60**	**38**	**(2)**	**132**
Other income	**17**	**18**	**31**	**27**	**93**
Total operating income	**949**	**322**	**777**	**(24)**	**2,024**
Change in expected credit losses and other credit impairment charges	**(256)**	**(34)**	**(37)**	**—**	**(327)**
Net operating income	**693**	**288**	**740**	**(24)**	**1,697**
– external	**782**	**265**	**648**	**2**	**1,697**
– inter-segment	**(89)**	**23**	**92**	**(26)**	**—**
Total operating expenses	**(396)**	**(153)**	**(670)**	**(74)**	**(1,293)**
Profit before income tax expense	**297**	**135**	**70**	**(98)**	**404**
	2019				
Net interest income	628	129	541	(30)	1,268
Net fee income	346	128	203	—	677
Net income from financial instruments held for trading	35	92	31	7	165
Other income	14	12	28	21	75
Total operating income	1,023	361	803	(2)	2,185
Change in expected credit losses and other credit impairment charges	(47)	(13)	(18)	—	(78)
Net operating income	976	348	785	(2)	2,107
– external	1,056	349	691	11	2,107
– inter-segment	(80)	(1)	94	(13)	—
Total operating expenses	(409)	(158)	(692)	(32)	(1,291)
Profit before income tax expense	567	190	93	(34)	816

1. *Corporate Centre is not an operating segment of the Bank. The numbers in this column provides a reconciliation between operating segments and the entity results.*

Balance sheet information

	Commercial Banking $m	Global Banking and Markets $m	Wealth and Personal Banking $m	Corporate Centre[1] $m	Total $m
At 31 Dec 2020					
Loans and advances to customers	**25,642**	**3,794**	**31,566**	**—**	**61,002**
Customers' liability under acceptances	**2,687**	**1,344**	**12**	**—**	**4,043**
Total external assets	**41,213**	**29,110**	**46,703**	**321**	**117,347**
Customer accounts	**25,188**	**7,959**	**38,803**	**—**	**71,950**
Acceptances	**2,703**	**1,347**	**12**	**—**	**4,062**
Total external liabilities	**35,345**	**26,228**	**48,505**	**387**	**110,465**
At 31 Dec 2019					
Loans and advances to customers	28,240	4,178	29,504	—	61,922
Customers' liability under acceptances	1,978	1,510	12	—	3,500
Total external assets	39,594	27,153	39,615	209	106,571
Customer accounts	21,712	6,199	34,978	—	62,889
Acceptances	1,982	1,511	12	—	3,505
Total external liabilities	30,997	24,539	44,490	436	100,462

1. Corporate Centre is not an operating segment of the Bank. The numbers in this column provides a reconciliation between operating segments and the entity results.

10 Analysis of financial assets and liabilities by measurement basis

Financial assets and financial liabilities are measured on an ongoing basis at either fair value or amortized cost. The following tables analyze the carrying amount of financial assets and liabilities by category and by balance sheet heading:

		2020				
	Footnote	Financial instruments measured at FVPL $m	Debt instruments measured at FVOCI $m	Equity instruments measured at FVOCI $m	Financial instruments measured at amortized cost $m	Total $m
Financial assets						
Cash and balances at central bank		**—**	**—**	**—**	**15,750**	**15,750**
Items in the course of collection from other banks		**—**	**—**	**—**	**13**	**13**
Trading assets		**1,719**	**—**	**—**	**—**	**1,719**
Other financial assets mandatorily measured at fair value through profit or loss		**9**	**—**	**—**	**—**	**9**
Derivatives		**5,447**	**—**	**—**	**—**	**5,447**
Loans and advances to banks		**—**	**—**	**—**	**1,270**	**1,270**
Loans and advances to customers	*1*	**—**	**—**	**—**	**61,002**	**61,002**
Reverse repurchase agreements – non-trading		**—**	**—**	**—**	**5,996**	**5,996**
Financial investments		**—**	**19,873**	**6**	**—**	**19,879**
Customers' liability under acceptances		**—**	**—**	**—**	**4,043**	**4,043**
Total		**7,175**	**19,873**	**6**	**88,074**	**115,128**
Financial liabilities						
Deposits by banks		**—**	**—**	**—**	**1,139**	**1,139**
Customer accounts		**—**	**—**	**—**	**71,950**	**71,950**
Repurchase agreements – non-trading		**—**	**—**	**—**	**3,227**	**3,227**
Items in the course of transmission to other banks		**—**	**—**	**—**	**181**	**181**
Trading liabilities		**1,831**	**—**	**—**	**—**	**1,831**
Derivatives		**5,647**	**—**	**—**	**—**	**5,647**
Debt securities in issue		**—**	**—**	**—**	**17,387**	**17,387**
Acceptances		**—**	**—**	**—**	**4,062**	**4,062**
Subordinated liabilities		**—**	**—**	**—**	**1,011**	**1,011**
Total		**7,478**	**—**	**—**	**98,957**	**106,435**

1. Includes finance lease receivables that are measured in accordance with IFRS 16. Refer note 27 for details.

		2019				
		Financial instruments measured at FVPL	Debt instruments measured at FVOCI	Equity instruments measured at FVOCI	Financial instruments measured at amortized cost	Total
	Footnote	$m	$m	$m	$m	$m
Financial assets						
Cash and balances at central bank		—	—	—	54	54
Items in the course of collection from other banks		—	—	—	15	15
Trading assets		4,322	—	—	—	4,322
Other financial assets mandatorily measured at fair value through profit or loss		5	—	—	—	5
Derivatives		3,267	—	—	—	3,267
Loans and advances to banks		—	—	—	1,169	1,169
Loans and advances to customers	1	—	—	—	61,922	61,922
Reverse repurchase agreements – non-trading		—	—	—	6,269	6,269
Financial investments		—	23,625	20	—	23,645
Customers' liability under acceptances		—	—	—	3,500	3,500
Total		7,594	23,625	20	72,929	104,168
Financial liabilities						
Deposits by banks		—	—	—	1,036	1,036
Customer accounts		—	—	—	62,889	62,889
Repurchase agreements – non-trading		—	—	—	7,098	7,098
Items in the course of transmission to other banks		—	—	—	225	225
Trading liabilities		2,296	—	—	—	2,296
Derivatives		3,431	—	—	—	3,431
Debt securities in issue		—	—	—	14,594	14,594
Acceptances		—	—	—	3,505	3,505
Subordinated liabilities		—	—	—	1,033	1,033
Total		5,727	—	—	90,380	96,107

1. *Includes finance lease receivables that are measured in accordance with IFRS 16. Refer note 27 for details.*

11 Trading assets

	Footnote	2020	2019
		$m	$m
Debt securities			
– Canadian and Provincial Government bonds	1	1,486	3,496
– treasury and other eligible bills		121	464
– other debt securities		112	362
At 31 Dec		**1,719**	4,322
Trading assets			
– not subject to repledge or resale by counterparties		1,012	2,170
– which may be repledged or resold by counterparties		707	2,152
At 31 Dec		1,719	4,322

1. *Including government guaranteed bonds.*

Term to maturity of debt securities

	2020	2019
	$m	$m
Less than 1 year	273	1,689
1-5 years	412	1,130
5-10 years	386	889
Over 10 years	648	614
At 31 Dec	**1,719**	4,322

12 Derivatives

Fair values of derivatives by product contract type held

	Assets			Liabilities		
	Held for trading	Hedge accounting	Total	Held for trading	Hedge accounting	Total
	$m	$m	$m	$m	$m	$m
Foreign exchange	**1,861**	**—**	**1,861**	**1,913**	**—**	**1,913**
Interest rate	**3,323**	**261**	**3,584**	**3,317**	**415**	**3,732**
Commodity	**2**	**—**	**2**	**2**	**—**	**2**
At 31 Dec 2020	**5,186**	**261**	**5,447**	**5,232**	**415**	**5,647**
Foreign exchange	1,562	—	1,562	1,529	58	1,587
Interest rate	1,588	117	1,705	1,620	224	1,844
Commodity	—	—	—	—	—	—
At 31 Dec 2019	3,150	117	3,267	3,149	282	3,431

Notional amounts by remaining term to maturity of the derivative portfolio

	Held for trading				Hedge accounting				Total
	Less than 1 year	1 - 5 years	Over 5 years	Total	Less than 1 year	1 - 5 years	Over 5 years	Total	
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Interest rate contracts	**229,301**	**144,246**	**35,068**	**408,615**	**1,364**	**14,567**	**515**	**16,446**	**425,061**
– futures	**7,527**	**30,411**	**—**	**37,938**	**—**	**—**	**—**	**—**	**37,938**
– swaps	**221,278**	**113,785**	**35,068**	**370,131**	**1,364**	**14,567**	**515**	**16,446**	**386,577**
– caps	**134**	**50**	**—**	**184**	**—**	**—**	**—**	**—**	**184**
– other interest rate	**362**	**—**	**—**	**362**	**—**	**—**	**—**	**—**	**362**
Foreign exchange contracts	**129,923**	**14,199**	**227**	**144,349**	**—**	**64**	**—**	**64**	**144,413**
– spot	**7,854**	**—**	**—**	**7,854**	**—**	**—**	**—**	**—**	**7,854**
– forward	**107,612**	**5,735**	**—**	**113,347**	**—**	**—**	**—**	**—**	**113,347**
– currency swaps and options	**14,457**	**8,464**	**227**	**23,148**	**—**	**64**	**—**	**64**	**23,212**
Other derivative contracts	**428**	**—**	**—**	**428**	**—**	**—**	**—**	**—**	**428**
– commodity	**428**	**—**	**—**	**428**	**—**	**—**	**—**	**—**	**428**
At 31 Dec 2020	**359,652**	**158,445**	**35,295**	**553,392**	**1,364**	**14,631**	**515**	**16,510**	**569,902**
Interest rate contracts	195,801	154,570	43,191	393,562	7,809	13,520	5,531	26,860	420,422
– futures	14,500	23,350	1	37,851	—	—	—	—	37,851
– swaps	180,031	131,030	43,190	354,251	7,809	13,520	5,531	26,860	381,111
– caps	—	190	—	190	—	—	—	—	190
– other interest rate	1,270	—	—	1,270	—	—	—	—	1,270
Foreign exchange contracts	134,200	13,830	651	148,681	894	64	—	958	149,639
– spot	3,415	—	—	3,415	—	—	—	—	3,415
– forward	120,724	4,815	102	125,641	—	—	—	—	125,641
– currency swaps and options	10,061	9,015	549	19,625	894	64	—	958	20,583
Other derivative contracts	10	—	—	10	—	—	—	—	10
– commodity	10	—	—	10	—	—	—	—	10
At 31 Dec 2019	330,011	168,400	43,842	542,253	8,703	13,584	5,531	27,818	570,071

The following tables summarize the fair values of the bank's derivative portfolio at 31 December segregated between derivatives that are in a favourable or receivable position and those in an unfavourable or payable position. Fair values of derivative instruments are determined using observable inputs (note 23).

	Held for trading			Hedge accounting			
	Favourable position	Unfavourable position	Net position	Favourable position	Unfavourable position	Net position	Total net position
	$m	$m	$m	$m	$m	$m	$m
Interest rate contracts	**3,323**	**(3,317)**	**6**	**261**	**(415)**	**(154)**	**(148)**
– swaps	**3,320**	**(3,313)**	**7**	**261**	**(415)**	**(154)**	**(147)**
– caps	**—**	**(1)**	**(1)**	**—**	**—**	**—**	**(1)**
– other interest rate	**3**	**(3)**	**—**	**—**	**—**	**—**	**—**
Foreign exchange contracts	**1,861**	**(1,913)**	**(52)**	**—**	**—**	**—**	**(52)**
– spot	**3**	**(4)**	**(1)**	**—**	**—**	**—**	**(1)**
– forward	**1,342**	**(1,397)**	**(55)**	**—**	**—**	**—**	**(55)**
– currency swaps and options	**516**	**(512)**	**4**	**—**	**—**	**—**	**4**
Other derivative contracts	**2**	**(2)**	**—**	**—**	**—**	**—**	**—**
– commodity	**2**	**(2)**	**—**	**—**	**—**	**—**	**—**
At 31 Dec 2020	**5,186**	**(5,232)**	**(46)**	**261**	**(415)**	**(154)**	**(200)**
Interest rate contracts	1,588	(1,620)	(32)	117	(224)	(107)	(139)
– swaps	1,580	(1,613)	(33)	117	(224)	(107)	(140)
– caps	—	—	—	—	—	—	—
– other interest rate	8	(7)	1	—	—	—	1
Foreign exchange contracts	1,562	(1,529)	33	—	(58)	(58)	(25)
– spot	2	(2)	—	—	—	—	—
– forward	1,057	(1,030)	27	—	—	—	27
– currency swaps and options	503	(497)	6	—	(58)	(58)	(52)
Other derivative contracts	—	—	—	—	—	—	—
– commodity	—	—	—	—	—	—	—
At 31 Dec 2019	3,150	(3,149)	1	117	(282)	(165)	(164)

Use of derivatives

The bank undertakes derivative activities for three primary purposes: to create risk management solutions for clients, to manage the portfolio risks arising from client business, and to manage and hedge our own risks. Most of the bank's derivative exposures arise from sales and trading activities and are treated as traded risk for market risk management purposes.

The bank's derivative activities give rise to open positions in portfolios of derivatives. These positions are managed constantly to ensure that they remain within acceptable risk levels in accordance with the bank's approved risk management policies, with offsetting deals being used to achieve this where necessary. When entering into derivative transactions, the bank employs the same credit risk management procedures that are used for traditional lending to assess and approve potential credit exposures.

Analysis of the derivative portfolio and related credit exposure

	2020				2019			
	Notional amount[1]	Positive replacement cost[2]	Credit equivalent amount[3]	Risk-weighted balance[4]	Notional amount[1]	Positive replacement cost[2]	Credit equivalent amount[3]	Risk-weighted balance[4]
	$m	$m	$m	$m	$m	$m	$m	$m
Interest rate contracts	**425,061**	**278**	**640**	**487**	420,422	351	824	327
– future	**37,938**	**—**	**11**	**—**	37,851	—	17	1
– swaps	**386,577**	**274**	**613**	**485**	381,111	342	784	318
– caps	**184**	**—**	**1**	**1**	190	—	1	2
– other interest rate contracts	**362**	**4**	**15**	**1**	1,270	9	22	6
Foreign exchange contracts	**144,413**	**511**	**2,220**	**679**	149,639	428	2,368	835
– spot	**7,854**	**—**	**—**	**—**	3,415	—	3	2
– forward	**113,347**	**282**	**1,708**	**418**	125,641	196	1,796	605
– currency swaps and options	**23,212**	**229**	**512**	**261**	20,583	232	569	228
Other derivative contracts	**428**	**—**	**—**	**—**	10	—	1	1
– commodity	**428**	**—**	**—**	**—**	10	—	1	1
At 31 Dec	**569,902**	**789**	**2,860**	**1,166**	570,071	779	3,193	1,163

1. *The notional contract amounts of derivatives held for trading purposes and derivatives designated in hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.*
2. *Positive replacement cost represents the total fair value of all outstanding contracts in a gain position after factoring in the master netting agreements.*
3. *Credit equivalent amount is the current replacement cost plus an amount for future credit exposure associated with the potential for future changes in currency and interest rates. The future credit exposure is calculated using a formula prescribed by OSFI in its capital adequacy guidelines.*
4. *Risk-weighted balance represents a measure of the amount of regulatory capital required to support the derivative activities. It is estimated by risk weighting the credit equivalent amounts according to the credit worthiness of the counterparties using factors prescribed by OSFI in its capital adequacy guidelines.*

Interest rate futures are exchange-traded. All other contracts are over-the-counter.

Derivatives held for trading

Most of the bank's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities in derivatives are entered into principally for the purpose of generating profits from short-term fluctuations in price or margin. Positions may be traded actively or be held over a period of time to benefit from expected changes in currency rates, interest rates, equity prices or other market parameters. Trading includes market-making, positioning and arbitrage activities. Market-making entails quoting bid and offer prices to other market participants for the purpose of generating revenues based on spread and volume; positioning means managing market risk positions in the expectation of benefiting from favourable movements in prices, rates or indices; arbitrage involves identifying and profiting from price differentials between markets and products.

Other derivatives classified as held for trading include non-qualifying hedging derivatives, ineffective hedging derivatives and the components of hedging derivatives that are excluded from assessing hedge effectiveness. Non-qualifying hedging derivatives are entered into for risk management purposes as described in the following section but do not meet the criteria for hedge accounting.

Derivatives in hedge accounting relationships

The bank uses derivatives (principally interest rate swaps) for hedging purposes in the management of its own asset and liability portfolios and structural positions. This enables the bank to optimize the overall cost to the bank of accessing debt capital markets, and to mitigate the market risk which would otherwise arise from structural imbalances in the maturity and other profiles of its assets and liabilities.

Fair value hedges

The bank's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate financial instruments due to movements in market interest rates. For qualifying fair value hedges, all changes in the fair value of the derivative and in the fair value of the item in relation to the risk being hedged are recognized in the income statement. If the hedge relationship is terminated, the fair value adjustment to the hedged item continues to be reported as part of the basis of the item and is amortized to the income statement as a yield adjustment over the remainder of the hedging period.

Hedging instrument by hedged risk

	Hedging Instrument				
		Carrying amount			
	Notional amount[1]	Assets	Liabilities	Balance sheet presentation	Change in fair value[2]
Hedged Risk	$m	$m	$m		$m
Interest rate	**10,772**	**42**	**415**	**Derivatives**	**(507)**
At 31 Dec 2020	**10,772**	**42**	**415**		**(507)**
Interest rate	14,452	72	180	Derivatives	(180)
At 31 Dec 2019	14,452	72	180		(180)

1. *The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.*
2. *Used in effectiveness testing; comprising the full fair value change of the hedging instrument not excluding any component.*

Hedged item by hedged risk

	Hedged Item						Ineffectiveness	
	Carrying amount		Accumulated fair value hedge adjustments included in carrying amount			Change in fair value[1]	Recognized in profit and loss	
	Assets	Liabilities	Assets	Liabilities	Balance sheet presentation			Profit and loss presentation
Hedged Risk	$m	$m	$m	$m		$m	$m	
Interest rate	**8,905**	**—**	**390**	**—**	**Financial investments**	**554**	**4**	**Net income from financial instruments held for trading**
	—	**2,428**	**—**	**(35)**	**Debt securities in issue**	**(44)**		
At 31 Dec 2020	**8,905**	**2,428**	**390**	**(35)**		**510**	**4**	
Interest rate	12,457	—	89	—	Financial investments	176	1	Net income from financial instruments held for trading
	—	2,303	—	9	Debt securities in issue	5		
At 31 Dec 2019	12,457	2,303	89	9		181	1	

1. *Used in effectiveness assessment; comprising amount attributable to the designated hedged risk that can be a risk component.*

Sources of hedge ineffectiveness may arise from basis risk including but not limited to the discount rates used for calculating the fair value of derivatives, hedges using instruments with a non-zero fair value and notional and timing differences between the hedged items and hedging instruments.

For some debt securities held, the bank manages interest rate risk in a dynamic risk management strategy. The assets in scope of this strategy are high quality fixed-rate debt securities, which may be sold to meet liquidity and funding requirements.

The interest rate risk of fixed rate debt securities issued by the bank is managed in a non-dynamic risk management strategy.

Timing of the notional amounts and average rates of the hedging instruments (excluding dynamic hedges)

	Notional amount 3 months or less	Rate (average)	Notional amount More than 3 months but less than 1 year	Rate (average)	Notional amount More than 1 year but less than 5 years	Rate (average)	Notional amount More than 5 years	Rate (average)
Hedged risk	$m	%	$m	%	$m	%	$m	%
Interest rate								
– swaps	**—**	**—**	**77**	**2.28**	**2,285**	**2.17**	**35**	**2.97**
At 31 Dec 2020	**—**		**77**		**2,285**		**35**	
Interest rate								
– swaps	522	2.04	328	1.21	1,390	2.30	75	2.93
At 31 Dec 2019	522		328		1,390		75	

Cash flow hedges

The bank's cash flow hedging instruments consist principally of interest rate swaps and cross-currency swaps that are used to manage the variability in future interest cash flows of non-trading financial assets and liabilities, arising due to changes in market interest rates and foreign-currency basis.

The bank applies macro cash flow hedging strategies for interest-rate risk exposures on portfolios of replenishing current and forecasted issuances of non-trading assets and liabilities that bear interest at variable rates, including rolling such instruments. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities on the basis of their contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate cash flows representing both principal balances and interest cash flows across all portfolios are used to determine the effectiveness and ineffectiveness. Macro cash flow hedges are considered to be dynamic hedges.

The bank also hedges the variability in future cash-flows on foreign-denominated financial assets and liabilities arising due to changes in foreign exchange market rates with cross-currency swaps; these are considered non-dynamic hedges.

Hedging instrument by hedged risk

	Hedging Instrument					Hedged Item	Ineffectiveness	
		Carrying amount						
	Notional amount[1]	Assets	Liabilities	Balance sheet presentation	Change in fair value	Change in fair value	Recognized in profit and loss	Profit and loss presentation
Hedged Risk	$m	$m	$m		$m	$m	$m	$m
Foreign currency	**64**	**—**	**—**	**Derivatives**	**63**	**(63)**	**—**	**Net income from financial instruments held for trading**
Interest rate	**5,674**	**219**	**—**	**Derivatives**	**265**	**(262)**	**3**	
At 31 Dec 2020	**5,738**	**219**	**—**		**328**	**(325)**	**3**	
Foreign currency	958	—	58	Derivatives	88	(88)	—	Net income from financial instruments held for trading
Interest rate	12,408	44	44	Derivatives	16	(15)	1	
At 31 Dec 2019	13,366	44	102		104	(103)	1	

1. *The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.*

Sources of hedge ineffectiveness may arise from basis risk, including but not limited to timing differences between the hedged items and hedging instruments and hedges using instruments with a non-zero fair value.

Reconciliation of equity and analysis of other comprehensive income by risk type

	2020		2019	
	Interest rate	**Foreign Currency**	Interest rate	Foreign Currency
	$m	**$m**	$m	$m
Cash flow hedging reserve at 1 Jan	**4**	**(1)**	(15)	(3)
Fair value gains	**261**	**63**	15	88
Fair value (gains)/losses reclassified from the cash flow hedge reserve to the income statement	**(74)**	**(62)**	10	(85)
Income taxes	**(50)**	**—**	(6)	(1)
Cash flow hedging reserve at 31 Dec	**141**	**—**	4	(1)

Interest Rate Benchmark Reform: Amendments to IFRS 9 and IAS 39 'Financial Instruments'

The first set of amendments ('Phase 1') to IFRS 9 and IAS 39, which were published in September 2019, primarily enabled an assumption to be made that the interbank offered rates ('IBORs') are to continue unaltered for the purposes of forecasting hedged cash flows until such time as the uncertainty of transitioning to nearly Risk-Free Rates ('RFRs') is resolved. The second set of amendments ('Phase 2'), issued in

August 2020 enables an entity to modify hedge documentation to reflect the components of hedge relationships which have transitioned to RFRs on an economically equivalent basis as a direct result of the IBOR transition.

While the application of Phase 1 amendments is mandatory for accounting periods starting on or after 1 January 2020, the bank has chosen to early adopt the Phase 2 amendments from the beginning of 2020. Significant judgement will be required in determining when IBOR transition uncertainty is resolved and therefore decide when Phase 1 amendments will cease to apply and when some of the Phase 2 amendments can be applied.

The bank has cash flow and fair value hedge accounting relationships that are exposed to different IBORs, predominantly CDOR, US Dollar LIBOR, Sterling LIBOR and EURIBOR. Existing derivatives, loans, bonds, and other financial instruments designated in these relationships referencing IBORs are expected to transition to new RFRs in different ways and at different times. External progress on the transition to RFRs is being monitored, with the objective of ensuring a smooth transition for the bank's hedge accounting relationships. The specific issues arising will vary with the details of each hedging relationship, but may arise due to the transition of existing products included in the designation, a change in expected volumes of products to be issued, a change in contractual terms of new products issued, or a combination of these factors. Some hedges may need to be de-designated and new relationships entered into, while others may survive the transition.

The hedge accounting relationships that are affected by the adoption of the temporary exceptions are hedged items presented in the balance sheet as 'Financial investments', 'Loans and advances to customers' and 'Debt securities in issue'.

The notional amounts of the derivatives designated in hedge accounting relationships represent the extent of the risk exposure managed by the bank that is directly affected by IBOR reform and impacted by the temporary exceptions. Details of these are presented below:

Hedging instrument impacted by IBOR reform

	Hedging instrument						
	Impacted by IBOR Reform						
	GBP	USD	CAD	EUR	Total	Not Impacted by IBOR Reform	Notional contract amount[1]
	$m	$m	$m	$m	$m	$m	$m
Fair Value Hedges	**69**	**5,382**	**5,282**	**—**	**10,733**	**39**	**10,772**
Cash Flow Hedges	**—**	**—**	**5,674**	**—**	**5,674**	**64**	**5,738**
At 31 Dec 2020	**69**	**5,382**	**10,956**	**—**	**16,407**	**103**	**16,510**
Fair Value Hedges	69	5,073	9,090	184	14,416	36	14,452
Cash Flow Hedges	—	—	12,408	—	12,408	—	12,408
At 31 Dec 2019	69	5,073	21,498	184	26,824	36	26,860

1. *The notional contract amounts of derivatives designated in qualifying hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.*

The main market events in scope of IBOR reform during 2020 were the changes applied by central clearing counterparties to remunerating EURO and USD collateral. While there was a minimal valuation impact to the derivatives in scope which are used for hedge accounting, these changes had no discontinuation impact to any of the designated relationships affected.

The bank continues to monitor market-wide IBOR reform changes and plans to effect the transition of IBOR hedged items, hedged risks and hedging instruments to RFRs following methodologies which are not expected to result in discontinuation of designated hedge relationships.

13 Financial investments

Carrying amount of financial investments

		2020	2019
	Footnote	$m	$m
Debt securities		**19,873**	23,625
– Canadian and Provincial Government bonds	1	**11,782**	14,577
– international Government bonds	1	**2,838**	3,326
– other debt securities issued by banks and other financial institutions		**3,502**	4,105
– treasury and other eligible bills		**1,751**	1,617
Equity securities		**6**	20
At 31 Dec		**19,879**	23,645
Financial investments		**19,879**	23,645
– not subject to repledge or resale by counterparties		**19,788**	20,083
– which may be repledged or resold by counterparties		**91**	3,562

1. *Includes government guaranteed bonds.*

Term to maturity of financial investments

	2020	2019
	$m	$m
Less than 1 year	**3,285**	3,533
1-5 years	**15,694**	14,277
5-10 years	**894**	5,815
No specific maturity	**6**	20
At 31 Dec	**19,879**	23,645

14 Property, plant and equipment

	Freehold land and buildings $m	Leasehold improvements $m	Equipment, fixtures and fittings $m	Right-of-use assets[1] $m	Total $m
Cost					
At 1 Jan 2020	**–**	**163**	**51**	**289**	**503**
Additions at cost	**–**	**7**	**4**	**13**	**24**
Disposals and write-offs	**–**	**(31)**	**(4)**	**(3)**	**(38)**
Net remeasurements	**–**	**–**	**–**	**(6)**	**(6)**
At 31 Dec 2020	**–**	**139**	**51**	**293**	**483**
Accumulated depreciation and impairment					
At 1 Jan 2020	**–**	**(99)**	**(25)**	**(40)**	**(164)**
Depreciation and impairment charge for the year	**–**	**(21)**	**(10)**	**(47)**	**(78)**
Disposals and write-offs	**–**	**29**	**4**	**3**	**36**
At 31 Dec 2020	**–**	**(91)**	**(31)**	**(84)**	**(206)**
Net carrying amount at 31 Dec 2020	**–**	**48**	**20**	**209**	**277**
Cost					
At 1 Jan 2019	1	159	59	—	219
Effect of adoption of IFRS 16 as at 1 January 2019	—	—	—	269	269
Additions at cost	—	18	3	20	41
Disposals and write-offs	(1)	(14)	(11)	—	(26)
At 31 Dec 2019	—	163	51	289	503
Accumulated depreciation and impairment					
At 1 Jan 2019	—	(92)	(26)	n/a	(118)
Depreciation and impairment charge for the year	—	(21)	(10)	(40)	(71)
Disposals and write-offs	—	14	11	—	25
At 31 Dec 2019	—	(99)	(25)	(40)	(164)
Net carrying amount at 31 Dec 2019	—	64	26	249	339

1. *The recognized right-of-use assets relate to the lease of properties for our branches and offices.*

15 Investments in subsidiaries

At 31 December 2020, HSBC Bank Canada wholly-owned the following principal subsidiaries:

Subsidiary	Place of incorporation	Carrying value of voting shares[1] $m
HSBC Finance Mortgages Inc.	Toronto, Ontario, Canada	410
HSBC Trust Company (Canada)	Vancouver, British Columbia, Canada	201
HSBC Securities (Canada) Inc.	Toronto, Ontario, Canada	187
HSBC Mortgage Corporation (Canada)	Vancouver, British Columbia, Canada	25
HSBC Global Asset Management (Canada) Limited	Vancouver, British Columbia, Canada	19
HSBC Private Wealth Services (Canada) Inc.	Toronto, Ontario, Canada	14

1. *The carrying value of voting shares is the bank's equity in such investments.*

16 Structured entity and other arrangements

Mortgage Backed Securities

The bank periodically creates National Housing Act Mortgage Backed Securities with certain of the bank's mortgages identified as collateral for such securities and issues these legally created securities to either the Canada Housing Trust or directly to the Canada Mortgage and Housing Corporation. The Canada Housing Trust is a structured entity sponsored by Canada Mortgage and Housing Corporation which issues Canada Mortgage Bonds. The bank does not have any decision-making power over Canada Housing Trust or the Canada Mortgage and Housing Corporation. The bank's only exposure to the Trust and the Corporation is derived from the contractual arrangements arising from the legal transfer of the mortgage backed securities and related collateral. Additional information can be found in note 24 in respect to assets securitized.

HSBC Investment funds

The bank establishes and manages investment funds such as mutual funds and pooled funds, acts as an investment manager and earns market-based management fees. The bank does not consolidate those mutual and pooled funds in which our interests indicated that we are exercising our decision making power as an agent of the other unit holder. Seed capital is provided from time to time to HSBC managed investment funds for initial launch. The bank consolidates those investment funds in which it has power to direct the relevant activities of the funds and in which the seed capital, or the units held by the bank, are significant relative to the total variability of returns of the funds such that the bank is deemed to be a principal rather than an agent.

HSBC Mortgage Fund

The bank periodically transfers mortgages to the HSBC Mortgage Fund (the 'fund') in accordance with the investment parameters of the fund and recognizes a liability for mortgages sold with recourse for the initial proceeds received. The bank provides an undertaking to repurchase mortgages which are in arrears for a period that is greater than 90 days and repurchases mortgages in certain circumstances when an individual mortgage is prepaid in full. In addition to these obligations the bank provides a liquidity arrangement to the HSBC Mortgage Fund whereby if the level of redemption requests by unitholders cannot be met by the fund the bank will either repurchase such funds as are deemed necessary by the HSBC Mortgage Fund to satisfy the liquidity requirements arising from unitholder requests or facilitate the purchase of such mortgages by a third party at the bank's discretion. The bank has not received any such liquidity requests from the fund in respect of unitholder redemptions. The fund is not consolidated as the bank does not have control over the fund as it has insufficient absolute returns or variability of returns to consolidate the fund. Information on mortgages sold with recourse can be found in note 25.

HSBC Canadian Covered Bond (Legislative) Guarantor Limited Partnership

HSBC Canadian Covered Bond (Legislative) Guarantor Limited Partnership ('the Guarantor LP') was established by the bank to support our covered bond program by providing a direct, unconditional and irrevocable guarantee for the payment of interest and principal due under the covered bond program. The Guarantor LP holds residential mortgages acquired from the bank for the purpose of meeting its obligations under the covered bond guarantee. The entity is consolidated as the bank has the decision-making power over its activities and remains exposed to the performance of the underlying mortgages.

See note 20 for further details on the covered bond program.

HSBC Canadian Covered Bond (Legislative) GP Inc.

The HSBC Canadian Covered Bond (Legislative) GP Inc. ('the Managing General Partner') is wholly-owned by the bank and is responsible for the day-to-day operations of the Guarantor LP. The directors and officers of the Managing General Partner are the bank's employees.

17 Other assets

	2020	2019
	$m	$m
Accounts receivable	**339**	349
Settlement accounts	**614**	710
Cash collateral	**470**	510
Other	**7**	11
At 31 Dec	**1,430**	1,580

18 Goodwill and intangible assets

	2020	2019
	$m	$m
Goodwill	**23**	23
Computer software	**144**	132
At 31 Dec	**167**	155

Impairment testing

The bank's impairment test in respect of goodwill allocated to a cash-generating unit ('CGU') is performed annually in early January, unless there is an early indication of impairment. As at 31 December 2020, the net recoverable amount exceeds the carry value of the cash-generating unit including goodwill. Therefore, no goodwill impairment was recognized in 2020 (2019: nil).

Basis of the recoverable amount

The recoverable amount of CGU to which goodwill has been allocated is based on value in use ('VIU'). The VIU is calculated by discounting management's cash flow projections for the CGU.

19 Trading liabilities

	2020	2019
	$m	$m
Net short positions in securities	**1,831**	2,296
At 31 Dec	**1,831**	2,296

20 Debt securities in issue

	2020	2019
	$m	$m
Bonds and medium term notes	**9,218**	11,091
Covered bonds	**3,883**	2,266
Money market instruments	**4,286**	1,237
At 31 Dec	**17,387**	14,594

Term to maturity

	Footnote	2020	2019
		$m	$m
Less than 1 year	1	**7,456**	4,018
1-5 years	1	**9,896**	10,452
5-10 years		**35**	124
At 31 Dec		**17,387**	14,594

1. *Includes covered bonds.*

The Canadian registered covered bonds, which are debt securities in issue, are secured by a segregated pool of uninsured residential mortgages on properties in Canada that is held by a separate guarantor entity i.e. HSBC Canadian Covered Bond (Legislative) Guarantor Limited Partnership, established by the bank exclusively for the Covered Bond Program (the 'Program'). Under the terms of the Program, the bank issued covered bonds that are direct, unsecured and unconditional obligations of the bank. The covered bonds are treated equivalent to deposits that are ranked *pari passu* with all customer accounts of the bank without any preference among themselves and at least *pari passu* with all other unsubordinated and unsecured obligations of the bank, present and future.

The legal title on the residential mortgages that is secured by a segregated pool is held by the Guarantor LP.

At 31 December 2020, the total amount of the mortgages transferred and outstanding was $11,294m (2019: $6,349m) and $3,883m of covered bonds were recorded as debt securities in issue on our consolidated balance sheet (2019: $2,266m).

Beginning in the second quarter, we participated in the Insured Mortgage Purchase Program ('IMPP'), launched by the Government of Canada as part of their response to COVID-19. Under the IMPP, we assessed whether substantially all of the risks and rewards of the loans have been transferred, in order to determine if the mortgages qualify for derecognition. Since we continue to be exposed to substantially all of the risks and rewards of ownership associated with these securitized mortgages, they do not qualify for derecognition. We continue to recognize the loans and recognize the related cash proceeds as secured financing. At 31 December 2020, the total amount of the mortgages transferred and outstanding was $451m and $450m of the associated liability was recorded as debt security in issue on our consolidated balance sheet.

21 Other liabilities

	2020	2019
	$m	$m
Mortgages sold with recourse	**1,955**	1,715
Lease liabilities	**226**	258
Accounts payable	**282**	256
Settlement accounts	**354**	915
Cash collateral	**225**	211
Other	**49**	18
Share based payment related liability	**6**	11
At 31 Dec	**3,097**	3,384

22 Subordinated liabilities

Subordinated debt and debentures, which are unsecured and subordinated in right of payment to the claims of depositors and certain other creditors, comprise:

	Footnote	Year of Maturity	Carrying amount	
			2020	**2019**
			$m	**$m**
Interest rate (%)				
Issued to HSBC Group				
– 3 month Canadian Dollar Offered Rate plus 1.92%	1	2028	**1,000**	1,000
Issued to third parties				
– 30 day bankers' acceptance rate plus 0.50%		2083	**11**	33
Debt and debentures at amortized cost			**1,011**	1,033

1. *The subordinated debt issued to HSBC Group includes non-viability contingency capital ('NVCC') provisions, necessary for the instrument to qualify as Tier 2 regulatory capital under Basel III. In the event that OSFI determines that a regulatory defined non-viability trigger event has occurred, NVCC provisions require the full and permanent write off of the subordinated debt.*

23 Fair values of financial instruments

Control framework

Fair values are subject to a control framework designed to ensure that they are either determined, or validated, by a function independent of the risk-taker. To this end, ultimate responsibility for the determination of fair values lies with the bank's finance department ('Finance'). Finance establishes the accounting policies and procedures governing valuation, and is responsible for ensuring that they comply with all relevant accounting standards.

Where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is used. For inactive markets, the bank sources alternative market information, with greater weight given to information that is considered to be more relevant and reliable. Examples of the factors considered are price observability, instrument comparability, consistency of data sources, underlying data accuracy and timing of prices.

For fair values determined using valuation models, the control framework includes development or validation by independent support functions of the model logic, inputs, model outputs and adjustments. Valuation models are subject to a process of due diligence before becoming operational and are calibrated against external market data on an ongoing basis.

Changes in fair value are generally subject to a profit and loss analysis process and are disaggregated into high-level categories including portfolio changes, market movements and other fair value adjustments.

Fair value hierarchy

Fair values of financial assets and liabilities are determined according to the following hierarchy:

- Level 1 – valuation technique using quoted market price: financial instruments with quoted prices for identical instruments in active markets that the bank can access at the measurement date.
- Level 2 – valuation technique using observable inputs: financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- Level 3 – valuation technique with significant unobservable inputs: financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

The best evidence of fair value is a quoted price in an actively traded market. In the event that the market for a financial instrument is not active, a valuation technique is used. The judgment as to whether a market is active may include, but is not restricted to, the consideration of factors such as the magnitude and frequency of trading activity, the availability of prices and the size of bid/offer spreads. In inactive markets, obtaining assurance that the transaction price provides evidence of fair value or determining the adjustments to transaction prices that are necessary to measure the fair value of the instrument requires additional work during the valuation process.

Valuation techniques incorporate assumptions about factors that other market participants would use in their valuations. A range of valuation techniques is employed, dependent upon the instrument type and available market data. Most valuation techniques are based upon discounted cash flow analysis, in which expected future cash flows are calculated and discounted to present value using a discounting curve. Prior to consideration of credit risk, the expected future cash flows may be known, as would be the case for the fixed leg of an interest rate swap, or may be uncertain and require projection, as would be the case for the floating leg of an interest rate swap. The valuation techniques the bank applies utilize market forward curves, if available. In option models, the probability of different potential future outcomes must be considered. In addition, the value of some products are dependent upon more than one market factor, and in these cases it will typically be necessary to consider how movements in one market factor may impact the other market factors. The model inputs necessary to perform such calculations include interest rate yield curves, exchange rates, volatilities, correlations, prepayment and default rates.

The majority of valuation techniques employ only observable market data and so the reliability of the fair value measurement is high. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, and for them, the derivation of fair value is more judgmental. An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, a significant proportion of the instrument's carrying amount and/or inception profit ('day 1 gain and loss') is driven by unobservable inputs. 'Unobservable' in this context means that there is little or no current market data available from which to determine the level at which an arm's length transaction would be likely to occur. It generally does not mean that there is no market data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used). Furthermore, in some cases the majority of the fair value derived from a valuation technique with significant unobservable inputs may be attributable to the observable inputs. Consequently, the effect of uncertainty in the determining unobservable inputs will generally be restricted to uncertainty about the overall fair value of the financial instrument being measured.

In certain circumstances, primarily where debt is hedged with interest rate derivatives or structured notes issued, the bank uses fair value to measure the carrying value of its own debt in issue. The bank records its own debt in issue at fair value, based on quoted prices in an active market for the specific instrument concerned, if available. When quoted market prices are unavailable, the own debt in issue is valued using valuation techniques, the inputs for which are either based upon quoted prices in an inactive market for the instrument, or are estimated by comparison with quoted prices in an active market for similar instruments. In both cases, the fair value includes the effect of applying the credit spread which is appropriate to the bank's liabilities. For all issued debt securities, discounted cash flow modeling is used to separate the change in fair value that may be attributed to the bank's credit spread movements from movements in other market factors such as benchmark interest rates or foreign exchange rates. Specifically, the change in fair value of issued debt securities attributable to the bank's own credit spread is computed as follows: for each security at each reporting date, an externally verifiable price is obtained or a price is derived using credit spreads for similar securities for the same issuer. Then, using discounted cash flow, each security is valued using a risk-free discount curve. The difference in the valuations is attributable to the bank's own credit spread. This methodology is applied consistently across all securities.

Structured notes issued and certain other hybrid instrument liabilities are included within trading liabilities and are measured at fair value. The credit spread applied to these instruments is derived from the spreads at which the bank would issue structured notes.

Gains and losses arising from changes in the credit spread of liabilities issued by the bank reverse over the contractual life of the debt, provided that the debt is not repaid early. All positions in non-derivative financial instruments, and all derivative portfolios, are valued at bid or offer prices as appropriate. Long positions are marked at bid prices; short positions are marked at offer prices.

The fair value of a portfolio of financial instruments quoted in an active market is calculated as the product of the number of units and its quoted price and no block discounts are made.

Transaction costs are not included in the fair value calculation, nor are the future costs of administering the over the counter derivative portfolio. These, along with trade origination costs such as brokerage fees and post-trade costs, are included either in 'Fee expense' or in 'Total operating expenses'.

A detailed description of the valuation techniques applied to instruments of particular interest follows:

Private equity

The bank's private equity portfolios are classified as investments in associates held at fair value and are not traded in active markets. In the absence of an active market, an investment's fair value is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors, as well as by reference to market valuations for similar entities quoted in an active market, or the price at which similar companies have changed ownership. The exercise of judgment is required because of uncertainties inherent in estimating fair value for private equity investments.

Debt securities, treasury and other eligible bills, and equities

The fair value of these instruments is based on quoted market prices from an exchange, dealer, broker, industry group or pricing service, when available. When unavailable, the fair value is determined by reference to quoted market prices for similar instruments, adjusted as appropriate for the specific circumstances of the instruments.

In the absence of quoted market prices, fair value is determined using valuation techniques based on the calculation of the present value of expected future cash flows of the assets. The inputs to these valuation techniques are derived from observable market data and, where relevant, assumptions in respect of unobservable inputs.

Derivatives

Over-the-counter (i.e. non-exchange traded) derivatives are valued using valuation models. Valuation models calculate the present value of expected future cash flows, based upon 'no-arbitrage' principles. For many vanilla derivative products, such as interest rate swaps and European options, the modeling approaches used are standard across the industry. For more complex derivative products, there may be some differences in market practice. Inputs to valuation models are determined from observable market data wherever possible, including prices available from exchanges, dealers, brokers or providers of consensus pricing. Certain inputs may not be observable in the market directly, but can be determined from observable prices via model calibration procedures. Finally, some inputs are not observable, but can generally be estimated from historical data or other sources. Examples of inputs that are generally observable include foreign exchange spot and forward rates, benchmark interest rate curves and volatility surfaces for commonly traded option products. Examples of inputs that may be unobservable include volatility spreads, in whole or in part, for less commonly traded option products, and correlations between market factors such as foreign exchange rates, interest rates and equity prices.

HSBC views the Overnight Indexed Swap ('OIS') curve or the Risk Free Rate ('RFR') curve where available as the base discounting curve for all derivatives, both collateralized and uncollateralized, and utilizes a 'funding fair value adjustment' to reflect the funding of uncollateralized derivative exposure at rates other than OIS or RFR.

Derivative products valued using valuation techniques with significant unobservable inputs comprise certain long-dated foreign exchange options.

Structured notes

The fair value of structured notes is derived from the fair value of the underlying debt security as described above, and the fair value of the embedded derivative is determined as described in the paragraph above on derivatives.

Trading liabilities valued using a valuation technique with significant unobservable inputs comprised equity-linked structured notes, which are issued by the bank and provide the counterparty with a return that is linked to the performance of certain equity securities. The notes are classified as Level 3 due to the unobservability of parameters such as long-dated equity volatilities, correlations between equity prices and interest rates and between interest rates and foreign exchange rates.

Bases of valuing financial assets and liabilities measured at fair value

The table below provides an analysis of the various bases described above which have been deployed for valuing financial assets and financial liabilities measured at fair value in the consolidated financial statements.

	Valuation techniques			
	Level 1 quoted market price	Level 2 using observable inputs	Level 3 with significant unobservable inputs	Total
	$m	$m	$m	$m
At 31 Dec 2020				
Assets				
Trading assets	**1,659**	**60**	**—**	**1,719**
Other financial assets mandatorily measured at fair value through profit or loss	**—**	**9**	**—**	**9**
Derivatives	**—**	**5,447**	**—**	**5,447**
Financial investments	**19,873**	**6**	**—**	**19,879**
Liabilities				
Trading liabilities	**1,776**	**55**	**—**	**1,831**
Derivatives	**—**	**5,647**	**—**	**5,647**
At 31 Dec 2019				
Assets				
Trading assets	4,257	65	—	4,322
Other financial assets mandatorily measured at fair value through profit or loss	—	5	—	5
Derivatives	—	3,267	—	3,267
Financial investments	23,612	33	—	23,645
Liabilities				
Trading liabilities	2,286	10	—	2,296
Derivatives	—	3,431	—	3,431

Transfers between Level 1 and Level 2 fair values

	Assets		Liabilities
	Trading assets	Financial investments	Trading liabilities
	$m	$m	$m
At 31 Dec 2020			
Transfer from Level 1 to Level 2	**14**	**—**	**25**
Transfer from Level 2 to Level 1	**—**	**12**	**—**
At 31 Dec 2019			
Transfer from Level 1 to Level 2	—	—	—
Transfer from Level 2 to Level 1	2	278	2

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each reporting period. Transfers into and out of levels of the fair value hierarchy are primarily attributable to changes in observability of valuation inputs and price transparency.

Fair values of financial instruments not carried at fair value

Fair values at the balance sheet date of the assets and liabilities set out below are estimated for the purpose of disclosure as follows:

(a) Loans and advances to banks and customers

The fair value of loans and advances is based on observable market transactions, where available. In the absence of observable market transactions, fair value is estimated using discounted cash flow models. Performing loans are grouped, as far as possible, into homogeneous pools segregated by maturity and coupon rates. In general, contractual cash flows are discounted using the bank's estimate of the discount rate that a market participant would use in valuing instruments with similar maturity, repricing and credit risk characteristics.

The fair value of a loan portfolio reflects both loan impairments at the reporting date and estimates of market participants' expectations of credit losses over the life of the loans. For impaired loans, fair value is estimated by discounting the future cash flows over the time period in which they are expected to be recovered.

(b) Deposits by banks and customer accounts

For the purposes of estimating fair value, deposits by banks and customer accounts are grouped by residual maturity. Fair values are estimated using discounted cash flows, applying current rates offered for deposits of similar remaining maturities. The fair value of a deposit repayable on demand approximates its book value.

(c) Debt securities in issue and subordinated liabilities

Fair values are determined using quoted market prices at the reporting date where available, or by reference to quoted market prices for similar instruments.

The fair values in this note are stated at a specific date and may be significantly different from the amounts which will actually be paid on the maturity or settlement dates of the instruments. In many cases, it would not be possible to realize immediately the estimated fair values given the size of the portfolios measured. Accordingly, these fair values do not represent the value of these financial instruments to the bank as a going concern.

For all classes of financial instruments, fair value represents the product of the value of a single instrument, multiplied by the number of instruments held.

The following table lists financial instruments whose carrying amount is a reasonable approximation of fair value because, for example, they are short-term in nature or reprice to current market rates frequently:

Assets	Liabilities
Cash and balances at central bank	Items in the course of transmission to other banks
Items in the course of collection from other banks	Deposits by banks
Loans and advances to banks	Acceptances
Customers' liability under acceptances	Short-term payables within 'Other liabilities'
Short-term receivables within 'Other assets'	Accruals
Reverse repurchase agreements – non-trading	Repurchase agreements – non-trading
Accrued income	

Fair values of financial instruments not carried at fair value

		2020					2019	
		Carrying amount	Fair value	Level 1 quoted market price	Level 2 using observable inputs	Level 3 with significant unobservable inputs	Carrying amount	Fair value
	Footnote	$m	$m	$m	$m	$m	$m	$m
At 31 Dec								
Assets								
Loans and advances to customers	1	**61,002**	**61,309**	**–**	**–**	**61,309**	61,922	61,917
Liabilities								
Customer accounts		**71,950**	**72,234**	**–**	**72,234**	**–**	62,889	63,166
Debt securities in issue		**17,387**	**17,792**	**–**	**17,792**	**–**	14,594	14,722
Subordinated liabilities		**1,011**	**1,047**	**–**	**1,047**	**–**	1,033	1,030

1. *Loans and advances to customers specifically relating to Canada: carrying amount $57,449m and fair value $57,738m.*

24 Assets pledged, collateral received and assets transferred

Assets charged as security for liabilities and contingent obligations

In the ordinary course of business, we pledge assets recorded on our consolidated balance sheet in relation to securitization activity, covered bonds, mortgages sold with recourse, securities lending and securities sold under repurchase agreements. These transactions are conducted under terms that are usual and customary to standard securitization, covered bonds, mortgages sold with recourse, securities lending and repurchase agreements. In addition, we also pledge assets to secure our obligations within payment and depository clearing systems.

		2020	2019
	Footnotes	$m	$m
Cash		**470**	510
Residential mortgages	1	**8,984**	6,317
Debt securities	2	**1,060**	6,076
At 31 Dec		**10,514**	12,903

1. *Includes the mortgages pledged for the covered bond program.*
2. *Certain prior year amount has been reclassified to conform to the current year presentation.*

The bank is required to pledge assets to secure its obligations in the Large Value Transfer System ('LVTS'), which processes electronically in real-time large value and time-critical payments in Canada. In the normal course of business, pledged assets are released upon settlement of the bank's obligations at the end of each business day. Only in rare circumstances are we required to borrow from the Bank of Canada to cover any settlement obligations. Under those circumstances, the pledged assets would be used to secure the borrowing. No amounts were outstanding under this arrangement at 31 December 2020 or 2019. Consequently, the assets pledged with respect to the bank's LVTS obligations have not been included in the table above.

Collateral accepted as security for assets

The fair value of financial assets accepted as collateral that the bank is permitted to sell or repledge in the absence of default is $6,513m (2019: $8,050m). The fair value of financial assets accepted as collateral that have been sold or repledged is $4,630m (2019: $5,428m). The bank is obliged to return equivalent assets.

These transactions are conducted under terms that are usual and customary to standard securities borrowing and reverse repurchase agreements.

Assets transferred

The following table analyzes the carrying amount of financial assets as at 31 December that did not qualify for derecognition during the year as the bank did not transfer substantially all of the variability of the risks and rewards of ownership and their associated financial liabilities recognized for the proceeds received.

Transferred financial assets not qualifying for full derecognition and associated financial liabilities

		Carrying amount of:		Fair value of:		
		Transferred assets	Associated liabilities	Transferred assets	Associated liabilities	Net position
	Footnotes	$m	$m	$m	$m	$m
At 31 Dec 2020						
– assets securitized		**2,470**	**2,441**	**2,490**	**2,530**	**(40)**
– mortgages sold with recourse		**1,955**	**1,955**	**2,004**	**2,004**	**—**
– repurchase agreements	1	**797**	**797**	**797**	**797**	**—**
At 31 Dec 2019						
– assets securitized		2,029	2,009	2,026	2,038	(12)
– mortgages sold with recourse		1,715	1,715	1,722	1,722	—
– repurchase agreements	1, 2	5,714	5,714	5,714	5,714	—

1. *Transfers of financial assets subject to repurchase agreements are presented prior to any offsetting adjustments.*
2. *Certain prior year amount has been reclassified to conform to the current year presentation.*

In addition to assets securitized as noted above which did not result in derecognition of the transferred financial instruments, the bank has also created $821m (2019: $57m) of securitized assets which are collateralized by certain of the bank's mortgage receivables which remain on the bank's balance sheet. A liability has not been recognized as the securitized assets have not been transferred to third parties. The retained mortgage-backed securities are available as collateral for secured funding liabilities.

25 Share capital

Authorized

Preferred – Unlimited number of Class 1 preferred shares in one or more series and unlimited number of Class 2 preferred shares in one or more series. We may, from time to time, divide any unissued Class 1 preferred shares into separate series and fix the number of shares in each series along with the associated rights, privileges, restrictions and conditions.

Common – Unlimited number of common shares.

Issued and fully paid

		2020		2019	
	Footnotes	Number of shares	Share capital $m	Number of shares	Share capital $m
Preferred shares Class 1	1	**44,000,000**	**1,100**	44,000,000	1,100
– Series G	2	**—**	**—**	20,000,000	500
– Series H	3	**20,000,000**	**500**	—	—
– Series I	4	**14,000,000**	**350**	14,000,000	350
– Series K	5	**10,000,000**	**250**	10,000,000	250
Common shares	6	**548,668,000**	**1,725**	498,668,000	1,225

1. *The Class 1 preferred shares include non-viability contingency capital ('NVCC') provisions, necessary for the preferred shares to qualify as Tier 1 regulatory capital under Basel III. In the event that OSFI determines that a regulatory defined non-viability trigger event has occurred, NVCC provisions require the write off and cancellation of the preferred shares against equity.*
2. *The Series G shares are non-voting, non-cumulative and redeemable. Each share yields 4%, payable quarterly, as and when declared. On 30 June 2020 and every 5 years thereafter, the dividend rate will reset to be equal to the then current 5-year Government of Canada bond yield plus 2.94%. Subject to regulatory approval, the bank may on 30 June 2020 and every 5 years thereafter, redeem a portion or all of the Series G shares at a cash redemption price of $25 per share. The holder of the Series G shares may, subject to certain conditions, on 30 June 2020 and every 5 years thereafter, convert a portion or all of the Series G shares into non-cumulative floating rate Series H preferred shares. The holder of the Series G shares exercised their option to convert the Series G shares into Series H shares on 30 June 2020.*
3. *The Series H shares are non-voting, non-cumulative and redeemable. Dividends are based on the three-month Government of Canada Treasury Bill yield plus 2.94%, payable quarterly, as and when declared. Subject to regulatory approval, the bank may (i) on 30 June 2025 and every 5 years thereafter, redeem a portion or all of the Series H shares at a cash redemption price of $25 per share or (ii) on any other date on or after 30 June 2020 redeem a portion or all of the Series H shares at a cash redemption price of $25.50. The holder of the Series H shares may on 30 June 2025 and every 5 years thereafter, convert a portion or all of the Series H shares into Series G shares.*
4. *The Series I shares are non-voting, non-cumulative and redeemable. The initial dividend was fixed at $0.37 per share and was paid on 31 March 2018. Thereafter, each share yields 4.6%, payable quarterly, as and when declared. On 31 December 2022, and every 5 years thereafter, the dividend rate will reset to be equal to the then current 5-year Government of Canada bond yield plus 2.95%. Subject to regulatory approval, the bank may on 31 December 2022 and every 5 years thereafter, redeem a portion or all of the Series I shares at a cash redemption price of $25 per share. The holder of the Series I shares may, subject to certain conditions, on 31 December 2022 and every 5 years thereafter, convert a portion or all of the Series I shares into non-cumulative floating rate Series J preferred shares. The Series J shares are non-voting, non-cumulative and redeemable. Dividends are based on the three-month Government of Canada Treasury Bill yield plus 2.95%, payable quarterly, as and when declared. Subject to regulatory approval, the bank may (i) on 31 December 2027 and every 5 years thereafter, redeem a portion or all of the Series J shares at a cash redemption price of $25 per share or (ii) on any other date on or after 31 December 2022 redeem a portion or all of the Series J shares at a cash redemption price of $25.50. The holder of the Series J shares may on 31 December 2027 and every 5 years thereafter, convert a portion or all of the Series J shares into Series I shares.*

5. *The Series K shares are non-voting, non-cumulative and redeemable. The initial dividend was fixed at $0.35560 per share and was paid on 31 December 2019. Thereafter, each share yields 5.45%, payable quarterly, as and when declared. On 30 September 2024 and every 5 years thereafter, the dividend rate will reset to be equal to the then current 5-year Government of Canada bond yield plus 4.011%. Subject to regulatory approval, the bank may on 30 September 2024 and every 5 years thereafter, redeem a portion or all of the Series K shares at a cash redemption price of $25 per share. The holder of the Series K shares may, subject to certain conditions, on 30 September 2024 and every 5 years thereafter, convert a portion or all of the Series K shares into non-cumulative floating rate Series L preferred shares. The Series L shares are non-voting, non-cumulative and redeemable. Dividends are based on the three-month Government of Canada Treasury Bill yield plus 4.011%, payable quarterly, as and when declared. Subject to regulatory approval, the bank may (i) on 30 September 2029 and every 5 years thereafter, redeem a portion or all of the Series L shares at a cash redemption price of $25 per share or (ii) on any other date on or after 30 September 2024 redeem a portion or all of the Series L shares at a cash redemption price of $25.50. The holder of the Series L shares may on 30 September 2029 and every 5 years thereafter, convert a portion or all of the Series L shares into Series K shares.*
6. *On 30 March 2020, the bank issued an additional 50,000,000 common shares to HSBC Overseas Holdings (UK) Limited.*

26 Contingent liabilities, contractual commitments and guarantees

	Footnote	2020 $m	2019 $m
Guarantees:			
– financial guarantees	1	**1,985**	2,124
– performance guarantees	2	**3,812**	3,345
At 31 Dec		**5,797**	5,469
Commitments:			
– standby facilities, credit lines and other commitments to lend		**43,879**	42,444
– documentary credits and short-term trade-related transactions		**563**	277
At 31 Dec		**44,442**	42,721

1. *Financial guarantees require the issuer to make specified payments to reimburse the holder for a loss incurred because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. The amounts in the above table are nominal principal amounts.*
2. *Performance bonds, bid bonds, standby letters of credit and other transaction-related guarantees are undertakings by which the obligation on the bank and/or the bank to make payment depends on the outcome of a future event.*

The preceding table discloses the nominal principal amounts of off-balance sheet liabilities and commitments for the bank, which represent the maximum amounts at risk should the contracts be fully drawn upon and the clients default. As a significant portion of guarantees and commitments are expected to expire without being drawn upon, the total of the nominal principal amounts is not indicative of future liquidity requirements.

The bank provides guarantees and similar undertakings on behalf of both third party customers and other entities within the bank. These guarantees are generally provided in the normal course of the bank's banking business. The risks and exposures arising from guarantees are captured and managed in accordance with the bank's overall credit risk management policies and procedures. Guarantees with terms of more than one year are subject to the bank's annual credit review process.

27 Finance lease receivables and lease commitments

Finance lease receivables

The bank leases a variety of assets to third parties under finance leases, including transport assets, property and general plant and machinery. At the end of the lease terms, assets may be sold to third parties or leased for further terms. This includes sale and lease-back arrangements. Rentals are calculated to recover the cost of assets less their residual value, and earn finance income.

	2020			2019		
	Total future minimum payments $m	**Unearned finance income $m**	**Present value $m**	Total future minimum payments $m	Unearned finance income $m	Present value $m
Lease receivables:						
No later than one year	**597**	**(54)**	**543**	680	(55)	625
One to two years	**502**	**(37)**	**465**	496	(37)	459
Two to three years	**352**	**(22)**	**330**	369	(22)	347
Three to four years	**233**	**(13)**	**220**	232	(12)	220
Four to five years	**128**	**(7)**	**121**	143	(6)	137
Later than five years	**135**	**(4)**	**131**	107	(7)	100
At 31 Dec	**1,947**	**(137)**	**1,810**	2,027	(139)	1,888

Lease commitments

The amount of lease agreements with a commencement date after 31 December 2020 is $97m (2019: $91m).

28 Related party transactions

The immediate parent company of the bank is HSBC Overseas Holdings (UK) Limited and the ultimate parent company is HSBC Holdings. Both are incorporated in England. The bank's related parties include the immediate parent, ultimate parent, fellow subsidiaries and Key Management Personnel.

(a) Transactions with Key Management Personnel

Key Management Personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the bank and includes members of the Board of HSBC Bank Canada.

Compensation of Key Management Personnel

The following represents the compensation paid to the Key Management Personnel of the bank in exchange for services rendered to the bank.

Compensation of Key Management Personnel

	Footnote	2020 $m	2019 $m
Short-term employee benefits	1	**13**	16
Post-employment benefits		**1**	1
Share-based payments		**2**	3
Year ended 31 Dec		**16**	20

1. *Directors receive fees but do not receive salaries and other short-term employee benefits.*

Other transactions, arrangements and agreements involving Key Management Personnel

The disclosure of the year-end balance and the highest balance during the year is considered the most meaningful information to represent transactions during the year. The transactions below were made in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with persons of a similar standing or, where applicable, with other employees. The transactions did not involve more than the normal risk of repayment or present other unfavourable features.

		2020		2019	
	Footnote	Highest balance during the year $m	Balance at 31 December $m	Highest balance during the year $m	Balance at 31 December $m
Key Management Personnel	1				
– loans		**8.2**	**4.8**	9.4	6.3
– credit cards		**0.3**	**0.2**	0.3	0.2

1. *Includes Key Management Personnel, close family members of Key Management Personnel and entities which are controlled, jointly controlled or significantly influenced, or for which significant voting power is held, by Key Management Personnel or their close family member.*

(b) Transactions between the bank and HSBC Group

Transactions detailed below include amounts due to/from the bank and HSBC Group. The disclosure of the year-end balance and the highest balance during the year is considered the most meaningful information to represent transactions during the year. The transactions below were made in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third party counterparties. Certain collateral for derivatives are handled by other HSBC Group affiliate who have agreements with selected clearing houses and exchanges.

	2020		2019	
	Highest balance during the year $m	Balance at 31 December $m	Highest balance during the year $m	Balance at 31 December $m
Assets				
Derivatives	**5,838**	**4,217**	3,100	2,360
Loans and advances to banks	**1,196**	**1,004**	696	696
Other assets	**2,444**	**336**	1,677	480
Liabilities				
Deposits by banks	**1,195**	**971**	865	858
Customer accounts	**48**	**48**	41	41
Repurchase agreements – non-trading	**785**	**40**	2,284	847
Derivatives	**7,473**	**4,271**	3,584	2,309
Other liabilities	**1,958**	**282**	1,200	270
Subordinated liabilities	**1,000**	**1,000**	1,000	1,000

On 30 March 2020, the bank issued an additional 50 million common shares to HSBC Overseas Holding (UK) Limited. Further details can be found in the note 25.

On 30 June 2020, HSBC Overseas Holdings (UK) Limited, holder of the preferred shares Series G, exercised its option to convert the preferred shares Series G into preferred shares Series H in accordance with their terms.

	2020 $m	2019 $m
Income Statement		
Interest income	**–**	14
Interest expense	**(48)**	(91)
Fee income	**26**	21
Fee expense	**(16)**	(17)
Other operating income	**31**	26
General and administrative expenses	**(312)**	(290)

29 Offsetting of financial assets and financial liabilities

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

		Amounts subject to enforceable netting arrangements						
					Amounts not set off in the balance sheet			
		Gross amounts	Amounts offset	Net amounts in the balance sheet	Financial instruments	Non-cash collateral	Cash collateral	Net amount
	Footnote	$m	$m	$m	$m	$m	$m	$m
Financial assets								
Derivatives (note 12)	1	**5,447**	**—**	**5,447**	**(4,480)**	**(50)**	**(326)**	**591**
Reverse repurchase agreements:		**6,649**	**(653)**	**5,996**	**—**	**(5,996)**	**—**	**—**
– loan and advances to banks at amortized cost		**520**	**(100)**	**420**	**—**	**(420)**	**—**	**—**
– loan and advances to customers at amortized cost		**6,129**	**(553)**	**5,576**	**—**	**(5,576)**	**—**	**—**
Loans and advances to customers		**844**	**—**	**844**	**(748)**	**—**	**—**	**96**
At 31 Dec 2020		**12,940**	**(653)**	**12,287**	**(5,228)**	**(6,046)**	**(326)**	**687**
Derivatives (note 12)	1, 2	3,267	—	3,267	(2,503)	(2)	(288)	474
Reverse repurchase agreements:		8,195	(1,926)	6,269	—	(6,269)	—	—
– loan and advances to banks at amortized cost		493	(172)	321	—	(321)	—	—
– loan and advances to customers at amortized cost		7,702	(1,754)	5,948	—	(5,948)	—	—
Loans and advances to customers		1,014	—	1,014	(788)	—	—	226
At 31 Dec 2019		12,476	(1,926)	10,550	(3,291)	(6,271)	(288)	700
Financial liabilities								
Derivatives (note 12)	1	**5,647**	**—**	**5,647**	**(4,480)**	**(85)**	**(549)**	**533**
Repurchase agreements		**3,880**	**(653)**	**3,227**	**—**	**(3,227)**	**—**	**—**
– deposits by banks at amortized cost		**1,076**	**(100)**	**976**	**—**	**(976)**	**—**	**—**
– customer accounts at amortized cost		**2,804**	**(553)**	**2,251**	**—**	**(2,251)**	**—**	**—**
Customer accounts excluding repos at amortized cost		**1,584**	**—**	**1,584**	**(748)**	**—**	**—**	**836**
At 31 Dec 2020		**11,111**	**(653)**	**10,458**	**(5,228)**	**(3,312)**	**(549)**	**1,369**
Derivatives (note 12)	1, 2	3,431	—	3,431	(2,503)	(147)	(602)	179
Repurchase agreements		9,024	(1,926)	7,098	—	(7,098)	—	—
– deposits by banks at amortized cost		3,215	(172)	3,043	—	(3,043)	—	—
– customer accounts at amortized cost		5,809	(1,754)	4,055	—	(4,055)	—	—
Customer accounts excluding repos at amortized cost		1,422	—	1,422	(788)	—	—	634
At 31 Dec 2019		13,877	(1,926)	11,951	(3,291)	(7,245)	(602)	813

1. *Includes derivative amounts that are both subject to and not subject to enforceable master netting agreements and similar agreements.*
2. *Certain prior year amounts have been reclassified to conform to the current year presentation.*

30 Legal proceedings and regulatory matters

The bank is subject to a number of legal proceedings and regulatory matters arising in the normal course of our business. The bank does not expect the outcome of any of these proceedings, in aggregate, to have a material effect on its consolidated balance sheet or its consolidated income statement.

31 Events after the reporting period

On 19 February 2021, the bank declared regular quarterly dividends for the first quarter 2021 on all series of HSBC Bank Canada Class 1 preferred shares, to be paid in accordance with their terms in the usual manner on 31 March 2021 or the first business day thereafter to the shareholder of record on 15 March 2021.

On 19 February 2021, the bank also declared a final dividend of $195m on HSBC Bank Canada common shares in respect of the financial year ending 31 December 2020, which will be paid on or before 30 March 2021 to the shareholder of record on 19 February 2021.

As the quarterly dividends on preferred shares for the first quarter of 2021 and the final dividend on common shares for 2020 were declared after 31 December 2020, the amounts have not been included in the balance sheet of the bank as a liability.

There have been no other material events after the reporting period which would require disclosure or adjustment to the 31 December 2020 consolidated financial statements.

These accounts were approved by the Board of Directors on 19 February 2021 and authorized for issue.

HSBC Group International Network[1]

Services are provided in 64 countries and territories

Europe	Asia-Pacific	Americas	Middle East and Africa
Armenia	Australia	Argentina	Algeria
Austria	Bangladesh	Bermuda	Bahrain
Belgium	China	Brazil	Egypt
Channel Islands	India	British Virgin Islands	Israel
Czech Republic	Indonesia	Canada	Kuwait
France	Japan	Cayman Islands	Lebanon
Germany	Korea, Republic of	Chile	Mauritius
Greece	Malaysia	Colombia	Morocco
Ireland	Maldives	Mexico	Oman
Isle of Man	New Zealand	Peru	Qatar
Italy	Philippines	United States of America	Saudi Arabia
Luxembourg	Singapore	Uruguay	South Africa
Malta	Sri Lanka		Turkey
Netherlands	Taiwan		United Arab Emirates
Poland	Thailand		
Russia	Vietnam		
Spain	Hong Kong Special Administrative Region		
Sweden	Macau Special Administrative Region		
Switzerland			
United Kingdom			

[1] As of 31 December 2020

Executive Committee[1]

Linda Seymour
Group General Manager, President and Chief Executive Officer
Toronto

Kimberly Flood
Senior Vice President and Head of Communications
Toronto

Georgia Stavridis
Chief Compliance Officer
Vancouver

Larry Tomei
Executive Vice President and Head of Wealth and Personal Banking
Toronto

Lilac Bosma
General Counsel
Vancouver

Kim Hallwood
Head of Corporate Sustainability
Vancouver

Gerhardt Samwell
Chief Financial Officer
Vancouver

Sophia Tsui
Senior Vice President and Chief Auditor
Vancouver

Andrew Cherry
Head of Global Markets Canada
Toronto

Scott Lampard
Head of Global Banking Canada
Toronto

Kim Toews
Executive Vice President and Head of Human Resources
Vancouver

Josée Turcotte
Senior Vice President, Corporate Secretary and Head of Governance
Toronto

Lisa Dalton
Chief of Staff, Office of the CEO
Vancouver

Stephen L. O'Leary
Chief Risk Officer
Vancouver

Caroline A Tose
Chief Operating Officer
Vancouver

Board of Directors[1]

Samuel Minzberg
Chair of the Board, HSBC Bank Canada and Of Counsel, Davies Ward Phillips & Vineberg LLP

Linda Seymour
Group General Manager, President and Chief Executive Officer, HSBC Bank Canada

Larry Tomei
Executive Vice President and Head of Wealth and Personal Banking, HSBC Bank Canada

Stephen Moss
Group Managing Director, Regional Chief Executive for Europe; the Middle East, North Africa and Turkey; Latin America; Canada, HSBC Holdings plc

Judith J. Athaide
President and Chief Executive Officer, Cogent Group Inc.

Robert G. McFarlane
Chair of the Audit, Risk and Conduct Review Committee, HSBC Bank Canada and Corporate Director

Mark S. Saunders
Executive Vice-President, Enterprise Services, Sun Life Financial Inc.

Karen L. Gavan
Corporate Director

Beth S. Horowitz
Corporate Director

[1]As of February 2021

Shareholder information

PRINCIPAL ADDRESSES

Vancouver:
HSBC Bank Canada
300-885 West Georgia Street
Vancouver, British Columbia
Canada V6C 3E9
Tel: 604-685-1000
Fax: 604-641-3098

Toronto:
HSBC Bank Canada
70 York Street
Toronto, Ontario
Canada M5J 1S9

Media Inquiries:
English:
416-868-3878
416-868-8282
416-673-6997
French:
416-868-8282
416-673-6997

Website
www.hsbc.ca

Social Media
Twitter: @HSBC_CA
Facebook: @HSBCCanada
YouTube: HSBC Canada
Instagram: @hsbc_ca

INVESTOR RELATIONS CONTACT

Enquiries may be directed to Investor Relations by writing to:

HSBC Bank Canada
Investor Relations -
Finance Department
Fourth Floor
2910 Virtual Way
Vancouver, British Columbia
Canada V5M 0B2
Email: investor_relations@hsbc.ca

More HSBC contacts

HSBC Global Asset Management (Canada) Limited
1 (888) 390-3333

HSBC Investment Funds (Canada) Inc.
1 (800) 830-8888
www.hsbc.ca/funds

HSBC Private Wealth Services (Canada) Inc.
1 (844) 756-7783

HSBC Securities (Canada) Inc.
1 (800) 760-1180

For more information, or to find the HSBC Bank Canada branch nearest you, call 1 (888) 310-4722 or visit our website at www.hsbc.ca

HSBC Bank Canada

885 West Georgia Street
Vancouver, British Columbia
Canada V6C 3E9
Telephone: 1 604 685 1000
www.hsbc.ca