

# BUILDING A PLACE TO CALL HOME

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**ANNUAL REPORT  
2018**







By 2030,  
everyone in Canada  
has a home that  
they can afford  
and that meets  
their needs.

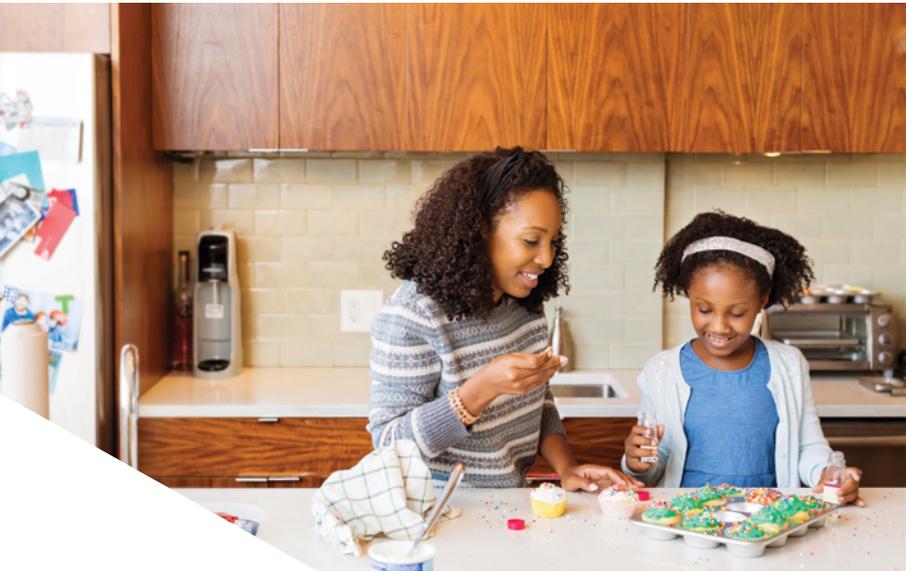
“We believe that  
Canada must  
be an example  
to the world as  
a place where  
anyone feels  
they belong.”

EVAN SIDDALL  
President & CEO



# TABLE OF CONTENTS

Message from the Chair	5
Message from the President	6
Message from the CFO	8
Our 2018 Corporate Plan Framework	10
Management Discussion & Analysis	12
Our Activities	13
Adapting to Increase Access to Housing	15
Spotlight on The National Housing Strategy	16
Welcoming Insights on the Needs of All Canadians	19
Our Performance Highlights	20
Transforming How We Work to Deliver Results for Canadians	23
Operating Environment	24
Expanding Our Abilities to Keep Up in a Data-Driven Society	27
Financial Results	28
Renewing Our Partnerships for Better Outcomes	34
Historical Information	37
Bringing Voices Together to Shape the Future of Housing	38
Risk Management	39
Innovating to Advance Housing Solutions	41
Corporate Governance	131
Board of Directors	132
Compensation and Attendance Record	133
Senior Management	134
Glossary	136



# MESSAGE FROM THE CHAIR

Wherever you are in Canada, housing affordability is top of mind. We hear about it in the news, at work, around the dinner table. When people can't afford a home that meets their needs, it doesn't only affect those individuals and their families; it affects the economic and social well-being of all Canadians. So, in 2018, as CMHC's Board of Directors met to discuss a refreshed strategy for the company, it was clear that housing affordability *must* be the focus.

This strategy is the result of a collaborative process between the Board of Directors – a diverse group of highly engaged leaders, each committed to improving the lives of Canadians and a skilled and motivated senior management team. We articulated an ambitious goal that gives CMHC's work new pertinence and purpose: *By 2030, everyone in Canada has a home that they can afford and that meets their needs.*

Realizing our ambitious goal requires an aligned organization where each person is enabled to work effectively and in alignment with our plans. As you'll read in this report, CMHC continued a major technology and business transformation, while at the same time delivering a key federal priority, the National Housing Strategy. The results we have achieved to date are impressive, and demonstrate our commitment to serving and bringing value to Canadians living from coast to coast to coast.

In 2018, I also had the chance to represent CMHC at events organized by several of our housing affordability partners. I've met with private and not-for-profit developers, foundations, governments, Indigenous communities, and people who have deep and urgent housing needs. I continue to be motivated by the impact that CMHC has on people's welfare and inspired by the overwhelming support for CMHC's work. Our refreshed strategy is a result of engaging with those who benefit from our actions and those who are partners in the delivery of our services.

CMHC will continue to strengthen these partnerships and build new ones in the years ahead. I look forward to working with dedicated, talented and passionate people who share our goal that, by 2030, everyone in Canada has a home that they can afford and that meets their needs.



Derek Ballantyne  
Chair, Board of Directors



# MESSAGE FROM THE PRESIDENT

Dear Minister, parliamentarians, colleagues and Canadians,

CMHC asserted its *raison d'être* in 2018 when we declared our goal that **“By 2030, everyone in Canada has a home that they can afford and that meets their needs.”**

Our audacious aspiration belongs to CMHC alone, yet we will only succeed with the help of others. After refocusing our business in 2014 and implementing a technology-driven business transformation from 2016 until now, we have again restructured our company to support a strategy focused on working with others to ensure housing affordability for all. This strategy has four key elements described later in this report and in greater detail in our 2019-2023 Strategic (Corporate) Plan.

## 2018 Highlights

We were occupied last year with the implementation of Canada's first National Housing Strategy (NHS), which was also proudly crafted by CMHC. The year marked several milestones on this 10-year, \$40-billion journey:

- Completion of a multilateral NHS framework in April, and completion of bilateral agreements with Ontario, British Columbia, New Brunswick and the Northwest Territories
- Launch of the National Housing Co-Investment Fund
- Expansion of the Rental Construction Financing Initiative to finance the construction of 14,000 new homes for renters
- Launch of the Federal Community Housing Initiative
- Hosting of the first ever National Housing Conference

We operate our company to ensure value for taxpayers. In 2018, we earned \$1.4 billion on \$4.8 billion of revenues, generating a return on equity in our commercial operations of 8.7% (our government assistance programs are operated to break even). And we did more than we ever have without increasing our employment levels. Our 1,900 people were associated with \$1.9 million in revenue per person. We achieved substantially all of our Strategic Plan targets for the fifth consecutive year.

## Housing Affordability and Boom/Bust Cycles

Our goal contemplates both good times – periods of economic expansion – and bad – especially the spectre of housing-related financial crises. We know that housing's unique character as something we consume, invest in and trade can promote volatile boom and bust cycles. We cannot ignore the fact that housing boom and bust cycles preceded over two-thirds of the 46 systemic banking crises for which house price data are available.

Housing markets in Canadian cities moderated slightly in 2018. Government measures undoubtedly contributed somewhat to the resulting slowdown in activity and house price growth. Patience and discipline will be required for many more years as incomes slowly catch up to the high levels of household indebtedness still observed in Canada (177.5% of income as of the third quarter of 2018). Sustained housing affordability therefore requires discipline and we need to avoid the temptation of short-term gratification that can be inherent in shorter electoral cycles.

Regrettably, the burden of tighter mortgage underwriting falls on first-time home buyers. The additional interest rate “stress test” that is now required is particularly constraining. However, we need to remind people regularly that trees don't grow to the sky and the century-long Canadian housing boom will not continue unabated forever. Younger Canadians are the most exposed to the risk of a sudden and severe housing market correction. Having a home we can afford also means not borrowing to the point of excess.

As it is, qualified first-time homebuyers receive substantial support from the government and we will continue to speak against ideas that contribute to further price inflation. Where supply is constrained – in Vancouver and Toronto especially – making it easier to buy a house can often serve only to push prices higher.

Well-intentioned support for home buyers often proves to have the opposite effect by making affordability worse, merely adding to existing homeowners' wealth at the expense of younger Canadians. Home buyer support must therefore be balanced against this risk. As a matter of fact, we estimate that the much-maligned stress test has reduced average home prices in Canada by 3.4%.



## Outlook

We are ready for whatever comes in 2019. Aside from being more focused in what we do, our risk management discipline will reach the maturity we have long targeted this year. Our rigorous risk frameworks are operational and are supported by a crisis playbook that we will test in a “tabletop” simulation this spring.

As I write this note in March 2019, we are in the midst of an enterprise-wide reorganization in support of our new strategy. Our Technology and Business Transformation partnership with Accenture will allow us to automate more activities, improving controls and risk management as well as supporting innovation.

We are also transforming how we work in order to give our employees greater autonomy and flexibility. Our employee-inspired Results-Only Work Environment (ROWE) treats us all as entrepreneurs, with clear goals, regular measurement against those goals, and managers who have been selected and trained to make work easier. Effective leadership is essential to achieving our targets; our reorganization conscientiously places a priority on key leadership skills. Consistent with these ideas, we will transform our workplace to promote increased collaboration, innovation and productivity.

## CMHC and Inclusion

Finally, we will continue to act as a standard bearer for inclusivity. We believe that Canada must be an example to the world as a place where anyone feels they belong. Starting with gender, we are proud that half of our people leaders are women. Much more, however, we will continue to build an increasingly diverse workforce. We use a 14-factor Diversity Index to track our workforce. And we will also convene a pan-governmental diversity and inclusion conference in June with a focus on the financial sector, where it has proven hard for women to feel fully included.

Ultimately, inclusion starts with a safe place to call home. Housing affordability for all rests at the centre of human dignity. Home is our foundation.

As a company, as a group of colleagues – indeed as Canadians – we will not rest until everyone in Canada has a home that they can afford and that meets their needs.

Evan Siddall  
President & CEO

# MESSAGE FROM THE CFO

CMHC exists for a single reason: **to make housing affordable for everyone in Canada.** We are passionate about this purpose, and we carefully manage our resources to deliver solutions that help create new housing, preserve existing housing and support low- and middle-income Canadians. At the same time, our Mortgage Insurance and Mortgage Funding activities support access to homeownership while also remaining profitable.

Sharing our passion for this purpose, I'm proud to provide you with a summary of our 2018 financial results.

Our total revenues for the year were \$4.8 billion, consisting primarily of \$2.3 billion in government funding (appropriations) for housing programs and \$2.4 billion in revenues from our Mortgage Insurance and Mortgage Funding activities. From these, we generated a net income of \$1.4 billion, with our Mortgage Insurance and Mortgage Funding activities contributing \$1 billion and \$400 million, respectively.

Our continued profitability allowed us to declare over \$4 billion in dividends to the federal government over the course of the year. For the first time, this included \$175 million in dividends from Mortgage Funding activities.

We also put significant focus on creating several key NHS programs, launching the \$13.2 billion National Housing Co-Investment Fund in May. Interest in this program has been strong and we are working hard to prioritize the numerous applications received to date.

In line with market trends, our homeowner mortgage insurance volumes decreased by 8% in 2018. Nevertheless, we helped more than 123,000 households across the country purchase homes. Sixty-five per cent of these households were first-time homebuyers and approximately 14% bought in rural communities. Yet, while homeowner volumes declined, we continued to see strong demand for our multi-unit Mortgage Insurance products. We insured an additional 113,000 rental housing units during the year.

At the end of 2018, our total insurance-in-force stood at \$448 billion with an arrears rate of just 0.29%. For this, we held \$12 billion in capital, representing 168% of our minimum regulatory capital target. Comprehensive stress testing performed during the year confirmed that our capital is sufficient to withstand severe adverse scenarios, ensuring that we can meet our insurance obligations.



Our Mortgage Funding programs continue to support competition and financial stability by providing financial institutions with access to reliable funding for their mortgage lending activities. In 2018, we provided guarantees for more than \$127 billion in National Housing Act Mortgage-Backed Securities and \$40 billion in Canada Mortgage Bonds, providing the funding for nearly 600,000 homebuyers in Canada. We ended the year with \$488 billion in guarantees-in-force and \$2.5 billion in available equity, representing 209% of our required equity.

We are striving to meet a bold new aspiration: "By 2030, everyone in Canada will have a home that they can afford and that meets their needs." To do this, we will continue to use strong financial stewardship to help improve housing affordability. We will also stand ready to respond to changing dynamics in the housing market should the need arise.

For more detail, I invite you to read our 2018 audited financial statements and notes.

  
Lisa Williams CPA, CA  
Chief Financial Officer



# OUR 2018 CORPORATE PLAN FRAMEWORK

## Our Mission

We help Canadians meet their housing needs.

## Our Vision

The heart of a world-leading housing system.

## Our Ultimate Outcomes

Canada has a stable, competitive and innovative housing system.

Canadians in need have access to affordable and sustainable housing.

## Core Priorities

Four strategic priorities guided our efforts in 2018.



### Reduce Housing Need

by reducing the number of Canadian households spending more than 30% of their before-tax income for acceptable local housing.



### Embrace Risk

by ensuring that risk-taking is an expected and valued part of our approach to work, becoming second nature for all employees.



### Enable Our Work

by providing employees with the right tools, leaders and work environment to foster engagement, innovation and professional development.



### Think Digital

by harnessing the power and opportunities offered by technology to ensure we do the right work the right way.

## How did we “reduce housing need” in 2018?

- **16,563** housing units committed for construction or repair through the National Housing Strategy
- **317,000** households given access to affordable and adequate housing through Budget 2016 expenditures
- **200+** applications received to support the construction, repair or renew althrough the National Housing Co-Investment Fund
- **5,404** units committed under the Rental Construction Financing initiative
- Reliable housing information and data provided to clients:
  - **96%** found our information useful
  - **90%** said our new products are relevant and address data gaps
- **600,000** loans facilitated through our Mortgage Funding activities

## How did we “embrace risk, enable our work and think digital” in 2018?

- **88%** of our milestones achieved in our technology transformation project plan
- **99.8%** of our mission-critical IT systems made available
- Core risk management capabilities strengthened:
  - **98%** of action plans completed to better manage risk
  - **84%** risk awareness indicated through our risk culture survey
- Diverse and talented workforce attracted and retained with the following representation rates:
  - **25.2%** visible minorities
  - **4.2%** persons with disabilities
  - **50.8%** women in leadership
- Supported employees’ learning goals, leadership development and career ambitions

# MANAGEMENT DISCUSSION & ANALYSIS

The following Management Discussion and Analysis (MD&A) of the financial condition and results of operations as approved by the Board of Directors on 21 March 2019 is prepared for the year ended 31 December 2018. This MD&A should be read in conjunction with the audited consolidated financial statements. Unless otherwise indicated, all financial information in this report has been prepared in accordance with International Financial Reporting Standards (IFRS) and all amounts are expressed in Canadian dollars.

## Forward-looking statements

Our Annual Report contains forward-looking statements that include, but are not limited to, statements with respect to our outlook for the regulatory environment in which we operate, the outlook and priorities for each activity and the risk environment. By their nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties that may cause actual results to differ materially from expectations expressed in the forward-looking statements.

## Non-IFRS measures

We use a number of financial measures to assess our performance. Some of these measures are not calculated in accordance with IFRS, are not defined by IFRS, and do not have standardized meanings that would ensure consistency and comparability with other institutions. These non-IFRS measures are presented to supplement the information disclosed in the consolidated financial statements and notes to the consolidated financial statements, which are prepared in accordance with IFRS and may be useful in analyzing performance and understanding the measures used by management in its financial and operational decision making. Where non-IFRS measures are used throughout the Annual Report, a definition of the term will be disclosed in the glossary for non-IFRS financial measures.

# OUR ACTIVITIES

## Assisted Housing

### What we do

We help Canadians in need access suitable housing they can afford. This is done through government-funded programs, often in partnership with provinces and territories.

### How we do it

We work with non-profit organizations, private sector companies, First Nation communities and all levels of government on a breakeven basis. Together, we fund and deliver housing programs, provide lending at below-market rates, and provide subsidized and non-subsidized housing support.

## Housing Analysis and Research

### What we do

We provide timely analysis, insight and advice on housing markets to the federal government, housing sector partners and Canadians.

### How we do it

We work with a wide range of organizations to identify, communicate and fill data gaps to better understand housing conditions. This includes focusing on the housing needs of Canada's most vulnerable populations.

We do research and policy analysis to support a well-functioning, financially stable housing system and to promote housing affordability and choice.

## Mortgage Insurance

### What we do

We offer competitive Mortgage Insurance products to promote home ownership access and to support the stability of the Canadian financial system.

### How we do it

Working with lenders, we offer Mortgage Insurance products to Canadians from coast to coast to coast.

We also offer multi-unit Mortgage Insurance, which provides access to preferred interest rates for the construction, purchase and refinancing of multi-unit residential properties.

### Our products

#### Transactional Homeowner Insurance

- Protects lenders against borrower default, enabling qualified borrowers with down payments of 5-20% to access comparable interest rates to borrowers with larger down payments.

#### Portfolio Insurance

- Allows lenders to pool low-ratio residential mortgages (1-4 unit properties) and insure these against borrower default for the purpose of creating mortgage-backed securities through our securitization programs.

#### Multi-unit Residential Insurance

- Protects the lender against borrower default on loans for the construction, purchase and refinancing of multi-unit (5+ unit) residential properties.

## Mortgage Funding

### What we do

We provide approved financial institutions with access to affordable and reliable mortgage financing. We enable them to pool eligible mortgages into marketable securities that are sold to investors.

### How we do it

We guarantee the timely payment of principal and interest of National Housing Act Mortgage-Backed Securities (NHA MBS), which are issued by approved financial institutions.

We issue Canada Mortgage Bonds (CMBs) through the Canada Housing Trust (CHT).

We oversee the Canadian Registered Covered Bond Program.

## Our products

### NHA MBS Program

- Enables approved financial institutions to transform insured residential mortgages into marketable securities to raise affordable and reliable mortgage financing.

We guarantee the timely payment of the principal and interest payments to investors, which is backed by the Government of Canada.

### CMB Program

- Provides approved financial institutions with access to affordable and reliable mortgage financing.

We issue CMBs (through the CHT) and uses the proceeds to purchase newly issued NHA MBS.

### Canadian Registered Covered Bond Program

- Enables lenders to pool assets, primarily uninsured Canadian residential mortgages, and sell them to investors to raise affordable and reliable mortgage financing.

Operates on a cost recovery basis. (The program is administered, but not guaranteed, by CMHC.)

The following table shows the share of outstanding mortgage credit by funding sources and demonstrates the importance of our Mortgage Funding programs:

<b>(in percentages)</b>	All mortgage lenders		Large banks		Other mortgage lenders	
	2018	2017	2018	2017	2018	2017
CMHC Securitization	30%	31%	23%	22%	51%	55%
Covered Bonds	10%	9%	13%	12%	1%	1%
Other funding sources	60%	60%	64%	66%	48%	44%

# ADAPTING TO INCREASE ACCESS TO HOUSING

Approximately 15% of the Canadian labour-force is self-employed and may have difficulty accessing mortgage financing since their incomes may vary or be less predictable.

In line with the National Housing Strategy (NHS) commitment to address the housing needs of all Canadians, last year we introduced enhancements to help self-employed Canadians access mortgage loan insurance more easily. Overall, in 2018, we insured 123,000 homeowner units, self-employed and otherwise, from communities all across the country and our Mortgage Funding programs funded nearly 600,000 loans.

Early in the year, we also released our groundbreaking report on the causes of escalating house prices and concluded that measures designed to increase supply are likely to have the most impact. So, while our Mortgage Insurance and Mortgage Funding programs remain pillars of CMHC, we have been adapting to ensure we are focused on addressing this objective.

In 2018, as part of our work implementating NHS programs, we launched the \$13.2 billion National Housing Co-Investment Fund. Thanks to the National Housing Co-Investment Fund, thousands of vulnerable Canadians can look forward to a brighter future with access to safe and affordable housing that meets their needs.

We also welcomed the commitment of an additional \$1.25 billion in the federal budget towards the Rental Construction Financing initiative, a program that offers low-cost loans to stimulate the creation of new rental housing.

New opportunities create new demands and in anticipation of the increased volumes these programs will create, we also launched a new recruitment and training program to attract, train and retain top multi-unit professionals.

We're ensuring our people and programs continue to expand access to housing for Canadians, helping us achieve our goal that by 2030, everyone in Canada can have a home that they can afford and that meets their needs.



*“The Multi-Unit Professionals Program has allowed me to learn about CMHC, meet new team members, and to develop a better understanding of how we all work together as one CMHC.”*

– Spencer W. Grigul,  
Program participant



# SPOTLIGHT ON THE NATIONAL HOUSING STRATEGY

Canada's first-ever National Housing Strategy (NHS) is a 10-year, \$40-billion plan that strengthens the middle class, cuts chronic homelessness in half and fuels our economy. Most importantly, it gives more Canadians across the country a place to call home.

The goal is to ensure that Canadians have access to housing that meets their needs and that they can afford. Ultimately, the NHS promotes diverse communities and creates a new generation of housing that is mixed-income, mixed-use, accessible and sustainable.

## National Housing Co-Investment Fund (NHCF)<sup>1</sup>

**Launch:** May 2018

**Funding:** \$13.2 billion in loans and contributions from 2018/19 to 2027/28

**Output:** 60,000 new housing units  
240,000 repaired housing units

This initiative supports the construction of new affordable housing and the repair and renewal of existing community and affordable housing. It provides low-interest loans or capital contributions and covers a spectrum of housing needs, from shelters to affordable homeownership. The initiative targets our vulnerable populations.

### Status:

- As of 31 December 2018, more than 200 selected applications are at various stages of assessment.
- We received applications from ten provinces and two territories. They came from not-for-profit organizations (80%), the private sector (7%), and municipal, First Nation and faith-based organizations (13%).
- As of 31 December 2018, we committed \$77.3 million to support the construction or repair of 752 units.
- We expect to meet our annual commitment target to finance the construction of 2,565 new housing units and to repair 13,100 housing units by 31 March 2019.

## Rental Construction Financing initiative (RCFi)<sup>1</sup>

**Launch:** April 2017

**Funding:** \$3.75 billion in loans from 2017/18 to 2020/21

**Output:** 14,000 new housing units

This initiative provides low-cost insured loans to encourage the construction of rental housing. It is specifically for areas across Canada where the need is clearly demonstrated.

### Status:

- Multiple applications are at various stages of approval thanks to significant program interest.
- As of 31 December 2018, we allocated \$2,376 million in financing, of which \$489 million has been recognized in our financial statements.
- This funding will support the construction of 8,795 units.
- We expect to meet our annual commitment target to finance the construction of 5,693 new housing units by 31 March 2019.

<sup>1</sup> Recognizes a unit as committed once funding is allocated to a specific project. (Allocated funding is not reflected in our financial statements)

## Affordable Housing Innovation Fund (IF)<sup>1</sup>

**Launch:** September 2016

**Funding:** \$200 million in loans from 2016/17 to 2020/21

**Output:** 4,000 new housing units

This fund encourages new funding models and innovative building techniques to support the next generation of housing in Canada. Innovative solutions will be vital to help address the challenges facing affordable housing.

### Status:

- Since program launch, we have supported the construction of over 900 units. We are identifying additional units through applications seeking joint funding with the NHCF.
- We do not expect to meet our annual commitment target to finance the construction of 1,400 new housing units by 31 March 2019. However, we are on track to meet the overall program target, with 7,359 new units committed since launch (4,359 units above the cumulative target).
- As of 31 December 2018, we allocated \$85.3 million to projects, \$44.7 million of which is recognized as a commitment on our financial statements.

## Federal Lands Initiative (FLI)<sup>1</sup>

**Launch:** July 2018

**Funding:** \$200 million from 2017/18 to 2020/21

**Output:** 4,000 new housing units

This initiative helps transfer surplus federal lands and buildings to be developed or renovated into affordable housing. Eligible applicants receive the properties at a discount or at no cost.

### Status:

- More than 84 government properties are currently being reviewed to be made available for affordable housing projects.
- We do not expect to meet our annual target of 200 new housing units by 31 March 2019 but have identified 5 properties that have been approved for disposal and will be posted for sale prior to 31 March 2019. These properties have the potential to create or preserve more than 227 housing units.

## Federal/Provincial/Territorial Housing Agreements

**Funding:** \$15.1 billion from 2018/19 to 2027/28

### Output<sup>2</sup>:

- Maintain 330,000 housing units in social housing
- Increase rent-assisted housing units by approximately 50,000 units
- Maintain and repair Urban Native Social Housing units available to low-income households
- Repair at least 60,000 existing social housing units
- Adequately support at least 300,000 households through a CHB

The new Multilateral Housing Partnership Framework asserts a shared vision for housing and sets the foundation for bilateral agreements on the delivery of key NHS initiatives. Provinces and territories deliver and cost-match federal funds from NHS through bilateral agreements with CMHC.

Includes: Province and Territory Priority Funding (PT Priority), Canada Community Housing Initiative (CCHI), Targeted Support for Northern Housing (Northern),<sup>3</sup> and Canada Housing Benefit (CHB).

### Status:

- We achieved the endorsement of a new Multilateral Housing Partnership Framework with provinces and territories<sup>4</sup> on 9 April 2018.
- We signed bilateral agreements with Ontario, British Columbia, New Brunswick and the Northwest Territories for a total of \$5.6 billion in combined housing investments.
- We continued to work with the remaining provinces and territories on finalizing agreements in place for funding that became available 1 April 2019.
- We are on track to launch programs under the Multilateral Housing Partnership Framework by April 2019.
- We expect to deliver commitments for Northern to support the construction of 35 new units and the repair of 200 units by 31 March 2019.

<sup>1</sup> Recognizes a unit as committed once funding is allocated to a specific project. (Allocated funding is not reflected in our financial statements)

<sup>2</sup> Outputs are described in the Federal/Provincial/Territorial (FPT) Housing Partnership Framework and targets will be confirmed through bilateral agreements and program design.

<sup>3</sup> This initiative recognizes a unit as committed once a formal claim is processed for reimbursement.

<sup>4</sup> Excluding Québec.

## Federal Community Housing Initiative (FCHI) – Phase 1

**Launch:** April 2018

**Funding:** \$38 million from 2017/18 to 2019/2020

**Output:** Maintain current federally administered community housing stock and its support for 55,000 units

This initiative keeps housing affordable for vulnerable tenants. It extends subsidies for federally administered projects with expiring operating agreements until 31 March 2020.

**Status:**

- As of 31 December 2018, 742 subsidy extension offers were provided to projects reaching the end of their operating agreements. Subsidy extension has supported over 15,000 households, representing a total investment of \$8.8 million.

## Technical Resource Centre and Community-Based Tenant Initiative (CBTI)

**Launch:** April 2018

**Funding:** \$64.2 million from 2017/18 to 2027/28

The Technical Resource Centre and CBTI provide support and capacity building within the community sector. They also contribute to various local organizations that provide information on housing options and housing-related financial literacy to vulnerable tenants.

**Status:**

- We issued a request for proposal for a service delivery agreement to start various components of the Technical Resource Centre and CBTI in 2019.

## Data, Innovation and Research

We are enhancing housing research and data to identify issues and innovative solutions. We are also assessing the impact of housing policies and shaping the NHS.

**Highlights:**

- We launched the 8 innovation and research initiatives including research scholarships, the Collaborative Housing Research Network and awards to support external research capacity.
- We launched the first-ever Canadian Housing Survey, the largest statistical housing survey in Canada, with a focus on social and affordable housing.
- We launched the Social and Affordable Housing Rental Structure Survey to better assess the condition of the community housing stock in Canada.
- We received 90 applications for the Solutions Labs, 34 applications for the Demonstrations Initiative, and 57 applications for the Research and Planning Fund.
- We presented 4 awards through the CMHC Housing Research Award Program to recognize world-class housing research being done in Canada.
- We launched the Research and Data plan to focus on answering key research questions and filling data gaps. This will enhance market effectiveness and support informed decision making for governments and the housing sector.
- We launched the Expert Community on Housing (ECOH) as an online collaborative platform to connect experts, share housing knowledge and collaborate on solutions.
- We hosted the Inaugural National Housing Conference in Ottawa, Ontario.

<sup>4</sup> Excluding Quebec.

# WELCOMING INSIGHTS ON THE NEEDS OF ALL CANADIANS

For more than 8 years, Tamara lived on the streets of Vancouver. The turning point came when an outreach worker convinced her to seek shelter in an all-women Atira social housing building. With safe and stable housing, her health improved, she went back to school and most importantly, she became eligible for a long-awaited gender reassignment surgery.

In 2018, Tamara moved in to a new mixed-income rental Olivia Skye building in Vancouver's downtown eastside. The building provides more than 70 units that are exclusively for rent to single and elderly women in need. "It's motivating to live in this kind of environment," says Tamara. "It pushes us to step up and continually better ourselves."

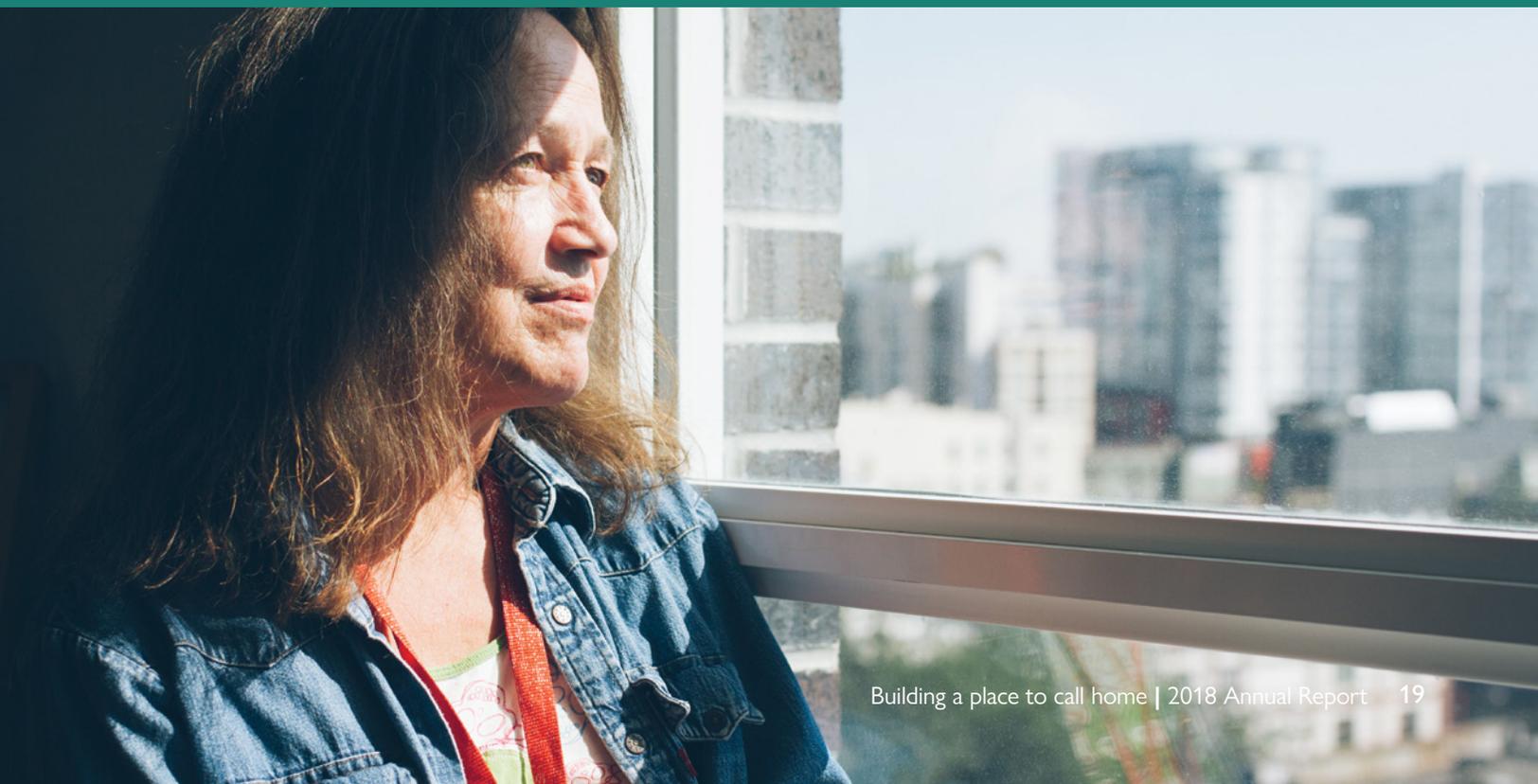
Stories like Tamara's continue to inspire our work to improve housing outcomes for women and children, along with the most vulnerable Canadians, but as we face the ambitious goals of the NHS, more than ever we are listening, learning and adapting to deliver safe, affordable housing solutions.

This past year, we conducted analysis about housing conditions for vulnerable populations including seniors, Indigenous households, persons with disabilities and visible minorities. We listened to the voices of people with lived experience

of housing need and homelessness, as well as hundreds of housing experts and stakeholders during national consultations on a human rights-based approach to housing.

This allowed us to hear important feedback on NHS initiatives, including support for the creation of a Federal Housing Advocate who could identify systemic barriers to accessing suitable and affordable housing, and assess the progress in achieving the NHS goals.

We are also exploring ways to apply Gender-Based Analysis Plus to ensure diversity and inclusion are at the forefront of our policies. We published research, launched employee training and intend to build on that foundation to create programs and services that work for everyone, especially Canada's most vulnerable populations.



## OUR PERFORMANCE HIGHLIGHTS

We identified 38 key performance indicators (KPIs) in our 2018-22 Corporate Plan. Of these, we achieved 33, partially achieved two and did not achieve three. The following table and analysis provides context to better understand our most notable performance highlights.

-  Meets or is within 2% of target
-  Within 2% and 5% of target
-  Does not meet or is not within 5% of target

Actuals are representative of performance as of 31 December 2018 (unless otherwise stated). Refer to the *Glossary* for definitions of KPIs.

		Plan	Actual	Status
Corporate	Net income (\$ million)	≥ \$1,452 <sup>1</sup>	\$1,417	
	Return on equity	≥ 8.6% <sup>1</sup>	8.7%	
	Operating budget expense ratio	≤ 14.2%	14.4%	
	Revenue per employee (\$ million)	≥ \$1.9	\$1.9	
Assisted Housing	Spending of government funding for housing programs by 31 March 2019 (\$2,179 million in 2018/19) <sup>2</sup>	\$2,179	\$1,310	
	Reduction in operating expenditures to deliver on lending activities (Cost to maintain loan portfolio) <sup>2</sup>	≥ 1%	2.85%	
	Increase in number of households that have access to affordable and adequate housing through 2016 Budget expenditures (2-year cumulative – by 31 March 2018) <sup>3</sup>	≥ 213,500	317,000	
	Commitments to support the construction of new or repair existing housing units through CMHC-led NHS activities <sup>2,4,5</sup>	23,393 <sup>6</sup>	6,058	
Mortgage Insurance	% of 1–4 unit applications insured from first-time buyers	≥ 60%	65.4%	
	% of rental units (new and existing) insured as affordable, both standard apartments and other shelter models <sup>4,5</sup>	5-7%	4.4%	
	Return on required equity	≥ 8.3% <sup>1</sup>	8.3%	
	Operating expense ratio	≤ 21.8% <sup>1</sup>	22.3%	
	Knowledge transfer and training activities with clients (1-4 unit)	≥ 6,000	6,061	
Mortgage Funding	Loss ratio	≤ 16.9% <sup>1</sup>	14.7%	
	Return on required equity	≥ 17.2%	23.9%	
People and Processes	Operating expense ratio	≤ 11.1%	9.5%	
	Availability of IT systems for mission critical applications	≥ 99.8%	99.8%	
	Employee engagement score	≥ 80%	80%	
	Employee enablement score	≥ 80%	67%	
	Representation rates of Indigenous People	≥ 3.0%	2.4%	
	Representation rates of Visible Minorities	≥ 24.5%	25.2%	
	Representation rates of Persons with Disabilities	≥ 4.3%	4.2%	
	Women in Leadership	= 50%	50.8%	
	Achievement of action plans <sup>7</sup> to better manage risk	≥ 90%	98%	
Risk Culture Maturity Index	≥ 80%	83%		

<sup>1</sup> Targets were normalized to reflect the revised earning pattern for insurance premiums.

<sup>2</sup> All fiscal KPI's based on expected performance by 31 March 2019.

<sup>3</sup> Includes households that were provided affordability assistance and/or provided funding to support adequate housing.

<sup>4</sup> Target is inclusive of output from NHCF, IF, FLI, Northern, and RCFi.

<sup>5</sup> Target adjusted to reflect additional Budget 2018 financial authorities provided for RCFi and re-profiling of 2017-18 financial authorities.

<sup>6</sup> 121 units committed for Kanas project stacked from RCFi and IF.

<sup>7</sup> 98% of target is 4.214%.

## Performance Highlights Analysis

### Corporate

We met our target of generating \$1.9 million in revenue per employee, resulting in a net income of \$1.4 billion for the year. Our net income was slightly below our target due to lower than expected insurance volumes in 2017 and 2018. It was also due to lower net gains on financial instruments tied to weaker-than-planned performance of equity markets and weaker-than-planned movements in bond yields. Nonetheless, we generated a return on equity of 8.7% against a target of 8.6% while operating efficiently and maintaining an operating budget expense ratio of 14.4% against a target of 14.2%.

### Assisted Housing

Operating on a breakeven basis, we help Canadians access suitable housing they can afford through government-funded programs, often in partnership with provinces and territories. We are on track to spend all planned government funding for housing programs (in consideration of our re-profiling requirements). In line with our commitment to continuous improvement, we have made significant progress reducing operating expenditures to deliver on lending activities, exceeding our target for the year.

Additionally, we surpassed our target for increasing the number of households that have access to affordable and adequate housing through 2016 Budget expenditures, affecting 317,000 households.

We launched several key NHS programs and initiatives, and are on track to achieve all deliverables, including cumulative program targets for supporting the building of new units and the repair of existing units (16,563 vs. target  $\geq$  25,620 units). Since their launch, we have made considerable progress and have seen strong interest across all NHS programs. We are prioritizing and assessing all applications to deliver on our commitments for building new and repairing existing housing units. For more information on the status of individual NHS programs, refer to the *Spotlight on the National Housing Strategy* on page 16.

### Housing Analysis and Research

Our work includes market analysis and use of analytical tools to improve our understanding of the housing system. We also provide research and information on a range of issues that promote affordability and choice. Finally, we give policy advice that supports sound decision making.

Surveyed clients say that our information is useful (96% vs. target  $\geq$  85%) and that our new products address data gaps and are relevant (90% vs. target  $\geq$  85%). In addition to this, we are on track to meet all our key policy and research milestones (89% vs. target  $\geq$  85%).

### Mortgage Insurance

Our Mortgage Insurance products help Canadians across the country access homeownership. In 2018, nearly two-thirds (65.4% vs. target  $\geq$  60%) of the mortgages we insured enabled first-time homebuyers to reach this milestone, while more than 14% of the buyers we insured were in rural areas of Canada (14.1% vs. target  $\geq$  13.5%), where other Mortgage Insurance options do not always exist.

We continue to balance our support for homebuyers with the overall risks to our business. The proportion of homebuyers we insured with a credit score of less than 680 (7.2%) was within our threshold of 6-10%, while our overall exposure to the Canadian housing industry decreased to \$448 billion (vs. target  $<$  \$480 billion).

Partnerships are key to our ability to reach Canadians. In 2018, we delivered more than 6,000 knowledge transfer and training activities with participants' satisfaction reaching 88.5%, exceeding the target of 83%.

To ensure Canadians have housing choice, we also support the supply of rental housing, with renewed focus on affordable rental options. We fell short of our target (4.4% vs. target 5-7%) for the percent of affordable rental units insured out of our total rental units insured. There has been lower demand than expected for refinance units with the extension of federally administered community housing agreements.

For Mortgage Insurance activity, our operating expense ratio was 0.5 percentage points higher than planned, primarily due to lower premiums and fees earned as a result of lower actual volumes than plan volumes. However, our loss ratio (14.7% vs. target  $\leq$  15.7%) exceeded our target, and we achieved the targeted 8.3% return on equity from our insurance activities.

## Performance Highlights Analysis (continued)

### Mortgage Funding

We provide approved financial institutions with access to affordable and reliable mortgage financing. We do this by enabling them to pool eligible mortgages into marketable securities that are sold to investors. In 2018, our Mortgage Funding programs funded nearly 600,000 loans. Lenders took advantage of our funding programs with a utilization rate of 94% (target > 95%) of the annual NHA MBS limit, and of 99% (target > 95%) of our CMB limit. We achieved these results while controlling our expenses (operating expense ratio 9.5% vs. target < 11.1%) and generating a 23.9% return on equity (vs. target < 17.2%).

### People and Processes

We are creating an organization where all employees feel valued and included. In particular, we are proud that half of our leaders are women (50.8% vs. target ≥ 50%), and we continue to make important progress in our representation rates of visible minorities (25.2% vs. target ≥ 24.5%) and persons with disabilities (4.2% vs. target ≥ 4.3%).

Our 2018 employee enablement score (67% vs. target ≥ 80%) results remained relatively stable, but did not improve as we had anticipated. We are working to better

understand the current enablement barriers, and we expect improved results by refocusing our organizational change management plans.

Representation rates of Indigenous people (2.4% vs. target ≥ 3.0%) are lower than expected, mainly because of contract terminations and retirements. We expect to increase representation rates by enhancing partnerships with Indigenous outreach organizations and increasing focus on recruitment, including targeted relationships with universities.

We effectively managed our IT infrastructure and the implementation of our Technology and Business Transformation. We met our targets of ensuring 99.8% of availability of our IT systems for mission critical applications and of 88% technology transformation project plan milestones achievement. Finally, we achieved 98% of our action plans to better manage risk (target ≥ 90%) and 83% on our Risk Culture Maturity Index (target ≥ 80%).

# TRANSFORMING HOW WE WORK TO DELIVER RESULTS FOR CANADIANS

We are committed to enabling our people to deliver the best possible results for Canadians by continuing our transformation into a modern, digital organization with current technology. In 2018, we took steps to ensure our workplace is adapting to meet changing business needs.

We modernized our IT infrastructure to empower employees to adapt to a mobile and flexible work environment with the introduction of tools such as Office 365 and cloud-based applications. We completed the implementation of new human resources systems and progressed in delivering new finance systems, which enable efficient processes, leadership development and employee learning. We also took the next step in evolving our technology, work styles and our space, which included implementing a Results-Only Work Environment (ROWE).

Our ultimate goal with ROWE is to create an experience in which our employees have autonomy and accountability for their work. We believe this will promote a diverse and innovative work environment that is inclusive of many different lifestyles and that enables employees to deliver outcomes that enhance the lives of all Canadians.

We took an important step in becoming a digital organization by overhauling our website to improve access, content search and client experience. We also built on our cloud and cyber security projects to automate and coordinate cyber security and compliance across our infrastructure.

In building a high-performing organization, we also focused on our risk management capabilities and strived to achieve a pervasive culture of risk awareness. Last year, we further developed and implemented our risk culture educational training. We enhanced our economic capital, stress testing models, model risk-management processes and technologies, and data governance. This helps us ensure all our activities are managed in a way that adequately reflects our risk appetite.

We continue to tailor our tools and processes to support an innovative and high-performing culture that achieves outcomes for Canadians.



*“At CMHC, employees have 100% autonomy and 100% accountability over their work, ultimately allowing them to choose when and where to work in order to deliver the best results for Canadians.”*

– Heather McLintock  
ROWE team co-lead



# OPERATING ENVIRONMENT

*Several events affected our activities in 2018.*

In 2018, the Canadian economy posted a near potential growth rate of 1.8%. This pace of growth was less than the 3.0% growth rate recorded for 2017.<sup>1</sup>

Domestic demand supported Canada's economic activity in 2018. Consumer spending continued to support economic activity, though to a lesser degree less than in 2017. The strong performance of the labour market increased personal disposable income, which contributed to higher spending.<sup>2</sup> Robust increases in government spending on goods, services and capital also contributed to GDP growth.

Business investment posted modest growth as strong investments in machinery and equipment was offset by declines for residential and non-residential investment. The trade balance did not affect economic growth, with both exports and imports growing at a similar pace.

The debt levels of Canadian households remain high. Despite weaker credit growth and rising incomes, the debt-to-disposable income ratio hovered near the record high levels of 2017 and reached 177.5% in the third quarter of 2018.<sup>3</sup> Mortgage debt remains the main component of the total outstanding household debt (67%), followed by home-equity lines of credit (11%).<sup>4</sup> In other words, real estate secures more than three-quarters of household debt.

In the housing sector, higher borrowing costs were combined with still favourable, but less stimulative, economic conditions. This contributed to softer demand on new home and resale markets. As a result, housing starts reached 212,843 units in 2018, which was 3% below the 10-year high of 2017. The decline in single-detached starts was greater than the slight increase posted in multi-family starts.

For its part, the resale market moderated to 452,795 MLS® sales. This marked an 11% drop from the elevated levels recorded in 2017. The average MLS® price slowed to \$490,426 in 2018, a 4% drop over the same period, leaving average prices slightly below their level in 2016, when MLS® sales were at a record high.

Overvaluation conditions are easing for Canada as a whole, as house prices become more closely aligned with the fundamentals. This is not the case for the housing markets of Vancouver and Toronto, and/or for markets in their vicinity, which remain highly vulnerable.<sup>5</sup>

Meanwhile, demand for rental housing remained vigorous and outpaced the growth in supply. As a result, the vacancy rate for rental apartments decreased for a second straight year, reaching 2.4% (versus 3.0% in 2017). With this decline, the vacancy rate for apartment units on the purpose-built rental market fell below 3.0%, the average of the last 10 years.

## Federal Budget 2018

Federal Budget 2018 committed an additional \$1.25 billion to the RCFi. This increased the amount available for low-cost loans for rental housing from \$2.5 billion to \$3.75 billion. With this additional funding, we now expect to help create 14,000 new rental-housing units for modest- and middle-income households by 2021.

## Gender-based Analysis Plus

As a public entity that represents all Canadians, we use the Gender-based Analysis Plus (GBA+) approach in our policies and programs. GBA+ recognizes that intersecting factors affect people's experiences: their identity, their context and their lived realities. As we aim to help Canadians meet their housing needs, we use GBA+ to see the potential impact of our activities and initiatives. It helps us deliver results for Canadians in the most fair and equitable manner.

<sup>1</sup> Source: Statistics Canada

<sup>2</sup> Ibid

<sup>3</sup> Seasonally adjusted credit market debt to disposable income. Source: Statistics Canada

<sup>4</sup> Source: Equifax

<sup>5</sup> Housing Market Assessment, Canada, First Quarter 2019

## OSFI Guidelines and Advisories

### OSFI corporate governance guidelines

On 18 September 2018, OSFI released its final version of the Corporate Governance Guideline. It sets out OSFI's expectations for Boards of Directors of federally regulated financial institutions.

The Guideline indicates that Boards should carry out, at minimum, the following duties:

- Approve and oversee strategy, risk management, Senior Management, oversight functions and internal and external audit plans.
- Provide constructive challenge, advice and guidance to Senior Management on operational and business policies, and on business performance and effectiveness of risk management.

This distinguishes the Board's role from that of Senior Management, which is to implement the Board's decisions and to direct operations of the institution. The Guideline stresses that an effective Board is independent and provides objective oversight of Senior Management and operations. It also emphasizes that the Board and Senior Management should promote and model a risk culture of integrity and effective risk management.

Our current practices meet OSFI's Guidelines.

## Mortgage Insurance Premiums

After our annual review of insurance products and capital requirements, we released a new pricing grid in April 2018. There were changes to our portfolio product, which lowered premiums in general. There were no changes to premiums for transactional homeowner and multi-unit residential Mortgage Insurance.

## NHA MBA Guarantee Fees

Effective 1 January 2018, we increased the threshold for the Tier 2 guarantee fees from \$8.5 billion to \$9 billion. Issuers' volumes above the threshold were subject to the higher Tier 2 fees. In addition, we also increased the NHA MBS guarantee fees across all NHA MBS terms in the Tier 2 schedule. We made these changes in support of the Government's efforts to encourage alternative funding options in the private market.

## Future Changes to Accounting Standards

Information is available on all International Accounting Standards Board (IASB) standards that affect the Corporation. See Note 2 of our 2018 audited consolidated financial statements, found on page 53.

### IFRS 17 Insurance Contracts – effective date of 1 January 2021

In May 2017, the IASB issued IFRS 17 Insurance Contracts, which will replace IFRS 4 Insurance Contracts. Our insurance contracts meet the definition of financial guarantee contracts under IFRS 9 Financial Instruments, and as insurance contracts under IFRS 17. In November 2018, the IASB voted to propose a one-year deferral of the effective date for IFRS 17 to 1 January 2022. The proposed deferral is subject to public consultation, expected in 2019.

On 4 May 2018, OSFI issued an Advisory titled "IFRS 17 Transition and Progress Report Requirements for Federally Regulated Insurers." This Advisory removes an insurer's option to early adopt IFRS 17, requires semi-annual progress reporting to OSFI, and makes it mandatory to use IFRS 17 for financial guarantee contracts (as opposed to the option of using IFRS 9 where previously applicable).

Under IFRS 17, insurance contract liabilities will include the present value of future insurance cash flows, adjusted for risk, as well as contractual service margin, which will be released over the coverage period. Contractual service margin will represent the difference between the premium received at inception and the present value of the risk-adjusted cash flows (i.e. profit to be earned in the future). If this difference is negative at inception, the insurance contract would be considered onerous and the difference immediately recorded in income. There are also revised presentation and disclosure requirements.

We have a multi-disciplinary team dedicated to analyzing and implementing the new accounting standard, and a detailed project plan is in place. We continue to evaluate where we will need to change our existing accounting and reporting processes and how this could affect our consolidated financial statements. We are also monitoring current IASB activities that could lead to additional changes to IFRS 17 and how they may impact our implementation plan.

# Revised Corporate Strategy and Realignment

In the fourth quarter of 2018, we finalized a new corporate aspiration: “By 2030, everyone in Canada has a home that they can afford and that meets their needs.” We then began to strategically reorganize our internal functions to meet our goal.

We have identified four strategic objectives (see the graphic) to help us achieve our long-term aspiration. They will also guide our day-to-day decisions to keep us focused on what matters most.



# EXPANDING OUR ABILITIES TO KEEP UP IN A DATA-DRIVEN SOCIETY

We have always been a leader in sharing housing market information and insights. However, increasing complexity across the housing continuum and in society means we need to think about housing differently.

We are building partnerships and leveraging our leadership position to gather housing-related data while developing new tools to analyze housing conditions. Together, these are improving our ability to support the housing needs of all Canadians.

In 2018, we launched or expanded a number of surveys and introduced a new reporting framework for issuers participating in our NHA MBS program. The data we are gathering is allowing us to create a more complete picture of the housing finance industry and to better understand the impacts of recent policy measures on mortgage markets.

While approximately two-thirds of Canadian households own their homes, we need to take care of the disenfranchised and those who feel left behind. In order to complement traditional research, we completed analyses of housing conditions for vulnerable populations including seniors, Indigenous households, persons with disabilities and visible minorities.

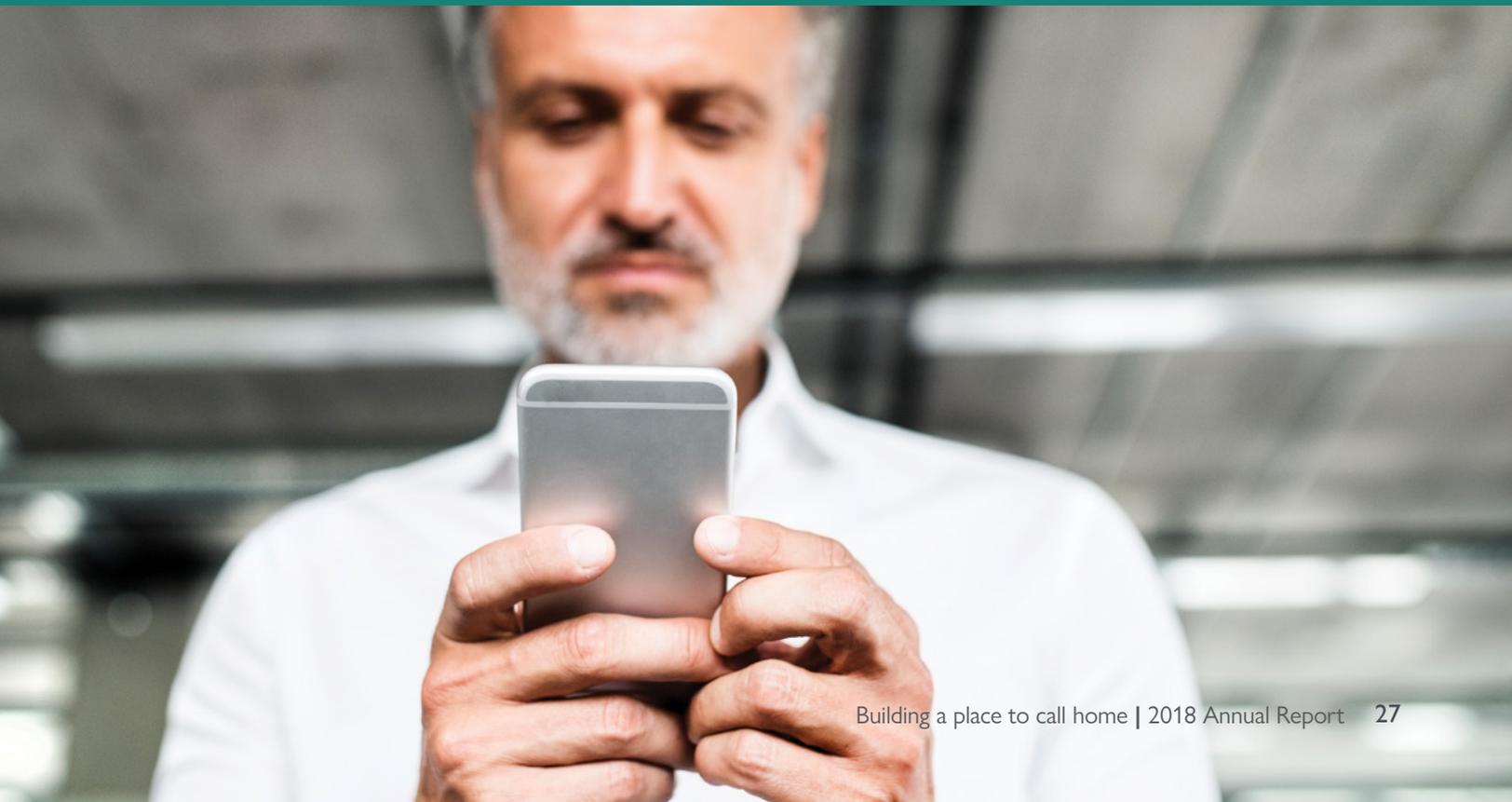
We also developed data and indicators to understand progress toward improved housing outcomes and we brokered social and affordable housing data sharing agreements between provincial and territorial partners and Statistics Canada.

Through these activities, we have expanded our ability to measure Core Housing Need and established new measures for Social Inclusion and Housing Hardship. As a result, we are better prepared to ensure our policies and programs support the housing needs of all Canadians.



*“Housing has become part of a broader social problem and we are going to do something about it in Canada.”*

– Evan Siddall  
President & CEO



# FINANCIAL RESULTS

## Key Financial Highlights

### Condensed Consolidated Balance Sheet

(in millions)	Assisted Housing		Mortgage Insurance		Mortgage Funding		Eliminations		Total	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Cash, cash equivalents, investment securities and derivatives	1,934	2,200	18,374	23,042	4,222	3,634	(3,905)	(4,582)	20,625	24,294
Loans	6,421	7,064	128	-	234,653	233,786	-	-	241,202	240,850
All other assets	784	685	729	807	549	493	(13)	(14)	2,049	1,971
<b>Total assets</b>	<b>9,139</b>	<b>9,949</b>	<b>19,231</b>	<b>23,849</b>	<b>239,424</b>	<b>237,913</b>	<b>(3,918)</b>	<b>(4,596)</b>	<b>263,876</b>	<b>267,115</b>
Dividends payable	-	-	500	2,000	175	-	-	-	675	2,000
Provision for claims	-	-	512	555	-	-	-	-	512	555
Borrowings	8,198	8,914	-	-	234,653	233,786	(3,896)	(4,544)	238,955	238,156
Unearned premiums and fees	-	-	5,375	5,352	1,573	1,335	-	-	6,948	6,687
All other liabilities	650	801	761	745	511	456	(17)	(26)	1,905	1,976
<b>Total liabilities</b>	<b>8,848</b>	<b>9,715</b>	<b>7,148</b>	<b>8,652</b>	<b>236,912</b>	<b>235,577</b>	<b>(3,913)</b>	<b>(4,570)</b>	<b>248,995</b>	<b>249,374</b>
<b>Total equity of Canada</b>	<b>291</b>	<b>234</b>	<b>12,083</b>	<b>15,197</b>	<b>2,512</b>	<b>2,336</b>	<b>(5)</b>	<b>(26)</b>	<b>14,881</b>	<b>17,741</b>

### DISCUSSION & ANALYSIS:

We ended the year in a strong financial position. In 2018, we declared dividends to the government of \$4,175 million, funded from our retained earnings from prior years and our 2018 net income of \$1,417 million. We declare dividends to the government only after regulatory and other capitalization requirements are met to ensure our Mortgage Insurance and Mortgage Funding activities are appropriately capitalized.

## Condensed Consolidated Statements of Income and Comprehensive Income

(in millions)	Assisted Housing		Mortgage Insurance		Mortgage Funding		Eliminations		Total	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Government funding for housing programs <sup>1</sup>	2,336	3,229	-	-	-	-	-	-	2,336	3,229
Premiums and fees earned	-	-	1,426	1,557	483	384	-	-	1,909	1,941
All other income <sup>2</sup>	51	126	444	763	68	61	15	32	578	982
<b>Total revenues</b>	<b>2,387</b>	<b>3,355</b>	<b>1,870</b>	<b>2,320</b>	<b>551</b>	<b>445</b>	<b>15</b>	<b>32</b>	<b>4,823</b>	<b>6,152</b>
Housing programs	2,336	3,229	-	-	-	-	-	-	2,336	3,229
Insurance claims	-	-	210	147	-	-	-	-	210	147
Operating expenses	25	27	318	318	55	51	-	-	398	396
<b>Total expenses</b>	<b>2,361</b>	<b>3,256</b>	<b>528</b>	<b>465</b>	<b>55</b>	<b>51</b>	<b>-</b>	<b>-</b>	<b>2,944</b>	<b>3,772</b>
Income taxes	-	19	334	451	124	99	4	8	462	577
<b>Net income</b>	<b>26</b>	<b>80</b>	<b>1,008</b>	<b>1,404</b>	<b>372</b>	<b>295</b>	<b>11</b>	<b>24</b>	<b>1,417</b>	<b>1,803</b>
Other comprehensive income (loss)	34	(42)	(123)	(348)	32	(45)	10	58	(47)	(377)
<b>Comprehensive income</b>	<b>60</b>	<b>38</b>	<b>885</b>	<b>1,056</b>	<b>404</b>	<b>250</b>	<b>21</b>	<b>82</b>	<b>1,370</b>	<b>1,426</b>

<sup>1</sup> CMHC's Housing Analysis and Research activities are cost-recovered from government funding for housing programs (2018 - \$72 million, 2017 - \$62 million), as well as from revenues from our Mortgage Insurance Activity (2018 - \$18 million, 2017 - \$19 million).

<sup>2</sup> Includes net interest income, investment income, net gains (losses) on financial instruments and other income.

### DISCUSSION & ANALYSIS:

#### REVENUES AND EXPENSES

Our revenues include government funding for the expenses we incur to deliver housing programs. In addition, we earn revenues from our Mortgage Insurance and Mortgage Funding activities that include insurance premiums earned from our transactional homeowner, portfolio and multi-unit residential insurance products. Fees earned from our Mortgage Funding activities result from the timely principal and interest payment guarantees we provide under our NHA MBS and CMB programs. Insurance premiums and guarantee fees are included in premiums and fees earned in the above table.

In 2018, our total revenues decreased by \$1,329 million (22%) mainly due to:

- A reduction of \$893 million (28%) in government funding in 2018, mostly driven by the expiry of funding provided under Budget 2016 for housing programs. Budget 2016 provided funding for various initiatives that have now expired, such as Investment in Affordable Housing, Affordable Housing for Seniors, Renovation & Retrofit of Social Housing, and Prepayment Flexibility, among others.
- Insurance premiums and guarantee fees revenue was stable year over year.
  - Mortgage Funding guarantee fees increased by \$99 million (26%) due to recent price increases and the implementation of a new tiered pricing structure. This higher revenue from our Mortgage Funding programs was offset by lower insurance premiums revenue which was \$131 million (8%) less than 2017. This is due to a slower rate of recognition of this revenue to reflect our recent experience with the timing of insurance claims, as well as lower homeowner and portfolio volumes in recent years.
- All other income decreased by \$404 million mainly due to higher losses on financial instruments (\$244 million (166%)) as a result of weak global financial markets in the fourth quarter of 2018 and lower investment income (\$60 million (10%)) as investments were disposed of to fund the payment of dividends.

Total expenses decreased by \$828 million (22%) mainly due to:

- Budget 2016 program funding expiring as described above resulting in lower housing programs expenses by \$893 million (28%).

## OTHER COMPREHENSIVE LOSS

Our other comprehensive loss is mainly driven by certain gains and losses on our financial instruments and defined benefit plan liability required to be recognized each fiscal year. The liability related to our defined-benefit pension and post-employment plan is remeasured at the end of each fiscal year. Gains and losses arise due to this remeasurement, as a result of either changes in the discount rate used to measure the pension plan obligation or the actual return on the plan assets versus the return that was expected. In 2018, our other comprehensive loss decreased by \$330 million (88%) mainly due to:

- The net effect of a higher discount rate and a lower return on plan assets resulted in a lower pension plan liability by \$79 million versus the remeasurement in 2017, which resulted in a higher liability by \$106 million. This difference of \$185 million was the main driver of the change in the other comprehensive loss year over year.

## Financial Performance Against 2018 Plan

(in millions)	2018	
	Actual	Plan
Total revenues	4,823	5,312 <sup>1</sup>
Total expenses	2,944	3,363
Income taxes	462	497
Net income	1,417	1,452 <sup>1</sup>
Total assets	263,876	267,032
Total liabilities	248,995	250,997
Total equity of Canada	14,881	16,035

<sup>1</sup> Targets were normalized to reflect the revised earning pattern for insurance premiums.

## DISCUSSION & ANALYSIS:

Total revenues were \$489 million (9%) lower than plan mainly due to changes in the timing of when government funding is required for the National Housing Strategy and the timing of advances to provinces for Investments in Affordable Housing and Social Housing Agreements (\$303 million). This was also the main driver for the lower than planned expenses in 2018.

Total revenues were also lower than plan because of higher losses on financial instruments (\$99 million) for the same reasons explained above in the discussion and analysis of the condensed consolidated statements of income and comprehensive income.

## Financial Metrics And Ratios

### MORTGAGE INSURANCE

(in percentages)	2018	2017
Loss ratio <sup>1</sup>	14.7	9.4
Operating expense ratio	22.3	20.4
Combined ratio	37.0	29.8
Severity ratio	31.9	32.2
Return on equity	7.4	8.3
Return on required capital	8.3	13.6

<sup>1</sup> Loss ratio on transactional homeowner and portfolio products excluding multi-unit residential was 22.7% for the twelve months ended 31 December 2018 (14.0% for the twelve months ended 31 December 2017).

Increases in the loss, operating expense and combined ratios are due to the decrease in insurance premiums earned, as explained above in the discussion and analysis of the condensed consolidated statements of income and comprehensive income. Lower net income caused a decrease in the return on required capital by 5.3 percentage points as well as a lower return on equity, which was partially offset by the declaration of dividends.

(in millions, unless otherwise indicated)	Insurance-in-force (\$B)		Insured volumes (units)		Insured volumes <sup>1</sup>		Premiums and fees received		Claims paid <sup>2</sup>	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Transactional homeowner	236	249	104,440	113,374	27,579	29,612	973	996	217	268
Portfolio	136	162	35,747	61,787	7,058	12,502	21	60	20	19
Multi-unit residential	76	69	113,298	119,738	13,096	11,455	451	382	5	42
<b>Total</b>	<b>448</b>	<b>480</b>	<b>253,485</b>	<b>294,899</b>	<b>47,733</b>	<b>53,569</b>	<b>1,445</b>	<b>1,438</b>	<b>242</b>	<b>329</b>

<sup>1</sup> Portfolio volumes include Lender substitutions along with new business volumes. Portfolio substitutions were 16,955 units and \$2,424 million in 2018 (40,647 units and \$7,337 million in 2017).

<sup>2</sup> Claims paid do not include social housing mortgage and index-linked mortgage claims.

Insurance-in-force decreased by \$32 billion (7%) due to lower volumes insured in the current year compared to recent years, and run-off of existing policies-in-force. New loans insured were \$48 billion, while estimated loan amortization and pay-downs were \$80 billion.

Transactional homeowner volumes decreased by 8,934 units (8%) primarily due to our reduced share of a shrinking insured mortgage market. In addition, portfolio volumes decreased due to lower eligible volumes for the portfolio substitutions product as past regulations continue to be grandfathered in. Multi-unit residential volumes decreased by 6,440 units (5%) as fewer borrowers refinanced units given higher interest rates. Although multi-unit volumes decreased, insured dollars were higher because we insured higher-priced, multi-unit properties.

Higher multi-unit insured dollar volumes and higher transactional homeowner premium rates resulted in a \$7-million (1%) increase in total premiums and fees received. Lower volumes in transactional homeowner and portfolio products partially offset this increase.

The decrease in claims paid of \$87 million (26%) is primarily due to a reduction in the number of claims for transactional homeowner across all regions resulting from strong economic conditions.

	2018		2017	
	No. of delinquent loans	Arrears rate	No. of delinquent loans	Arrears rate
Transactional homeowner	5,048	0.42%	5,376	0.43%
Portfolio	1,296	0.13%	1,362	0.13%
Multi-unit residential	86	0.36%	106	0.48%
<b>Total</b>	<b>6,430</b>	<b>0.29%</b>	<b>6,844</b>	<b>0.29%</b>

The arrears rate includes all loans more than 90 days past due as a percentage of outstanding insured loans. There were lower reported delinquencies in all regions except the Prairies and the Territories, which is consistent with the economic trends for these regions.

## MORTGAGE FUNDING

<b>(in percentages)</b>	2018	2017
Return on required equity	23.9%	15.1%

Our Mortgage Funding return on required equity was 8.8 percentage points higher than in 2017 due to the combined effect of the increase in adjusted net income and decrease in required equity for the year.

<b>(in millions, unless otherwise indicated)</b>	Total guarantees-in-force (\$B)		Securities guaranteed (\$B)		Guarantee and application fees received <sup>1</sup>	
	2018	2017	2018	2017	2018	2017
NHA MBS	254	244	127	127	503	479
CMB	234	233	40	40	146	148
<b>Total</b>	<b>488</b>	<b>477</b>	<b>167</b>	<b>167</b>	<b>649</b>	<b>627</b>

<sup>1</sup> Guarantee and application fees received for NHA MBS; guarantee fees received for CMB.

Guarantees-in-force increased by \$11 billion (2%) as new guarantees issued during the year exceeded maturities. Guarantees-in-force remain under the \$600 billion legislative limit.

Guarantee and application fees received increased by \$22 million (4%) despite the slightly lower guaranteed volumes compared to last year. This is mainly due to our implementation of higher Tier-2 NHA MBS guarantee fees in 2018, which apply to issuers whose guaranteed NHA MBS volumes exceed the \$9 billion guarantee threshold for the year.

## Government Funding for Housing Program Expenses

The following table reconciles the amount of government funding for housing programs authorized by Parliament as available to us during the Government's fiscal year (31 March) with the total amount we recognized in our calendar year.

<b>(in millions)</b>	<b>2018</b>	<b>2017</b>
Amounts provided for housing programs:		
<b>Amounts authorized in 2017/18 (2016/17)</b>		
Main estimates	2,735	2,028
Supplementary estimates A <sup>1,2</sup>	41	1,070
Supplementary estimates B <sup>1,2</sup>	1	78
Supplementary estimates C <sup>1</sup>	1	-
Less: Portion recognized in calendar 2017 (2016)	(1,663)	(1,563)
Less: Government funding lapsed for 2017/18 (2016/17)	(74)	(12)
Less: Frozen Allotment	(15)	(35)
<b>2017/18 (2016/17) government funding for housing programs recognized in 2018 (2017) calendar year</b>	<b>1,026</b>	<b>1,566</b>
Amounts authorized in 2018/19 (2017/18)		
Main estimates	2,452	2,735
Supplementary estimates A <sup>1,2,3</sup>	7	41
Supplementary estimates B <sup>1,4</sup>	1	1
Supplementary estimates C <sup>1</sup>	-	1
<b>Total fiscal year government funding for housing programs</b>	<b>2,460</b>	<b>2,778</b>
Less: portion to be recognized in subsequent quarters	(1,131)	(1,089)
Less: Forecasted lapse for 2018/19 (actual lapse in 2017/18)	-	(11)
Less: Frozen Allotment	(19)	(15)
<b>2018/19 (2017/18) government funding for housing programs recognized in 2018 (2017) calendar year</b>	<b>1,310</b>	<b>1,663</b>
<b>Total government funding for housing programs recognized – twelve months ended 31 December</b>	<b>2,336</b>	<b>3,229</b>

<sup>1</sup> Supplementary estimates are additional government funding voted on by Parliament during the Government's fiscal year.

<sup>2</sup> Budget 2016 provided funding over two years for investments in social infrastructure, as well as funding over five years for a new Affordable Rental Housing Innovation Fund. Years one and two of these investments are reflected within the 2016/17 and 2017/18 government funding.

<sup>3</sup> Approved reprofile request from 2017/18 to 2018/19 in supplementary estimates A for Shelter Enhancement Program.

<sup>4</sup> Approved supplementary estimates B for First Nations Housing Management Professional Initiative (HMPI).

## RENEWING OUR PARTNERSHIPS FOR BETTER OUTCOMES

Helping Canadians find a home they can afford and that meets their needs can't be done in isolation. Partnerships are at the heart of everything we do. They need to be nurtured, developed and often re-examined. That's why we're looking at the ways we can further cultivate collaboration.

"It's not a small job, housing," says Frank French, the housing manager for Chippewas of the Thames First Nation. He assumed his new role in 2016, and shortly after he enrolled in Vancouver Island University's Housing Manager Program.

Last year, we partnered with communities and academic institutions to expand the delivery of Housing Manager's training programs. Some 139 Indigenous housing professionals, like Frank, enrolled in the specialized programs that provide the opportunity to learn, network with other communities and compare best practices.

In the spirit of reconciliation, we continued to support the goal of Indigenous autonomy, control and self-determination. In 2018, we negotiated several contracts with First Nation organizations across the country to deliver CMHC technical services on-reserve, helping to improve housing outcomes.

We also set the foundation for all levels of government to work together to achieve a long-term shared vision for housing. The multilateral Housing Partnership Framework was endorsed by our provincial and territorial counterparts and sets the stage for the launch of provincial and territorial-delivered NHS initiatives.<sup>1</sup>

Relationships are also at the core of the National Housing Co-Investment Fund, an NHS initiative we launched last year that prioritizes projects that support partnerships between governments, non-profits, private sector, Indigenous organizations and others to make federal investment go further and reach more households. Through the NHS and beyond, we continue to build and encourage relationships that support housing outcomes.

<sup>1</sup> Excluding Quebec.



## Capital Management

### FRAMEWORKS

For our Assisted Housing activity, we maintain a reserve fund pursuant to Section 29 of the CMHC Act. Our Lending programs operate on a breakeven basis, however, a portion of their earnings are retained in this reserve fund as part of our strategy to address future interest rate and credit risk exposure on our loans. Unrealized fair value market fluctuations and re-measurement losses on defined benefit plan liabilities are absorbed in retained earnings. We do not hold capital for Housing programs, as this activity does not present risks to the Corporation that would require capital to be set aside.

For our Mortgage Insurance activity, our capital management framework follows OSFI regulations with respect to the use of the minimum capital test (MCT) for insurance companies.

With respect to our Mortgage Funding activity, our capital management framework follows industry best practices and incorporates regulatory principles from OSFI, including those set out in OSFI's E19 – Own Risk and Solvency Assessment (ORSA) guideline, and those of the Basel Committee on Banking Supervision. Our capital adequacy assessment uses an integrated approach to evaluate our capital needs from both a regulatory and economic capital basis to establish capital targets that take into consideration our strategy and risk appetite.

### RATIOS

The table below presents our capital management ratios as at 31 December.

(in percentages)	2018	2017
Mortgage Insurance: Capital available to minimum capital required (MCT)	168%	184%
Mortgage Funding: Available equity to required equity	209%	135%

Our MCT decreased by 16 percentage points mainly due to the declaration of \$4,000 million in dividends. We remain adequately capitalized as at 31 December 2018.

Our available equity to required equity ratio is 74 percentage points higher than in 2017. This increase is driven by the reinvestment of our increasing net income combined with a decrease in capital required because of our revised view on the risks associated with our Mortgage Funding program.

Refer to the Consolidated Financial Statements note 10 – Capital Management for further disclosure on capital management.

## Financial Outlook

### MORTGAGE INSURER CAPITAL ADEQUACY TEST GUIDELINE

On 9 August 2018, OSFI issued the Mortgage Insurer Capital Adequacy Test (MICAT) guideline that combines the 1 January 2017 advisory on Capital Requirements for Federally Regulated Mortgage Insurers and the relevant portions of the 2018 Minimum Capital Test for Federally Regulated Property and Casualty Insurance Companies. The MICAT has an effective date of 1 January 2019.

With this new guideline, OSFI simplified the calculation of insurance risk, streamlined the requirements for single-family residential mortgages, included accommodations for IFRS 16 Leases, and specified credit risk factors for securitized assets.

Changes in the MICAT framework predominately relate to streamlining the requirements for single-family residential mortgages as follows:

- Base total asset requirements will require the mortgage insurer to use the borrower's credit score at origination and remove the use of updated credit scores, and;
- Increases of the base total asset requirements uniformly by 5%, with a corresponding 1% increase in operational risk, to allow for deterioration in borrower credit scores after origination.

Based on the new guideline, we estimate that our MICAT ratio as at 1 January 2019 is 181% excluding transitional arrangements. Capital required is expected to increase under MICAT over the planning horizon as new business is written. The Corporation implemented the MICAT guideline on 1 January 2019.

### NHA MBS GUARANTEE FEES AND ANNUAL LIMITS

Effective 1 January 2019, the NHA MBA guarantee limit will increase to \$140 billion from \$135 billion. This limit excludes NHA MBS issuance as reinvestment assets for CMB series issued before 1 July 2016. The CMB guarantee limit will remain at \$40 billion.

# HISTORICAL INFORMATION

(in millions, unless otherwise indicated)	Actual				
	2018	2017	2016	2015	2014
<b>Consolidated Results</b>					
Total assets	263,876	267,115	259,532	252,107	248,490
Total liabilities	248,995	249,374	238,542	232,468	230,308
Total equity of Canada	14,881	17,741	20,990	19,639	18,182
Total revenues	4,823	6,152	4,625	4,636	6,199
Total expenses (including income taxes)	3,406	4,349	3,247	3,148	3,574
Net income	1,417	1,803	1,378	1,488	2,625
Operating budget expense ratio	14.4%	11.3%	12.3%	11.1%	15.1%
<b>Assisted Housing</b>					
Government funding for housing programs	2,336	3,229	2,153	2,049	2,010
Net income (loss)	26	80	(14)	25	52
Total equity of Canada	291	234	196	202	191
<b>Mortgage Insurance</b>					
Insurance-in-force (\$B)	448	480	512	526	543
Total insured volumes*	47,733	53,569	84,275	80,447	75,376
Premiums and fees received	1,445	1,438	1,558	1,438	1,315
Premiums and fees earned	1,426	1,557	1,505	1,592	1,688
Claims paid	242	329	377	353	390
Insurance claims	210	147	334	290	328
Net income	1,008	1,404	1,183	1,264	2,374
Arrears rate	0.29%	0.29%	0.32%	0.34%	0.35%
Loss ratio	14.7%	9.4%	22.2%	18.2%	19.4%
Operating expense ratio	22.3%	20.4%	17.0%	13.3%	14.8%
Combined ratio	37.0%	29.8%	39.2%	31.5%	34.2%
Severity ratio	31.9%	32.2%	31.9%	32.0%	30.1%
Return on equity	7.4%	8.3%	6.5%	7.4%	15.4%
Return on required equity	8.3%	13.6%	11.6%	12.9%	23.6%
Capital available to minimum capital required (% MCT)	168%	184%	384%	354%	343%
% Estimated outstanding Canadian residential mortgages with CMHC insurance coverage (\$)	29.1%	31.9%	36.0%	39.1%	42.7%
<b>Mortgage Funding</b>					
Guarantees-in-force (\$B)	488	477	452	431	422
Annual securities guaranteed (\$B)	167	167	144	116	118
Guarantee and application fees received	649	627	579	473	273
Guarantee and application fees earned	483	384	284	268	245
Net income	372	295	224	215	197
Operating expense ratio	9.5%	10.8%	12.6%	11.1%	10.9%
Return on equity	15.3%	13.4%	11.3%	12.0%	12.9%
Equity available to equity required	209%	135%	100%	159%	157%
Return on required equity	23.9%	15.1%	13.5%	17.9%	20.5%
% estimated outstanding Canadian residential mortgages with CMHC securitization guarantee (\$)	31.9%	32.2%	32.6%	32.5%	32.8%

\* Total insured volumes include portfolio substitutions.

## BRINGING VOICES TOGETHER TO SHAPE THE FUTURE OF HOUSING

“We have to get back to proper values. First come your ideals, before any ideas come forward. What are your ideals?” Celebrated Canadian Architect Douglas Cardinal urged the audience at our first-ever National Housing Conference to think about putting principles like respect for the environment and all peoples, at the forefront of our housing decisions.

Bringing together a diversity of voices is what make events like the National Housing Conference so valuable. The conference created a space for knowledge sharing and debate among industry experts, researchers, policy makers and practitioners. The event explored the role of housing in promoting economic growth and social inclusivity in our communities. Those conversations help us build relationships and gain insight into what each of us are doing to tackle the challenges of affordability and inequality.

Earlier in 2018, we co-hosted the European Covered Bond Council’s Plenary Meeting in Vancouver, marking the first time the event occurred in Canada. It gave us a global stage to share how we support Canada’s financial stability by helping lenders access diverse sources of reliable funding and provided an opportunity to learn and share best practices with international regulatory and covered bond experts.

We also supported a diverse group of 40 women from across the country as they came together in October 2018 to share their knowledge and stories as part of the second Pan-Canadian Voice for Women’s Housing in Vancouver. The event provided a platform for these women to share their experiences,

ensuring that women’s voices inform housing solutions and programs being developed, in order to properly address the needs of women.

While these conferences are important, this year we also took a step toward keeping conversations going outside of official gatherings. We launched the Expert Community on Housing – or ECOH – a collaborative, online network that enables housing experts to share their knowledge with CMHC and others, contributing to the development of innovative housing solutions across the housing spectrum.

*“Being a participant in this year’s Symposium really made me feel good. I loved how we all became one energy source feeding off each other’s ideas and really got out of our heads together. It was the first time in a long time that I felt my opinion was needed and more importantly wanted.”*

– Bianca Mercer  
Lived Experience Expert



# RISK MANAGEMENT

We are exposed to a variety of risks that could affect the achievement of our objectives. In order to promote stability in the housing system and protect the public resources entrusted to us, we strive to be a best-in-class housing risk manager.

process and people, model, outsourcing, security and privacy, compliance and fraud risks, among others. Our structured risk management programs ensure regular risk assessment and reporting of our risks and provide a sound process to monitor the company's top and emerging risks.

## Our Risk Management Approach

Our comprehensive enterprise risk management (ERM) framework defines our risk management practices and is designed to support an effective risk culture in the company. The framework is structured around four key dimensions: risk governance, risk management program, risk appetite and risk behaviour.

Our risks are governed by risk frameworks and policies and are supported by our “three lines of defence” operating model. This model embeds risk management activities in strategic planning and aligns strategy and performance across all businesses and functions.

It also promotes robust decision making, as well as evaluation and management of risks across the organization.

We categorize key risks facing the organization into seven categories: strategic, reputational, operational, insurance and guarantee, credit, market and liquidity. Operational risks are further broken down into subcategories, such as business



## Risk reporting and monitoring

Our risk reporting and monitoring processes provide a corporate-wide view of our risk profile, flag key and emerging risks and foster discussions about mitigating actions.

The following table outlines our seven risk categories and their assessment as at 31 December 2018:

Strategic	Moderate
Reputational	Moderate
Operational	High
Insurance	Low
Credit	Low
Market	Low
Liquidity	Low

We provide additional context below for risks that rank high or moderate.

### **Operational Risk ● High**

Operational risk is the risk of loss or other undesirable outcomes resulting from people, inadequate or failed internal processes or systems, or from external events. We assessed operational risk as high with cyber security and organizational change being identified as top concerns to the organization.

Our technology transformation is increasing the efficiency and effectiveness of our activities and modernizing our information and technology infrastructure. We have also matured our cyber security capabilities, including improved cyber detection and vulnerability management.

Our ability to attract, retain and engage a diverse and talented workforce is key to fulfilling the mission of helping Canadians meet their housing needs. We are closely monitoring change fatigue during the deployment of multiple concurrent business transformations and change initiatives. To mitigate this risk, we assess performance, provide a competitive total rewards package and update HR processes. We also support learning and development opportunities to help employees achieve their full potential.

Model risk plays an important role in supporting our operations. New models are subject to independent validation and require approval from the Chief Risk Officer prior to implementation.

Externally, some of the key risks include outsourcing and supplier risk in addition to legal risks associated with the NHA MBS and CMB programs. We maintain sound corporate governance and internal processes, such as consulting with both internal and external specialized counsel, to mitigate these risks.

### **Reputational Risk ● Moderate**

We assessed our reputational risks as moderate given our rapidly changing internal and external environments. The combination of economic uncertainties, mortgage lending regulatory changes, our technology and business transformation, as well as heightened expectations from our many NHS partners may impact our reputation and the way we execute our strategy.

Under the National Housing Strategy, client and partner expectations are high and proposed targets are ambitious. We manage reputational risk through a number of proactive strategies and approaches to engage or inform our clients and partners.

Through our Housing Research & Analysis activities, the evidence-based information and advice that we provide must be timely, relevant and accurate. To reduce reputational risk, we promote our knowledge creation and sharing role. Internal and external consultations also ensure our priorities reflect information gaps and surveys are conducted to measure the usefulness of our market analysis and research products.

### **Strategic Risk ● Moderate**

We assessed our strategic risks as moderate given the combination of economic uncertainties and mortgage lending regulatory changes.

A number of factors influence our Mortgage Insurance business, including interest rate trends, house price changes, the unemployment rate, government regulation and competition within the Canadian housing finance market. We monitor these factors to ensure that strategic risk remains within our risk tolerance.

# INNOVATING TO ADVANCE HOUSING SOLUTIONS

At CMHC, our values embolden us to celebrate both wins and failures and to be fearless in the face of change. Getting the most out of ourselves and maximizing the return on our efforts requires us to embrace new ideas and to think about things differently.

Our Affordable Housing Innovation Fund encourages those working on new housing solutions and innovative building techniques. Programs like the Innovation Fund allow us to test new ideas within the Canadian context and support those pushing the traditional and established boundaries.

Whether converting used shipping containers into new affordable rental units or experimenting with tiny homes, the progress we make with our partners allows us to advance new housing solutions that will benefit all Canadians. We also want to understand the impact of our projects and share innovative best practices. Last year, we conducted a post-occupancy analysis on a Vancouver modular multi-unit building that demonstrated the new approach can offer cost-effective, energy-efficient and socially inclusive housing.

In order to support those conducting research and working on new ideas behind the scenes, in 2018 we launched a number of NHS-related innovation and research programs. The CMHC Housing Research Awards recognize Canadian world-class housing research while the CMHC Housing Research Scholarship Program provides post-doctoral fellowships to support then next generation of researchers.

Beyond our programs, we are transforming internally, using technology to identify how we can innovate to make housing more affordable. We are now leveraging analytics and machine learning to better identify and detect fraud networks and have begun exploring the application of blockchain within our Mortgage Funding activities.

Whether it be on the ground or in the classroom, we are proud to be shaping the future of housing in Canada.



*“We take what works from around the world and apply it to a Canadian context. We are trying to figure out how to build this community with as much green tech as possible, while staying economically viable.”*

– **Thomas Grenier**  
Owner, Vagabond Tiny Homes



Our mandate, as set out in the NHA, is to promote the construction of new houses, the repair and modernization of existing houses, and the improvement of housing and living conditions.



# CONSOLIDATED FINANCIAL STATEMENTS

Management's Responsibility for Financial Reporting	45
Consolidated Balance Sheet	48
Consolidated Statement of Income And Comprehensive Income	49
Consolidated Statement of Equity of Canada	50
Consolidated Statement of Cash Flows	51
Notes to Consolidated Financial Statements	52
1. Corporate Information	52
2. Basis of Preparation and Significant Accounting Policies	53
3. Current and Future Accounting Changes	69
4. Critical Judgments in Applying Accounting Policies and Making Estimates	74
5. Segmented Information	75
6. Government Funding and Housing Programs Expenses	79
7. Mortgage Insurance	80
8. Mortgage Funding	86
9. Structured Entities	87
10. Capital Management	88
11. Fair Value Measurement	91
12. Cash and Cash Equivalents	97
13. Investment Securities	98
14. Loans	101
15. Borrowings	105
16. Derivatives	108
17. Financial Instruments Income and Expenses	109
18. Market Risk	110
19. Credit Risk	112
20. Liquidity Risk	116
21. Accounts Receivable and Other Assets	119
22. Investment Property	119
23. Accounts Payable and Other Liabilities	119
24. Pension and Other Post-Employment Benefits	120
25. Income Taxes	125
26. Related Party Transactions	126
27. Commitments and Contingent Liabilities	128
28. Operating Expenses	128
29. Current and Non-Current Assets and Liabilities	129
30. Comparative Figures	130
31. Subsequent Event	130



## MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

Year ended 31 December 2018

Management is responsible for the integrity and objectivity of the consolidated financial statements and related financial information presented in this annual report. The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and, consequently, include amounts which are based on the best estimates and judgment of Management. The financial information contained elsewhere in this Annual Report is consistent with that in the consolidated financial statements.

In carrying out its responsibilities, Management maintains appropriate financial systems and related internal controls to provide reasonable assurance that financial information is reliable; assets are safeguarded; transactions are properly authorized and are in accordance with the relevant legislation, by-laws of the Corporation and Government directives; resources are managed efficiently and economically; and operations are carried out effectively. The system of internal controls is supported by internal audit, which conducts periodic audits of different aspects of the operations.

The Board of Directors, acting through the Audit Committee whose members are neither officers nor employees of the Corporation, oversees Management's responsibilities for financial reporting and internal control systems. The Board of Directors, upon the recommendation of the Audit Committee, has approved the consolidated financial statements.

Ernst & Young LLP and the Auditor General of Canada have audited the consolidated financial statements. The auditors have full access to, and meet periodically with, the Audit Committee to discuss their audit and related matters.



Evan Siddall, BA, LL.B  
President and Chief Executive Officer



Lisa Williams, CPA, CA  
Chief Financial Officer



## INDEPENDENT AUDITORS' REPORT

To the Minister of Families, Children and Social  
Development

### Report on the Audit of the Consolidated Financial Statements

#### *Opinion*

We have audited the consolidated financial statements of Canada Mortgage and Housing Corporation and its subsidiary (the Group), which comprise the consolidated balance sheet as at 31 December 2018, and the consolidated statement of income and comprehensive income, consolidated statement of equity of Canada and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

#### *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 are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### *Other Information*

Management is responsible for the other information.

The other information comprises the information included in the 2018 Annual Report, but does not include the consolidated financial statements and our auditors' report thereon.

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, 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 IFRSs, 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 Group'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 Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group'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 Group'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 Group'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 Group 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 Canada Housing Trust or business activities within the Group 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.

### **Report on Compliance with Specified Authorities**

#### *Opinion*

In conjunction with the audit of the consolidated financial statements, we have audited transactions of Canada Mortgage and Housing Corporation coming to our notice for compliance with specified authorities. The specified authorities against which compliance was audited are Part X of the *Financial Administration Act* and regulations, the *Canada Mortgage and Housing Corporation Act*, the *National Housing Act*, the by-laws of the Canada Mortgage and Housing Corporation, and the directives issued pursuant to section 89 of the *Financial Administration Act*.

In our opinion, the transactions of Canada Mortgage and Housing Corporation that came to our notice during the audit of the consolidated financial statements have complied, in all material respects, with the specified authorities referred to above. Further, as required by the *Financial Administration Act*, we report that, in our opinion, the accounting principles in IFRSs have been applied, except for the changes in the methods of

accounting for financial instruments and revenues due to the adoption of *IFRS 9, Financial Instruments* and *IFRS 15, Revenue from contracts with customers* as explained in Note 3 to the consolidated financial statements, on a basis consistent with that of the preceding year.

#### *Responsibilities of Management for Compliance with Specified Authorities*

Management is responsible for Canada Mortgage and Housing Corporation's compliance with the specified authorities named above, and for such internal control as management determines is necessary to enable Canada Mortgage and Housing Corporation to comply with the specified authorities.

#### *Auditor's Responsibilities for the Audit of Compliance with Specified Authorities*

Our audit responsibilities include planning and performing procedures to provide an audit opinion and reporting on whether the transactions coming to our notice during the audit of the consolidated financial statements are in compliance with the specified authorities referred to above.



Riowen Yves Abgrall, CPA, CA  
Principal  
for the Auditor General of Canada



Chartered Professional Accountants  
Licensed Public Accountants

Ottawa, Canada  
21 March 2019

# CONSOLIDATED BALANCE SHEET

AS AT 31 DECEMBER

(in millions of Canadian dollars)	Notes	2018	2017
<b>Assets</b>			
Cash and cash equivalents	12	837	887
Accrued interest receivable		724	705
Investment securities:	13		
Fair value through profit or loss		1,591	1,234
Fair value through other comprehensive income		18,164	-
Available for sale		-	22,112
Derivatives	16	33	61
Due from the Government of Canada	6	158	126
Loans:	14		
Fair value through profit or loss		2,040	2,906
Amortized cost		239,162	237,944
Accounts receivable and other assets	21	856	835
Investment property	22	311	305
		<b>263,876</b>	<b>267,115</b>
<b>Liabilities</b>			
Securities sold under repurchase agreements		280	297
Accounts payable and other liabilities	23	506	561
Accrued interest payable		546	545
Dividends payable	10	675	2,000
Derivatives	16	117	39
Provision for claims	7	512	555
Borrowings:	15		
Fair value through profit or loss		3,430	4,564
Amortized cost		235,525	233,592
Defined benefit plans liability	24	354	450
Unearned premiums and fees	7, 8	6,948	6,687
Deferred income tax liabilities	25	102	84
		<b>248,995</b>	<b>249,374</b>
Commitments and contingent liabilities	27		
<b>Equity of Canada</b>	10		
Contributed capital		25	25
Accumulated other comprehensive income or loss		5	490
Retained earnings		14,851	17,226
		<b>14,881</b>	<b>17,741</b>
		<b>263,876</b>	<b>267,115</b>

The accompanying notes are an integral part of these consolidated financial statements.



Derek Ballantyne  
Chairperson



Evan Siddall, BA, LL.B  
President and Chief Executive Officer

# CONSOLIDATED STATEMENT OF INCOME AND COMPREHENSIVE INCOME

YEAR ENDED 31 DECEMBER

(in millions of Canadian dollars)	Notes	2018	2017
Interest income	17	5,294	4,708
Interest expense	17	5,170	4,569
<b>Net interest income</b>		<b>124</b>	<b>139</b>
Government funding for housing programs	6	2,336	3,229
Premiums and fees earned	7, 8	1,909	1,941
Investment income	17	513	573
Net gains (losses) on financial instruments	17	(97)	147
Other income		38	123
<b>Total revenues and government funding</b>		<b>4,823</b>	<b>6,152</b>
<b>Non-interest expenses</b>			
Housing programs	6	2,336	3,229
Insurance claims		210	147
Operating expenses	28	398	396
<b>Total expenses</b>		<b>2,944</b>	<b>3,772</b>
<b>Income before income taxes</b>		<b>1,879</b>	<b>2,380</b>
Income taxes	25	462	577
<b>Net income</b>		<b>1,417</b>	<b>1,803</b>
<b>Other comprehensive income (loss), net of tax</b>			
Net unrealized losses from available for sale financial instruments		-	(135)
Net unrealized losses from debt instruments held at fair value through other comprehensive income		(103)	-
Reclassification of gains on available for sale financial instruments to net income on disposal in the year		-	(136)
Reclassification of gains on debt instruments held at fair value through other comprehensive income on disposal in the year		(14)	-
<b>Total items that will be subsequently reclassified to net income</b>		<b>(117)</b>	<b>(271)</b>
Items that will not be subsequently reclassified to net income			
Net unrealized losses from equity securities designated at fair value through other comprehensive income		(9)	-
Remeasurement gains (losses) on defined benefit plans	24, 25	79	(106)
<b>Total items that will not be subsequently reclassified to net income</b>		<b>70</b>	<b>(106)</b>
<b>Total other comprehensive income (loss), net of tax</b>		<b>(47)</b>	<b>(377)</b>
<b>Comprehensive income</b>		<b>1,370</b>	<b>1,426</b>

The accompanying notes are in integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENT OF EQUITY OF CANADA

YEAR ENDED 31 DECEMBER

(in millions of Canadian dollars)	Notes	2018	2017
<b>Contributed capital</b>		<b>25</b>	<b>25</b>
<b>Accumulated other comprehensive income</b>			
Balance at beginning of year		490	761
Impact of adopting IFRS 9	3	(368)	-
Restated opening balance		122	761
Other comprehensive loss		(117)	(271)
<b>Balance at end of year</b>		<b>5</b>	<b>490</b>
<b>Retained earnings</b>			
Balance at beginning of year		17,226	20,204
Impact of adopting IFRS 9	3	366	-
Impact of adopting IFRS 15	3	(53)	-
Restated opening balance		17,539	20,204
Net income		1,417	1,803
Other comprehensive income (loss)		70	(106)
Dividends	10	(4,175)	(4,675)
<b>Balance at end of year</b>		<b>14,851</b>	<b>17,226</b>
<b>Equity of Canada</b>	<b>10</b>	<b>14,881</b>	<b>17,741</b>

The accompanying notes are an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENT OF CASH FLOWS

YEAR ENDED 31 DECEMBER

(in millions of Canadian dollars)	Notes	2018	2017
<b>Cash flows from operating activities</b>			
Net income		1,417	1,803
Adjustments to determine net cash flows from operating activities			
Amortization of premiums and discounts on financial instruments		105	144
Net gains on financial instruments		(71)	(116)
Deferred income taxes		10	57
Net unrealized gains on investment property	22	-	(90)
Changes in operating assets and liabilities			
Derivatives		106	32
Accrued interest receivable		(19)	-
Due from the Government of Canada		(32)	(67)
Accounts receivable and other assets		(106)	(68)
Accounts payable and other liabilities		(57)	13
Accrued interest payable		1	3
Provision for claims		(43)	(99)
Defined benefit plans liability		(1)	(63)
Unearned premiums and fees		189	123
Other		(8)	20
Loans	14		
Repayments		39,826	30,836
Disbursements		(40,003)	(40,373)
Borrowings	15		
Repayments		(40,859)	(32,839)
Issuances		41,039	42,386
		1,494	1,702
<b>Cash flows from investing activities</b>			
Investment securities			
Sales and maturities		10,244	8,352
Purchases		(6,270)	(8,119)
Investment property	22		
Additions		(1)	-
Disposals		-	22
Securities purchased under resale agreements		-	17
Securities sold under repurchase agreements		(17)	(407)
		3,956	(135)
<b>Cash flows from financing activities</b>			
Dividends paid	10	(5,500)	(2,675)
Change in cash and cash equivalents		(50)	(1,108)
<b>Cash and cash equivalents</b>			
Beginning of year		887	1,995
End of year		837	887
<b>Represented by</b>			
Cash		1	3
Cash equivalents		836	884
		<b>837</b>	<b>887</b>
<b>Supplementary disclosure of cash flows from operating activities</b>			
Amount of interest received during the year		6,057	5,592
Amount of interest paid during the year		5,372	4,767
Amount of dividends received during the year		34	46
Amount of income taxes paid during the year		478	435

The accompanying notes are an integral part of these consolidated financial statements.

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2018

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## 1. CORPORATE INFORMATION

Canada Mortgage and Housing Corporation (CMHC or Corporation) was established in Canada as a Crown corporation in 1946 by the *Canada Mortgage and Housing Corporation Act* (CMHC Act) to carry out the provisions of the *National Housing Act* (NHA). We are also subject to Part X of the *Financial Administration Act* (FAA) by virtue of being listed in Part 1 of Schedule III, wholly owned by the Government of Canada (Government), and an agent Crown corporation. Our National Office is located at 700 Montreal Road, Ottawa, Ontario, Canada, K1A 0P7.

Our mandate, as set out in the NHA, is to promote the construction of new houses, the repair and modernization of existing houses, and the improvement of housing and living conditions. In relation to financing for housing, the NHA's purpose is to promote housing affordability and choice; to facilitate access to, and competition and efficiency in the provision of, housing finance; to protect the availability of adequate funding for housing; and generally to contribute to the well-being of the housing sector. In addition, we have the following objectives in carrying out any activities related to mortgage insurance and guarantee programs and in administering the Canadian covered bond legal framework: (a) to promote the efficient functioning and competitiveness of the housing finance market; (b) to promote and contribute to the stability of the financial system, including the housing market; and (c) to have due regard to the Corporation's exposure to loss. We deliver on our mandate through our reportable segments: Assisted Housing (AH), Mortgage Insurance (Mortgage Loan Insurance or MI) and Mortgage Funding (Securitization or MF). These Activities are supported by our Market Analysis and Research Activity and by our infrastructure of People and Processes.

Within the Public Accounts of Canada, our annual consolidated net income reduces the Government's annual deficit; our consolidated retained earnings and accumulated other comprehensive income (AOCI) reduce the Government's accumulated deficit.

In September 2008, CMHC, together with a number of other Crown corporations, was issued a directive (P.C. 2008-1598) pursuant to Section 89 of the FAA requiring due consideration to the personal integrity of those to whom it lends or provides benefits. We continue to meet the requirements of this directive.

In December 2014, CMHC was issued a directive (P.C. 2014-1380) pursuant to Section 89 of the FAA that is intended to ensure that Crown corporations' pension plans provide a 50:50 current service cost-sharing ratio between employees and employer for pension contributions to be phased in for all members by 31 December 2017. We have responded to the directive with a new design for our defined benefit pension plan, effective 1 January 2018, which reflects the criteria of uniformity, risk sharing, competitiveness and cost control. We continue to take steps to ensure the long-term sustainability of our pension plan and to manage costs.

In July 2015, CMHC was issued a directive (P.C. 2015-1106) pursuant to Section 89 of the FAA directing Crown corporations to align their travel, hospitality, conference and event expenditure policies, guidelines and practices with those of Treasury Board of Canada Secretariat (TBS) in a manner consistent with their legal obligations and to report on the implementation of this directive in the Corporation's next corporate plan. Our analysis found that our policies were generally aligned with TBS policies and any gaps were not considered material. During 2017, further updates were made by TBS and as such, our policies were updated effective January 2019 to ensure continued compliance.

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## 2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

### Basis of preparation

Our consolidated financial statements have been prepared in accordance with IFRS as issued by the International Accounting Standards Board (IASB). Except as identified immediately below, we have applied the same accounting policies consistently to all periods presented.

Our consolidated financial statements were approved by the Board of Directors on 21 March 2019.

### Accounting policy changes

Effective 1 January 2018, we adopted IFRS 9 *Financial Instruments*, which replaces IAS 39 *Financial Instruments: Recognition and Measurement*, as well as IFRS 15 *Revenue from Contracts with Customers*, which replaces IAS 18 *Revenue*, IAS 11 *Construction Contracts* and related interpretations. As a result, we changed some of our accounting policies for financial instruments and timely payment guarantees (TPGs). As we have not restated comparative information for 2017, we have disclosed both our 2018 and 2017 accounting policies where applicable in this note. Refer to Note 3 for further information on our adoption of these accounting standards.

### Measurement basis

Our consolidated financial statements have been prepared on a going concern basis using a historical cost basis except for the following items in the consolidated balance sheet:

- Financial assets at fair value through profit or loss (FVTPL) or fair value through other comprehensive income (FVOCI), as well as liabilities at FVTPL, are measured at fair value;
- Investment property is measured at fair value;
- Defined benefit liabilities for post-employment benefit plans are recognized at the present value of the defined benefit obligations, net of the fair value of plan assets; and
- Provision for claims is recognized on an actuarial present value basis.

### Functional currency

Our consolidated financial statements are stated in millions of Canadian dollars, unless otherwise indicated, which is the Corporation's functional currency.

### Basis of consolidation

Our consolidated financial statements include the accounts of CMHC. As required by IFRS 10 *Consolidated Financial Statements*, we consolidate the accounts of Canada Housing Trust (CHT) as we control its activities.

Control is achieved when we are exposed, or have rights, to variable returns from our involvement with the investee and have the ability to affect those returns through our power over the investee. Specifically, we control an investee if, and only if, we have power over the investee (i.e. existing rights that give us the current ability to direct the relevant activities of the investee); exposure, or rights, to variable returns from our involvement; and the ability to use our power over the investee to affect our returns.

We re-assess whether or not we control an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control.

Inter-segment balances and transactions have been eliminated.

The following summarizes the significant accounting policies used in the preparation of our consolidated financial statements.

## Government funding and housing programs expenses

The Assisted Housing Activity receives government funding (appropriations) for housing programs and initiatives.

### Government funding for housing programs

Government funding is recognized when there is reasonable assurance that it will be received and all attached conditions will be complied with. It is recognized as revenue over the same period as the related housing programs expenses.

### Housing programs expenses

Housing programs expenses, including operating costs incurred to administer the housing programs, are recorded on an accrual basis.

Expenses incurred but not yet reimbursed are included in due from the Government of Canada.

## Mortgage insurance

### Product classification

We classify our mortgage insurance as an insurance contract as the lender faces uncertainty with regard to potential borrower default on a mortgage and therefore pays a premium to transfer the risk to us. If the borrower defaults, the claim is significantly larger than the actual premium. Such contracts remain insurance contracts until the underlying insured mortgages are fully repaid or there is a claim.

### Premium revenue earned and unearned premiums

Mortgage insurance premiums are due at the inception of the mortgage being insured, at which time they are deferred as unearned premiums and included in unearned premiums and fees. The majority of mortgage insurance issued to date have amortizations of 25 years or less. Unearned premiums are recognized as revenue over the period covered by the insurance contract using earning factors which reflect claim occurrence patterns. The earning patterns are selected based on the principle that premiums would be earned at the same pace as claims are expected to be incurred.

Unearned premiums represent the unamortized portion of the policy premiums at the balance sheet date and therefore relate to claims that may occur from the balance sheet date to the termination of the insurance contract.

### Fees

We offer approved lenders a service for low loan-to-value applications for transactional homeowners whereby we assess an application using our loan assessment platform which provides approved lenders with an insurable or non-insurable result. There is no mortgage insurance coverage associated with this assessment. These fees are recognized immediately as revenue once the decision is rendered.

Application fees designed to recover part or all acquisition costs associated with issuing mortgage insurance policies related to multi-unit residential loans are deferred and amortized on the same basis as the related premiums.

### Provision for claims

The provision for claims represents an estimate for expected claims and the related settlement expenses, net of the related expected property sale proceeds and borrower recoveries, for defaults from the mortgage insurance business that have occurred on or before the balance sheet date. This provision includes claims that are incurred but not reported (IBNR), claims that are incurred but not enough reported (IBNER), claims in process (CIP), and claims on loans made under various social housing programs as well as loans financed by ILM under the Federal Co-operative Housing Program (SH and ILM). The provision takes into consideration the time value of money and includes an explicit provision for adverse deviation.

A change in the estimated provision for claims is recorded in insurance claims expense in the period in which it occurs.

For further details on the estimates and assumptions used to calculate the provision, see Note 4.

### **Insurance policy liability adequacy**

Liability adequacy tests are performed at each balance sheet date as part of the actuarial valuation to ensure the adequacy of insurance policy liabilities net of deferred acquisition costs (DAC) assets with respect to unearned premiums. Current best estimates of future contractual cash flows, claims handling and administration costs, and investment returns from the assets backing the liabilities are taken into account in the tests. There is a deficiency if the outcome of the liability adequacy test exceeds the unearned premiums balance. In such a case, DAC assets are written off first, and insurance liabilities are increased once the DAC assets are written off in full. Any premium deficiency is immediately recognized in insurance claims expense.

### **Deferred acquisition costs**

DAC generally consist of policy issuance costs relating to the underwriting of insurance contracts. A portion of the acquisition costs relating to the unearned premiums is deferred and amortized over the estimated lives of the relevant contracts using the same earning factors as the unearned premiums. DAC assets are included in accounts receivable and other assets and amortization is recorded in operating expenses.

### **Net estimated borrower recoveries**

We estimate the net borrower recoveries related to claims paid based on historical data in accordance with Canadian accepted actuarial practice on an annual basis. Changes to the estimated borrower recovery balance are recorded in insurance claims expense in the year in which they are determined. Net estimated borrower recoveries are included in accounts receivable and other assets.

### **Government of Canada fees for risk exposure**

We pay fees to the Department of Finance to compensate for mortgage insurance risks. These fees are deferred in accounts receivable and other assets and recognized in operating expenses over the period covered by the insurance contract using the same earning factors as the unearned premiums. The fees are payable at the rate of 3.25% of premiums written during the year and an additional 0.1% on new portfolio insurance written.

## **Timely payment guarantees**

### **Classification**

Financial guarantee contracts are defined as those that require the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due. We classify the TPG for *National Housing Act* Mortgage-Backed Securities (NHA MBS) and Canada Mortgage Bonds (CMB) as financial guarantee contracts. Such contracts remain financial guarantee contracts until all rights and obligations are extinguished or expire.

### **Recognition and measurement – effective as of 1 January 2018 (IFRS 9 and 15)**

TPG and application fees are initially recognized in unearned premiums and fees at fair value (the premium received). Subsequently, they are measured at the higher of i) the amount initially recognized less the amortization of guarantee and application fee revenue; and ii) the amount of the allowance for expected credit losses (ECL). Unless the amount of the allowance for ECL is higher, the fees are recognized into premiums and fees earned on a straight-line basis over the expected life (typically the contractual life) of the related NHA MBS or CMB. All fees are received prior to the issuance of the corresponding securities.

### **Recognition and measurement – effective prior to 1 January 2018 (IAS 11, 18 and 39)**

TPG fees are initially recognized in unearned premiums and fees at fair value (the premium received). Subsequently, they are measured at the amount initially recognized less the amortization of guarantee fee revenue. Guarantee fee revenue is recognized into premiums and fees earned over the expected life of the related NHA MBS or CMB. Should the estimated amount required to settle the timely payment guarantee obligations exceed unearned premiums and fees, an additional provision is recognized.

Application fees are recognized as revenues in the period in which the related services are rendered. Direct costs associated with issuing timely payment guarantees are recognized in operating expenses as incurred.

### *Government of Canada guarantee fees*

We pay guarantee fees to the Department of Finance to compensate for TPG risks. These fees are deferred in accounts receivable and other assets and recognized in operating expenses over the period covered by the guarantee. These fees are payable at a rate of 0.075% of CMB issuances.

## **Financial instruments – effective as of 1 January 2018 (IFRS 9)**

### **Classification and measurement of financial instruments (IFRS 9)**

We classify our financial assets in the following categories: financial assets at FVTPL, FVOCI and amortized cost. Classification is determined at initial recognition based on our business model for managing the asset and the contractual cash flow characteristics of the asset.

Financial liabilities are classified as either financial liabilities at FVTPL or amortized cost, which is essentially unchanged from IAS 39 except that changes in fair value of liabilities designated at FVTPL due to our own credit risk are presented in other comprehensive income (OCI), rather than profit or loss.

Consistent with under IAS 39, we use settlement date accounting for purchases and sales of financial assets and financial liabilities, and we recognize realized gains and losses on sales on a weighted average cost basis.

The following table presents a description of our financial instruments along with their classification under IFRS 9 and the criteria for classifying them as such:

Classification	Financial Instruments (Activity) <sup>1</sup>	Description	Criteria and accounting treatment
<b>Financial assets at amortized cost</b>	Cash and cash equivalents (AH, MI, MF)	Highly liquid investments with a term to maturity of 98 days or less from the date of acquisition that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.	Financial assets are classified at amortized cost if the assets: <ul style="list-style-type: none"> <li>a) are held within a business model whose objective is to collect contractual cash flows;</li> <li>b) generate cash flows on specified dates that are solely payment of principal and interest (SPPI); and</li> <li>c) have not been designated as FVTPL in order to eliminate or significantly reduce an accounting mismatch that would otherwise arise from classifying them as at amortized cost.</li> </ul>
	Securities purchased under resale agreements (Reverse Repurchase Agreements) (AH, MI)	Purchase of securities, typically Government treasury bills or bonds, with the commitment to resell the securities to the original seller at a specified price and future date in the near term.	Financial assets at amortized cost are initially recognized at fair value plus transaction costs. They are subsequently measured at amortized cost using the effective interest rate method (EIRM), net of an allowance for ECL.  Interest income is recognized using the EIRM in interest income in AH and investment income in MI and MF.
	Loans – CMB Program (MF)	Amounts due from Canadian financial institutions as a result of the sale of their beneficial interest in NHA MBS to CHT.	ECL on financial assets at amortized cost are recognized in net gains (losses) on financial instruments in AH and insurance claims in MI.  Gains and losses arising on derecognition are recognized directly in net gains (losses) on financial instruments, together with foreign exchange gains and losses.
	Loans – Lending Programs (AH)	Loans not economically hedged within our AH Activity.	For certain lending program loans originated from 1946 to 1984 through provisions of the NHA, interest rate losses from the loans having lower interest rates than the related borrowings are reimbursed through government funding. In assessing the fair value of these loans at initial recognition, the continued receipt of the government funding in the future is assumed.
	Loans (MI)	Mortgages or loans (workouts) that benefit from the MI-supported default management activities that enable borrowers to work through their financial difficulties.	
<b>Debt instruments at FVOCI</b>	Cash equivalents (MI, MF) Investment Securities – debt instruments (MI, MF)	Highly liquid investments with a term to maturity of 98 days or less from the date of acquisition that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value consists of Corporate, Federal, Provincial and Sovereign debt instruments.	Debt instruments are classified as at FVOCI if the assets: <ul style="list-style-type: none"> <li>a) are held within a business model whose objective is achieved by collecting contractual cash flows and selling assets;</li> <li>b) generate cash flows on specified dates that are SPPI; and</li> <li>c) have not been designated as FVTPL in order to eliminate or significantly reduce an accounting mismatch that would otherwise arise from classifying them as at FVOCI.</li> </ul> Financial assets at FVOCI are initially recognized at fair value plus transaction costs. They are subsequently measured at fair value. Unrealized gains and losses arising from changes in fair value are recorded in OCI until the financial asset is derecognized at which point, cumulative gains or losses previously recognized in OCI are reclassified from AOCI to net gains (losses) on financial instruments. Unrealized foreign exchange gains (losses) are recognized in net gains (losses) on financial instruments.  Interest income is recognized using the EIRM in investment income.  The cumulative ECL allowance on financial assets held at FVOCI is recorded in OCI and does not reduce the carrying amount of the financial asset. The change in the ECL allowance is recognized in profit or loss.

<sup>1</sup> Denotes in which Activity we hold the instruments: AH, MI or MF

continued

Classification	Financial Instruments (Activity) <sup>1</sup>	Description	Criteria and accounting treatment
<b>Financial assets at FVTPL</b>	Cash equivalents, loans, investment securities designated at FVTPL (AH)	For certain portfolios of loans and associated borrowings originated prior to August 2016, the AH Activity uses derivatives to manage refinancing and reinvestment risks, as well as mismatches between the timing of receipts from assets and payments of liabilities. These assets form part of the lending economic hedging structure and are designated at FVTPL.	Financial assets that do not meet the criteria for classification as financial assets at amortized cost or financial assets at FVOCI are classified as at FVTPL, unless an irrevocable election has been made at initial recognition for certain equity investments to have their changes in fair value be presented in OCI.  Financial assets at FVTPL include any financial assets whose contractual cash flows are not SPPI, or any financial assets that are not held within a business model whose objective is achieved by collecting contractual cash flows or collecting cash flows and selling assets.
	Derivatives – Interest rate swaps (AH) and FX contracts (MI)	Interest rate swaps and foreign exchange contracts used to economically hedge foreign exchange risks on US Dollar denominated debt instruments.	Financial assets at FVTPL also include derivatives or instruments that have been irrevocably designated upon initial recognition as at FVTPL in order to eliminate or significantly reduce an accounting mismatch that would otherwise arise from classifying them in those categories.
	Investment Securities – Common equity securities and limited partnership units (MI)	Classified at FVTPL.	Financial assets at FVTPL are initially recognized and subsequently measured at fair value. Unrealized gains and losses arising from changes in fair value and gains and losses realized on disposition are recorded in net gains (losses) on financial instruments. Transaction costs are recognized in net gains (losses) on financial instruments as incurred.  Interest income and dividend income are recognized in net income.  ECL are not recognized on financial instruments measured at FVTPL.
	Investment Securities – debt instruments (MI)	Subordinated debt securities whose contractual cash flows do not give rise to cash flows that are SPPI.	
	Loans – (AH, MI)	Workout loans which contain interest adjustment clauses and therefore fail the SPPI test, assigned mortgages for which we only expect to recover the value of the underlying collateral, as well as loans economically hedged within our AH Activity.	
<b>Equity instruments designated at FVOCI</b>	Investment Securities - Preferred equity securities (MI)	Preferred shares.	An irrevocable election is available upon initial recognition to present changes in the fair value of equity instruments in OCI if the instruments are not held for trading and is not a contingent consideration in a business combination. An instrument that is held for trading is:  a) acquired principally for the purpose of selling in the near term;  b) on initial recognition, part of a portfolio of identified financial instruments that are managed together and for which there is evidence of recent actual short-term profit-taking; or  c) a derivative (other than financial guarantee derivatives or designated effective hedging instruments).  The election is made upon initial recognition on an instrument-by-instrument basis. Amounts recognized in OCI shall not be transferred to profit or loss; however, they may be transferred to a different category within equity (e.g. retained earnings) upon derecognition.  We have elected to transfer cumulative OCI directly to retained earnings at each balance sheet date.  ECL are not recognized on equity instruments.  Dividend income is recognized in net income.

Classification	Financial Instruments (Activity) <sup>1</sup>	Description	Criteria and accounting treatment
<b>Financial liabilities at FVTPL</b>	Borrowings (AH – Lending programs)	Borrowings that are economically hedged as part of our lending hedging structure.	<p>A financial liability is classified at FVTPL if it is held for trading or designated as at FVTPL.</p> <p>A financial liability may be irrevocably designated upon initial recognition as at FVTPL if:</p> <ul style="list-style-type: none"> <li>a) doing so eliminates or reduces significantly an accounting mismatch; or</li> <li>b) its performance is evaluated on a fair value basis in accordance with risk management policies. <p>Unrealized gains and losses arising from changes in fair value are recognized in net gains (losses) on financial instruments except for changes in fair value attributable to an entity's own credit risk for financial liabilities designated at FVTPL. These changes are recognized in OCI unless doing so would create an accounting mismatch, in which case the entire fair value change is presented in profit or loss.</p> </li></ul>
<b>Financial liabilities at amortized cost</b>	<p>Borrowings – CMB (MF)</p> <p>Borrowings from the Government of Canada (AH)</p> <p>Securities sold under repurchase agreements (MI)</p>	<p>Interest-bearing bullet bonds issued by CHT and guaranteed by CMHC. See below this table for further details about CMB.</p> <p>Borrowings incurred to fund loans in the AH Activity that are not part of the lending hedging structure.</p> <p>Sale of securities with the commitment to repurchase the securities from the original buyer at a specified price and future date in the near term. Proceeds received from these agreements are generally invested in Reverse Repurchase Agreements or cash equivalents for the purpose of generating additional income. These transactions are entered into simultaneously with matching terms to maturity.</p>	<p>Financial liabilities are classified at amortized cost, unless they have been classified at FVTPL.</p> <p>Financial liabilities are initially recognized at fair value plus transaction costs. They are subsequently measured at amortized cost using the EIRM, with interest expense recorded in interest expense in AH and MF and investment income in MI.</p>
<b>Financial guarantee contracts</b>	NHA MBS and CMB (MF)	Guarantee to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due.	NHA MBS TPG and application fees and CMB TPG fees are initially recognized in unearned premiums and fees at fair value (the premium received). Subsequently, they are measured at the higher of i) the amount initially recognized less the amortization of guarantee and application fee revenue; and ii) the amount of the allowance for ECL.

<sup>1</sup> Denotes in which Activity we hold the instruments: AH, MI or MF.

## Classification and measurement of debt instruments (IFRS 9)

The classification and measurement of debt instruments is based on the business model for managing the assets and whether contractual cash flows are SPPI.

### Business model assessment

The business model reflects how we manage assets in order to generate cash flows. That is, whether the objective is solely to collect contractual cash flows, or to collect both contractual cash flows and cash flows arising from the sale of assets. If neither is applicable, then the financial asset is measured at FVTPL. We assess our business models at a level that reflects how our financial instruments are managed to achieve our business objectives. This assessment begins at the operating segment level, and where applicable, by sub-portfolios of instruments that are managed together within a particular activity to achieve common business objectives.

Upon initial and subsequent application of IFRS 9, we perform our business model assessment based on the following main criteria:

- management's strategic objectives of the business model and how these objectives are carried out in practice;
- how performance of the business model is evaluated and reported to key management personnel;
- the risks that affect the performance of the business model and how we manage those risks. Key risks include market, credit, and liquidity risks as described in detail in Notes 18, 19 and 20 respectively;
- how managers of the business model are compensated;
- the frequency, value and timing of historical sales activity and expectations for future sales activities.

### **SPPI Assessment**

We assess whether the cash flows of our debt instruments meet the SPPI criteria based on the asset's contractual terms. For this assessment, we define principal as the fair value of the asset upon initial recognition and interest as consideration for the time value of money, the credit risk of the transaction and for other lending risks and costs as well as a profit margin.

Contractual terms that introduce exposure to risk or volatility to the contractual cash flows that are inconsistent with a basic lending agreement do not satisfy the SPPI requirement. Equity instruments and derivatives fail the SPPI test.

### **Financial liabilities at amortized cost (IFRS 9)**

#### **Canada Mortgage Bonds**

CMB are interest-bearing bullet bonds issued by CHT and guaranteed by CMHC. Coupon interest payments are made semi-annually for fixed rate CMB and quarterly for floating rate CMB. Principal repayments on the bonds are made at maturity. The Approved MBS Sellers reimburse CHT for the cost of arranging financing, including the fees paid to underwriters and others for the distribution of CMB. Consistent with under IAS 39, transaction costs directly attributable to the issuance of CMB and reimbursements thereof are included in the amount initially recognized and amortized to interest expense using the effective interest method.

We may purchase and resell CMB in the market for investment purposes. Purchases are treated as retirements of debt with the difference between the purchase price and the carrying value of the CMB being recognized as a gain or loss in net gains (losses) on financial instruments. Subsequent sales are treated as re-issuance of the debt with gains and losses deferred and amortized over the remaining life of the CMB sold. When CMHC holds a CMB to maturity or acquires CMB in the primary market, the related cash flows are excluded from the consolidated statement of cash flows as they are not considered external cash flows to the consolidated entity. These treatments are the same as they were under IAS 39.

### **Measurement of expected credit losses (IFRS 9)**

Credit losses are defined as the difference between all contractual cash flows due to the Corporation in accordance with the contract, and the cash flows that we expect to receive (cash shortfalls), discounted at the original effective interest rate (or credit-adjusted effective interest rate for purchased or originated credit-impaired assets). ECL are the weighted average of credit losses determined by evaluating a range of possible outcomes using reasonable, supportable information about past events and current and forecasted future economic conditions.

The Corporation has developed an impairment model to determine the allowance for ECL on our debt securities classified as amortized cost or FVOCI, loans classified as amortized cost and our financial guarantee contracts. We determine an allowance for ECL at initial recognition of the financial instrument (or the date we become party to a financial guarantee) that is updated at each balance sheet date throughout the life of the instrument.

The ECL allowance is based on the ECL over the life of the financial instrument (lifetime ECL), unless there has been no significant increase in credit risk (SICR) since initial recognition, in which case the ECL allowance is measured at an amount equal to the portion of lifetime ECL that result from default events possible within the next 12 months (12-month ECL). ECL are determined based on three main drivers: probability of default, loss given default and exposure at default.

- Probability of default (PD): a point-in-time estimate of the likelihood of default either over the next 12 months (12-month ECL) or over the remaining life of the instrument (lifetime ECL). Our PD's are determined by mapping internal credit ratings to point-in-time PD tables based on statistical models derived from a large data set of publicly traded entities.

- Loss given default (LGD): the percentage of the gross carrying amount of the instrument that will be lost on default at a given point in time. It is based on the difference between contractual cash flows due and those expected to be received, including the realization of collateral.
- Exposure at default (EAD): the gross carrying amount of the instrument at a given point in time, which is calculated as the present value of the outstanding contractual cash flows using the EIRM.
- The ECL is calculated using a scenario based approach where, for each scenario, the PD, LGD and EAD are projected for each individual exposure at each cash flow date over the next 12 months (12-month ECL) or remaining life of the instrument (lifetime ECL). The components are multiplied together at each future date and discounted back using the original effective interest rate to the reporting date and summed. A probability-weighted average ECL is then determined across the multiple scenarios. We have modelled all ECL at the individual instrument level.

### Significant increase in credit risk (IFRS 9)

We have established a policy to perform an assessment at each balance sheet date of whether the instrument's credit risk has increased significantly since initial recognition (or the date we become party to a financial guarantee). Based on this assessment, we group the instruments into the following categories:

- Stage 1: instruments that have not experienced a SICR since initial recognition. ECL are recognized based on 12-month ECL;
- Stage 2: instruments that have experienced a SICR since initial recognition. In subsequent periods, if the credit risk of an instrument has improved such that there is no longer a SICR since initial recognition, the ECL allowance will revert to stage 1. ECL are recognized based on lifetime ECL;
- Stage 3: instruments that are considered credit-impaired as one or more events that have a detrimental impact on estimated future cash flows have occurred. ECL are recognized based on lifetime ECL;
- Purchased or originated credit-impaired (POCI) – instruments that are credit impaired on initial recognition. ECL are recognized based on lifetime ECL.

Interest revenue on stage 3 or POCI financial instruments is calculated based on the carrying amount of the asset, net of the loss allowance, rather than the gross carrying amount.

For instruments that we assess as having low credit risk at the reporting date, we applied the low credit risk exemption (stage 1) and have presumed that credit risk has not increased significantly since initial recognition. We use our internal credit ratings at the reporting date to assess whether the instrument has low credit risk. Our internal ratings are based on internal assessments of counterparty creditworthiness and generally correspond to those provided by credit rating agencies. We consider an instrument to have low credit risk when our internal rating is BBB- or higher.

We apply a backstop to all financial instruments for which the counterparty is more than 30 days past due on its contractual payments, whereby we consider the instrument to have experienced a SICR.

We consider an instrument in default, which is fully aligned with the definition of credit-impaired, when it meets the following criteria:

- Observable data exists that has a detrimental impact on the estimated future cash flows such as:
  - significant financial difficulty of the issuer;
  - the granting of a new loan to assist the borrower work through financial difficulties;
  - it becomes probable that the issuer will enter bankruptcy or other financial reorganization, and
  - the disappearance of an active market due to financial difficulties.
- Borrower becomes 90 days past due on its contractual payments.

An instrument is no longer considered impaired when all past due amounts, including interest, have been recovered and it is determined that the principal and interest are fully collectable in accordance with the original contractual terms of the instrument. We write off instruments, either partially or in full, against the related ECL allowance when we judge that there is no realistic prospect of future recovery.

In addition to the 30-day backstop discussed above, we apply the following policies in determining whether there has been a SICR on our financial instruments subject to ECL:

#### ***Debt instruments at amortized cost / FVOCI***

The Corporation's credit risk policies restrict investments in debt instruments to an internal rating of BBB- or higher and therefore all debt instruments held are presumed to have low credit risk and we have applied the low credit risk exemption (stage 1).

#### ***Loans under the CMB program***

Loans under the CMB program represent amounts due from Canadian financial institutions as a result of the sale of their beneficial interest in NHA MBS securities to us. The loans are collateralized by the NHA MBS and associated reinvestment securities acquired in the transactions. The NHA MBS, reinvestment assets and swaps represent the sole source of repayment on the loans, and thus directly affect the probability of a default occurring. Therefore, our assessment of SICR is based on the credit risk of these supporting assets.

The supporting assets are limited to NHA MBS and reinvestment assets rated R-1 (high) or AAA and swap counterparties with a minimum rating of BBB-. As such, all loans under the CMB program are presumed to have low credit risk and we have applied the low credit risk exemption (stage 1).

#### ***Assisted Housing Activity loans / Mortgage Insurance Activity loans***

Loans with an internal rating of BBB- or higher are presumed to have low credit risk and the low credit risk exemption has been applied (stage 1). These loans consist of those issued to municipalities under the Municipal Infrastructure Lending Program and loans indemnified by provinces and territories through provisions under Social Housing Agreements (SHA) where the credit rating of the province or territory is considered in the SICR assessment. This credit enhancement is relevant to assessing changes in credit risk since it directly impacts the probability of default. The province or territory is responsible for collecting loan payments from the borrower and, in turn, makes all payments to CMHC directly in accordance with the contractual terms of the loan on behalf of the borrower. These payments are made to CMHC, irrespective of the borrower's payment status.

All remaining loans issued under our Assisted Housing or Mortgage Insurance activities have not been internally rated and therefore the low credit risk presumption is not used. Our SICR assessment of these loans is based on the following criteria, which are primarily based on days past due:

- Stage 1: All current loans to 30 days past due.
- Stage 2: Loans between 30 and 90 days past due.
- Stage 3: Loans more than 90 days past due. Also, a loan that is not past due but has been issued a workout loan to assist with financial difficulties will be considered credit impaired irrespective of days past due.

Under the terms of certain construction loans issued by our Assisted Housing Activity or workout loans issued by our Mortgage Insurance Activity, there may be a period of time where the loan has been advanced but not under repayment and therefore days past due cannot be used in the SICR assessment. For these loans that are not under repayment, we assess SICR by applying the following criteria:

- days past due on loans issued by the same borrower;
- collective assessment by reviewing past due status of borrowers with shared credit risk characteristics;
- qualitative assessment of specific indicators of the construction project such as: project delays, performance against budget and remaining costs to complete.

### **Financial guarantees**

CMHC issues financial guarantees for NHA MBS and CMB whereby CMHC guarantees the timely payment of principal and interest to NHA MBS and CMB investors. Upon issuance of a guarantee, CMHC collects a fee which is considered the fair value of the guarantee and is deferred and recognized as revenue over the expected life of the guarantee.

Under the NHA MBS program, a financial institution (the “NHA MBS issuer”) creates a pool of eligible mortgages and sells the pool to investors. The underlying pool of mortgages is designed to provide sufficient cash flows to fund the NHA MBS with the issuer having the obligation to fund any shortfalls that may arise, thus exposing the Corporation to credit risk of the issuer with the underlying pool of mortgages serving as a credit enhancement. This credit enhancement directly affects the likelihood of the issuer defaulting since shortfalls only occur if the underlying pool has provided insufficient cash flows to fund NHA MBS payments to investors. Our assessment of SICR is therefore based on both the credit risk of the issuer and the credit risk of the pool of mortgages underlying the NHA MBS. The pool of mortgages are considered low credit risk since only mortgages insured by CMHC or by approved private mortgage insurers are eligible to be pooled in NHA MBS, all of which carry investment grade credit ratings.

Under the CMB program, the credit risk exposures are, by design, the CMB loans that are the sole source of funds to fulfill CHT’s CMB obligations. As previously discussed, the NHA MBS, reinvestment assets and swaps represent the sole source of repayment on the loans. The SICR assessment for the CMB guarantee is based on the credit risk of these supporting assets all of which have been assessed as low credit risk.

We have assessed the TPG under both the NHA MBS and CMB programs as having low credit risk and will apply the low credit risk exemption (stage 1).

### **Forward looking macroeconomic variables (IFRS 9)**

The Corporation has incorporated forward looking economic information into its ECL by performing the calculation under multiple scenarios resulting in a probability-weighted average ECL based on the weightings of each scenario. We have used three sets of economic scenarios for all instruments representing a baseline, upside and downside scenario.

We performed an economic variable selection process to identify the sets of macroeconomic variables that had the highest correlation with our portfolios. This process resulted in three sets of economic variables that are most highly correlated to our portfolios dependent on the geographic and industry sector of the exposure that include the following variables: unemployment rates, oil prices, 10-year corporate bond spreads and the CBOE Volatility Index.

All macroeconomic variables are projected over a five year period, subsequently reverting to long-run averages. Forecasts and scenarios weightings are prepared by the Corporation annually and reviewed quarterly by a cross-functional committee represented by members of our Capital Markets, Finance, Risk and Market Analysis sectors with recommendations presented to an executive committee for approval.

## Financial instruments – effective prior to 1 January 2018 (IAS 39)

### Classification and measurement of financial instruments (IAS 39)

We classify our financial assets in the following categories: financial assets designated at FVTPL, held for trading (HFT), available for sale (AFS), loans and receivables, and held to maturity (HTM). We classify our financial liabilities as either financial liabilities designated at FVTPL or other financial liabilities.

Classification is determined at initial recognition based on our intent and the characteristics of the financial instrument.

Classification	Criteria and accounting treatment
<b>Designated at fair value through profit or loss</b>	<p>IAS 39 provides an entity the option of designating a financial instrument at FVTPL when doing so results in more relevant information because either:</p> <ul style="list-style-type: none"> <li>a) it eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring the assets or liabilities or recognizing the gains or losses on them on different bases; or</li> <li>b) the financial instrument belongs to a group managed and evaluated on a fair value basis in accordance with documented risk management or investment strategies and information about the group is provided internally on that basis to key management personnel.</li> </ul> <p>This designation is irrevocable.</p> <p>Financial instruments designated at FVTPL are initially recognized at fair value. They are subsequently measured at fair value. Unrealized gains and losses arising from changes in fair value and gains and losses realized on disposition are recorded in net gains (losses) on financial instruments. Transaction costs are recognized in net gains (losses) on financial instruments as incurred.</p>
<b>Held for trading</b>	<p>HFT financial instruments are either derivatives or financial instruments acquired or incurred principally for the purpose of selling or repurchasing in the near term.</p> <p>HFT financial instruments are initially recognized at fair value. They are subsequently measured at fair value. Unrealized gains and losses arising from changes in fair value and gains and losses realized on disposition are recorded in net gains (losses) on financial instruments. Transaction costs are recognized in net gains (losses) on financial instruments as incurred.</p>
<b>Loans and receivables</b>	<p>Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market except for those designated at FVTPL or classified as AFS. Loans and receivables are initially recognized at fair value plus transaction costs. They are subsequently measured at amortized cost using the effective interest method. When loans and receivables are determined to be impaired, the changes in their estimated realizable value are recorded in net gains (losses) on financial instruments.</p>
<b>Held to maturity</b>	<p>HTM financial assets are non-derivative financial assets with fixed or determinable payments and a fixed maturity, other than loans and receivables and those designated at FVTPL or classified as AFS, that we have positive intention and ability to hold to maturity.</p> <p>HTM financial assets are initially recognized at fair value plus transaction costs. They are subsequently measured at amortized cost using the effective interest method. When HTM financial assets are determined to be impaired, their changes in fair value are recorded in net gains (losses) on financial instruments.</p>
<b>Available for sale</b>	<p>AFS financial assets are non-derivative financial assets which are neither classified as HFT, HTM, loans and receivables nor designated at FVTPL. AFS financial assets are initially recognized at fair value plus transaction costs. They are subsequently measured at fair value. Unrealized gains and losses arising from changes in fair value are recorded in OCI until the financial asset is sold, derecognized, or determined to be impaired at which time they are transferred to net income and reported in net gains (losses) on financial instruments. Unrealized foreign exchange gains (losses) on AFS debt securities are recognized in net gains (losses) on financial instruments.</p>
<b>Other financial liabilities</b>	<p>Other financial liabilities are non-derivative financial liabilities which have not been designated at FVTPL.</p> <p>Other financial liabilities are initially recognized at fair value plus transaction costs. They are subsequently measured at amortized cost using the effective interest method with interest expense recorded in interest expense.</p>

The following is a summary of the classification of our financial instruments. Refer to the IFRS 9 policies above for further descriptions of these financial instruments.

### **Cash and cash equivalents**

Cash equivalents funded by securities sold under repurchase agreements (repurchase agreements) are classified as HTM or loans and receivables. Otherwise, cash equivalents in the Assisted Housing Activity are classified as HTM or loans and receivables or, if held as part of a lending program that is economically hedged using derivatives, they are designated at FVTPL. Cash equivalents in the Mortgage Insurance and Mortgage Funding Activities are classified as AFS. Interest income on these investments is recorded in interest income for the Assisted Housing Activity and in investment income for the Mortgage Insurance and Mortgage Funding Activities.

### **Securities purchased under resale agreements and sold under repurchase agreements**

Securities purchased under resale agreements (reverse repurchase agreements) are treated as collateralized transactions and are classified as loans and receivables.

Securities sold under repurchase agreements (repurchase agreements) are classified as other financial liabilities.

### **Investment securities**

Investment securities in the Assisted Housing Activity are comprised of fixed income securities and are designated at FVTPL. Investment securities in the Mortgage Insurance Activity are comprised of fixed income securities and common and preferred equity securities and are classified as AFS or designated at FVTPL. The Mortgage Funding Activity holds fixed income investment securities classified as AFS. Interest income on fixed income investments is recorded in interest income for the Assisted Housing Activity and in investment income for the Mortgage Insurance and Mortgage Funding Activities using the effective interest method. Dividend income on equity investments is recorded in investment income when the right to the dividend is established.

### **Derivatives**

Derivatives are classified as HFT as they have not been designated as eligible hedges for accounting purposes and are carried at fair value. Derivative contracts with a positive fair value are reported as assets, while derivative contracts with a negative fair value are reported as liabilities.

We do not have derivatives embedded in other financial instruments (host contracts) which require separation.

For our interest rate swaps, the net of interest income and expense is recognized as earned and incurred in interest income.

### **Loans**

We designate the Assisted Housing Activity loans that are part of Lending programs and that are economically hedged using derivatives at FVTPL.

We classify the Assisted Housing Activity loans that are not economically hedged using derivatives, as well as loans in the CMB program, as loans and receivables.

Interest earned is recognized in interest income using the effective interest method.

### **Borrowings**

#### **Designated at fair value through profit or loss**

Capital market borrowings: Capital market borrowings represented borrowings incurred between 1993 and April 2008 to fund loans in the Assisted Housing Activity. The remaining outstanding borrowings matured in 2017. They were designated at FVTPL and formed part of the lending hedging structure.

Borrowings from the Government of Canada: Since April 2008, the Assisted Housing Activity has been borrowing under the terms of the Crown Borrowing Agreement. These borrowings fund the loans originated in the Lending programs that are designated at FVTPL and form part of the lending hedging structure.

## **Other financial liabilities**

CMB, as well as Borrowings from the Government of Canada that fund loans in the Assisted Housing Activity and are not economically hedged, are classified as loans and receivables.

For all borrowings, interest expense is recognized in interest expense using the effective interest method.

## **Impairment of financial instruments (IAS 39)**

Management assesses at each balance sheet date whether there is objective evidence that financial assets not carried at FVTPL or HFT are impaired. A financial asset is considered impaired and impairment losses are incurred if, and only if, there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset and that loss event(s) has an impact on the estimated future cash flows of the asset that can be reliably estimated.

Objective evidence of impairment considered in Management's review includes observable data indicating significant financial difficulty of the issuer; defaults or delinquencies in the payment of interest, principal or preferred equity dividends; the disappearance of an active market for the financial asset because of the issuer's financial difficulties; and bankruptcy or other financial reorganization of the issuer. Credit and preferred equity rating downgrades are considered in our assessment, although they alone might not represent objective evidence of impairment.

### ***AFS common equity investment securities***

For common equity investment securities classified as AFS, objective evidence of impairment also includes a significant or prolonged decline in fair value below cost or significant adverse changes that have taken place in the technological, market, economic or legal environment in which the issuer operates. The determination whether a decline in fair value below cost is significant or prolonged requires judgment. In making this judgment, we apply certain quantitative tests to the total position in each common equity security supplemented with a qualitative assessment of the financial condition of the issuer.

For common equity investment securities classified as AFS that are identified as impaired, the cumulative unrealized loss previously recorded in OCI is reclassified from OCI and recognized as an impairment loss in net income for the period through net gains (losses) on financial instruments. Further declines in the fair value of impaired AFS common equity instruments are recognized in net income, while increases in fair value are recorded in OCI.

### ***AFS debt and preferred equity investment securities***

For debt and preferred equity investment securities classified as AFS that are identified as impaired, the cumulative unrealized loss previously recorded in OCI is reclassified from OCI and recognized as an impairment loss in net income for the period through net gains (losses) on financial instruments. If the fair value of an impaired debt or preferred equity instrument classified as AFS subsequently increases and the increase can be related objectively to an event occurring after the impairment loss was recognized, the impairment loss is reversed in net income, with the reversal limited in amount to the previously recognized impairment loss. Otherwise, subsequent increases in fair value are recorded in OCI.

### ***Loans and receivables and held to maturity financial assets***

For financial assets classified as loans and receivables or HTM that are identified as impaired, the carrying amount is reduced to the present value of estimated future cash flows (excluding future credit losses not yet incurred) discounted at the original effective interest rate, with the impairment loss being recorded in net income for the period through net gains (losses) on financial instruments. Interest is accrued only to the extent that there is an expectation of receipt.

Previously recognized impairment losses can be reversed if the loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized. Impairment losses can be reversed to the extent that the carrying amount of the financial asset does not exceed what the amortized cost would have been had the impairment not occurred.

For economic or legal reasons related to a borrower's financial difficulties, we may take an assignment of an insured mortgage and pay the insured lender the loan balance rather than proceed with the acquisition. We may also make advances to a project in order to help it return to a state where the borrower can manage their mortgage obligations. These loans are held within the Mortgage Insurance Activity and are recorded in accounts receivable and other assets.

We establish an allowance for credit losses for these loans that provides for estimated amounts that may not be recovered. Factors that are considered in assessing the estimated realizable amount include, but are not limited to, underlying asset valuation and any changes in market and economic outlook. The allowance for credit losses is included as a reduction to accounts receivable and other assets and any change in the allowance is included in insurance claims expense.

A loan is no longer considered impaired when all past due amounts, including interest, have been recovered and it is determined that the principal and interest are fully collectable in accordance with the original contractual terms of the loan or revised terms.

Loans are written off, either partially or in full, against the related allowance for credit losses when we judge that there is no realistic prospect of future recovery.

### **Canada Mortgage Bonds program**

Loans in the CMB program represent amounts due from Canadian financial institutions as a result of the sale of their beneficial interest in NHA MBS securities to CMHC and are funded by the issuance of CMB. There are both fixed and floating rate loans in this category, with principal in all cases being due at maturity.

Under these arrangements, substantially all of the risks and rewards of the NHA MBS are retained by the issuers through swap agreements with the Corporation. Consequently, the NHA MBS and investments arising from the reinvestment of principal proceeds distributed by the NHA MBS serve as collateral to the loans and are not recognized in the consolidated balance sheet. This collateral is however held in the name of the Corporation and represents the sole source of principal repayments for the loans. The amount due from the swap counterparties represents the interest earned on the loans and is recognized in interest income.

### **Investment property**

Investment properties are properties held to earn rental income or for capital appreciation, or both. Investment properties are initially recognized at cost plus transaction costs. Subsequent to initial recognition, they are measured at fair value. Gains or losses arising from changes in fair value are recognized in other income in the period in which they arise. Investment property rental income and expenses are recorded in other income.

For certain investment properties held by the Assisted Housing Activity, expenses are recoverable from the Minister. These activities are recorded in housing programs expenses and government funding.

### **Non-current assets held for sale**

Real estate acquired by the Mortgage Insurance Activity through loan default is classified as non-current assets held for sale since its carrying amount will be recovered through a sale transaction. The criteria for held for sale classification includes our commitment to a plan to sell the selected assets and the expectation that such a sale will be completed within a 12 month period. Events or circumstances beyond our control may extend the period to complete the sale beyond one year. Such assets continue to be classified as held for sale as we remain committed to our plan to sell the asset. Non-current assets held for sale are measured at the lower of their carrying amount and their fair value less cost to sell and are included in accounts receivable and other assets. Impairment losses and any subsequent reversals are recognized in insurance claims expense in the period in which they occur. Non-current assets held for sale are not depreciated.

### **Dividend distributions to the Government**

Dividends to the Government are recognized as a liability in the period in which the dividends are authorized and are no longer at the discretion of the Corporation. A corresponding amount is recognized directly in equity.

### **Pension and other post-employment benefits**

We have a number of benefit arrangements which provide pension and other post-employment benefits to eligible employees. These include a federally regulated pension plan (Pension Plan), an unregistered supplemental pension plan (Supplemental Plan) and other non-pension post-employment defined benefits consisting mainly of life and medical insurance. The Supplemental Plan offers benefits in excess of statutory limits as defined under the Income Tax Act (ITA).

The Pension Plan and the Supplemental Plan are both defined benefit pension plans. Effective 31 December 2017, the defined contribution plan was closed, and on 1 January 2018 all eligible members were transferred to the new modified defined benefit pension plan, for which the accounting treatment is the same as the previous Pension Plan.

The Pension Plan and the Defined Contribution Pension Plan are subject to the federal *Pension Benefits Standards Act, 1985* (PBSA) and its regulations and to the ITA. Both pension plans are registered with the Office of the Superintendent of Financial Institutions (OSFI) and the Canada Revenue Agency (CRA).

### **Defined benefit plans**

The defined benefit plans include the defined benefit Pension Plan and the defined benefit Supplemental Plan as well as the other non-pension post-employment benefits. The benefits available under both the Pension Plan and the Supplemental Plan are based on length of service and average earnings over the best consecutive five-year period.

The net defined benefit liability recognized is the present value of the obligations under the defined benefit plans less the fair value of the assets of those plans. The defined benefit plan assets are limited to the present value of any economic benefits available in the form of reductions in future contributions to these plans.

Net benefit costs of the plans are the current service costs, the net of the interest cost on the defined benefit obligation, the interest income on the plan assets and gain or loss on curtailment, and are included in operating expenses.

Remeasurement gains and losses on defined benefit plans include actuarial gains and losses and changes in the return on plan assets (excluding net interest). They are recognized in OCI as incurred and then flow into retained earnings and are not reclassified to net income in subsequent periods.

### **Income taxes**

CMHC is a prescribed federal Crown corporation under Reg. 7100 of the ITA and is subject to federal income tax as a prescribed corporation for purposes of subsection 27(2) of the ITA. We are not subject to provincial income tax. CHT is subject to federal and provincial income taxes on the amount of taxable income for the period and is permitted a deduction for all amounts paid or payable to CHT's beneficiaries in determining income for tax purposes. As all taxable income was distributed to the beneficiaries, no provision for income taxes has been reflected for CHT.

We use the liability method of accounting for income taxes. Under this method, deferred income tax assets and liabilities are recognized based on the estimated tax effect of temporary differences between the carrying value of assets and liabilities on the financial statements and their respective tax bases. The Corporation uses substantively enacted income tax rates at the balance sheet date that are expected to be in effect when the asset is realized or the liability is settled. The carrying amount of deferred income tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred income tax asset to be utilized.

### **Related party transactions**

Except for funds borrowed from the Government under the Crown Borrowing Program, related party transactions are made on terms equivalent to those that prevail in arm's length transactions. Funds borrowed under the Crown Borrowing Program included in borrowings designated at FVTPL are at below market rates thereby allowing us to make loans at below market rates which lowers the Government's cost to subsidize social housing. This generates a gain which is recognized in net gains (losses) on financial instruments at the borrowing date.

### **Contingent liabilities**

Contingent liabilities are possible obligations whose existence will be confirmed only by uncertain future events or present obligations where the transfer of economic benefit is uncertain or cannot be reliably measured.

### **Foreign currency translation**

Monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars at exchange rates prevailing at the balance sheet date. Exchange gains and losses resulting from the translation of foreign denominated balances are included in net gains (losses) on financial instruments. Purchases and sales of foreign securities and the related income are translated into Canadian dollars at the exchange rates prevailing on the respective dates of the transactions.

### 3. CURRENT AND FUTURE ACCOUNTING CHANGES

#### Current accounting changes

We actively monitor new standards and amendments to existing standards that have been issued by the IASB. There were no new or amended standards issued by the IASB that we adopted during the year ended 31 December 2018 that had a material impact on our consolidated financial statements other than those discussed below.

#### IFRS 15 Revenue from Contracts with Customers

We adopted IFRS 15, which replaces IAS 18, IAS 11 and related interpretations, on 1 January 2018. IFRS 15 sets out the requirements for recognizing revenue that apply to all contracts with customers (except for contracts that are within the scope of the standards on leases, insurance contracts and financial instruments). As a result, we changed our accounting policy for revenue recognition as described below.

We adopted the standard using the cumulative effect method, whereby the cumulative effect of initially applying IFRS 15 was recognized as an adjustment to the opening balance of Equity of Canada at 1 January 2018. Therefore, comparative information for 2017, which has not been restated, continues to be reported under IAS 18 and is not comparable to the information presented for 2018.

The adoption of IFRS 15 resulted in changes in accounting policies and adjustments to amounts recognized in the financial statements as follows.

#### Accounting for application fees on TPGs

Whereas application fees on TPGs were previously recognized as revenue on the payment date, under IFRS 15, the application fee and the TPG fee are considered one performance obligation and the corresponding revenue is recognized as the performance obligation is satisfied (over the expected life of the underlying security).

As a consequence, the unearned premiums and fees balance on 1 January 2018 was \$72 million higher than the balance under the previous policy. The corresponding adjustment to retained earnings, net of tax, was \$53 million.

There were no other material changes as a result of the adoption of IFRS 15.

#### Impact of adoption of IFRS 15

The following table summarizes the impacts of adopting IFRS 15 on our consolidated financial statements for the year ended 31 December 2018.

(in millions)

Financial statement line item	As reported	Adjustments	Balances without adoption of IFRS 15
<b>Consolidated balance sheet:</b>			
Accounts receivable and other assets	856	(6)	850
Unearned premiums and fees	6,948	(70)	6,878
Deferred income tax liabilities	102	11	113
Retained earnings	14,851	53	14,904
<b>Consolidated statement of income and comprehensive income:</b>			
Premiums and fees earned	1,909	(2)	1,907

#### IFRS 9 Financial Instruments

We adopted IFRS 9, which replaces IAS 39, on 1 January 2018. IFRS 9 addresses the recognition and derecognition, classification and measurement and impairment of financial instruments and hedge accounting. Refer to Note 2 for details on our accounting policies related to the standard. As permitted by IFRS 9, we have not restated comparative figures for financial instruments for dates and periods prior to 1 January 2018. Therefore, comparative information for 2017 is reported in accordance with IAS 39 and is not comparable to the information presented for 2018. The net effect of transitioning to IFRS 9 was recognized in Equity of Canada on 1 January 2018. CMHC does not apply hedge accounting.

Amendments were also made to IFRS 7 *Financial Instruments: Disclosures* to reflect the differences between IAS 39 and IFRS 9. These changes include transitional disclosures, which we have disclosed below, along with expanded quantitative and qualitative credit risk disclosures, which are presented in Notes 13 and 14.

## Impact of adoption of IFRS 9

### Reclassifications

The following table compares the carrying amount of financial assets and liabilities under IAS 39 with those under IFRS 9 upon transition at 1 January 2018. We have not restated 2017 comparative information presented under IAS 39. Differences upon transition have been recorded directly in retained earnings.

<b>(in millions)</b>		IAS 39			IFRS 9	
Financial instrument type	Classification	Carrying Amount	Reclassification	Remeasurement	Classification	Carrying Amount
<b>Assets:</b>						
Cash and cash equivalents	Designated at FVTPL <sup>1,7</sup>	55	-	-	Designated at FVTPL	55
	AFS <sup>1</sup>	67	-	-	Debt instruments at FVOCI	67
	Loans and receivables <sup>1</sup>	765	-	-	Amortized cost	765
Total cash and cash equivalents		887	-	-		887
Accrued interest receivable	Loans and receivables <sup>1</sup>	705	-	-	Amortized cost	705
Investment securities						
Debt instruments	Designated at FVTPL <sup>1,7</sup>	1,234	-	-	Designated at FVTPL	1,234
	AFS <sup>1</sup>	20,842	-	-	Debt instruments at FVOCI	20,842
	AFS <sup>2</sup>	97	-	-	FVTPL	97
Common equities and limited partnership units	AFS <sup>4</sup>	1,105	-	-	FVTPL	1,105
Preferred equities	AFS <sup>5</sup>	68	-	-	Equity instruments designated at FVOCI	68
Total investment securities		23,346	-	-		23,346
Derivatives	FVTPL <sup>1,7</sup>	61	-	-	FVTPL	61
Due from government of Canada	Loans and receivables <sup>1</sup>	126	-	-	Amortized cost	126
Loans	Designated at FVTPL <sup>1,7</sup>	2,906	-	-	Designated at FVTPL	2,906
	Loans and receivables <sup>1,3,6</sup>	237,944	102	(5)	Amortized cost	238,041
	Loans and receivables <sup>3</sup>	-	26	-	FVTPL	26
	Loans and receivables <sup>6</sup>	-	15	2	FVTPL	17
Total loans		240,850	143	(3)		240,990
Accounts receivable and other assets	Loans and receivables <sup>3</sup>	193	(143)	-	Amortized cost	50
	N/A <sup>1,11</sup>	642	-	-	N/A	642
Total accounts receivable and other assets <sup>3</sup>		835	(143)	-		692
Investment property	N/A <sup>11</sup>	305	-	-	N/A	305
<b>Total assets</b>		<b>267,115</b>	<b>-</b>	<b>(3)</b>		<b>267,112</b>

<b>(in millions)</b>		IAS 39			IFRS 9	
Financial instrument type	Classification	Carrying Amount	Reclassification	Remeasurement	Classification	Carrying Amount
<b>Liabilities:</b>						
Securities sold under repurchase agreements	Other financial liabilities <sup>1</sup>	297	-	-	Amortized cost	297
Accrued interest payable	Other financial liabilities <sup>1</sup>	545	-	-	Amortized cost	545
Dividends payable	Other financial liabilities <sup>1</sup>	2,000	-	-	Amortized cost	2,000
Derivatives	FVTPL <sup>1,7</sup>	39	-	-	FVTPL	39
Borrowings	Designated at FVTPL <sup>1,7</sup>	4,564	-	-	Designated at FVTPL	4,564
	Other financial liabilities <sup>1</sup>	233,592	-	-	Amortized cost	233,592
Total borrowings		238,156		-	-	238,156
Accounts payable and other liabilities	Other financial liabilities <sup>1</sup>	481			Amortized cost	481
	N/A <sup>11</sup>	80			N/A	80
Total accounts payable and other liabilities		561				561
Other	N/A <sup>11</sup>	7,776	-	-	N/A	7,776
<b>Total liabilities</b>		<b>249,374</b>	<b>-</b>	<b>-</b>		<b>249,374</b>

### Reconciliation of impairment allowance from IAS 39 to IFRS 9

The following table reconciles our opening loss allowance under IAS 39's incurred loss model to our expected credit loss allowance under IFRS 9's expected credit loss model, before tax.

<b>(in millions)</b>				
Measurement Category	Loan loss allowance under IAS 39 <sup>8</sup>	Reclassification <sup>9</sup>	Remeasurement <sup>10</sup>	ECL allowance under IFRS 9
Debt instruments at AFS (IAS 39)/FVOCI (IFRS 9)	-	-	9	9
Loans and receivables (IAS 39)/Amortized cost (IFRS 9)	113	(17)	5	101
<b>Total</b>	<b>113</b>	<b>(17)</b>	<b>14</b>	<b>110</b>

## Impact of transition on Equity of Canada

The following table presents the IFRS 9 and IFRS 15 transitional impacts on accumulated OCI and retained earnings as at 1 January 2018.

(in millions)

<b>Accumulated other comprehensive income</b>	
Closing Balance as at 31 December 2017	490
Impact of adopting IFRS 9, net of tax:	
Impact of reclassifying equity securities from AFS to FVTPL <sup>4</sup>	(371)
Impact of reclassifying debt instruments from AFS to FVTPL <sup>2</sup>	(3)
Recognition of ECL on debt instruments at FVOCI <sup>10</sup>	6
<b>Total impact of adopting IFRS 9, net of tax</b>	<b>(368)</b>
<b>Restated opening balance as at 1 January 2018</b>	<b>122</b>
<b>Retained earnings</b>	
Closing Balance as at 31 December 2017	17,226
Impact of adopting IFRS 15, net of tax	(53)
Impact of adopting IFRS 9, net of tax:	
Impact of reclassifying equity securities from AFS to FVTPL <sup>4</sup>	371
Impact of reclassifying debt instruments from AFS to FVTPL <sup>2</sup>	3
Recognition of ECL on debt instruments at FVOCI <sup>10</sup>	(6)
Re-measurement of loans reclassified from amortized cost to FVTPL <sup>12</sup>	2
Re-measurement of ECL on loans at amortized cost <sup>10</sup>	(4)
<b>Total impact of adopting IFRS 9, net of tax</b>	<b>366</b>
<b>Restated opening balance as at 1 January 2018</b>	<b>17,539</b>

<sup>1</sup> Financial instruments reclassified to new categories under IFRS 9, as their previous categories under IAS 39 were 'retired', with no changes to their measurement basis.

<sup>2</sup> In our MI Activity, at 1 January 2018, we held \$97 million in subordinated debt instruments which were classified as AFS and measured at FVOCI under IAS 39. These instruments fail the SPPI test and are classified as at FVTPL under IFRS 9. Upon transition, \$3 million, net of tax, was reclassified from AOCI to retained earnings.

<sup>3</sup> In our MI Activity, at 1 January 2018, we held \$143 million of loans presented in accounts receivable and other assets that have been reclassified to loans. Of these loans, \$26 million fail the SPPI test and were classified as at FVTPL and \$117 million were classified as amortized cost under IFRS 9.

<sup>4</sup> Under IAS 39, our common share equity securities and limited partnership units held in our MI Activity were classified as AFS. Under IFRS 9, equity securities are mandatorily classified as financial assets at FVTPL unless an irrevocable election is made to present fair value changes in OCI. We have not made use of this election and therefore our common equity securities and limited partnership units were re-classified from AFS to FVTPL. Upon transition, \$371 million in unrealized gains (losses), net of tax, were reclassified from AOCI to retained earnings.

<sup>5</sup> Under IAS 39, preferred equity securities of \$68 million held in our MI Activity were classified as AFS. Under IFRS 9, we have elected to present fair value changes in OCI. Under this election, there is no recycling of gains and losses from OCI to net income upon derecognition. This differs from our previous practices under AFS where realized gains and losses are recycled to net income when the investment is sold or derecognized.

<sup>6</sup> Under IAS 39, loans held under the Municipal Infrastructure Lending Program (MILP) within our AH Activity were classified as loans and receivables. Under IFRS 9, one loan of \$15 million within this portfolio contains contractual cash flows that fail the SPPI test and has been reclassified to FVTPL. All other loans held within the MILP program pass the SPPI test and are classified and measured at amortized cost under IFRS 9.

<sup>7</sup> As at the transition date of 1 January 2018, all of our loans, investment securities and borrowings that were previously designated at FVTPL to eliminate an accounting mismatch with derivatives used in economic hedges of interest rate risk will remain so under IFRS 9 as there have been no changes in the structure of the hedges.

<sup>8</sup> Under IAS 39, loss allowance was recognized against related loan balance and presented in accounts receivable and other assets.

<sup>9</sup> Reclassification represents the impact to the impairment allowances from classification and measurement changes.

<sup>10</sup> Re-measurement represents the before-tax impact to the impairment allowance from the adoption of the IFRS 9 ECL model.

<sup>11</sup> Items with a classification listed as N/A are not financial instruments, but have been included in the table in order to reconcile to financial statement line items.

<sup>12</sup> Re-measurement represents the difference between the fair value and amortized cost of the loans on transition.

## Future accounting changes

The following new standards and interpretation issued by the IASB have been assessed as having a possible impact on the Corporation in the future. We intend to adopt each of these standards and this interpretation, if applicable, as at the required effective dates indicated below and are currently assessing the impact on our consolidated financial statements.

### IFRS 16 Leases – effective date of 1 January 2019

IFRS 16 *Leases* replaces IAS 17 *Leases* and related interpretations and provides greater transparency about leverage, the assets an entity uses in its operations, and the risks to which it is exposed from entering into lease transactions.

Under IFRS 16, the core principle is that a lessee recognizes assets and liabilities for all leases with a term greater than 12 months, unless the underlying asset is of low value. Liabilities represent a lessee's obligations to make lease payments and assets represent its rights to use leased assets for the lease term. Depreciation of leased assets is recognized separately from interest on lease liabilities in the income statement. The accounting requirements for lessors are substantially unchanged.

We have completed our assessment of the impact of adopting IFRS 16. The primary impact to the Corporation is that assets and liabilities will be recognized for its leases of office space, which are currently accounted for as operating leases under IAS 17. In addition, straight-line operating lease expenses will be replaced by depreciation of right-of-use assets and interest on lease liabilities, but this impact will be immaterial.

We intend to adopt IFRS 16 using the modified retrospective approach, whereby the cumulative effect of initially applying the standard would be recognized as an adjustment to the opening balance of Equity of Canada at 1 January 2019, and comparative information, which will not be restated, will continue to be reported under IAS 17 and related interpretations. We will also apply the transition relief whereby we are not required to reassess whether a contract is, or contains, a lease at the date of initial application. At transition, we expect the opening equity adjustment to be nil and the right-of-use assets and liabilities to total approximately \$62 million.

### IFRIC 23 Uncertainty over Income Tax Treatments – effective date of 1 January 2019

International Financial Reporting Interpretations Committee Interpretation (IFRIC) 23 *Uncertainty over Income Tax Treatments* provides guidance on the accounting for income tax treatments that have yet to be accepted by tax authorities.

IFRIC 23 outlines the approach to follow in determining recognition and measurement of income taxes for accounting purposes in situations in which it is unclear whether a given tax treatment used by a reporting issuer in its tax return will be accepted by the relevant tax authority. In such instances, the key determining factor is whether it is probable that the tax authority will accept the chosen tax treatment. If this is determined to be probable, the income tax amount recognized in the financial statements should reflect the chosen treatment and be measured at the amount that reflects the best prediction of the resolution of the uncertainty, either the most likely amount or the expected value.

We do not expect this interpretation to have a material impact on our consolidated financial statements.

### IFRS 17 Insurance Contracts – effective date of 1 January 2021

In May 2017, the IASB issued IFRS 17 *Insurance Contracts*, which will replace IFRS 4 *Insurance Contracts*. Under IFRS 17, insurance contract liabilities will include the present value of future insurance cash flows adjusted for risk as well as contractual service margin. Contractual service margin will represent the difference between the present value of the risk adjusted cash flows and the premium received at inception and will be released over the coverage period. Should the difference between the premium received and the present value of future cash outflows be negative at inception, or throughout the life of the contract, the insurance contract would be considered onerous and the difference would be recorded immediately in net income. Furthermore, the unit of account is more granular than under current accounting practice. At a minimum, groups of contracts will need to be separated into annual cohorts, though further disaggregation is permitted and in certain cases required. There will also be a new income statement presentation for insurance contracts and additional disclosure requirements.

We have not yet determined the full impact of this new standard on our consolidated financial statements.

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## 4. CRITICAL JUDGMENTS IN APPLYING ACCOUNTING POLICIES AND MAKING ESTIMATES

### Judgments in applying accounting policies

In the process of applying the accounting policies, in addition to judgments regarding impairment of financial instruments discussed in Note 2, Management has made the following judgments, which have the most significant effect on the amounts recognized in our consolidated financial statements.

#### Consolidation

Significant judgments are applied in the assessment of whether the substance of the relationship between CMHC and CHT indicates that CMHC controls CHT. CMHC guarantees the timely payment of principal and interest on the CMB, and chooses when to provide that guarantee. CHT cannot undertake new business (e.g. issue new bonds) without the benefit of a guarantee, and its only available guarantor at present is CMHC. Within that context, CMHC has direct influence on the activities of CHT and can use this influence to manage its exposure to CHT.

#### Derecognition

In assessing whether transfers of NHA MBS from Issuers to CHT under the CMB program qualify for derecognition, significant judgment is applied in determining whether substantially all the risks and rewards of ownership of the NHA MBS have been transferred. We have determined that the sellers of NHA MBS to CHT failed to meet the derecognition criteria as they retain the risk and rewards of the NHA MBS through swap agreements. As a result, we do not recognize the underlying NHA MBS in the consolidated balance sheet but rather account for the transfer as a loan.

### Use of estimates and assumptions

The preparation of our consolidated financial statements requires Management to make estimates and assumptions that affect the reported amount of revenues, expenses, assets and liabilities, and the accompanying disclosures. The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below. We based our assumptions and estimates on information available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Corporation. Such changes are reflected in the assumptions when they occur.

#### Provision for claims

The provision at 31 December is determined by the Appointed Actuary and the main actuarial assumptions are long-term assumptions for probability of default, loss given default and timing of the related cash flows, which are adjusted for the short-term impact of current economic conditions.

Historical experience, grouped by product and age of loans, adjusted for related changes to our insurance products and processes, is used throughout the actuarial valuation. Determining the provision involves the risk that the actual results will deviate, and in certain cases significantly, from the estimates made. In addition, there is a risk that the timing of future liability payments or return on investments will differ materially from the assumptions underlying the valuation of insurance policy liabilities.

The estimate for claims that are IBNR is made using historical losses and defaults adjusted to consider prevailing legal, economic, and regulatory trends; this estimate is generally subject to a greater degree of uncertainty than that for reported claims. The provision for IBNER is estimated from the payment pattern of the supplementary amounts on open claims. The losses on CIP are estimated by multiplying the insured loan amount by the calculated average loss level.

Due to the uniqueness of the programs through which the SH and ILM loans are made, the provision for these loans is determined using the expected losses on the current outstanding balances of the insured loans.

For sensitivity analysis and further information on the measurement of the provision, see Note 7.

### **Unearned premiums**

Mortgage insurance premiums are due at the inception of the mortgage being insured, at which time they are deferred and recognized as revenue over the period covered by the related insurance contracts using factors determined annually by the Appointed Actuary. The premium earnings factors are based on claim occurrence patterns and amortization periods under the assumption that premiums would be earned and hence recognized into revenue at the same rate as claims are incurred. Distinct earning patterns are applied to product types that exhibit substantially different claim occurrence patterns. Claim occurrence patterns are based on long-term historical claim data sorted by age of loans.

### **Fair value measurement of financial instruments**

When the fair values of financial assets and financial liabilities recorded in the consolidated balance sheet cannot be measured based on quoted prices in active markets, their fair value is measured using valuation techniques such as discounted cash flow, spread differential or other valuation models. These models include a degree of judgment in consideration of inputs such as yield curves, market spreads and risk premiums with reference to financial instruments that have similar yields, market risk and maturity characteristics. Changes in assumptions relating to these factors could affect the reported fair value of financial instruments.

### **Valuation of pension benefit obligation**

The cost of the defined benefit pension plan and the present value of the pension obligation are determined based on actuarial valuations. The actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, rate of compensation increase, mortality rates and inflation. Due to the complexities involved in the valuation and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed annually.

The assumption most sensitive to change is the discount rate. In determining the appropriate discount rate, Management considers the interest rates of Canadian dollar corporate bonds with an 'AA' rating and extrapolated as needed along the yield curve to correspond with the expected term of the defined benefit obligation. The mortality rate is based on publicly available Public Sector mortality tables for Canada.

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## **5. SEGMENTED INFORMATION**

CMHC's operating segments include the Assisted Housing Activity, the Mortgage Insurance Activity, the Mortgage Funding Activity and the activities of CHT. These operating segments are supported by the Market Analysis and Research and People and Processes Activities. As described in Note 1, we have determined our reportable segments as Assisted Housing, Mortgage Insurance and Mortgage Funding.

Our Chief Operating Decision Maker (CODM) is the Corporation's Executive Committee. Our CODM monitors the operating results of the activities separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on financial and non financial metrics that are tied to the objectives of each Activity and may differ by Activity.

The Assisted Housing Activity includes Housing and Lending programs which share many similarities and satisfy the same objective of supporting access to affordable housing for Canadians in need. Our CODM allocates resources and assesses performance of the Housing and Lending programs as one. Housing programs are administered either directly by CMHC or by provinces and territories under SHA and Investment in Affordable Housing, while Lending program loans are made to federally-subsidized social housing sponsors, First Nations, provinces, territories and municipalities. Assisted Housing revenues are earned from government funding and interest income on loans.

The Mortgage Insurance Activity provides mortgage insurance for transactional homeowner, portfolio and multi-unit residential loans in all parts of Canada. We operate these programs on a commercial basis with due regard for loss without the need for funding from the Government. Mortgage insurance revenues are earned from premiums, fees and investment income.

The Mortgage Funding Activity provides TPGs of interest and principal of securities issued on the basis of eligible housing loans and on CMB. The guarantees are provided on a commercial basis.

CHT's functions include the acquisition of interests in eligible housing loans such as NHA MBS, the issuance of CMB, as well as the purchase of highly rated investments and certain related financial hedging activities.

For the purposes of our segmented reporting, our Mortgage Funding Activity and CHT, a separate entity, are aggregated in the Mortgage Funding reportable segment. Accordingly, Mortgage Funding revenues are earned from guarantee and application fees, investment income and interest income on loans.

Market Analysis and Research and People and Processes are not separate segments but their costs are allocated to our operating segments. Market Analysis and Research activities are cost recovered and presented within the financial results of the Assisted Housing and Mortgage Insurance segments. People and Processes activities expenses are presented within the financial results of the Assisted Housing, Mortgage Insurance and Mortgage Funding segments.

For all segments, revenues are attributed to, and assets are located in, Canada.

### **Aggregation of the Mortgage Funding Activity and CHT**

The Mortgage Funding Activity and CHT both support our objective of ensuring adequate supply of funds for mortgage lending through mortgage securitization. Through the CMB program in its entirety (including the guarantee by Mortgage Funding), we contribute to the stability of the financial system by allowing lenders to access funds for residential mortgage lending.

Both segments' business is generated by market demand for CMHC's TPG for mortgage funding through NHA MBS and through CMB issued by CHT. Revenue for the reportable segment is generated through TPGs, application fees and interest income.

There are many similarities in the nature of the production processes, customers and methods of distribution. CMB are available to both institutional investors and retail investors and can be bought through investment dealers, banks, trust companies, and other types of financial institutions. The guarantee takes effect at issuance.

<b>(in millions)</b>	Assisted Housing Activity		Mortgage Insurance Activity		Mortgage Funding Activity		Eliminations		Total	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Interest income	335	374	-	-	4,965	4,339	(6)	(5)	5,294	4,708
Interest expense	321	361	-	-	4,957	4,331	(108)	(123)	5,170	4,569
<b>Net interest income</b>	<b>14</b>	<b>13</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>8</b>	<b>102</b>	<b>118</b>	<b>124</b>	<b>139</b>
Government funding for housing programs	2,336	3,229	-	-	-	-	-	-	2,336	3,229
Premiums and fees earned	-	-	1,426	1,557	483	384	-	-	1,909	1,941
Investment income (losses)	-	-	530	607	62	48	(79)	(82)	513	573
Net gains (losses) on financial instruments	2	-	(83)	152	(8)	(1)	(8)	(4)	(97)	147
Other income	35	113	(3)	4	6	6	-	-	38	123
<b>Total revenues and government funding</b>	<b>2,387</b>	<b>3,355</b>	<b>1,870</b>	<b>2,320</b>	<b>551</b>	<b>445</b>	<b>15</b>	<b>32</b>	<b>4,823</b>	<b>6,152</b>
<b>Non-interest expenses</b>										
Housing programs	2,336	3,229	-	-	-	-	-	-	2,336	3,229
Insurance claims	-	-	210	147	-	-	-	-	210	147
Operating expenses	25	27	318	318	55	51	-	-	398	396
<b>Total expenses</b>	<b>2,361</b>	<b>3,256</b>	<b>528</b>	<b>465</b>	<b>55</b>	<b>51</b>	<b>-</b>	<b>-</b>	<b>2,944</b>	<b>3,772</b>
<b>Income before income taxes</b>	<b>26</b>	<b>99</b>	<b>1,342</b>	<b>1,855</b>	<b>496</b>	<b>394</b>	<b>15</b>	<b>32</b>	<b>1,879</b>	<b>2,380</b>
Income taxes	-	19	334	451	124	99	4	8	462	577
<b>Net income</b>	<b>26</b>	<b>80</b>	<b>1,008</b>	<b>1,404</b>	<b>372</b>	<b>295</b>	<b>11</b>	<b>24</b>	<b>1,417</b>	<b>1,803</b>
Total revenues and government funding	2,387	3,355	1,870	2,320	551	445	15	32	4,823	6,152
Inter-segment income (loss) <sup>1</sup>	(6)	(3)	(87)	(88)	108	123	(15)	(32)	-	-
External revenues and government funding	2,381	3,352	1,783	2,232	659	568	-	-	4,823	6,152

<sup>1</sup> Inter-segment income relates to the following:

- The Assisted Housing Activity recognizes revenues from investing in holdings of CMB;
- The Mortgage Insurance Activity recognizes revenues from investing in holdings of CMB; and
- Within the Mortgage Funding Activity, CHT recognizes interest expense on CMB held by the Assisted Housing and Mortgage Insurance Activities.

(in millions)	Assisted Housing Activity		Mortgage Insurance Activity		Mortgage Funding Activity		Eliminations <sup>1</sup>		Total	
	IFRS 9	IAS 39	IFRS 9	IAS 39	IFRS 9	IAS 39	IFRS 9	IAS 39	IFRS 9	IAS 39
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
<b>Assets</b>										
Cash and cash equivalents	527	519	309	342	1	26	-	-	837	887
Accrued interest receivable	123	140	113	140	501	439	(13)	(14)	724	705
Investment securities:										
Fair value through profit or loss	1,374	1,630	615	1	-	-	(398)	(397)	1,591	1,234
Fair value through other comprehensive income	-	-	17,450	-	4,221	-	(3,507)	-	18,164	-
Available for sale	-	-	-	22,689	-	3,608	-	(4,185)	-	22,112
Derivatives	33	51	-	10	-	-	-	-	33	61
Due from the Government of Canada	158	126	-	-	-	-	-	-	158	126
Loans:										
Fair value through profit or loss	2,019	2,906	21	-	-	-	-	-	2,040	2,906
Amortized cost	4,402	4,158	107	-	234,653	233,786	-	-	239,162	237,944
Accounts receivable and other assets	239	163	569	618	48	54	-	-	856	835
Investment property	264	256	47	49	-	-	-	-	311	305
	9,139	9,949	19,231	23,849	239,424	237,913	(3,918)	(4,596)	263,876	267,115
<b>Liabilities</b>										
Securities sold under repurchase agreements	-	-	280	297	-	-	-	-	280	297
Accounts payable and other liabilities	376	429	100	101	30	31	-	-	506	561
Accrued interest payable	69	129	-	-	490	430	(13)	(14)	546	545
Dividends payable	-	-	500	2,000	175	-	-	-	675	2,000
Derivatives	18	26	99	13	-	-	-	-	117	39
Provision for claims	-	-	512	555	-	-	-	-	512	555
Borrowings:										
Fair value through profit or loss	3,430	4,564	-	-	-	-	-	-	3,430	4,564
Amortized cost	4,768	4,350	-	-	234,653	233,786	(3,896)	(4,544)	235,525	233,592
Defined benefit plans liability	146	181	209	266	(1)	3	-	-	354	450
Unearned premiums and fees	-	-	5,375	5,352	1,573	1,335	-	-	6,948	6,687
Deferred income tax liabilities	41	36	73	68	(8)	(8)	(4)	(12)	102	84
	8,848	9,715	7,148	8,652	236,912	235,577	(3,913)	(4,570)	248,995	249,374
<b>Equity of Canada</b>	<b>291</b>	<b>234</b>	<b>12,083</b>	<b>15,197</b>	<b>2,512</b>	<b>2,336</b>	<b>(5)</b>	<b>(26)</b>	<b>14,881</b>	<b>17,741</b>
	9,139	9,949	19,231	23,849	239,424	237,913	(3,918)	(4,596)	263,876	267,115

<sup>1</sup> The balance sheet eliminations remove inter-segment holdings of CMB and inter-segment receivables/payables.

## 6. GOVERNMENT FUNDING AND HOUSING PROGRAMS EXPENSES

In accordance with Treasury Board's Policy on Results, starting 1 April 2018, CMHC is required to report government funding following the Departmental Results Framework (DRF). The DRF is the structure against which resources and performance information are reported to Parliament and Canadians. A DRF describes, at a high level, the domains in which an organization acts, the changes it seeks to contribute to, and how it will assess progress. CMHC's activities are presented into the following three core responsibilities.

- **Assistance for housing needs:** encompasses programs where CMHC provides federal funding to improve access to affordable housing for Canadians in housing need, including Indigenous peoples, Canadians with special or distinct needs, and certain vulnerable groups.
- **Financing for housing:** encompasses programs whereby CMHC makes financing available for new and existing housing-related initiatives.
- **Housing expertise and capacity development:** encompasses a variety of programs whereby CMHC supports capacity and skills development activities within the housing sector and conducts research and analysis as well as disseminates information on a range of issues that support the housing sector and informed decision making by government and other sectors.

The following table presents the amount of government funding and housing programs expenses, including operating expenses incurred to support these programs, for the three core responsibilities.

(in millions)	2018	2017
Assistance for housing needs	2,202	3,093
Financing for housing	38	48
Housing expertise and capacity development	96	88
<b>Total</b>	<b>2,336</b>	<b>3,229</b>

Of the total amount expensed on housing programs, \$862 million (2017 – \$916 million) was provided for programs transferred to provinces/territories under SHA. Under the SHA, the province/territory assumes our financial and other obligations with respect to these programs in exchange for pre-determined annual funding. The accountability framework requires the province/territory to provide an audited Annual Statement of Funding and Expenditures and an Annual Program Performance Report. This funding may become repayable by the provinces/territories if the amounts are not used in accordance with the terms and conditions of the SHA.

Housing programs expenses also include related party transactions between the Government and us for the reimbursement of:

- Our operating expenses incurred to support and administer the housing programs, not exceeding the maximum government funding voted by Parliament;
- Interest rate losses resulting from certain loans made that contain interest rate clauses that are lower than the associated interest cost on the related borrowings;
- Operating losses on certain investments in housing programs and real estate properties; and
- Default losses on certain loans as well as net disposal losses on certain investments in housing programs and real estate properties.

The following table summarizes the nature of these expenses reimbursed by the Government.

(in millions)	2018	2017
Operating expenses	187	161
Interest rate losses	42	104
Default and disposal losses	1	-
<b>Total</b>	<b>230</b>	<b>265</b>

The total reimbursement for interest losses includes \$34 million (2017 – \$89 million) towards our losses incurred as a result of the prepayment and repricing activity on loans.

The following table presents the change in the due from the Government of Canada account. The outstanding balance as at 31 December 2018 is mainly composed of housing programs expenses incurred but not yet reimbursed.

<b>(in millions)</b>	<b>2018</b>	<b>2017</b>
Balance at beginning of year	126	59
Total government funding recognized in revenues during the year	2,336	3,229
Total government funding received during the year	(2,301)	(3,162)
Third party remittances owing to the Government of Canada	(3)	-
<b>Balance at end of year</b>	<b>158</b>	<b>126</b>

## 7. MORTGAGE INSURANCE

### Mortgage Insurance risk management

We assume the risk of loss from borrower default through mortgage insurance contracts entered into with approved lenders, exposing us to uncertainty surrounding the timing, frequency and severity of claims. Insurance risk management policies are in place to identify, mitigate, report and monitor this risk to ensure activities are managed within our risk appetite, tolerances and risk limits to successfully deliver on our mandate and meet our strategic directions.

We manage our exposure to insurance risk of loss through prudent product design, pricing, insurance underwriting policies, claims payment and default management, reserving, fraud and misrepresentation risk management, market diversification and borrower review and monitoring for the multi-unit, portfolio and homeowner products.

### Product Design

The development of mortgage insurance products takes into account changing client needs, new legislation and regulations, the evolving economic environment and our mandate to serve Canadians across the country, particularly in those market segments not served or less well-served by the private sector. Product design is based on prudent underwriting practices combined with our goal to ensure that creditworthy borrowers have access to mortgage insurance products that meet their needs.

### Pricing

Premiums are set based on projections of claim frequency, claim severity, return on investment, operating expenses, taxes, capital targets, profitability considerations and market demand. In addition, pricing decisions also take into account other considerations related to competition, strategic direction and CMHC's public mandate. Pricing risk refers to the potential that these projections and considerations may substantively and persistently differ from actual developments and values in the long term, which could have significant implications for CMHC's risk of loss, profitability and achievement of mandate.

At least annually, we conduct a pricing review of our products to: i) ensure they support Canadians in meeting their housing needs for a wide range of housing types and tenures; ii) support the profitability and long-term viability of the Mortgage Insurance activities; iii) foster competition; iv) support financial stability; and v) be in line with our risk appetite and tolerances.

### Insurance underwriting policies

Risks related to underwriting could arise from: i) the lender; ii) the borrower; iii) the property; and/or iv) the market. As a result, we have developed prudent and disciplined underwriting policies and guidelines which set the contractual framework and general obligations with respect to underwriting, provides approved lenders with underwriting criteria for mortgage insurance and also includes policies to obtain the approved lender designation.

In addition, for transactional homeowner products, risks related to insurance for different types of residential properties are assessed using our mortgage insurance risk assessment methodology and a rigorous underwriting and post-approval due diligence process.

In the case of multi-unit underwriting, due to different risk characteristics, applications undergo additional individual in-depth assessments to evaluate borrower, property, market and loan characteristics by our underwriters.

## Claims payment and default management

Our Claims Payment Centre supports approved lenders in managing default related to homeowner and small rental loans to reduce risk of default on payment.

Regional centers work with approved lenders for multi-unit residential rental, licensed care or retirement properties in resolving default situations, evaluating workout alternatives and other matters. We consider workouts through effective management of projects in difficulty by following established frameworks.

We actively pursue recoveries, which are amounts expected to be recovered from borrowers in order to mitigate our potential loss.

## Reserving

Reserving risk refers to the risk that insurance liabilities differ significantly from the actual claim payments. We estimate insurance policy liabilities to cover future losses and payments on claims arising from our insurance activity. These policy liabilities are established based on projections of claim frequency, severity and timing, within the context of the economic environment and recent performance indicators such as arrears rates.

## Fraud and misrepresentation risk management

Fraud risk management comprises all activities aiming to detect and prevent fraud or misrepresentation and mitigating losses due to fraud or misrepresentation. We mitigate fraud using models to identify mortgage loan applications that have a high probability of containing misrepresentation and taking the appropriate measures upon identification. We maintain specialized underwriting staff to review these claims and, if appropriate, require enhanced due diligence by the lender.

## Market diversification

Concentration risk may arise from insurance contracts issued in a particular geographical area where local economic conditions are significantly different from the national average that could expose the Corporation to a greater risk of loss. The relative impact of the outcome is mitigated as a result of the distribution of business across different geographic areas. We monitor the conditions of the housing market and economy in each region of Canada against pre-determined risk tolerances in accordance with our Risk Appetite Framework.

The table below sets out the concentration of loan amount insured during the period:

(in percentages)	2018				2017			
	Transactional homeowner	Portfolio	Multi-unit residential	Overall	Transactional homeowner	Portfolio	Multi-unit residential	Overall
Atlantic	6	1	8	6	5	1	3	4
Quebec	29	6	26	26	27	20	33	28
Ontario	31	54	39	36	31	54	40	36
Prairies and territories	24	15	11	19	26	12	9	20
British Columbia	10	24	16	13	11	13	15	12
<b>Canada</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

## Monitoring

A comprehensive monitoring and quality assurance framework also enables CMHC's ongoing rigorous review of business trends, performance and lender compliance in order to make timely adjustments to underwriting and other risk management criteria and processes as needed.

## Insurance-in-force

At 31 December 2018, insurance-in-force, which represents the maximum potential total risk exposure of the Mortgage Insurance Activity, totaled \$448 billion (2017 – \$480 billion). This amount includes \$486 million (2017 – \$458 million) in outstanding loan balances from the Lending programs included in the Assisted Housing Activity (refer to Note 14).

Under Section 11 of the NHA, the total of outstanding insured amounts of all insured loans may not exceed \$600 billion (2017 – \$600 billion).

The following table presents the percentage distribution of insurance-in-force by region:

(in percentages)	2018				2017			
	Transactional homeowner	Portfolio	Multi-unit residential	Overall	Transactional homeowner	Portfolio	Multi-unit residential	Overall
Atlantic	7	4	6	6	7	4	6	5
Quebec	23	12	29	21	22	13	29	20
Ontario	29	47	36	36	30	47	36	37
Prairies and territories	30	19	16	24	30	18	16	24
British Columbia	11	18	13	13	11	18	13	14
<b>Canada</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### Role of the Appointed Actuary

The Appointed Actuary is an external actuary and a Fellow of the Canadian Institute of Actuaries (FCIA) appointed by the Corporation to carry out a valuation of the policy liabilities (provision for claims and unearned premiums) as at 30 September. The factors and techniques used in the valuation are in accordance with Canadian accepted actuarial practice, applicable legislation, and associated regulations. The Appointed Actuary also performs a roll-forward of the provision for claims from the date of the actuarial valuation to 31 December.

### Earned and unearned premiums and fees

The following table presents the composition of premiums and fees earned.

(in millions)	2018	2017
Earned premiums	1,397	1,530
Earned application fees <sup>1</sup>	29	27
<b>Total</b>	<b>1,426</b>	<b>1,557</b>

<sup>1</sup> Includes previously unearned application fees on multi-unit residential loans recognized in the year, as well as low loan-to-value transactional homeowner application fees which are earned as received.

The following table presents the changes in the unearned premiums and fees balance.

(in millions)	2018	2017
Balance at beginning of year	5,352	5,472
Premiums deferred on contracts written in the year	1,420	1,407
Premiums earned in the year	(1,397)	(1,530)
Application fees deferred on contracts written in the year	15	16
Application fees earned in the year <sup>1</sup>	(15)	(13)
<b>Balance at end of year</b>	<b>5,375</b>	<b>5,352</b>

<sup>1</sup> Only includes earned application fees on multi-unit residential loans during the period. Application fee revenue earned on low loan-to-value transactional homeowner application fees are earned immediately as they are received.

## Deferred acquisition costs

The following table presents the changes in the DAC balance.

(in millions)	2018	2017
Balance at beginning of year	165	149
Acquisition costs deferred	64	61
Amortization of deferred acquisition costs	(48)	(45)
<b>Balance at end of year<sup>1</sup></b>	<b>181</b>	<b>165</b>

<sup>1</sup> Balance is accounted for in accounts receivable and other assets (Note 21).

## Provision for claims

The provision for claims includes amounts set aside for IBNR claims, IBNER claims, CIP and SH and ILM.

Provision for claims comprises the following:

(in millions)	2018			2017		
	IBNR, IBNER and CIP	SH and ILM	Total	IBNR, IBNER and CIP	SH and ILM	Total
Undiscounted estimated losses	369	120	489	364	158	522
Discounting	(7)	(20)	(27)	(6)	(17)	(23)
Discounted provision for adverse deviation	28	22	50	27	29	56
<b>Total provision for claims</b>	<b>390</b>	<b>122</b>	<b>512</b>	<b>385</b>	<b>170</b>	<b>555</b>

The following table presents the changes in the provision for claims balance.

(in millions)	2018			2017		
	IBNR, IBNER and CIP	SH and ILM	Total	IBNR, IBNER and CIP	SH and ILM	Total
Provision for claims, beginning of year	385	170	555	475	179	654
Net claims paid during the year	(242)	(6)	(248)	(329)	(1)	(330)
Provision for claims provided for and losses incurred during the period <sup>1</sup>	258	1	259	247	4	251
Unfavourable (favourable) development on prior period insurance claims	(11)	(43)	(54)	(8)	(12)	(20)
<b>Provision for claims, end of year</b>	<b>390</b>	<b>122</b>	<b>512</b>	<b>385</b>	<b>170</b>	<b>555</b>

<sup>1</sup> Included as part of insurance claims on the consolidated statement of income and comprehensive income. Provision for claims provided for and losses may not equal insurance claims expense as certain expenses incurred do not impact the provision for claims.

## Methodology and significant factors

The key method we use for estimating insurance policy liabilities is the actuarial present value basis. Policy liabilities are prepared by the Appointed Actuary and are based on assumptions and estimates as of the balance sheet date. There is inherent uncertainty in any estimate of ultimate liabilities including for premium deficiency, IBNR, IBNER, CIP and SH and ILM because the ultimate liability for claims is subject to the outcome of events yet to occur.

Provisions are reviewed and evaluated at each reporting period in light of emerging claim experience and changing circumstances. The resulting changes in the estimated provision for claims are recorded in insurance claims expense in the year in which they are determined. Estimates of the timing of net cash outflows resulting from our recognized insurance liabilities are provided in Note 29. As the SH and ILM programs are unique it is difficult to provide a more precise maturity profile beyond 12 months. The majority of mortgages for the SH and ILM loans have remaining amortization periods of 8 years or less.

Earning patterns are determined by product type and by amortization period. Approximately 75% of the premiums written are recognized as premiums earned within the first five years of the insurance contract.

The following factors affect the key actuarial assumptions used in the determination of the provision for claims:

- Claim frequency – claim frequency, or probability of default, is dependent on the loan-to-value, the underwriting year and other characteristics of the loans insured. It reflects historical and current trends and arrears reporting;
- Claim severity – claim severity, or average loss on claims, is dependent on the dollar value of claims, losses on sales of real estate properties, administrative expenses, payment delays and sale delays. These factors are generally based on historical experience; and
- Economic conditions – recent past and projected economic factors, such as unemployment rates, house price inflation and consumer price index, affect the forecast of future claim levels.

## Sensitivity analysis

The following table presents the sensitivity in the significant assumptions that have the greatest effect on the measurement of the insurance contract liabilities. The percentage change in variables is applied to a range of existing actuarial modeling assumptions to derive the possible impact on income before income taxes and equity of Canada for reasonably possible movements in key loss assumptions with all other assumptions held constant. In practice, this is unlikely to occur and changes in some of the assumptions might be correlated, which might magnify or counteract the sensitivities. The relationship of a change in assumption to the change in value may not be linear. The methodology for sensitivity testing has not changed significantly from the prior year.

(in millions, unless otherwise indicated)	Change indicator	Change in assumptions	Impact on income before income taxes		Impact on equity of Canada		
			2018	2017	2018	2017	
<b>Loss sensitivity factors</b>							
Claim frequency	Relative	+10%	(44)	(51)	(33)	(38)	
	Relative	-10%	44	51	33	38	
Claim severity	Relative	+10%	(49)	(51)	(37)	(38)	
	Relative	-10%	49	51	37	38	
<b>Economic sensitivity factor</b>							
Unemployment rate	Absolute	+100 bps	(58)	(16)	(44)	(12)	
Gross domestic product	Absolute	-100 bps	(26)	(10)	(20)	(8)	
Mortgage rates	Absolute	+100 bps	(20)	(8)	(15)	(6)	

## Claims development

### Incurred but not reported, incurred but not enough reported and claims in process

The following table shows the development of the expected losses on IBNR, IBNER and CIP claims and their related expenses (excluding SH and ILM) over a period of time and the estimated ultimate cost of claims for 2009 through 2018 to present the earliest material claim that has arisen and for which there is still uncertainty about the amount and timing of claim payments. The information is presented on a default year basis where claims are related to the period in which the insured event occurred and not the period in which the policy was underwritten.

<b>(in millions, unless otherwise indicated)</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
Expected losses											
Default year	745	596	551	522	388	346	303	306	247	258	
One year later	691	566	499	428	370	328	324	272	253		
Two years later	711	560	479	432	372	351	319	280			
Three years later	719	571	480	439	376	345	312				
Four years later	734	577	484	440	378	343					
Five years later	716	583	484	441	381						
Six years later	712	582	488	440							
Seven years later	731	581	487								
Eight years later	731	580									
Nine years later	730										
Current estimate of cumulative claims	730	580	487	440	381	343	312	280	253	258	4,064
Claims paid											
Default year	56	43	37	29	22	19	16	23	19	19	
One year later	391	308	257	225	194	175	175	144	126		
Two years later	200	161	135	134	119	120	95	87			
Three years later	46	43	39	37	29	23	20				
Four years later	11	20	11	12	13	3					
Five years later	10	8	3	2	1						
Six years later	(5)	(1)	4	(1)							
Seven years later	20	(1)	(2)								
Eight years later	2	(1)									
Nine years later	(1)										
Cumulative payments to date	730	580	484	438	378	340	306	254	145	19	3,674
<b>Provision for claims</b>	-	-	3	2	3	3	6	26	108	239	390
Current estimate of surplus (deficit)	15	16	64	82	7	3	(9)	26	(6)	-	
Surplus of initial expected loss on claims	2%	3%	12%	16%	2%	1%	(3%)	8%	(2%)	0%	

### Insurance policy liability adequacy

A liability adequacy test on the premium liabilities and claim liabilities is performed quarterly. Premium liabilities represent a provision for future claims and expenses which are expected to arise from the unearned portion of the policies-in-force. Thus, this provision is for claims that have not yet occurred and, therefore, covers the period from the date of the valuation to the date of default (the assumed claim occurrence date).

The liability adequacy test for the Corporation for the year ended 31 December 2018 has identified that no premium deficiency reserve is required (2017 – nil).

## 8. MORTGAGE FUNDING

We guarantee the timely payment of principal and interest of CMB issued by CHT under the CMB program and NHA MBS issued by Approved Issuers on the basis of housing loans under the NHA MBS program in the event that an issuer is unable to satisfy its obligations under these programs. In that circumstance, we will mitigate our loss by realizing on the collateral securing the obligations under each of the programs.

At the balance sheet date, the Corporation has not received a claim on its TPG. As such, no provision in addition to the remaining unearned premium is required.

The following table presents the changes in the unearned TPG fees balance.

(in millions)	2018			2017		
	NHA MBS	CMB	Total	NHA MBS	CMB	Total
Balance at beginning of year	859	476	1,335	648	444	1,092
IFRS 15 adjustment for application fees	72	-	72	-	-	-
<b>Restated opening balance</b>	<b>931</b>	<b>476</b>	<b>1,407</b>	<b>648</b>	<b>444</b>	<b>1,092</b>
TPG fees received in the year	503	146	649	479	148	627
TPG fees earned in the year <sup>1</sup>	(355)	(128)	(483)	(268)	(116)	(384)
<b>Balance at end of year</b>	<b>1,079</b>	<b>494</b>	<b>1,573</b>	<b>859</b>	<b>476</b>	<b>1,335</b>

<sup>1</sup> Includes \$421 million (2017 - \$301 million) of fees earned that were included in the restated opening unearned TPG fees balance.

The following table presents the revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the balance sheet date.

(in millions)	2019	2020	2021	2022	2023	2024 and thereafter
NHA MBS	381	307	203	108	40	40
CMB	126	111	85	62	40	70

### Guarantees-in-force

Total guarantees-in-force represents the maximum principal obligation related to TPGs<sup>1</sup>. Under Section 15 of the NHA, the aggregate outstanding amount of principal guarantees may not exceed \$600 billion (2017 – \$600 billion).

The following table presents the total guarantees-in-force by program. We do not expect these to result in future cash outflows.

(in billions)	2018	2017
NHA MBS	254	244
CMB <sup>2</sup>	234	233
<b>Total</b>	<b>488</b>	<b>477</b>

<sup>1</sup> Exposure excludes the realizable value of the related assets securing the NHA MBS and CMB guaranteed.

<sup>2</sup> Includes \$3.9 billion (2017 – \$4.6 billion) in investments which are eliminated in the consolidated balance sheet.

The following table presents the maturity profile of the guarantees-in-force based on principal amount outstanding as at 31 December 2018.

(in millions)	NHA MBS guarantees	CMB guarantees	Total guaranteed
2019	28,592	30,750	59,342
2020	59,337	39,999	99,336
2021	70,023	37,750	107,773
2022	49,887	44,250	94,137
2023	43,536	36,500	80,036
2024 and thereafter	2,149	45,000	47,149
<b>Total</b>	<b>253,524</b>	<b>234,249</b>	<b>487,773</b>

## 9. STRUCTURED ENTITIES

### Consolidated structured entities

#### Canada Housing Trust

CHT was established in 2001 as a special-purpose trust, separate from CMHC. While we control the activities of CHT, its assets and liabilities are neither owned by nor held for our benefit. CHT's functions are limited to the acquisition of interests in eligible housing loans such as NHA MBS, the issuance of CMB, as well as the purchase of highly rated investments and certain related financial hedging activities. The beneficiaries of the Trust, after payment of all obligations, are one or more charitable organizations. Financial information for CHT is presented in the following tables on an unconsolidated basis.

#### Condensed Balance Sheet

(in millions)	2018	2017
Loans – amortized cost <sup>1</sup>	234,653	233,786
Other assets	491	431
<b>Total assets</b>	<b>235,144</b>	<b>234,217</b>
Borrowings – amortized cost <sup>1</sup>	234,653	233,786
Other liabilities	491	431
<b>Total liabilities</b>	<b>235,144</b>	<b>234,217</b>
<b>Total equity of Canada</b>	<b>-</b>	<b>-</b>

<sup>1</sup> On 1 January 2018, upon adoption of IFRS 9, loans and receivables and other financial liabilities were renamed to loans at amortized cost and borrowings at amortized cost, respectively.

## Condensed Statement of Income

(in millions)	2018	2017
Interest income – loans	4,965	4,339
Interest expense	4,957	4,331
Net interest income	8	8
<b>Total revenues</b>	<b>8</b>	<b>8</b>
Operating expenses	8	8
<b>Total expenses</b>	<b>8</b>	<b>8</b>
<b>Net income</b>	<b>-</b>	<b>-</b>

## 10. CAPITAL MANAGEMENT

We consider our capital available to be equal to the total equity of Canada less assets with a capital requirement of 100%.

Our primary objective with respect to capital management is to ensure that our commercial operations have adequate capital to deliver their mandate while remaining financially self-sustaining and also to follow prudent business practices and guidelines existing in the private sector as appropriate. Beyond the \$25 million capital prescribed by the CMHC Act, we currently have no externally imposed minimal capital requirements; however, we voluntarily follow guidelines set out by OSFI.

We perform an Own Risk & Solvency Assessment (ORSA), which is an integrated process that evaluates capital adequacy on both a regulatory and economic capital basis and is used to establish capital targets taking into consideration our strategy and risk appetite. Our 'Own View' of capital needs is determined by identifying our risks and evaluating whether or not an explicit amount of capital is necessary to absorb losses from each risk. With the above we have also met the requirements of the CMHC Act and the NHA.

We set an internal target for our Mortgage Insurance Activity and our Mortgage Funding Activity at a level that is expected to cover all material risks. The internal target is calibrated using specified confidence intervals and is designed to provide Management with an early indication of the need to resolve financial problems. Under our capital management policy, we operate at available capital levels above the internal target on all but unusual and infrequent occasions. Accordingly, we have established an operating level (holding target) for our Mortgage Insurance Activity and our Mortgage Funding Activity in excess of our internal target. The operating level is calibrated using confidence intervals specified by our capital management policy and is designed to provide Management with adequate time to resolve financial problems before available capital decreases below the internal target.

We make dividend payments to the Government from our Mortgage Insurance and Mortgage Funding Activities, to the extent there are profits and retained earnings not allocated to reserves, capitalization or to meet the needs of the Corporation for purposes of the NHA, CMHC Act or any other purpose authorized by Parliament relating to housing. However, our capital is not managed to issue a dividend. The following table presents the change in the dividends payable balance.

(in millions)	Dividend declarations <sup>1</sup>		Amount payable at 31 December 2017	Amount paid during the year	Dividends payable at 31 December 2018
	Date	Amount			
		MI	MF		
2017 Special dividend	29 June 2017	4,000	-	2,000	2,000
Quarter 1 dividend	22 March 2018	1,000	-	-	1,000
Quarter 2 dividend	24 May 2018	1,000	-	-	1,000
Quarter 3 dividend	23 August 2018	1,000	-	-	1,000
Quarter 4 dividend	28 November 2018	1,000	175	-	500
		8,000	175	2,000	5,500
					675

<sup>1</sup> Dividends declared in 2017 and paid in full by 31 December 2017 of \$675 million have been excluded from the table.

There have been no changes to our internal guidelines in what is considered to be capital or the objectives of managing capital during the year. However, there has been a change in external guidelines that affects our Mortgage Insurance Activity, as noted below.

The components of consolidated capital available are presented below.

(in millions)	2018	2017
Contributed capital	25	25
Accumulated other comprehensive income	5	490
Appropriated retained earnings	13,049	14,918
Unappropriated retained earnings <sup>1</sup>	1,802	2,308
<b>Total equity of Canada<sup>2</sup></b>	<b>14,881</b>	<b>17,741</b>
Less: assets with a capital requirement of 100%	(33)	(10)
<b>Total capital available</b>	<b>14,848</b>	<b>17,731</b>

<sup>1</sup> Unappropriated retained earnings represents retained earnings in excess of our operating level for the Mortgage Insurance and Mortgage Funding Activities.

<sup>2</sup> Equity of Canada includes the impact of eliminations.

## Mortgage Insurance capital

The appropriated retained earnings of the Mortgage Insurance Activity is based on our ORSA. As regulatory capital, based on guidelines developed by OSFI, is higher than economic capital, we have set our capital targets based on regulatory capital. OSFI's minimum regulatory capital requirement is 100% of its Minimum Capital Test (MCT). The OSFI Supervisory target is 150% of the minimum capital required. We set an internal target above the Supervisory capital required under OSFI guidelines. The following table presents the components of capital available.

<b>(in millions, unless otherwise indicated)</b>	<b>2018</b>	<b>2017</b>
Accumulated other comprehensive income	(45)	477
Appropriated retained earnings	11,846	13,171
Appropriated capital <sup>1</sup>	11,801	13,648
Unappropriated capital	282	1,549
<b>Total Mortgage Insurance capital</b>	<b>12,083</b>	<b>15,197</b>
Less: assets with a capital requirement of 100%	(33)	(10)
<b>Total Mortgage Insurance capital available</b>	<b>12,050</b>	<b>15,187</b>
Internal target	155%	155%
Operating level	165%	165%
Capital available to minimum capital required (% MCT) <sup>2</sup>	168%	184%

<sup>1</sup> We appropriate retained earnings and AOCI at the operating level of 165% of MCT. Our internal target is set at 155% of MCT.

<sup>2</sup> We have not made use of transitional arrangements as provided by the OSFI Advisory. Our MCT ratio as at 31 December 2018 would be 172% with transitional arrangements.

## Mortgage Funding capital

Mortgage Funding capital is appropriated for the guarantees provided by our NHA MBS and CMB programs. There is no regulatory capital and the appropriated amount of capital is based on our 'Own View', as outlined above.

We do not have separate capital amounts for CHT because the TPG exposure to CMB issued by CHT is covered by the Mortgage Funding capital. The amounts of Mortgage Funding capital held also recognize the risk mitigation provided by mortgage insurers, who are required to hold capital for the underlying mortgage default risk.

The following table presents the components of the capital available.

<b>(in millions, unless otherwise indicated)</b>	<b>2018</b>	<b>2017</b>
Accumulated other comprehensive income	6	(23)
Appropriated retained earnings	1,195	1,747
Appropriated capital <sup>1</sup>	1,201	1,724
Unappropriated capital	1,311	612
<b>Total Mortgage Funding capital available</b>	<b>2,512</b>	<b>2,336</b>
Capital available to capital required (%)	209%	135%

<sup>1</sup> We appropriate retained earnings and AOCI at the operating level (capital required), which is set at 110% of our 'Own View' of capital needs. Our internal target is set at 105% of our 'Own View' of capital needs.

## Assisted Housing capital

### Lending programs

We maintain a reserve fund pursuant to Section 29 of the CMHC Act. A portion of the Lending programs' earnings is retained in this reserve fund as part of our strategy to address interest rate risk exposure on pre-payable loans as well as credit risk exposure on unsecured loans. The reserve fund is subject to a statutory limit of \$240 million (2017 – \$240 million), which we have determined through our ORSA to be in a reasonable range. Should the statutory limit be exceeded, we would be required to pay the excess to the Government.

Unrealized fair value fluctuations as well as remeasurement gains and losses on defined benefit plans are absorbed in retained earnings. The Housing programs' portion of remeasurements is recorded in retained earnings until it is reimbursed by the Government through government funding for housing programs.

The following table presents the components of the capital available.

(in millions)	2018	2017
Reserve fund	111	116
Retained earnings	155	93
<b>Total Lending programs capital available</b>	<b>266</b>	<b>209</b>

### Housing programs

We do not hold capital for Housing programs as this activity does not present risks to the Corporation that would require capital to be set aside.

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## 11. FAIR VALUE MEASUREMENT

### Fair value measurement

We measure certain financial instruments and non-financial assets at fair value in the consolidated balance sheet and disclose the fair value of certain other items. Fair value is determined using a consistent measurement framework.

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 under current market conditions. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest. Fair value measurement of non-financial assets (i.e. investment property) takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use. For financial instruments, accrued interest is separately recorded and disclosed.

### Fair value hierarchy

The methods used to measure fair value make maximum use of relevant observable inputs and minimize the use of unobservable inputs. Fair value measurements are classified in a fair value hierarchy as level 1, 2 or 3 according to the observability of the most significant inputs used in making the measurements.

#### Level 1

Assets and liabilities that are measured based on unadjusted quoted prices in active markets for identical assets or liabilities. An active market is one where transactions are occurring with sufficient frequency and volume to provide pricing information on an ongoing basis.

## Level 2

Assets and liabilities that are measured based on observable inputs other than level 1 prices. Level 2 inputs include prices obtained from third-party pricing services based on independent dealers' quotes for identical assets or liabilities in markets that are not considered sufficiently active. Level 2 also includes fair values obtained by discounting expected future cash flows, making maximum use of directly or indirectly observable market data such as yield curves and implied forward curves constructed from foreign exchange rates, benchmark interest rates and credit spreads of identical or similar assets or liabilities.

## Level 3

Assets and liabilities not quoted in active markets that are measured using valuation techniques. Where possible, inputs to the valuation techniques are based on observable market data, such as yield curves and implied forward curves constructed from benchmark interest rates and credit spreads of similar assets or liabilities. Where observable inputs are not available, unobservable inputs are used. For level 3 assets and liabilities, unobservable inputs are significant to the overall measurement of fair value.

We have processes and controls in place to ensure fair value is appropriately measured. The valuation of financial instruments is performed by the Operations Support Division (OSD) of the Capital Markets sector. OSD has developed models and methodologies to determine fair value of financial instruments not quoted in active markets which are reviewed and monitored on an ongoing basis. All valuations are subject to independent price verification (IPV) managed by the sector of the Chief Risk Officer. IPV is a process where valuations are independently verified against external market prices and other relevant market data on an ongoing basis.

Generally, the unit of account for a financial instrument is the individual instrument, and valuation adjustments are applied at an individual instrument level, consistent with that unit of account.

For investment property, fair value is determined by independent external property appraisers who hold recognized and relevant professional qualifications and have recent relevant experience and our internal appraisers on a rotating basis.

## Methods and assumptions

We measure fair value using the following methods and assumptions:

### Investment securities

Equity securities are valued using closing bid price quotes from active markets.

Fixed income securities are valued primarily by indicative quotes obtained from multi-dealer consensus pricing services. Where observable quotes are not available, securities are valued using spread differentials of similar actively traded securities or discounted cash flow techniques using observable discount rate curves for instruments having similar characteristics. Future cash flows of certain floating rate bonds are estimated based on observable implied forward rate curves.

For our private limited partnership and real estate investment trust equity investments, fair value is measured as our share of the partnership's or trust's net asset value. In measuring net asset value, the fair value of the partnership's or trust's real estate assets is determined at least annually by independent appraisers using the income approach or the market approach, and the fair value of its long-term debt is measured by discounting expected future cash flows.

### Loans

Loans are valued by discounting future cash flows using discount rate curves that reflect the collection guarantees provided by provincial, territorial or federal levels of government. Inputs into the discounting model are the Government yield curve and spreads derived from assets with comparable financial risks.

## Derivatives

Derivatives consist of over-the-counter interest rate swaps and foreign currency forward contracts. These are valued by discounting estimated future cash flows using observable discount rate curves constructed using benchmark interest rates and foreign exchange rates. Future cash flows for floating rate legs are estimated based on observable implied forward rate curves. An adjustment is made to reflect the credit risk that either counterparty may not be able to fulfil its obligations. Inputs to this adjustment include market-implied default rates and estimated recovery rates, and the adjustment takes into account master netting and collateral arrangements in place.

## Investment property

The fair value of investment property is determined using either the income approach or the market approach, incorporating the highest and best use of the property. Of the total fair value of investment properties, 15% (2017 – 78%) was based on valuations performed by independent valuers and 85% (2017 – 22%) was based on internal valuations.

The income approach is primarily applied in determining the fair value of rent-producing properties. Under the income approach, fair value is based upon the present value of expected future cash flows of each property using an unobservable discount rate reflective of the characteristics of the property. Future cash flows are estimated using unobservable assumptions about future rental values and vacancy rates.

The market approach is primarily applied in determining the fair value of vacant land. Under the market approach, fair value is based upon market transactions involving comparable property, with adjustments made to reflect the unique aspects of the property being valued.

The highest and best use of the investment property held in the Assisted Housing Activity (\$264 million as at 31 December 2018; \$256 million as at 31 December 2017) differs from its current use as these investment properties are used to carry out CMHC's social housing mandate rather than maximize its economic value.

## Borrowings

Borrowings from the Government of Canada are valued by discounting future cash flows using discount rate curves derived from the directly observable yields of our market-traded borrowings. The fair value of capital market borrowings was measured using closing ask price quotes obtained from multi-dealer consensus pricing services.

## Comparison of carrying and fair values for financial instruments not carried at fair value

The following table compares the carrying and fair values of financial instruments not carried at fair value. Carrying value is the amount at which an item is measured in the consolidated balance sheet.

(in millions)	2018			2017		
	Carrying value	Fair value	Fair value over (under) carrying value	Carrying value	Fair value	Fair value over (under) carrying value
<b>Financial assets</b>						
Loans at amortized cost <sup>1,3</sup>	239,162	239,820	658	237,944	239,137	1,193
<b>Financial liabilities</b>						
Borrowings at amortized cost <sup>2,3</sup>	235,525	236,311	786	233,592	234,918	1,326

<sup>1</sup> \$239,704 million (31 December 2017 – \$239,137 million) fair value categorized as level 2, \$116 million (31 December 2017 – nil) fair value categorized as level 3.

<sup>2</sup> \$120,580 million (31 December 2017 – \$111,380 million) fair value categorized as level 1, \$115,731 million (31 December 2017 – \$123,538 million) fair value categorized as level 2.

<sup>3</sup> On 1 January 2018, upon adoption of IFRS 9, loans and receivables and other financial liabilities were renamed to loans at amortized cost and borrowings at amortized cost, respectively.

## Fair value hierarchy for items carried at fair value

The following table presents the fair value hierarchy for assets and liabilities carried at fair value in the consolidated balance sheet.

	IFRS 9				IAS 39			
	2018				2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
<b>Assets</b>								
Cash equivalents								
Interest bearing deposits with banks	-	80	-	80	-	55	-	55
Federal government issued	24	-	-	24	67	-	-	67
<b>Total cash equivalents</b>	<b>24</b>	<b>80</b>	<b>-</b>	<b>104</b>	<b>67</b>	<b>55</b>	<b>-</b>	<b>122</b>
Investment securities								
FVTPL								
Debt instruments								
Corporate/other entities	-	278	-	278	-	373	-	373
Provinces/municipalities	229	177	-	406	78	399	-	477
Sovereign and related entities	-	317	-	317	-	384	-	384
Equities								
Canadian common shares	492	-	-	492	-	-	-	-
Limited partnership units	-	-	98	98	-	-	-	-
<b>Total at FVTPL</b>	<b>721</b>	<b>772</b>	<b>98</b>	<b>1,591</b>	<b>78</b>	<b>1,156</b>	<b>-</b>	<b>1,234</b>
FVOCI								
Debt instruments								
Corporate/other entities	1,412	7,200	-	8,612	-	-	-	-
Federal government issued	4,663	57	-	4,720	-	-	-	-
Provinces/municipalities	1,978	2,487	-	4,465	-	-	-	-
Sovereign and related entities	-	268	-	268	-	-	-	-
Equities								
Canadian preferred shares	99	-	-	99	-	-	-	-
<b>Total at FVOCI</b>	<b>8,152</b>	<b>10,012</b>	<b>-</b>	<b>18,164</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
AFS								
Debt instruments								
Corporate/other entities	-	-	-	-	1,010	9,663	-	10,673
Federal government issued	-	-	-	-	4,105	86	-	4,191
Provinces/municipalities	-	-	-	-	2,054	3,734	-	5,788
Sovereign and related entities	-	-	-	-	-	287	-	287
Equities								
Canadian common shares	-	-	-	-	1,017	-	-	1,017
Limited partnership units	-	-	-	-	-	-	88	88
Canadian preferred shares	-	-	-	-	68	-	-	68
<b>Total AFS</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8,254</b>	<b>13,770</b>	<b>88</b>	<b>22,112</b>
Loans designated at FVTPL	-	2,002	-	2,002	-	2,906	-	2,906
Loans mandatorily at FVTPL	-	17	21	38	-	-	-	-
Derivatives	-	33	-	33	-	61	-	61
Investment property	-	-	311	311	-	-	305	305
<b>Total assets carried at fair value</b>	<b>8,897</b>	<b>12,916</b>	<b>430</b>	<b>22,243</b>	<b>8,399</b>	<b>17,948</b>	<b>393</b>	<b>26,740</b>
<b>Liabilities</b>								
Borrowings designated at FVTPL	-	3,430	-	3,430	-	4,564	-	4,564
Derivatives	-	117	-	117	-	39	-	39
<b>Total liabilities carried at fair value</b>	<b>-</b>	<b>3,547</b>	<b>-</b>	<b>3,547</b>	<b>-</b>	<b>4,603</b>	<b>-</b>	<b>4,603</b>

## Transfers between fair value hierarchy levels

For assets and liabilities measured at fair value on a recurring basis, we determine if reclassifications have occurred between levels in the hierarchy by re-assessing categorization at each balance sheet date. Transfers are dependent on our assessment of market trading activity of the last month of each balance sheet date using internal classification criteria. Transfers between levels are deemed to occur at the beginning of the quarter in which the transfer occurs. There were \$2,575 million of transfers from level 2 to level 1 and \$2,483 million of transfers from level 1 to level 2 during the year ended 31 December 2018 (31 December 2017 – \$2,709 million and \$3,376 million, respectively).

## Change in fair value measurement for items classified as level 3

The following table presents the change in fair value for items carried at fair value and classified as level 3.

(in millions)	Investment securities					
	FVTPL – asset backed securities	Equities at FVTPL – limited partnership units <sup>4</sup>	Total investment securities	Loans – FVTPL <sup>5</sup>	Investment property	Total
<b>2018</b>						
Fair value as at 1 January 2018		88	88	26	305	419
Purchases	-	11	11	46	1	58
Net gains in net income <sup>1,2</sup>	-	4	4	1	5	10
Gains in OCI	-	-	-	-	-	-
Cash receipts on settlements/disposals	-	(5)	(5)	(52)	-	(57)
<b>Fair value as at 31 December 2018</b>	<b>-</b>	<b>98</b>	<b>98</b>	<b>21</b>	<b>311</b>	<b>430</b>
<b>2017</b>						
Fair value as at 1 January 2017	137	38	175	-	267	442
Purchases	-	17	17	-	-	17
Net gains in net income <sup>1,2</sup>	-	-	-	-	90	90
Gains in OCI	-	6	6	-	-	6
Cash receipts on settlements/disposals	(137)	(3)	(140)	-	(22)	(162)
Other <sup>3</sup>	-	30	30	-	(30)	-
<b>Fair value as at 31 December 2017</b>	<b>-</b>	<b>88</b>	<b>88</b>	<b>-</b>	<b>305</b>	<b>393</b>

<sup>1</sup> Included in net gains (losses) on financial instruments for investment securities; other income for investment property.

<sup>2</sup> Of the net gains in net income for 2018, \$9 million relates to assets held at 31 December 2018 (31 December 2017 – \$89 million).

<sup>3</sup> During 2017, an investment property was sold to an unrelated real estate investment trust in exchange for equity instruments in the trust and other consideration.

Following the transaction CMHC has neither control nor significant influence over the trust.

<sup>4</sup> Under IAS 39, limited partnership units were previously classified as AFS.

<sup>5</sup> Consists of MI Activity loans that were reclassified from accounts receivable and other assets to loans at FVTPL as at 1 January 2018.

## Unobservable inputs for items classified as level 3

The valuations of items classified as level 3 use unobservable inputs, changes in which may significantly affect the measurement of fair value. Valuations were based on assessments of the prevailing conditions at 31 December 2018, which may change materially in subsequent periods. The following table presents quantitative information about the significant unobservable inputs used in level 3 fair value measurements for items carried at fair value.

(in millions, unless otherwise indicated)	Valuation technique	Unobservable inputs	2018		2017	
			Asset fair value	Weighted average input/range	Asset fair value	Weighted average input/range
<b>Investment securities</b>						
Equities at FVTPL - Limited partnership units <sup>1</sup>	Share of partnership equity	Reported partnership equity	98	n.a.	88	n.a.
<b>Investment property</b>						
Mortgage Insurance Activity	Discounted cash flow	Estimated rental value per square foot Discount rate	47	\$14 - \$42 6% - 8%	49	\$16 - \$42 7%
Assisted Housing Activity	Discounted cash flow	Estimated rental value per square foot Discount rate	27	\$31 - \$189 4% - 6%	21	\$25 - \$149 4% - 6%
	Market approach	Value per square foot	237	\$0 - \$448	235	\$0 - \$491
<b>Total investment property</b>			<b>311</b>		<b>305</b>	
<b>Loans at FVTPL</b>						
MI activity workout loans	Discounted cash flow	Loss rate	8	63%	-	-
MI activity mortgage assignments	Market approach	Value per square foot	13	\$11 - \$710	-	-
<b>Total loans at FVTPL</b>			<b>21</b>			
<b>Total level 3 items carried at fair value</b>			<b>430</b>		<b>393</b>	

<sup>1</sup> Under IAS 39, limited partnership units were previously classified as AFS.

## Level 3 sensitivity analysis

### Investment property

For investment property, increases (decreases) in estimated rental value and price per square foot could result in a significantly higher (lower) fair value of the properties. Increases (decreases) in discount rates could result in a significantly lower (higher) fair value.

## 12. CASH AND CASH EQUIVALENTS

The following table provides a breakdown of our cash and cash equivalents:

(in millions)	IFRS 9				IAS 39			
	2018				2017			
	Amortized cost	FVOCI	FVTPL	Total	Loans and receivables	AFS	FVTPL	Total
Cash	1	-	-	1	3	-	-	3
Interest-bearing deposits with banks	428	-	80	508	450	-	55	505
Corporate/other entities	151	-	-	151	208	-	-	208
Federal government issued Provinces/ municipalities	-	24	-	24	-	67	-	67
	153	-	-	153	104	-	-	104
<b>Total cash and cash equivalents</b>	<b>733</b>	<b>24</b>	<b>80</b>	<b>837</b>	<b>765</b>	<b>67</b>	<b>55</b>	<b>887</b>

We have \$78 million of cash and cash equivalents as at 31 December 2018 (31 December 2017 – \$80 million) that relates to funds received from the Government that may only be used as part of the Affordable Rental Housing Innovation Fund.

We also have \$260 million of cash and cash equivalents (31 December 2017 – \$75 million) that may only be used as part of the Rental Construction Financing initiative (RCFi).

## 13. INVESTMENT SECURITIES

The following tables present the contractual maturity profile and average yield of investment securities.

(in millions)	IFRS 9				Total 2018
	Remaining term to maturity				
	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	
<b>FVTPL</b>					
Fixed income					
Corporate/other entities	135	117	-	26	278
Provinces/municipalities	76	304	26	-	406
Sovereign and related entities	80	229	8	-	317
<b>Total fixed income</b>	<b>291</b>	<b>650</b>	<b>34</b>	<b>26</b>	<b>1,001</b>
Yield <sup>1</sup>	1.7%	1.5%	2.3%	8.0%	1.7%
Canadian equities					590
Yield <sup>2</sup>					3.5%
<b>Total at FVTPL</b>					<b>1,591</b>
<b>FVOCI</b>					
Fixed income					
Corporate/other entities <sup>3</sup>	1,018	2,561	1,660	3,373	8,612
Federal government issued	345	2,072	967	1,336	4,720
Provinces/municipalities	382	892	875	2,316	4,465
Sovereign and related entities	101	125	-	42	268
<b>Total fixed income</b>	<b>1,846</b>	<b>5,650</b>	<b>3,502</b>	<b>7,067</b>	<b>18,065</b>
Yield <sup>1</sup>	2.3%	2.2%	2.5%	2.9%	2.5%
<b>Canadian equities</b>					<b>99</b>
Yield <sup>2</sup>					5.0%
<b>Total at FVOCI</b>					<b>18,164</b>
<b>Total</b>					<b>19,755</b>

<sup>1</sup> Represents the weighted-average yield, determined as the weighted-average of the effective yields of individual securities.

<sup>2</sup> Represents the average yield, determined by dividing dividend income by average cost.

<sup>3</sup> Includes debt securities denominated in U.S. dollars with a carrying value of \$2,278 million (2017 – \$1,792 million).

(in millions)	IAS 39				Total 2017
	Remaining term to maturity				
	Within 1 year	1 to 3 years	3 to 5 years	Over 5 years	
<b>Designated at FVTPL</b>					
Fixed income					
Corporate/other entities	181	136	56	-	373
Provinces/municipalities	66	253	158	-	477
Sovereign and related entities	75	239	70	-	384
<b>Total designated at FVTPL</b>	<b>322</b>	<b>628</b>	<b>284</b>	<b>-</b>	<b>1,234</b>
Yield <sup>1</sup>	1.7%	1.6%	1.5%	-	1.6%
<b>Available for sale</b>					
Fixed income					
Corporate/other entities	1,776	2,694	2,396	3,807	10,673
Federal government issued	133	2,134	880	1,044	4,191
Provinces/municipalities	393	1,357	1,234	2,804	5,788
Sovereign and related entities	-	152	75	60	287
<b>Total fixed income</b>	<b>2,302</b>	<b>6,337</b>	<b>4,585</b>	<b>7,715</b>	<b>20,939</b>
Yield <sup>1</sup>	2.2%	2.0%	2.4%	2.9%	2.5%
Canadian equities					1,173
Yield <sup>2</sup>					6.2%
<b>Total available for sale</b>					<b>22,112</b>
<b>Total</b>					<b>23,346</b>

<sup>1</sup> Represents the weighted-average yield, determined as the weighted-average of the effective yields of individual securities.

<sup>2</sup> Represents the average yield, determined by dividing dividend income by average cost.

The following table shows the cumulative unrealized gains (losses) on investment securities recorded at fair value.

(in millions)	IFRS 9				IAS 39			
	2018				2017			
	Amortized cost <sup>1</sup>	Gross cumulative unrealized gains	Gross cumulative unrealized losses	Fair value	Amortized cost <sup>1</sup>	Gross cumulative unrealized gains	Gross cumulative unrealized losses	Fair value
Debt instruments								
FVTPL	1,007	2	(8)	1,001	1,242	2	(10)	1,234
FVOCI <sup>2</sup>	17,964	275	(174)	18,065	-	-	-	-
AFS	-	-	-	-	20,837	264	(162)	20,939
Equities								
FVTPL	371	223	(4)	590	-	-	-	-
FVOCI	108	-	(9)	99	-	-	-	-
AFS	-	-	-	-	670	504	(1)	1,173

<sup>1</sup> Amortized cost for equities is acquisition cost less impairment losses, if any.

<sup>2</sup> Includes debt instruments denominated in U.S. dollars with a carrying value of \$2,278 million (31 December 2017 - \$1,792 million).

We have investment securities of \$283 million (2017 – \$295 million) that are part of securities sold under repurchase agreements with terms that do not exceed 93 days. We continue to earn investment income and recognize in OCI changes in fair value on these investment securities during the year, with the exception of investments in CHT-issued CMB, which are eliminated from the consolidated financial statements.

### Credit quality – FVOCI

The following table presents the credit quality of debt instruments held at FVOCI, all of which have an ECL allowance based on 12-month ECL. Credit ratings are based on our internal credit rating system and amounts in the table represent the fair value of the financial asset.

(in millions)	As at 31 December 2018				
	AAA	AA- to AA+	A- to A+	BBB- to BBB+	Total
Investment securities <sup>1</sup>	5,510	1,975	8,887	1,693	18,065

<sup>1</sup> The internal credit ratings are based upon internal assessments of the counterparty creditworthiness. These ratings correspond to those provided by the credit rating agencies except in cases where stand-alone ratings exist. A counterparty internal credit rating cannot be higher than the highest stand-alone rating from any of the agencies. A stand-alone rating removes the assumption of Government support from the rating.

### Expected credit losses – FVOCI

The ECL allowance for debt instruments held at FVOCI was \$6 million at 31 December 2018 and there was a decrease of \$3 million in ECL recognized in net gains (losses) on financial instruments for these securities during the year.

There were no impairment losses recognized in net gains (losses) on financial instruments for investment securities during the year ended 31 December 2017 and no reversals of previously realized debt instrument impairments.

## 14. LOANS

The following tables present the contractual maturity profile and average yield of loans based on carrying value.

(in millions, unless otherwise indicated)	IFRS 9						Total 2018
	Year of maturity						
	2019	2020	2021	2022	2023	2024 and thereafter	
<b>FVTPL</b>							
Lending programs	573	723	408	47	96	172	2,019
MI Activity loans <sup>2</sup>	16	3	2	-	-	-	21
<b>Total FVTPL</b>	<b>589</b>	<b>726</b>	<b>410</b>	<b>47</b>	<b>96</b>	<b>172</b>	<b>2,040</b>
Yield	2.1%	1.7%	1.5%	2.0%	2.5%	2.1%	1.8%
<b>Amortized cost<sup>1</sup></b>							
Loans under the CMB program	30,765	39,980	37,831	44,421	36,517	45,139	234,653
Lending programs	108	126	156	117	145	3,750	4,402
MI Activity loans <sup>2</sup>	51	20	13	5	4	14	107
<b>Total amortized cost</b>	<b>30,924</b>	<b>40,126</b>	<b>38,000</b>	<b>44,543</b>	<b>36,666</b>	<b>48,903</b>	<b>239,162</b>
Yield	2.1%	2.1%	2.1%	2.3%	2.5%	2.6%	2.3%
<b>Total</b>	<b>31,513</b>	<b>40,852</b>	<b>38,410</b>	<b>44,590</b>	<b>36,762</b>	<b>49,075</b>	<b>241,202</b>

<sup>1</sup> On 1 January 2018, upon adoption of IFRS 9, loans and receivables were renamed to loans at amortized cost.

<sup>2</sup> Includes MI Activity loans that were previously classified within accounts receivable and other assets but were reclassified to loans at FVTPL and amortized cost as at 1 January 2018.

(in millions, unless otherwise indicated)	IAS 39						Total 2017
	Year of maturity						
	2018	2019	2020	2021	2022	2023 and thereafter	
<b>FVTPL</b>							
Lending programs designated at FVTPL	603	674	830	462	53	284	2,906
Yield	2.4%	2.1%	1.7%	1.5%	2.0%	2.1%	2.1%
<b>Loans and receivables<sup>1</sup></b>							
Loans under the CMB program	38,695	30,781	39,969	37,863	44,464	42,014	233,786
Lending programs	122	72	178	417	637	2,732	4,158
<b>Total amortized cost</b>	<b>38,817</b>	<b>30,853</b>	<b>40,147</b>	<b>38,280</b>	<b>45,101</b>	<b>44,746</b>	<b>237,944</b>
Yield	2.3%	1.8%	1.9%	1.9%	2.1%	2.6%	2.1%
<b>Total</b>	<b>39,420</b>	<b>31,527</b>	<b>40,977</b>	<b>38,742</b>	<b>45,154</b>	<b>45,030</b>	<b>240,850</b>

<sup>1</sup> On 1 January 2018, upon adoption of IFRS 9, loans and receivables were renamed to loans at amortized cost.

The following table presents the cash flows and non-cash changes for loans.

(in millions)	Cash flows			Non-cash changes				Balance at end of period
	Restated opening balance <sup>4</sup>	Repayments	Disbursements	Fair value changes	Accretion	ECL	Transfers <sup>1</sup>	
<b>2018</b>								
<b>FVTPL</b>								
Lending programs	2,923	(355)	-	(8)	-	-	(541)	2,019
MI Activity loans <sup>2</sup>	26	(53)	46	2	-	-	-	21
<b>Total at FVTPL</b>	<b>2,949</b>	<b>(408)</b>	<b>46</b>	<b>(6)</b>	<b>-</b>	<b>-</b>	<b>(541)</b>	<b>2,040</b>
<b>Amortized cost<sup>3</sup></b>								
Loans under the CMB program	233,786	(38,848)	39,673	-	42	-	-	234,653
Lending programs	4,138	(549)	273	-	-	(1)	541	4,402
MI Activity loans <sup>2</sup>	117	(21)	11	-	3	(3)	-	107
<b>Total amortized cost</b>	<b>238,041</b>	<b>(39,418)</b>	<b>39,957</b>	<b>-</b>	<b>45</b>	<b>(4)</b>	<b>541</b>	<b>239,162</b>
<b>Total</b>	<b>240,990</b>	<b>(39,826)</b>	<b>40,003</b>	<b>(6)</b>	<b>45</b>	<b>(4)</b>	<b>-</b>	<b>241,202</b>
<b>2017</b>								
<b>FVTPL</b>								
Lending programs	4,020	(457)	-	(57)	-	-	(600)	2,906
<b>Loans and receivables<sup>3</sup></b>								
Loans under the CMB program	223,315	(29,812)	40,243	-	40	-	-	233,786
Lending programs	3,995	(567)	130	-	-	-	600	4,158
<b>Total loans and receivables</b>	<b>227,310</b>	<b>(30,379)</b>	<b>40,373</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>600</b>	<b>237,944</b>
<b>Total</b>	<b>231,330</b>	<b>(30,836)</b>	<b>40,373</b>	<b>(57)</b>	<b>40</b>	<b>-</b>	<b>-</b>	<b>240,850</b>

<sup>1</sup> Transfers are matured loans that have been renewed where the new loans are no longer part of a portfolio of economically hedged loans and borrowings and therefore classified at amortized cost.

<sup>2</sup> Includes MI Activity loans that were previously classified within accounts receivable and other assets but were reclassified to loans at FVTPL and amortized cost as at 1 January 2018.

<sup>3</sup> On 1 January 2018, upon adoption of IFRS 9, loans and receivables were renamed to loans at amortized cost.

<sup>4</sup> Opening balances have been restated for the 2018 period only and are presented in accordance with IFRS 9. Reclassifications and remeasurements upon transition from IAS 39 to IFRS 9 are presented in Note 3.

### Credit quality – amortized cost

The following table presents the credit quality of loans at amortized cost, presented separately for those based on 12-month or lifetime ECL. For loans where past due information is used as the primary criteria in assessing SICR, aging of loans past due from contractual due date is presented. For loans where past due information is not the primary criteria used in assessing SICR, credit quality is presented by credit rating category based on our internal credit rating system. Amounts in the table represent the gross carrying amount of the financial asset.

2018

<b>(in millions)</b>	<b>Stage 1: 12-month ECL</b>	<b>Stage 2: Lifetime ECL (not credit impaired)</b>	<b>Stage 3: Lifetime ECL (credit impaired)</b>	<b>POCI</b>	<b>Total</b>
<b>Days past due:</b>					
0-30 days	2,482	-	-	-	2,482
30-90	-	2	-	-	2
90+	-	-	103	-	103
POCI	-	-	-	116	116
<b>Total gross carrying amount</b>	<b>2,482</b>	<b>2</b>	<b>103</b>	<b>116</b>	<b>2,703</b>
<b>Internal credit ratings<sup>1</sup></b>					
AAA	-	-	-	-	-
AA- to AA+	725	-	-	-	725
A- to A+	350	-	-	-	350
BBB- to BBB+	836	-	-	-	836
<b>Total gross carrying amount</b>	<b>1,911</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,911</b>
Total	4,393	2	103	116	4,614
ECL allowance	(1)	-	(46)	(58)	(105)
<b>Total, net of ECL allowance</b>	<b>4,392</b>	<b>2</b>	<b>57</b>	<b>58</b>	<b>4,509</b>
Loans under the CMB program	-	-	-	-	234,653
<b>Total loans at amortized cost</b>					<b>239,162</b>

<sup>1</sup> The internal credit ratings are based upon internal assessments of the counterparty creditworthiness. These ratings correspond to those provided by the credit rating agencies except in cases where stand-alone ratings exist. A counterparty internal credit rating cannot be higher than the highest stand-alone rating from any of the agencies. A stand-alone rating removes the assumption of Government support from the rating.

Total undrawn loan commitments outstanding at 31 December 2018 were \$674 million, of which \$664 million are subject to 12-month ECL and \$10 million are commitments outstanding on purchased or credit impaired loans.

The allowance for expected credit losses on undrawn loan commitments was \$3 million at 31 December 2018, an increase of \$3 million for the year.

The ECL on loans increased by \$4 million during the year primarily due to migration of MI Activity loans from stage 1 to stage 3 based on days past due criteria.

## Expected credit losses

The table below presents the change in the ECL allowance recognized in the consolidated statement of income on loans held at amortized cost.

(in millions)	IFRS 9					IAS 39
	2018					2017
	Stage 1: 12-month ECL	Stage 2: Lifetime ECL not credit impaired	Stage 3: Lifetime ECL credit impaired	POCI	Total	Total
<b>ECL allowance – beginning of period:</b>						
Lending program loans	1	-	4	-	5	23
MI Activity loans	-	-	33	63	96	187
<b>Total ECL allowance – beginning of period</b>	<b>1</b>	<b>-</b>	<b>37</b>	<b>63</b>	<b>101</b>	<b>210</b>
<b>Increase in ECL allowance:</b>						
Lending program loans	-	-	1	-	1	(23)
MI Activity loans	-	-	8	(5)	3	(74)
<b>Total increase in ECL allowance<sup>2</sup></b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>(5)</b>	<b>4</b>	<b>(97)</b>
<b>ECL allowance – end of period:</b>						
Lending program loans	1	-	5	-	6	-
MI Activity loans	-	-	41	58	99	113
<b>Total ECL allowance – end of period</b>	<b>1</b>	<b>-</b>	<b>46</b>	<b>58</b>	<b>105</b>	<b>113</b>

<sup>1</sup> IAS 39 loss allowance for MI Activity loans was presented in accounts receivable and other assets.

<sup>2</sup> Included in net gains (losses) on financial instruments for Lending program loans and insurance claims expense for MI Activity loans.

## Sources of guarantee

We are assured collection of principal and accrued interest on 99% (2017 – 99%) of our loans. The sources of guarantee for these loans are provided below. For loans at FVTPL, the change in fair value attributable to changes in credit risk is immaterial (2017 – immaterial).

(in millions)	IFRS 9			IAS 39		
	2018			2017		
	FVTPL	Amortized Cost	Total	Designated at FVTPL	Loans and receivables <sup>4</sup>	Total
Provinces and territories through provisions in the SHA	1,045	1,478	2,523	1,488	1,443	2,931
Government of Canada through provisions in the NHA	-	580	580	-	661	661
Indigenous and Northern Affairs Canada through Ministerial Loan Guarantees	603	747	1,350	851	479	1,330
Loans underwritten by our MI Activity	154	332	486	258	200	458
Collateral <sup>1</sup>	-	234,653	234,653	-	233,786	233,786
<b>Total guaranteed loans</b>	<b>1,802</b>	<b>237,790</b>	<b>239,592</b>	<b>2,597</b>	<b>236,569</b>	<b>239,166</b>
Other Lending programs loans <sup>2</sup>	217	1,265	1,482	309	1,375	1,684
MI Activity loans <sup>3</sup>	21	107	128	-	-	-
<b>Total</b>	<b>2,040</b>	<b>239,162</b>	<b>241,202</b>	<b>2,906</b>	<b>237,944</b>	<b>240,850</b>

<sup>1</sup> Represents collateral held for loans under the CMB program which consists of NHA MBS securities and high quality reinvestment assets.

<sup>2</sup> Consists of loans to provincial entities and municipalities.

<sup>3</sup> MI Activity loans were classified within accounts receivable and other assets in 2017 and were reclassified to loans at FVTPL and amortized cost as at 1 January 2018.

<sup>4</sup> On 1 January 2018, upon adoption of IFRS 9, loans and receivables were renamed to loans at amortized cost.

## 15. BORROWINGS

The following tables present the contractual maturity profile and average yield of borrowings based on carrying value.

(in millions, unless otherwise indicated)	IFRS 9						Total 2018
	Year of maturity						
	2019	2020	2021	2022	2023	2024 and thereafter	
<b>Designated at FVTPL</b>							
Borrowings from the Government of Canada	1,076	1,241	653	79	162	219	3,430
Yield <sup>1</sup>	2.0%	1.5%	1.3%	1.9%	2.4%	1.8%	1.7%
<b>Borrowings at amortized cost<sup>2</sup></b>							
Canada mortgage bonds	30,467	39,047	37,533	44,084	36,169	43,457	230,757
Borrowings from the Government of Canada	497	494	601	624	579	1,973	4,768
<b>Total borrowings at amortized cost</b>	<b>30,964</b>	<b>39,541</b>	<b>38,134</b>	<b>44,708</b>	<b>36,748</b>	<b>45,430</b>	<b>235,525</b>
Yield <sup>1</sup>	2.1%	2.1%	2.1%	2.3%	2.5%	2.6%	2.3%
<b>Total</b>	<b>32,040</b>	<b>40,782</b>	<b>38,787</b>	<b>44,787</b>	<b>36,910</b>	<b>45,649</b>	<b>238,955</b>

<sup>1</sup> Represents the weighted-average yield, determined by applying the weighted-average effective yields of individual fixed rate borrowings and the weighted-average yields-to-reset of floating rate borrowings.

<sup>2</sup> On 1 January 2018, upon adoption of IFRS 9, other financial liabilities were renamed to borrowings at amortized cost.

(in millions, unless otherwise indicated)	IAS 39						Total 2017
	Year of maturity						
	2018	2019	2020	2021	2022	2023 and thereafter	
<b>Designated at FVTPL</b>							
Borrowings from the Government of Canada	1,135	1,079	1,239	650	79	382	4,564
Yield <sup>1</sup>	2.2%	2.0%	1.5%	1.3%	1.9%	2.0%	1.8%
<b>Other financial liabilities<sup>2</sup></b>							
Canada mortgage bonds	38,060	30,406	39,012	37,596	43,920	40,248	229,242
Borrowings from the Government of Canada	504	419	409	533	570	1,915	4,350
<b>Total borrowings at amortized cost</b>	<b>38,564</b>	<b>30,825</b>	<b>39,421</b>	<b>38,129</b>	<b>44,490</b>	<b>42,163</b>	<b>233,592</b>
Yield <sup>1</sup>	2.4%	1.8%	1.9%	1.9%	2.1%	2.6%	2.1%
<b>Total</b>	<b>39,699</b>	<b>31,904</b>	<b>40,660</b>	<b>38,779</b>	<b>44,569</b>	<b>42,545</b>	<b>238,156</b>

<sup>1</sup> Represents the weighted-average yield, determined by applying the weighted-average effective yields of individual fixed rate borrowings and the weighted-average yields-to-reset of floating rate notes.

<sup>2</sup> On 1 January 2018, upon adoption of IFRS 9, other financial liabilities were renamed to borrowings at amortized cost.

### Borrowings – designated at fair value through profit or loss

Included in this category are short- and medium-term borrowings from the Government taken to fund certain Assisted Housing Activity loans originated prior to August 2016. Short-term debt, having an original term to maturity less than 365 days, was nil at 31 December 2018 (2017 – nil). Medium-term debt includes fixed rate notes, with an original term to maturity ranging from two to ten years.

The carrying amount at 31 December 2018 of borrowings – designated at FVTPL is \$23 million lower (2017 – \$15 million lower) than the contractual amount due at maturity. Our liabilities are backed by the full faith and credit of the Government and there is no significant change in value that can be attributed to changes in credit risk.

### Borrowings – amortized cost

This category includes borrowings under the CMB program as well as the short- and medium-term borrowings from the Government taken to fund certain Assisted Housing Activity loans, including all those originated after July 2016. Short-term debt, having an original term to maturity less than 365 days, was \$41 million at 31 December 2018 (2017 – \$50 million). Medium-term debt includes fixed rate notes, with an original term to maturity ranging from two to ten years. The following table presents the cash flows and non-cash changes for borrowings.

(in millions)	Cash flows			Non-cash changes			Balance at end of year
	Balance at beginning of year	Issuances	Repayments	Fair value changes	Accretion and other	Eliminations	
<b>2018</b>							
<b>Designated at FVTPL</b>							
Borrowings from the Government of Canada	4,564	-	(1,128)	(6)	-	-	3,430
<b>Borrowings at amortized cost<sup>1</sup></b>							
Canada mortgage bonds	229,242	39,673	(38,775)	-	42	575	230,757
Borrowings from the Government of Canada	4,350	1,366	(956)	(19)	27	-	4,768
<b>Total borrowings at amortized cost</b>	<b>233,592</b>	<b>41,039</b>	<b>(39,731)</b>	<b>(19)</b>	<b>69</b>	<b>575</b>	<b>235,525</b>
<b>Total</b>	<b>238,156</b>	<b>41,039</b>	<b>(40,859)</b>	<b>(25)</b>	<b>69</b>	<b>575</b>	<b>238,955</b>
<b>2017</b>							
<b>Designated at FVTPL</b>							
Borrowings from the Government of Canada	5,632	1,083	(2,069)	(82)	-	-	4,564
Capital market borrowings	273	-	(273)	-	-	-	-
<b>Total designated at FVTPL</b>	<b>5,905</b>	<b>1,083</b>	<b>(2,342)</b>	<b>(82)</b>	<b>-</b>	<b>-</b>	<b>4,564</b>
<b>Other financial liabilities<sup>1</sup></b>							
Canada mortgage bonds	218,829	40,243	(29,467)	-	40	(403)	229,242
Borrowings from the Government of Canada	4,327	1,060	(1,030)	(12)	5	-	4,350
<b>Total borrowings at amortized cost</b>	<b>223,156</b>	<b>41,303</b>	<b>(30,497)</b>	<b>(12)</b>	<b>45</b>	<b>(403)</b>	<b>233,592</b>
<b>Total</b>	<b>229,061</b>	<b>42,386</b>	<b>(32,839)</b>	<b>(94)</b>	<b>45</b>	<b>(403)</b>	<b>238,156</b>

<sup>1</sup> On 1 January 2018, upon adoption of IFRS 9, other financial liabilities were renamed to borrowings at amortized cost.

When CMHC holds CMB to maturity or acquires CMB in the primary market, the related cash flows are excluded from the consolidated statement of cash flows. During the year ended 31 December 2018, there were \$73 million (2017 – \$345 million) of CMB maturities that have been excluded from repayments in the table above and from investment securities – sales and maturities in the consolidated statement of cash flows. There were no purchases in the primary market during the year ended 31 December 2018 (2017 – nil).

## Borrowing authorities

The Minister of Finance approves CMHC's Borrowing Plan annually and establishes limits and parameters for borrowings. The limits and parameters pertain to capital market borrowings and borrowings from the Government of Canada that have been incurred since April 2008 in the Assisted Housing and Mortgage Funding Activities.

The Borrowing Authorities were revised in 2018 to apply limits separately to short-term borrowings outstanding and long-term borrowings issued. These limits for 2018 were \$4.6 billion and \$1.75 billion, respectively. Actual short-term borrowings outstanding as at 31 December 2018, and long-term borrowings issued in 2018 were \$41 million and \$956 million, respectively. The Borrowing Authorities also require that CMHC receive Minister of Finance approval for any new capital market borrowings. There were no capital market borrowings outstanding as at 31 December 2018 (2017 - nil).

In 2017, the Borrowing Authorities provided separate limits for short-term borrowings outstanding and long-term borrowings issued for activities other than the RCFi, as well as total RCFi borrowings outstanding. These limits were \$2.4 billion, \$775 million, and \$625 million, respectively, and actual amounts as at 31 December 2017 were \$50 million, \$561 million, and \$84 million, respectively.

The legislative authority, which is separate from the limits above and does not apply to borrowings of CHT, requires that the total indebtedness outstanding at any time, other than to the Government, not exceed \$20 billion (2017 – \$20 billion). The outstanding principal balance of this indebtedness was nil as at 31 December 2018 (2017 – nil).

## 16. DERIVATIVES

Derivatives are financial contracts whose value is derived from movements in one or more underlying securities, rates, indices or other instruments. We use derivatives in conjunction with our risk management activities.

Interest rate swaps are transactions in which two parties exchange interest cash flows on a specified notional amount for a predetermined period based on agreed-upon fixed and floating rates. Notional amounts are not exchanged. The value of these swaps is derived from movements in interest rates. We use them to manage reinvestment risk, refinancing risk, or mismatches in the timing of receipts from assets versus payments of liabilities.

Foreign currency forward contracts are over-the-counter contracts in which two parties agree to exchange one currency for another at a specified price for settlement at a future pre-determined date. The value of these contracts is derived from movements in foreign exchange and interest rates. We use them to manage currency risk associated with U.S. dollar-denominated debt securities.

The table below provides the notional amounts of the derivative transactions recognized in the consolidated financial statements. Notional amounts, which are off-balance sheet, serve as a point of reference for calculating payments and do not represent the fair value, or the potential gain or loss associated with the credit or market risk of such instruments.

(in millions)	2018				2017			
	Average term to maturity	Notional amount	Fair value		Average term to maturity	Notional amount	Fair value	
			Asset	Liability			Asset	Liability
Interest rate swaps	2 years	6,221	33	18	2 years	7,709	51	26
Foreign currency forward contracts	1 year	2,223	-	99	1 year	1,824	10	13
<b>Total</b>		<b>8,444</b>	<b>33</b>	<b>117</b>		<b>9,533</b>	<b>61</b>	<b>39</b>

### Credit exposure of derivatives

The following table presents the credit exposure of derivatives by term to maturity. The replacement value is the total current fair value including accrued interest of all outstanding contracts with a positive fair value, after factoring in the impact of master netting agreements. The replacement value represents our maximum derivative credit exposure. Potential future credit exposure represents an estimate of the potential change in the market value of the transaction up to maturity, which is calculated in relation to the notional principal of the contracts by applying factors consistent with guidelines issued by OSFI.

Credit risk equivalent is the total of the replacement value and the potential future credit exposure. The risk weighted equivalent is determined by applying a standard OSFI defined measure of counterparty credit risk to the credit equivalent amount.

(in millions)	Replacement value			Potential future credit exposure	2018		2017	
	Within 1 year	1 to 5 years	Over 5 years		Credit risk equivalent	Risk-weighted equivalent	Credit risk equivalent	Risk-weighted equivalent
Derivatives	1	1	-	13	15	3	55	11

The fair value of the collateral we hold related to our derivatives as at 31 December 2018 was nil (2017 – nil).

## 17. FINANCIAL INSTRUMENTS INCOME AND EXPENSES

Interest income, investment income and interest expense

The following table outlines the total interest income and expense for financial instruments and the dividend income recognized in the consolidated statement of income and comprehensive income.

(in millions)	IFRS 9			IAS 39		
	2018			2017		
	Interest income	Investment income	Interest expense	Interest income	Investment income	Interest expense
<b>Interest for financial instruments not at FVTPL:</b>						
Cash equivalents	5	7	-	1	4	-
Debt instruments – FVOCI	-	475	-	-	-	-
Debt instruments – AFS	-	-	-	-	529	-
Loans – amortized cost	5,210	-	-	4,606	-	-
Securities sold under repurchase agreements	-	(7)	-	-	(3)	-
Borrowings – amortized cost	-	-	5,097	-	-	4,476
<b>Total interest for financial instruments not at FVTPL</b>	<b>5,215</b>	<b>475</b>	<b>5,097</b>	<b>4,607</b>	<b>530</b>	<b>4,476</b>
<b>Interest for financial instruments at FVTPL:</b>						
Debt instruments	20	5	-	21	-	-
Loans	39	-	-	55	-	-
Borrowings	-	-	73	-	-	93
Derivatives	20	-	-	25	-	-
<b>Total interest for financial instruments at FVTPL</b>	<b>79</b>	<b>5</b>	<b>73</b>	<b>101</b>	<b>-</b>	<b>93</b>
<b>Total interest</b>	<b>5,294</b>	<b>480</b>	<b>5,170</b>	<b>4,708</b>	<b>530</b>	<b>4,569</b>
Dividend income <sup>1</sup>	-	33	-	-	43	-
<b>Total</b>	<b>5,294</b>	<b>513</b>	<b>5,170</b>	<b>4,708</b>	<b>573</b>	<b>4,569</b>

<sup>1</sup> Includes dividend income of \$31 million recognized on investments still held at the end of the year (2017 – \$43 million).

## Gains and losses from financial instruments

The following table presents the gains (losses) related to financial instruments recognized in the consolidated statement of income and comprehensive income.

(in millions)	IFRS 9	IAS 39
	2018	2017
<b>Financial Instruments designated at FVTPL</b>		
Investment securities	1	(10)
Loans	(6)	(57)
Borrowings	6	82
<b>Total financial instruments designated at FVTPL</b>	<b>1</b>	<b>15</b>
<b>Financial instruments mandatorily at FVTPL</b>		
Equity securities	(80)	-
Debt instruments	(2)	-
Derivatives	(198)	20
Loans	2	-
<b>Total financial instruments mandatorily at FVTPL</b>	<b>(278)</b>	<b>20</b>
Debt instruments held at FVOCI <sup>1</sup>	158	-
AFS – investment securities <sup>1</sup>	-	89
Loans at amortized cost – prepayments	22	78
Borrowings – amortized cost <sup>2</sup>	(2)	(55)
Expected credit loss recoveries on financial assets	2	-
<b>Total</b>	<b>(97)</b>	<b>147</b>

<sup>1</sup> Includes foreign exchange gains of \$180 million (2017 – losses of \$54 million) resulting from translation of U.S. dollar-denominated debt securities.

<sup>2</sup> Includes losses from the retirement of borrowings of \$18 million (2017 – \$67 million), net of gains from the issuance of borrowings of \$16 million (2017 – \$12 million).

## 18. MARKET RISK

Market risk is the risk of adverse financial impacts arising from changes in underlying market factors, including interest rates, foreign exchange rates, and equity prices.

### Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The investment portfolios for the Mortgage Insurance and Mortgage Funding Activities are managed in accordance with their Strategic Asset Allocation (SAA), which limits interest rate risk relative to internal limits and benchmarks.

The Assisted Housing Activity is exposed to interest rate risk when asset and liability principal and interest cash flows have different payment, repricing or maturity dates. Some of our loans contain prepayment and/or repricing options. As we do not have the right to prepay our borrowings from the Government of Canada totalling \$8,194 million (2017 – \$8,914 million) without penalty, we are exposed to interest rate risk.

We manage interest rate risk in the Assisted Housing Activity's Lending programs differently depending on the cash flow characteristics of the program's loans and when the loans were originated. Overall sensitivity of the Assisted Housing Activity to interest rate risk is managed by ensuring the economic value of net assets in the Lending programs on an aggregated and standalone basis plus the reserve fund remains positive under certain interest rate shock scenarios.

For certain Assisted Housing Activity loans originated prior to August 2016 and having a gross carrying amount of \$2,002 million at 31 December 2018, we use derivatives to manage reinvestment and refinancing risks as well as mismatches in the timing of cash flows between the loans, reinvested principal receipts and borrowings. For certain Assisted Housing Activity loans originated after July 2016 and having a gross carrying amount of \$1,554 million as at 31 December 2018, an asset/liability matching strategy is employed on a portfolio basis whereby we structure our borrowings so that the associated future obligations match the future cash flows to be received on the loans. Under this matching strategy, derivatives are not used and the term over which principal receipts must be reinvested is significantly reduced. Cumulative cash flow mismatches are limited by policy to \$30 million.

For one Assisted Housing Activity loan program, closed to new loans since 2011, we manage interest rate risk through matching the present value of cash flows of the program's assets and liabilities. Loans in this program had a gross carrying amount of \$1,110 million at 31 December 2018.

For certain other Assisted Housing Activity loan programs having longer-term expected draw schedules, we use loan pricing to manage the uncertainty of the timing of loan cash flows and investment returns earned on borrowed funds. The gross carrying amount of loans in these programs was \$131 million at 31 December 2018.

Interest rate risk on other Assisted Housing Activity loans of \$1,630 million at 31 December 2018 is managed primarily through the maintenance of a reserve fund pursuant to Section 29 of the CMHC Act.

Loans under the CMB program are exposed to both interest rate risk and prepayment/reinvestment risk. Prepayment/reinvestment risk is the risk that NHA MBS may experience varying degrees of prepayment throughout the term and these prepayments must be reinvested immediately. To mitigate these risks, we enter into swap agreements with approved financial institution counterparties. Under these agreements, both interest rate and prepayment/reinvestment risks are transferred to swap counterparties. We pay all interest received from the underlying NHA MBS and reinvestment assets to the swap counterparties and the swap counterparties pay an amount equal to the coupon payments on the CMB. As a result of these swap agreements, changes in interest rates or prepayments/reinvestments related to the CMB program have no impact on the consolidated statement of income and comprehensive income.

## Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. We are exposed to currency risk from our holdings in foreign currency denominated investment securities. Our internal policies limit the amount of foreign currency investments and require full economic hedging of currency risk. We held \$2,278 million in FVOCI debt securities denominated in U.S. dollars as at 31 December 2018 (2017 – \$1,792 million).

Our strategy to fully hedge currency risk is to continuously enter into a series of short-term foreign currency forward contracts generally having terms less than one year. Under these contracts, most of which are settled net, we exchange U.S. dollars for Canadian dollars at an exchange rate fixed at the outset of the contract for settlement at a future pre-determined date. Given the short terms of the forward contracts, full hedging of currency risk over the life of the foreign-denominated debt securities will require continued application of our strategy in the future. The exposures presented in the Value at Risk table below reflect the offsetting effect of the hedging instruments. Currency risk was assessed as immaterial as at 31 December 2018 (2017 – immaterial).

## Other price risk

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices, other than those giving rise to interest rate and currency risk. We are exposed to other price risk through fluctuations in prices of equity investments held by the Mortgage Insurance Activity. The fair value of these investments as at 31 December 2018 is \$689 million (2017 – \$1,173 million). We limit our exposure to equity investments by using tolerance ranges and various diversification and exposure measures.

## Sensitivity analyses

### Value at risk (VaR)

Market risk for investment securities in the Mortgage Insurance and Mortgage Funding Activities is evaluated through the use of VaR models. VaR is a statistical technique used to measure the maximum potential loss of an investment portfolio over a specified holding period with a given level of confidence. The VaR for the Mortgage Insurance and Mortgage Funding Activities as at 31 December calculated with 95% confidence over a 22 business day holding period, is outlined in the table below. VaR is presented separately for individual market risk factors and for the total portfolio. The effect of diversification results from the fact that market risks are not

perfectly correlated and, consequently, there is a benefit from investment diversification. The VaR figures are based on one year of historical prices and correlations of bond and equity markets and 26 weeks of volatility.

<b>(in millions)</b>	<b>2018</b>	<b>2017</b>
Investment securities:		
Interest rate risk on debt instruments	178	213
Equity risk	26	43
Effect of diversification	(36)	(50)
<b>Total VaR</b>	<b>168</b>	<b>206</b>

### Interest rate sensitivity

Market risk for the Assisted Housing Activity portfolios of loans, investments, borrowings and swaps is evaluated by measuring their sensitivity to changes in interest rates.

For the Assisted Housing Activity's financial instruments designated at FVTPL and derivatives, we assessed the impact of a 200 bps shift in interest rates as immaterial as at 31 December 2018.

The Assisted Housing Activity's loans and borrowings measured at amortized cost are also exposed to interest rate risk. The net impact of a shift in interest rates on their fair value is presented below.

<b>(in millions)</b>	2018		2017	
	Interest rate shift		Interest rate shift	
	-200 bps	+200 bps	-200 bps	+200 bps
Increase (decrease) in fair value of net assets <sup>1</sup>	(75)	63	(56)	49

<sup>1</sup> The changes in fair value of net assets resulting from interest rate shifts presented in this table would not be recognized in comprehensive income as the underlying financial instruments are measured at amortized cost.

The Assisted Housing Activity's net interest income is also sensitive to interest rate movements.

The maximum negative exposure of net interest income is \$0.5 million at 31 December 2018 (2017 – \$1.2 million). This is calculated by scenario analysis using multiple simulations of interest rate volatility with 95% confidence over a one-year period.

## 19. CREDIT RISK

Credit risk is the potential for financial loss arising from failure of a borrower or an institutional counterparty to fulfill its contractual obligations. We are exposed to credit risk from various sources including borrower default through mortgage insurance contracts and institutional counterparty credit risk arising from financial guarantees under the NHA MBS and CMB programs, lending arrangements, fixed income and preferred share investments and derivative transactions. A detailed breakdown of credit risk is presented below.

### Maximum exposure to credit risk

<b>(in billions)</b>	<b>2018</b>	<b>2017</b>
Mortgage insurance: insurance-in-force (Note 7)	448	480
TPGs: guarantees-in-force (Note 8) <sup>1</sup>	488	477

<sup>1</sup> Exposure includes underlying instruments which may also be insured by CMHC or other mortgage insurers.

For all financial assets other than guarantees or derivatives, the maximum exposure to credit risk is the carrying amount. For derivatives, the maximum exposure to credit risk is indicated in Note 16.

Credit risk associated with mortgage insurance is managed through prudent product design, underwriting and default management practices, and the establishment of adequate capital reserves as described in Notes 7 and 10.

Credit risk associated with TPGs is managed through due diligence in approving NHA MBS Issuers, ongoing monitoring of Issuer credit quality and program compliance, and the requirement that all mortgages supporting the NHA MBS be insured against borrower default. We have further mitigated this risk by having been assigned all rights, title and interest in the underlying mortgages so that we have access to principal and interest payments in the event of Issuer default.

Credit risk associated with loans in the Assisted Housing Activity is in part mitigated through measures that include loan guarantees from other government entities as described in Note 14. Losses due to default are largely recoverable from various levels of government.

Under the CMB program, loans represent amounts due from Canadian financial institutions as a result of the sale of their beneficial interest in NHA MBS securities to us. The loans are collateralized by the NHA MBS and associated reinvestment securities acquired in the transactions. The collateral is held in our name and represents the sole source of principal repayments for the loans. CMB program collateral held is rated R-1 (high) or AAA by at least two rating agencies.

Under the CMB program, we are exposed to credit-related counterparty risk in the event of default of swap counterparties. This risk is mitigated by transacting with highly rated swap counterparties and collateralization requirements based on credit ratings. All swap counterparties must have a minimum credit rating of BBB (high), or its equivalent, by at least two rating agencies.

The fair value of total loan collateral held under the CMB program was \$235,576 million, 100.4% of loan carrying value, as at 31 December 2018 (2017 – \$234,832 million, 100.4% of loan carrying value).

Credit risk associated with fixed income investments, preferred equity and derivatives is managed through the implementation of policies which include minimum counterparty credit ratings and investment portfolio diversification limits by issuer, credit rating, term and by industry sector, and through the use of appropriate legal agreements and collateralization requirements for derivatives.

## Concentration risk

Concentration risk arises from holdings of financial instruments issued by entities that operate in the same sector or geographic area or engage in similar activities such that they may be affected similarly by changes in economic or other conditions.

The following table presents the concentration of credit risk by sector and geographic region of our investment securities and derivative transactions:

<b>(in millions, unless otherwise indicated)</b>	<b>2018</b>		<b>2017</b>	
<b>By sector:</b>				
Provincial	5,088	24.7%	6,336	26.1%
Federal	4,960	24.0%	4,544	18.7%
Financial	3,568	17.3%	5,001	20.6%
Industrial	3,148	15.3%	3,432	14.1%
Energy	1,239	6.0%	1,468	6.0%
Other	2,621	12.7%	3,510	14.5%
<b>Total<sup>1</sup></b>	<b>20,624</b>	<b>100%</b>	<b>24,291</b>	<b>100%</b>
<b>By geographic region:</b>				
Canada	16,654	80.8%	20,019	82.4%
U.S.	2,730	13.2%	2,705	11.1%
Other	1,240	6.0%	1,567	6.5%
<b>Total<sup>1</sup></b>	<b>20,624</b>	<b>100%</b>	<b>24,291</b>	<b>100%</b>

<sup>1</sup> Total comprised of cash equivalents of \$836 million (2017 – \$884 million), investment securities of \$19,755 million (2017 – \$23,346 million) and derivatives with a positive fair value, net of collateral, of \$33 million (2017 – \$61 million).

## Credit quality

The following table presents the credit quality of the cash equivalents and investment securities based on an internal credit rating system<sup>1</sup>.

(in millions)	2018				2017			
	AAA	AA- to AA+	A- to A+	Lower than A-	AAA	AA- to AA+	A- to A+	Lower than A-
Cash equivalents	143	75	458	160	335	218	331	-
Investment securities <sup>2</sup>								
FVTPL	368	265	355	13	409	541	283	1
FVOCI <sup>3</sup>	5,510	1,975	8,917	1,762	5,420	4,419	9,199	1,969

<sup>1</sup> The internal credit ratings are based upon internal assessments of the counterparty creditworthiness. These ratings correspond to those provided by the credit rating agencies except in cases where stand-alone ratings exist. A counterparty internal credit rating cannot be higher than the highest stand-alone rating from any of the agencies. A stand-alone rating removes the assumption of Government support from the rating.

<sup>2</sup> Includes fixed income investments and preferred equity only.

<sup>3</sup> On 1 January 2018, upon adoption of IFRS 9, investment securities classified as AFS were reclassified as investment securities at FVOCI.

## Derivatives

We limit the credit risk associated with derivative transactions by dealing with counterparties whose credit ratings are in accordance with our Enterprise Risk Management Policies; through the use of International Swaps Derivatives Association (ISDA) master agreements for derivatives; and, where appropriate, through the use of ratings-based collateral thresholds in the Credit Support Annexes (CSA).

ISDA is a master agreement that sets out standard terms that apply to all transactions we entered into with the counterparty. The ISDA outlines procedures and calculations of termination costs in the event of default by either party. The ISDA master agreements give us a legally enforceable right to settle all transactions covered by the agreement with the same counterparty on a net basis in the event of default. All derivative counterparties must have a minimum credit rating of A-, or its equivalent, from at least two rating agencies.

The CSA document, included in the ISDA master agreements, regulates the collateral requirements of derivative transactions and the terms under which collateral is transferred to mitigate credit risk. The CSA gives us the right, in the event of default, to liquidate collateral held and apply proceeds received from liquidation against amounts due from the counterparty. Collateral held to offset mark-to-market exposures is not used for any other purpose than to offset such exposure.

## Securities purchased under resale agreements

By their nature, these balances have low credit risk given their short terms and are secured by the underlying securities purchased under the agreements and any incremental margin obtained from counterparties.

These transactions are subject to Global Master Repurchase Agreements which set out the standard terms of all repurchase agreements transacted with each counterparty. These agreements give us a legally enforceable right to settle all repurchase transactions with the same counterparty on a net basis in the event of default. These agreements also provide for the posting of margin by the counterparty when our exposure to that entity exceeds a certain ratings-based threshold. Securities held as eligible margin include debt obligations issued by or guaranteed by the Government, including Crown corporations and CHT. Margin securities should not be used for any other purpose than to offset such exposure. In the event of counterparty default, we have the right to liquidate these securities. We did not hold any margin securities at 31 December 2018 (2017 – nil).

## Netting arrangements and offsetting of financial assets and financial liabilities

The following tables present the potential effects of the netting arrangements described above.

### Financial assets

(in millions)	(i)	(ii)	(iii) = (i) - (ii)	(iv)		(v) = (iii) - (iv)
	Gross amount of recognized assets	Gross amount offset in the consolidated balance sheet	Net amount of assets presented in the consolidated balance sheet <sup>1</sup>	Gross amount not offset in the consolidated balance sheet		Net amount
				Financial instruments <sup>2</sup>	Financial collateral received <sup>3</sup>	
<b>2018</b>						
Derivatives <sup>1</sup>	46	-	46	(43)	-	3
Securities purchased under resale agreements <sup>1</sup>	-	-	-	-	-	-
<b>Total</b>	<b>46</b>	<b>-</b>	<b>46</b>	<b>(43)</b>	<b>-</b>	<b>3</b>
<b>2017</b>						
Derivatives <sup>1</sup>	78	-	78	(41)	-	37
Securities purchased under resale agreements <sup>1</sup>	-	-	-	-	-	-
<b>Total</b>	<b>78</b>	<b>-</b>	<b>78</b>	<b>(41)</b>	<b>-</b>	<b>37</b>

<sup>1</sup> Derivatives are carried at fair value. Securities purchased under resale agreements are carried at amortized cost.

<sup>2</sup> Gross amounts of financial instruments not offset in the consolidated balance sheet refers to amounts recorded to derivative liabilities and securities sold under repurchase agreements where we have a legally enforceable right to offset against amounts recorded to derivative assets and securities purchased under resale agreements, on a counterparty-by-counterparty basis, in the event of default of the counterparty.

<sup>3</sup> We have the right, in the event of default, to liquidate and apply financial collateral held against amounts due from counterparties. For derivatives, these amounts represent the fair value of collateral posted by swap counterparties to us. For securities purchased under resale agreements, these amounts represent fair value of margin posted by counterparties and of securities we purchased with the commitment to resell to the counterparty at a future date.

Derivative assets, as presented in the above table, are reconciled to the consolidated balance sheet as follows:

(in millions)	2018	2017
Derivative assets presented in offsetting table	46	78
Less: Accrued interest receivable presented separately in consolidated balance sheet	(13)	(17)
<b>Derivative asset balance presented in the consolidated balance sheet</b>	<b>33</b>	<b>61</b>

## Financial liabilities

(in millions)	(i)	(ii)	(iii) = (i) - (ii)	(iv)		(v) = (iii) - (iv)
	Gross amount of recognized liabilities	Gross amount offset in the consolidated balance sheet	Net amount of liabilities presented in the consolidated balance sheet <sup>1</sup>	Gross amount not offset in the consolidated balance sheet		Net amount
				Financial instruments <sup>2</sup>	Financial collateral pledged <sup>3</sup>	
<b>2018</b>						
Derivatives <sup>1</sup>	120	-	120	(43)	-	77
Securities sold under repurchase agreements <sup>1</sup>	280	-	280	-	(281)	(1)
<b>Total</b>	<b>400</b>	<b>-</b>	<b>400</b>	<b>(43)</b>	<b>(281)</b>	<b>76</b>
<b>2017</b>						
Derivatives <sup>1</sup>	41	-	41	(41)	-	-
Securities sold under repurchase agreements <sup>1</sup>	297	-	297	-	(296)	1
<b>Total</b>	<b>338</b>	<b>-</b>	<b>338</b>	<b>(41)</b>	<b>(296)</b>	<b>1</b>

<sup>1</sup> Derivatives are carried at fair value. Securities sold under repurchase agreements are carried at amortized cost.

<sup>2</sup> Gross amounts of financial instruments not offset in the consolidated balance sheet refers to amounts recorded to derivative assets and securities purchased under resale agreements where we have a legally enforceable right to offset against amounts recorded to derivative liabilities and securities sold under repurchase agreements, on a counterparty-by-counterparty basis, in the event of default of the counterparty.

<sup>3</sup> Represents the fair value of securities we sold to counterparties with our commitment to repurchase from the counterparty at a future date, net of the fair value of any margin posted by our counterparties.

Derivative liabilities, as presented in the above table, are reconciled to the consolidated balance sheet as follows:

(in millions)	2018	2017
Derivative liabilities presented in offsetting table	120	41
Less: Accrued interest payable presented separately in consolidated balance sheet	(3)	(2)
<b>Derivative liabilities balance presented in the consolidated balance sheet</b>	<b>117</b>	<b>39</b>

## 20. LIQUIDITY RISK

Liquidity risk is the risk that we will encounter difficulty in meeting obligations associated with financial liabilities. Liquidity risk comprises both funding liquidity risk, which is the risk that we will be unable to meet our payment obligations when required due to an inability to borrow or realize on overdraft facilities, and market liquidity risk, which is the risk that we are not able to unwind or offset a particular position without incurring losses because of inadequate market depth or market disruption.

The principal financial obligations exposing us to liquidity risk include, but are not limited to:

- the payment of claims incurred by the Mortgage Insurance Activity;
- the need to fulfill the TPGs we have issued if sufficient funds are not available for the payment of principal or interest on NHA MBS or CMB by Approved Issuers or CHT, respectively; and
- payments required by borrowings and derivatives.

We have a liquidity risk policy which includes appropriate limits and other mitigants to ensure sufficient resources to meet current and projected cash requirements.

The Mortgage Insurance and Mortgage Funding Activities' investment portfolios are managed to ensure that there is sufficient cash flow to meet projected claims. Sources of liquidity include: fees, premiums, investment income and proceeds from sales and maturities of investments.

Within the NHA MBS and CMB programs, liquidity risk refers to the risk that we may not be able to provide the funding required, in a timely fashion, to satisfy a call on our TPG obligations. As guarantor, we are exposed to the risk of NHA MBS issuer default, CMB program repo and swap counterparty default, impairment of eligible CMB program collateral securities and system or other operational failures. With respect to our TPGs, our policy is to maintain sufficient liquidity to cover the largest exposure to a single counterparty on a given payment date. Cash, short-term investments and investment securities held in any of CMHC's activities can be utilized to satisfy a call on the TPGs. Additional liquidity sources in the event of an immediate need to fulfill the TPGs include overdraft facilities and a \$350 million line of credit with the Central Paying Agent. The Central Paying Agent acts on CHT's behalf to carry out certain payment functions in the CMB program, including collection of monthly payments on NHA MBS purchased and administration and reporting of cash flows. Other policies in place to mitigate liquidity risk include ensuring high credit quality investments as permitted by the CHT trust agreements and swap counterparties and the establishment of maturity monitoring guidelines.

The Assisted Housing Activity investment portfolio is managed to ensure that there is sufficient cash flow to meet funding needs in case of contingencies causing operational disruptions, unanticipated needs, and to facilitate use of the Crown Borrowing Program. The asset/liability management strategy ensures that the assets are maintained at the same level as the liabilities. Derivatives are used to hedge mismatches in the timing of cash flows. Further sources of liquidity associated with this portfolio include overdraft facilities and cash and short-term investments in marketable securities. For any additional liquidity requirements, we can access the Crown Borrowing Program upon Department of Finance approval.

At 31 December 2018, we had \$300 million (2017 – \$300 million) of overnight overdraft facilities available with our banker that had not been drawn upon.

We also mitigate liquidity risk through the use of ISDA master netting agreements reducing the amount of cash required to satisfy derivative obligations.

## Maturity analysis

The following table presents our undiscounted contractual cash flows payable, including accrued interest, under financial liabilities by remaining contractual maturities; this table therefore cannot be reconciled to the consolidated balance sheet.

(in millions)	IFRS 9					Total 2018
	Within 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	
Securities sold under repurchase agreements	129	151	0	0	0	280
Derivatives	1	1	103	6	0	111
Borrowings – designated at FVTPL	300	264	583	2,196	232	3,575
Borrowings – amortized cost <sup>1</sup>	59	5,711	30,753	173,839	50,334	260,696
Dividends payable	675	0	0	0	0	675
Accounts payable and other liabilities	15	142	54	89	0	300
<b>Total</b>	<b>1,179</b>	<b>6,269</b>	<b>31,493</b>	<b>176,130</b>	<b>50,566</b>	<b>265,637</b>

(in millions)	IAS 39					Total 2017
	Within 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	
Securities sold under repurchase agreements	74	223	-	-	-	297
Derivatives	2	(3)	19	12	-	30
Borrowings – designated at FVTPL	11	301	894	3,175	400	4,781
Other financial liabilities <sup>1</sup>	122	6,724	37,388	167,092	47,102	258,428
Dividends payable	500	1,000	500	-	-	2,000
Accounts payable and other liabilities	28	215	19	118	-	380
<b>Total</b>	<b>737</b>	<b>8,460</b>	<b>38,820</b>	<b>170,397</b>	<b>47,502</b>	<b>265,916</b>

<sup>1</sup> On 1 January 2018, upon adoption of IFRS 9, other financial liabilities were renamed to borrowings at amortized cost.

Commitments related to loans and financial guarantees are disclosed in Note 14 and Note 8 respectively.

## 21. ACCOUNTS RECEIVABLE AND OTHER ASSETS

The following table presents the composition of accounts receivable and other assets.

(in millions)	2018	2017
Deferred Government of Canada fees	244	224
Deferred acquisition costs (Note 7)	181	165
Workouts <sup>1</sup>	-	164
Fixed and intangible assets	122	84
Net estimated borrower recoveries	82	73
Non-current assets held for sale	69	51
Accounts receivable	40	46
Income taxes receivable	85	4
Other	33	24
<b>Total</b>	<b>856</b>	<b>835</b>

<sup>1</sup> As a result of the adoption of IFRS 9, workouts were reclassified from accounts receivable and other assets to loans at FVTPL and amortized cost.

## 22. INVESTMENT PROPERTY

The following table presents the changes in the investment property balance. Disclosures related to the determination of fair value of investment property are included in Note 11.

(in millions)	2018			2017		
	Mortgage Insurance	Assisted Housing	Total	Mortgage Insurance	Assisted Housing	Total
Balance at beginning of year	49	256	305	98	169	267
Additions	1	-	1	-	-	-
Disposals <sup>1</sup>	-	-	-	(52)	-	(52)
Net unrealized gains (losses) in net income <sup>2</sup>	(3)	8	5	3	87	90
<b>Balance at end of year</b>	<b>47</b>	<b>264</b>	<b>311</b>	<b>49</b>	<b>256</b>	<b>305</b>

<sup>1</sup> Includes a disposal of nil (2017 – \$30 million) in exchange for non-cash consideration; refer to Note 11.

<sup>2</sup> Included in other income.

## 23. ACCOUNTS PAYABLE AND OTHER LIABILITIES

The following table presents the composition of accounts payable and other liabilities.

(in millions)	2018	2017
Accrued housing programs expenses	140	239
Accrued expenses	85	72
Government of Canada fees	80	81
Affordable Rental Housing Innovation Fund deferred funding	79	80
Other miscellaneous liabilities	122	89
<b>Total</b>	<b>506</b>	<b>561</b>

## 24. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

### Defined benefit plans

The defined benefit plans include the defined benefit Pension Plan and Supplemental Plan as well as the other non-pension post-employment defined benefit plans.

Effective 4 April 2013, the defined benefit components of the Pension Plan and the Supplemental Plan were closed to new entrants. Eligible employees joining the Corporation after this date were enrolled in the defined contribution component of the plans. In 2016, the Corporation segregated the defined contribution component of the Pension Plan and transferred the contributions into a new stand-alone defined contribution pension plan. The new stand-alone defined contribution plan was closed to new entrants as of 31 December 2017 and eligible members were transferred to a new modified defined benefit pension plan. All pension plan modifications will only apply to service that follows the implementation date of 1 January 2018. All benefits earned by employees under the existing plans prior to the implementation date will remain unchanged.

Our defined benefit Pension Plan requires contributions to be made to a separately administered fund (Pension Fund) whereas the defined benefit Supplemental Plan and the other non-pension post-employment defined benefits are unfunded and the benefits are paid directly by the Corporation.

Pursuant to a trust agreement we entered into with the Pension Fund Trustees (the Trustees), they are responsible for the management and administration of the Pension Fund. There are eight Trustees, including our President, one member of our Board of Directors, three members of Senior Management and three Pension Council members (a combination of current and retired employees). The Trustees set investment policies and objectives within the context of the investment philosophy and Risk Appetite Framework established by the Board of Directors and periodically review these policies. The Pension Fund's Investment Committee assists the Trustees in the investment management of the defined benefit Pension Plan.

The Pension Fund's asset allocation policy is based upon the principle of diversification of investments among various asset classes relative to the liabilities of the defined benefit Pension Plan. The current policy, which is based on liability-driven investment principles, has been established at 40% public equity investments, 41% fixed income securities and 19% real estate and infrastructure, on a net asset basis. The policy includes permissible ranges around these percentage weights. Additionally, the policy allows for the use of a modest level of leverage of 25% of net asset value to purchase fixed income assets to reduce the interest rate risk of the portfolio. The investments of the Pension Fund are subject to credit, liquidity and market risks. The most significant of these risks is asset volatility due to market conditions. The liabilities of the defined benefit component of the Pension Plan are adjusted to the Consumer Price Index and as such, they are subject to interest rate risks, inflation risk and changes in the life expectancy of the plan members. The most significant risk is interest rate risk as the present value of the liabilities is calculated using a discount rate set with reference to Canadian AA-rated corporate bond yields. If the Pension Fund assets underperform this yield, the funded position of the defined benefit Pension Plan decreases. Financial risks are managed primarily through the diversification of assets and prudent investment strategies.

The actuarial valuation on a going concern basis of our defined benefit component of the Pension Plan reports a surplus as at 31 December 2018. As a result, we are not required to make going concern special payments. The valuation on a solvency basis, which assumes that the plan is wound up at the valuation date, reports a deficit as at 31 December 2018 and we expect to make special payments in 2019 to reduce this deficiency.

We continue to make full normal contributions and to monitor the defined benefit Pension Plan. The next actuarial valuation will be undertaken at 31 December 2019, with the results reported in the 2019 consolidated financial statements.

The defined benefit obligation relating to the defined benefit plans is funded as follows:

(in millions)	Pension benefit plans		Other post-employment benefit plans	
	2018	2017	2018	2017
Wholly or partially funded	2,135	2,263	-	-
Wholly unfunded	85	93	118	135
<b>Defined benefit obligation</b>	<b>2,220</b>	<b>2,356</b>	<b>118</b>	<b>135</b>

## Defined benefit pension and other post-employment benefit plans

The following tables present information about the defined benefit plans.

2018 (in millions)	Pension expense included in net income				Benefits paid	Remeasurements of the net defined benefit plans incl. in OCI <sup>1</sup>	Employees' contributions	CMHC's contributions	Dec. 31, 2018
	Jan. 1, 2018	Current service cost	Interest cost/ (income)	Sub-total included in net income					
Pension benefit plans									
Defined benefit obligation	2,356	39	78	117	(105)	(164)	16	-	2,220
Fair value of plan assets	(2,041)	-	(66)	(66)	105	87	(16)	(53)	(1,984)
Pension benefit plans liability	315	39	12	51	-	(77)	-	(53)	236
Other post-employment benefit plans									
Defined benefit obligation	135	2	5	7	(6)	(18)	-	-	118
Fair value of plan assets	-	-	-	-	6	-	-	(6)	-
Other post-employment benefit plans liability	135	2	5	7	-	(18)	-	(6)	118
<b>Defined benefit plans liability</b>	<b>450</b>	<b>41</b>	<b>17</b>	<b>58</b>	<b>-</b>	<b>(95)</b>	<b>-</b>	<b>(59)</b>	<b>354</b>

<sup>1</sup> The detailed breakdown of remeasurement gains and losses on defined benefit plans included in OCI is found in additional tables below.

2017 (in millions)	Pension expense included in net income				Benefits paid	Remeasurements of the net defined benefit plans incl. in OCI <sup>1</sup>	Employees' contributions	CMHC's contributions	Dec. 31, 2017
	Jan. 1, 2017	Current service cost	Interest cost/ (income)	Sub-total included in net income					
Pension benefit plans									
Defined benefit obligation	2,126	29	81	110	(96)	205	11	-	2,356
Fair value of plan assets	(1,867)	-	(71)	(71)	96	(85)	(11)	(103)	(2,041)
Pension benefit plans liability	259	29	10	39	-	120	-	(103)	315
Other post-employment benefit plans									
Defined benefit obligation	125	1	5	6	(5)	9	-	-	135
Fair value of plan assets	-	-	-	-	5	-	-	(5)	-
Other post-employment benefit plans liability	125	1	5	6	-	9	-	(5)	135
<b>Defined benefit plans liability</b>	<b>384</b>	<b>30</b>	<b>15</b>	<b>45</b>	<b>-</b>	<b>129</b>	<b>-</b>	<b>(108)</b>	<b>450</b>

<sup>1</sup> The detailed breakdown of remeasurement gains and losses on defined benefit plans included in OCI is found in additional tables below.

The following table presents further detailed information on the various sources of remeasurement in OCI included in the prior table.

(in millions)	Remeasurement (gains)/losses included in OCI				Total included in OCI
	Return on plan assets (excluding interest income)	Actuarial changes arising from changes in demographic assumptions	Actuarial changes arising from changes in financial assumptions	Actuarial changes arising from plan experience	
<b>Year ended 31 December 2018</b>					
Pension benefit plans					
Defined benefit obligation	-	-	(182)	18	(164)
Fair value of plan assets	87	-	-	-	87
Pension benefit plans liability	87	-	(182)	18	(77)
Other post-employment benefit plans					
Defined benefit obligation	-	(11)	(14)	7	(18)
<b>Defined benefit plans liability</b>	<b>87</b>	<b>(11)</b>	<b>(196)</b>	<b>25</b>	<b>(95)</b>
<b>Year ended 31 December 2017</b>					
Pension benefit plans					
Defined benefit obligation	-	-	206	(1)	205
Fair value of plan assets	(85)	-	-	-	(85)
Pension benefit plans liability	(85)	-	206	(1)	120
Other post-employment benefit plans					
Defined benefit obligation	-	-	6	3	9
<b>Defined benefit plans liability</b>	<b>(85)</b>	<b>-</b>	<b>212</b>	<b>2</b>	<b>129</b>

The remeasurement of plan assets is the difference between the actual rate of return on the defined benefit pension plan assets and the discount rate used to measure the obligation. The actual return on plan assets was \$(21) million (2017 – \$156 million).

The following table presents information on the fair value of the plan assets.

(in millions, unless otherwise indicated)	2018				2017			
	Quoted	Unquoted	Total	%	Quoted	Unquoted	Total	%
Cash and cash equivalents	7	0	7	0.4%	2	-	2	0.1%
Short-term investments <sup>1</sup>	27	32	59	3.0%	97	-	97	4.8%
Bonds and debentures <sup>2</sup>								
Securities issued or guaranteed by the Government of Canada	180	3	183	9.2%	212	-	212	10.4%
Other securities	114	724	838	42.2%	807	1	808	39.6%
Equities								
Canadian equities	395	-	395	19.9%	455	-	455	22.3%
Foreign equities	475	-	475	24.0%	499	1	500	24.5%
Infrastructure	-	78	78	3.9%	-	76	76	3.7%
Real return securities <sup>3</sup>	214	28	242	12.2%	237	-	237	11.6%
Real estate, net of mortgages payable	-	223	223	11.2%	-	197	197	9.6%
Securities sold under repurchase agreements	-	(500)	(500)	(25.2)%	-	(519)	(519)	(25.4)%
Other liabilities net of non-investment assets	-	(16)	(16)	(0.8)%	-	(24)	(24)	(1.2)%
<b>Total</b>	<b>1,412</b>	<b>572</b>	<b>1,984</b>	<b>100.0%</b>	<b>2,309</b>	<b>(268)</b>	<b>2,041</b>	<b>100.0%</b>

<sup>1</sup> Includes \$27 million or 1.4% (2017 – \$97 million or 4.8%) of investments made in securities issued or guaranteed by related parties.

<sup>2</sup> Includes \$51 million or 2.6% (2017 – \$39 million or 1.9%) of investments made in securities we guaranteed (CMB) and \$132 million or 6.7% (2017 – \$172 million or 8.4%) of investments made in securities issued or guaranteed by related parties.

<sup>3</sup> Includes \$238 million or 12.0% (2017 – \$234 million or 11.5%) of investments made in securities issued or guaranteed by related parties.

## Assumptions

The assets and obligation of the defined benefits were measured for accounting purposes as at 31 December 2018. In performing this measurement, the following assumptions were adopted.

	Pension benefit plans		Other post-employment benefit plans	
	2018	2017	2018	2017
<b>Defined benefit obligation</b>				
Discount rate	3.9%	3.4%	3.9%	3.4%
Rate of compensation increase	3.3%	3.3%	3.3%	3.3%
Inflation rate	2.0%	2.0%	2.0%	2.0%
<b>Benefit costs</b>				
Discount rate	3.4%	3.9%	3.4%	3.9%
Rate of compensation increase	3.3%	2.8%	3.3%	2.8%
Inflation rate	2.0%	2.0%	2.0%	2.0%
<b>Assumed medical cost trend</b>				
Initial medical cost trend rate	-	-	5.4%	5.6%
Medical cost trend rate declines to <sup>1</sup>	-	-	4.0%	4.5%
Year that the rate reaches the ultimate trend rate	-	-	2040	2028
<b>Life expectancy of plan members at age 65</b>				
Male	24 years	24 years	24 years	24 years
Female	25 years	25 years	25 years	25 years

<sup>1</sup> Average decrease per year of 0.1% (2017 – 0.1%).

The discount rates are determined by reference to Canadian AA-rated corporate bonds with terms to maturity approximating the duration of the defined benefit obligation. The weighted average duration of the defined pension benefit obligation is 15 years (2017 – 15 years).

The mortality assumptions used are derived from standard tables published by the Canadian Institute of Actuaries.

## Sensitivity

The following table shows the impact of changes in the assumptions.

(in millions)	Increase (decrease) in defined benefit obligation	Increase (decrease) in net benefit costs recognized in operating expenses
50 bps increase/decrease in discount rate	(170)/192	(12)/12
50 bps increase/decrease in rate of compensation increase	22/(21)	4/(3)
10 bps increase/decrease in inflation rate	30/(29)	2/(2)
100 bps increase/decrease in health care cost trend rates	10/(8)	-
One year increase in life expectancy of plan members	69	4

The above sensitivity analyses are based on a change in one assumption while holding all other assumptions constant. In practice, this is unlikely to occur and changes in some of the assumptions might be correlated. The method and types of assumptions used in preparing the sensitivity analyses have not changed from the previous year.

## Cash flows

In 2019, we expect to make contributions to the defined benefit plans of approximately \$37 million.

## Defined contribution plan

The defined contribution plan includes the pre-2016 defined contribution component of the Pension Plan, as well as the stand-alone defined contribution Pension Plan established in 2016 and Supplemental Plan.

CMHC's contributions to the defined contribution plan were nil (2017 – \$4 million).

## 25. INCOME TAXES

The following table presents the components of income tax.

<b>(in millions)</b>	<b>2018</b>	<b>2017</b>
Current income tax expense	452	519
Deferred income tax relating to origination and reversal of temporary differences	10	58
Total income tax expense included in net income	462	577
Income tax expense (recovery) on other comprehensive loss		
Net unrealized losses from FVOCI financial instruments	(37)	-
Net unrealized gains from AFS financial instruments	-	(46)
Reclassification of prior years' net unrealized gains realized in the period in net income	(8)	(50)
Remeasurement gains (losses) on defined benefit plans	16	(23)
Total income tax recovery included in other comprehensive loss	(29)	(119)
<b>Total</b>	<b>433</b>	<b>458</b>

The following is a reconciliation of the statutory tax rate to the effective tax rate.

<b>(in millions, unless otherwise indicated)</b>	<b>2018</b>	<b>2017</b>
Income before income taxes	1,879	2,380
Statutory tax rate	25%	25%
Income taxes computed at statutory tax rate	470	595
Permanent differences	(8)	(18)
<b>Income tax expense</b>	<b>462</b>	<b>577</b>
Effective tax rate	24.6%	24.2%

The statutory tax rate of 25% is comprised of the federal income tax rate of 38% less the general rate reduction of 13%.

The following tables present the tax-effected temporary differences which result in deferred income tax assets and liabilities.

(in millions)	2017	Change through consolidated net income	Change through consolidated OCI	Change through consolidated equity	2018
<b>Deferred income tax assets</b>					
Fair value of financial instruments	-	20	(14)	-	6
Post-employment benefits	71	(1)	(16)	-	54
Net realized losses on borrowings	35	(1)	-	-	34
<b>Total deferred income tax assets</b>	<b>106</b>	<b>18</b>	<b>(30)</b>	<b>-</b>	<b>94</b>
<b>Deferred income tax liabilities</b>					
Fair value of investment properties	(58)	(2)	-	-	(60)
Other	(14)	(12)	-	19	(7)
Provision for claims	(118)	(13)	-	2	(129)
<b>Total deferred income tax liabilities</b>	<b>(190)</b>	<b>(27)</b>	<b>-</b>	<b>21</b>	<b>(196)</b>
<b>Net deferred income tax assets (liabilities)</b>	<b>(84)</b>	<b>(9)</b>	<b>(30)</b>	<b>21</b>	<b>(102)</b>
(in millions)	2016	Change through consolidated net income	Change through consolidated OCI	Change through consolidated equity	2017
<b>Deferred income tax assets</b>					
Fair value of financial instruments	24	(21)	(3)	-	-
Post-employment benefits	59	(11)	23	-	71
Net realized losses on borrowings	24	11	-	-	35
<b>Total deferred income tax assets</b>	<b>107</b>	<b>(21)</b>	<b>20</b>	<b>-</b>	<b>106</b>
<b>Deferred income tax liabilities</b>					
Fair value of investment properties	(35)	(23)	-	-	(58)
Other	(6)	(8)	-	-	(14)
Provision for claims	(119)	(6)	-	7	(118)
<b>Total deferred income tax liabilities</b>	<b>(160)</b>	<b>(37)</b>	<b>-</b>	<b>7</b>	<b>(190)</b>
<b>Net deferred income tax assets (liabilities)</b>	<b>(53)</b>	<b>(58)</b>	<b>20</b>	<b>7</b>	<b>(84)</b>

The deferred income tax assets have been recognized in full as we believe it is probable that these items will be realized in the normal course of operations.

## 26. RELATED PARTY TRANSACTIONS

Our related parties include the Government and its departments, agencies and Crown corporations (in terms of common ownership), key management personnel and their close family members and the Pension Plan.

All material related party transactions and outstanding balances not disclosed elsewhere are disclosed below.

Transactions or balances between the entities that have been eliminated on consolidation are not reported.

## Government of Canada and its departments, agencies and Crown corporations

The following tables summarize income earned and receivable, the total amount invested in instruments issued or guaranteed by the Government and government fees.

(in millions)	2018	2017
<b>Income earned and receivable</b>		
Investment income – cash equivalents	1	1
Investment income – investment securities	70	58
Interest receivable – investment securities <sup>1</sup>	12	12
<b>Government issued</b>		
Cash equivalents	24	67
Investment securities	4,720	4,191
<b>Government fees</b>		
Mortgage Funding	30	20
Mortgage Insurance	38	36

<sup>1</sup> Included in accrued interest receivable.

## Key management personnel

The following table presents the compensation of key management personnel, defined as those persons having authority and responsibility for planning, directing and controlling our activities. We have expanded this definition in 2018 to comprise the members of the Board of Directors and of the Executive Committee, whereas for 2017 this comprised the members of the Board of Directors and only select members of senior management.

(in thousands)	2018			2017		
	Board of Directors	Other key management personnel	Total	Board of Directors	Other key management personnel	Total
Short-term benefits	170	4,579	4,749	107	3,986	4,093
Post-employment benefits	-	979	979	-	682	682
<b>Total</b>	<b>170</b>	<b>5,558</b>	<b>5,728</b>	<b>107</b>	<b>4,668</b>	<b>4,775</b>

Receivable balances outstanding with members of key management personnel as at 31 December 2018 are nil (2017 – nil).

## Pension plan

The following table summarizes interest expense we incurred and operating expenses we recovered from the Pension Plan.

(in millions)	2018	2017
Interest expense – paid to the Pension Plan for its holdings of CMB <sup>1</sup>	1	1
Operating expense recoveries – paid by the Pension Plan for our administration services	4	4

<sup>1</sup> Refer to Note 24 for additional information on holdings of CMB by the Pension Plan.

Receivable balances outstanding from the Pension Plan as at 31 December 2018 are \$14 million (2017 – \$22 million).

## 27. COMMITMENTS AND CONTINGENT LIABILITIES

### Letters of credit

We have \$118 million (2017 – \$125 million) in letters of credit outstanding, which secure benefits accrued up to 31 December 2017 under the Supplemental Plan.

### Other financial obligations

Total estimated remaining contractual financial obligations are as follows based on minimum commitment:

(in millions)	2019	2020	2021	2022	2023	2024 and thereafter
Housing programs <sup>1</sup>	1,458	1,342	1,274	1,126	1,036	4,198
Other contractual obligations	90	51	47	45	29	-
Operating leases	12	12	11	9	6	9
<b>Total</b>	<b>1,560</b>	<b>1,405</b>	<b>1,332</b>	<b>1,180</b>	<b>1,071</b>	<b>4,207</b>

<sup>1</sup> Total remaining contractual financial obligations for housing programs extend for periods up to 25 years (2017 – 25 years).

In addition to the above minimum commitments, there is a total of \$139 million at 31 December 2018 that can be claimed by various parties over the next year under the Investment in Affordable Housing if the required criteria are met by the various parties to the agreements.

### Legal claims

There are legal claims of \$4 million (2017 – \$8 million) against CMHC. Due to the uncertainty of the outcome of these claims, no provision for loss has been recorded. We do not expect the ultimate resolution of any of the proceedings to which we are party to have a significant adverse effect on our financial position.

## 28. OPERATING EXPENSES

The following table presents the composition of operating expenses.

(in millions)	2018	2017
Personnel costs	293	261
Depreciation of premises and equipment	12	3
Other administrative goods and services	280	293
	585	557
Less: Housing programs operating expenses <sup>1</sup>	(187)	(161)
<b>Total operating expenses</b>	<b>398</b>	<b>396</b>

<sup>1</sup> These expenses represent operating costs we incurred to support and administer housing programs within the Assisted Housing Activity. These costs are reimbursed by the Government through government funding and are recognized in housing programs expenses (refer to Note 6).

## 29. CURRENT AND NON-CURRENT ASSETS AND LIABILITIES

The following table presents assets and liabilities we expect to recover or settle within 12 months of the balance sheet date.

(in millions)	IFRS 9			IAS 39		
	2018			2017		
	Within 1 year	After 1 year	Total	Within 1 year	After 1 year	Total
<b>Assets</b>						
Cash and cash equivalents	837	-	837	887	-	887
Accrued interest receivable	724	-	724	705	-	705
Investment securities:						
Fair value through profit or loss	291	1,300	1,591	322	912	1,234
Fair value through other comprehensive income	1,845	16,319	18,164			
Available for sale	-	-	-	2,302	19,810	22,112
Derivatives	2	31	33	15	46	61
Due from the Government of Canada	56	102	158	27	99	126
Loans:						
Fair value through profit or loss	589	1,451	2,040	603	2,303	2,906
Amortized cost	30,924	208,238	239,162	38,817	199,127	237,944
Accounts receivable and other assets	341	515	856	278	557	835
Investment property	-	311	311	-	305	305
	35,609	228,267	263,876	43,956	223,159	267,115
<b>Liabilities</b>						
Securities sold under repurchase agreements	280	-	280	297	-	297
Accounts payable and other liabilities	417	89	506	458	103	561
Accrued interest payable	546	-	546	545	-	545
Dividends payable	675	-	675	2,000	-	2,000
Derivatives	100	17	117	14	25	39
Provision for claims	317	195	512	317	238	555
Borrowings:						
Fair value through profit or loss	1,076	2,354	3,430	1,135	3,429	4,564
Amortized cost	30,964	204,561	235,525	38,564	195,028	233,592
Defined benefit plans liability	109	245	354	95	355	450
Unearned premiums and fees	1,850	5,098	6,948	1,712	4,975	6,687
Deferred income tax liabilities	-	102	102	-	84	84
	36,334	212,661	248,995	45,137	204,237	249,374
<b>Net</b>	<b>(725)</b>	<b>15,606</b>	<b>14,881</b>	<b>(1,181)</b>	<b>18,922</b>	<b>17,741</b>

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## **30. COMPARATIVE FIGURES**

Government funding for housing programs presented in Note 6 has been reclassified to conform to the current period's presentation in accordance with Treasury Board's Policy on Results. CMHC is required to report government funding following the Departmental Results Framework for the Government beginning 1 April 2018.

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## **31. SUBSEQUENT EVENT**

On 21 March 2019, we declared dividends of \$505 million, which are expected to be paid by 30 April 2019.

# CORPORATE GOVERNANCE

## Legislative Framework

Incorporated under the CMHC Act, the Corporation is accountable to Parliament through the Minister responsible for CMHC, currently the Minister of Families, Children and Social Development. Our legislative framework includes the CMHC Act, the NHA and the FAA.

### Board of Directors

The Board of Directors is responsible for managing our affairs in accordance with applicable legislation and the governing by-laws. As steward of the Company, the Board of Directors sets strategic direction, ensures the integrity and adequacy of corporate policies, information systems and management practices, ensures that principal risks are identified and managed, and evaluates and monitors performance and results. The Board of Directors has a duty to protect the long- and short-term interests of the Company, safeguard the Corporation's assets, and be prudent and professional in fulfilling its duties.

The Board is made up of the Chair, the President and Chief Executive Officer (CEO), the Deputy Minister of the Minister responsible for CMHC, the Deputy Minister of Finance, and eight other directors. Charters for the Board and its committees (Audit, Corporate Governance and Nominating, Human Resources, Risk Management, Affordable Housing, and Pension Fund Trustees) are posted on our website. The Board meets a minimum of five times per year and holds an annual public meeting.

In order to identify opportunities for enhanced Board performance and director development and education, the Board undergoes annual assessments, generally alternating between a peer assessment and an overall assessment, the latter of which examines the functioning of the Board as a whole in comparison to the boards of other Crown corporations and financial institutions.

# BOARD OF DIRECTORS

As of 31 December 2018

## DEREK BALLANTYNE

Chair  
(effective 29 April 2018)

## ROBERT P. KELLY

Chair  
(to 6 March 2018)

## PETER SHARPE

Chair, Human Resources Committee

## PAUL ROCHON

Deputy Minister of Finance

## NAVJEET (BOB) DHILLON

## LINDA MORRIS

## JANICE ABBOTT

Chair, Affordable Housing Committee

## LOUISE POIRIER-LANDRY

(to 29 January 2018)

## EVAN SIDDALL

President and Chief Executive Officer

## BRUCE SHIRREFF

Vice-Chairperson  
Chair, Risk Management Committee

## LOUISE LEVONIAN

Deputy Minister, Employment and  
Social Development Canada  
(to 31 August 2018)

## GRAHAM FLACK

Deputy Minister, Employment and  
Social Development Canada  
(effective 20 October 2018)

## DANA ADES LANDY

Chair, Audit Committee  
(effective 30 January 2018)

## ANNE GIARDINI

Chair of the Pension Fund Trustees

## GORDON LAING

(effective 12 December 2018)

# COMPENSATION AND ATTENDANCE RECORD

Member	Compensation (\$)	Committee Member Attendance						
		Board of Directors	Governance and Nominating	Audit				
					Human Resources	Risk Management	Affordable Housing	Pension Fund Trustees
Robert P. Kelly <sup>1</sup>	<sup>2</sup>	1/7	1/5	0/4	1/5	0/4	-	-
Derek Ballantyne <sup>3</sup>	45,103	5/7	3/5	-	-	-	3/4	-
Evan Siddall	n/a	7/7	5/5	-	-	-	-	2/4
Navjeet (Bob) Dhillon	16,200	7/7	-	4/4	-	-	4/4	-
Louise Poirier-Landry <sup>4</sup>	1080	1/7	1/5	-	-	-	-	-
Paul Rochon	n/a	6/7	-	3/4	-	3/4	-	-
Bruce Shirreff	17,200	7/7	5/5	-	5/5	4/4	-	-
Peter Sharpe	12,950	5/7	3/5	3/4	4/5	-	-	-
Louise Levonian <sup>5</sup>	n/a	5/7	3/5	-	1/5	-	2/4	-
Dana Ades Landy <sup>6</sup>	18,600	6/7	-	4/4	4/5	4/4	-	-
Janice Abbott	18,950	7/7	-	-	5/5	4/4	4/4	-
Anne Giardini	21,680	7/7	5/5	4/4	-	4/4	-	3/4
Linda Morris	18,700	7/7	-	-	5/5	-	4/4	-
Graham Flack <sup>7</sup>	n/a	1/7	1/5	-	-	-	1/4	-
Gordon Laing <sup>8</sup>	0	0/7	0/5	0/4	0/5	0/4	0/4	-

<sup>1</sup> To 6 March 2018

<sup>2</sup> Opted to waive all per diem allocation effective January 2016

<sup>3</sup> Effective 29 April 2018

<sup>4</sup> To 29 January 2018

<sup>5</sup> To 31 August 2018

<sup>6</sup> Effective 30 January 2018

<sup>7</sup> Effective 20 October 2018

<sup>8</sup> Effective 12 December 2018

# SENIOR MANAGEMENT

## OUR EXECUTIVE COMMITTEE As at 31 December 2018



### **Evan Siddall**

#### **President and Chief Executive Officer**

Evan has worked at some of the world's largest investment banking firms in Canada and the United States. He also served at the Bank of Canada where, in the wake of the global financial crisis, he spearheaded the development of financial infrastructure to guard against systemic risks. Since joining CMHC in 2014, he has led a transformation to make the organization more high-performing and innovative, with a vision to be at the heart of a world-leading housing system.



### **Romy Bowers**

#### **Chief Commercial Officer**

Romy joined CMHC in 2015 with more than 15 years' experience working at and with Canada's leading private-sector financial institutions. Having recently led CMHC's risk operations, she now brings her superior insight and client understanding to the organization's commercial operations.



### **Deborah Greenberg**

#### **Chief Legal Officer and Corporate Secretary**

Deborah is a specialist in commercial law and governance who served in leadership advisory roles at private sector organizations prior to joining CMHC in 2017. She is responsible for setting the legal and governance frameworks for all of the company's operations, and heads its corporate secretariat.



### **Charles MacArthur**

#### **Senior Vice-President, Assisted Housing**

Charlie's 20+ years at CMHC have given him experience working in every corner of the country and a deep understanding of housing markets. He leads the team delivering the NHS.



### **Paul Mason**

#### **Chief Information Officer**

Paul joined CMHC in 2016 bringing with him more than 20 years of experience running IT operations for leading financial and technology corporations. He leads CMHC's technology and business transformation.



### **Steven Mennill**

#### **Chief Risk Officer**

Steve's experience at CMHC and expertise in urban planning and economics converge to make him one of Canada's foremost housing authorities. With 23 years of experience at CMHC, including as a key contributor to Canada's response to the 2008-09 global recession, he now leads CMHC's Risk Management efforts.



### **Marie-Claude Tremblay**

#### **Senior Vice-President, People and Strategy**

Marie-Claude's career of service to Canada includes roles in several federal departments and senior positions at CMHC, which she joined in 2010. In her current role, she aligns CMHC's strategy with its people, overseeing strategy development, human resources and public affairs.



### **Michel Tremblay**

#### **Senior Vice-President, Policy and Research**

Michel's career is marked by high-level roles in areas including the development of the NHS Housing Strategy. He now leads efforts to modernize and bolster CMHC's data analysis and research capabilities, leading to data-driven policy development.



### **Lisa Williams**

#### **Chief Financial Officer**

Prior to joining CMHC in 2003, Lisa used to audit Crown corporations for Canada's Auditor General. Her leadership on CMHC's multi-unit insurance operations, including as Vice-President, Multi-Unit Insurance Operations (2016), have contributed to the organization's healthy financial performance. She now leads CMHC's Finance Team.

# OUR MANAGEMENT COMMITTEE

**Fatima Barros**

Vice-President, Audit and Evaluation

**Mark Chamie**

Vice-President, Capital Markets

**Kathleen Devenny**

Vice-President, Financial Planning and Analysis

**Nathalie Fredette**

Vice-President, Insurance Operations

**Christina Haddad**

Vice-President, Public Affairs

**Steffan Jones**

Vice-President, Strategy and Organizational Excellence

**Nadine Leblanc**

Deputy Chief Risk Officer

**Neil Levecque**

Chief Data Officer and Vice-President, Technology Strategy

**Audrey Moritz**

Vice-President, Housing Markets and Indicators

**Caroline Sanfaçon**

Vice-President, Affordable Housing, Investments and Lending

**Carla Staresina**

Vice-President, Client Relationship Management

**Debbie Stewart**

Vice-President, Affordable Housing, Client Solutions Management

**Glen Trevisani**

Vice-President, Multi-Unit Insurance Operations

# GLOSSARY

## NON-IFRS FINANCIAL MEASURES

We use a number of financial measures to assess our performance, some of which are not calculated in accordance with IFRS, are not defined by IFRS, and do not have standardized meaning that would ensure consistency and comparability with other institutions.

### Arrears rate

The ratio (expressed as a percentage) of all loans that are typically more than 90 days past due to the number of outstanding insured loans.

### Capital available to capital required

Under Mortgage Funding this means the ratio (expressed as a percentage) of capital available to capital required where capital required is calculated by applying risk factors to investment asset and liability exposures using a framework developed in accordance with both regulatory and economic capital principles.

### Capital available to minimum capital required

Under the Mortgage Insurance Activity, this means the ratio (expressed as a percentage) of capital available to minimum capital required where capital available is calculated as total equity adjusted for assets with a capital requirement of 100% and minimum capital required is calculated by applying risk factors to investment asset and liability exposures in accordance with guidelines established by OSFI.

### Guarantees-in-force

The total guarantees related to the timely payment of principal and interest of NHA MBS for investors in securities issued by Approved Issuers on the basis of housing loans through the NHA MBS Program and the CMB issued by the CHT.

### Insurance-in-force

The total amount of outstanding loan balances covered by mortgage insurance policies at a specific period in time.

### Loss ratio

The ratio (expressed as a percentage) of the insurance claims incurred during the period to the premiums and fees earned in the period in the Mortgage Insurance Activity.

### Minimum Capital Test (MCT)

The minimum capital required calculated by applying risk factors to the Mortgage Insurance Activity's assets and liabilities using a defined methodology prescribed by OSFI.

### Mortgage Insurance defaults

Defaults from the Mortgage Insurance business occurs when a borrower has missed the equivalent of at least one payment as at the reporting date.

### Operating Budget Expense Ratio

The ratio (expressed as a percentage) of operating budget expenses for all of CMHC's activities (excluding CHT) during the period to premiums, fees, guarantee, and application fees received, net interest income from Lending programs and normalized government funding.

### Operating expense ratio

Mortgage Insurance Activity: the ratio (expressed as a percentage) of operating expenses during the period to premiums and fees earned during the period for the Mortgage Insurance Activity.

Mortgage Funding Activity: the ratio (expressed as a percentage) of operating expenses during the period, exclusive of those related to the administration of the covered bond legal framework, to guarantee fees earned during the period.

### Return on capital holding target (ROCHT)

Reflects annualized net income, adjusted to reflect earnings based on CMHC's capital holding level of 165% MCT, divided by the weighted average capital holding target for the period.

### Return on equity

The annualized net income divided by the average of the beginning and ending equity for the period, used to highlight the operating performance.

### Return on required capital (RoRC)

The annualized net income, adjusted to remove investment income earned on capital in excess of capital required, divided by the average required capital for the period.

### Revenue per employee

The ratio of premiums, fees, guarantee, and application fees received, net interest income from Lending programs and normalized government funding during the period, to full-time equivalents (FTEs).

### Severity ratio

The ratio (expressed as a percentage) of insurance claims to the original insured loan amount for the claims paid in the period.

## OTHER GLOSSARY TERMS

### Allocated

Allocated refers to funding earmarked to support the building or repair of units of whose formal project agreement is still subject to final approvals and conditions.

### Approved Issuer

A business organization which, having met the criteria established by CMHC, is approved to issue and administer guaranteed NHA MBS.

### Approved Lender

A lending institution designated as an approved lender by CMHC under the NHA. Only Approved Lenders may qualify for CMHC loan insurance.

### Canada Housing Trust (CHT)

The CHT is a special purpose trust that acquires interests in eligible insured housing loans, such as NHA MBS, and issues CMB. The CHT also purchases highly rated investments and undertakes certain related financial hedging activities. We consolidate the accounts of CHT with Mortgage Funding. CHT's assets and liabilities are neither owned by nor held for our benefit. The beneficiaries of the trust, after payment of all obligations, are one or more charitable organizations.

### Core housing need

A household is in core housing need if its housing does not meet one or more of the adequacy, suitability or affordability standards and it would have to spend 30% or more of its before-tax income to access local housing that meets all three standards. Adequate housing does not require any major repairs, according to residents. Suitable housing has enough bedrooms for the size and make-up of resident households, according to National Occupancy Standard (NOS) requirements. Affordable housing costs less than 30% of before-tax household income.

### emili

A proprietary online automated Mortgage Insurance risk assessment and approval system developed by CMHC.

### Employee engagement

Measures the commitment of an employee to CMHC. Such commitment is reflected in employee's willingness to speak well of CMHC, recommend it as an employer of choice, feeling proud of working at CMHC and translating it to a high motivation to do one's best every day to contribute to the success of CMHC. (Index of 5 questions)

### Employee enablement

Measures the extent to which employees are in optimal roles, and whether the work environment supports their success. (Index of 4 questions)

### Financial commitment

Achieved once a formal loan agreement is duly executed and a binding agreement to provide credit under pre-specified terms and conditions is reached.

### Housing programs expenses

All activities funded by the government under Assisted Housing and Housing Analysis and Research Activities.

### Housing support

Contractual commitments for housing and municipal infrastructure that help to reduce affordability problems for low and moderate-income households, to provide accommodation for students and to provide production of moderately priced rental housing. The program also provides ancillary services to support our mandate. This includes the Affordable Housing Centre, the housing-related infrastructure loans to municipalities and other long-term commitments such as the market housing programs and the community services program.

### Investment in Affordable Housing (IAH) 2011-2019

Since April 2011, new federal funding for affordable housing has been provided through the IAH. Originally announced as a three-year commitment (2011-2014), the IAH has been extended to 2019 for a total federal investment of more than \$1.9 billion over eight years toward reducing the number of Canadians in housing need. Under the IAH, provinces and territories cost-match the federal investment and are responsible for program design and delivery.

## Lending programs

We make loans under the NHA to federally-subsidized social housing sponsors, First Nations, provinces, territories and municipalities as well as non-subsidized housing support loans. Our loan portfolio is comprised of a mix of renewable and non-renewable loans which may be on or off-reserve. Direct Lending is the current borrowing initiative we use to refinance our renewable loans as well as to finance new commitments on-reserve. These loans can be financed at lower interest rates due to our status as a federal Crown corporation. As such, we are able to lower the cost of government assistance required for social housing projects. Direct Lending is operated on a planned breakeven basis.

## Municipal Infrastructure Lending Program 2009-2011 (MILP)

In Budget 2009, we provided \$2 billion in direct low-cost loans to municipalities over a two-year period ending 31 March 2011 to fund housing-related municipal infrastructure.

## Risk Culture Maturity Index

Comprised of several metrics on risk governance, risk appetite, risk management practices and risk behaviour, in addition to results from our Risk Culture Survey, allowing for a more comprehensive view of our corporate risk culture.

## Stacking

Enables eligible projects to access more than one funding stream to achieve increased results. Stacking may include pre-project support, land, contribution funding, or loans. Results are counted against each relevant initiative target and rolled up for overall performance reporting.



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