



Investor Relations Presentation

November 15, 2018

Ontario Financing Authority
www.ofina.on.ca

Overview

- **Ontario Bonds**

- Exceptional liquidity with a wide range of bond offerings
- Attractive spreads provide opportunities for investors to achieve higher returns

- **Ontario's Economic and Fiscal Summary**

- A diverse economy with a well-educated and highly skilled workforce, generating almost 40 per cent of the national GDP
- The government is projecting a deficit of \$14.5 billion in 2018–19, a \$0.5 billion improvement compared to the baseline for planning provided by the Independent Financial Commission of Inquiry

Ontario Bonds

- **Bond Offerings**
 - Wide range of offerings provide extensive investment and trading opportunities across the yield curve
- **Liquid**
 - Strong liquidity in secondary markets and large benchmark issues
- **Attractive Spreads**
 - Ontario spreads give investors opportunities to enhance their returns
- **Safe**
 - Largest Canadian provincial economy by GDP and population
 - A diverse economy with direct taxation powers and stable growth
- **Borrowing Program**
 - Long-term borrowing for 2018–19 is forecast to be \$33.2 billion

Ontario's 2018–19 Borrowing Program

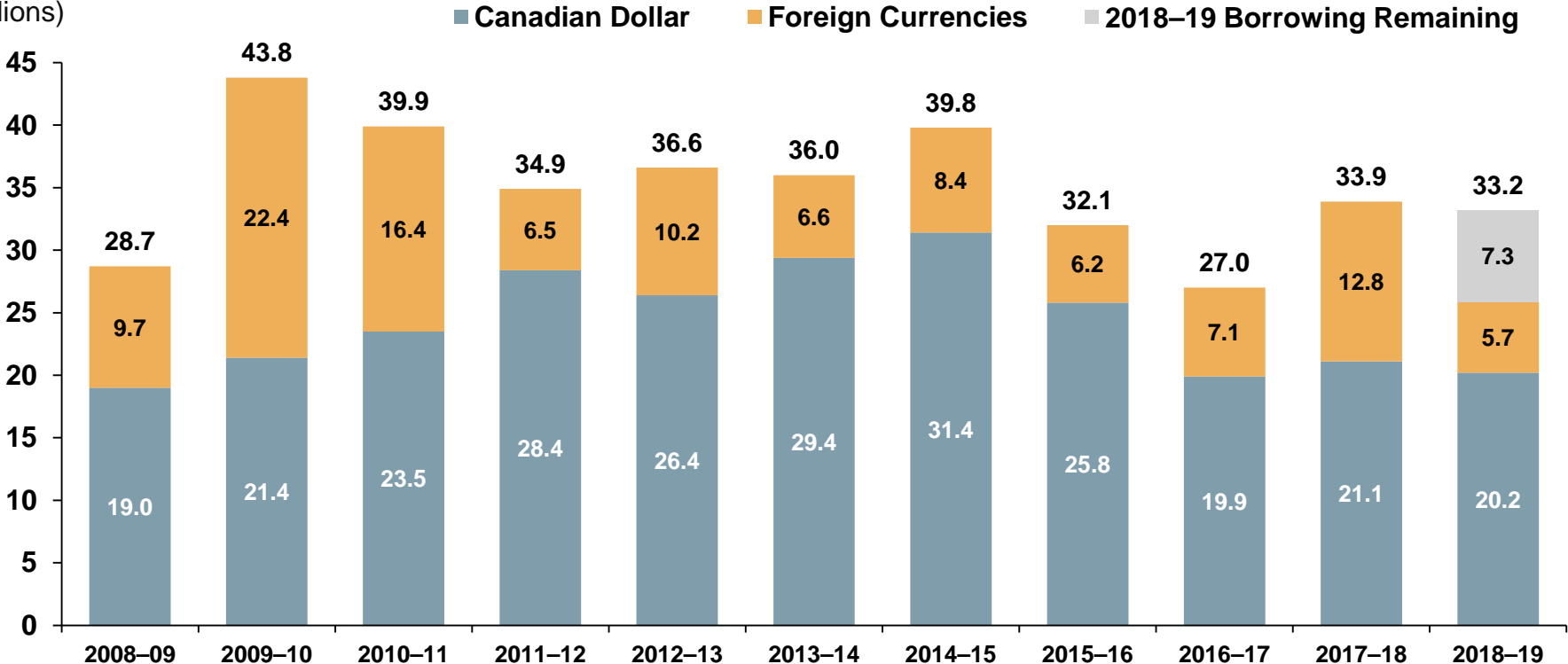
(\$ Billions)	2018 Budget	Outlook Based on Commission of Inquiry	Change from Commission of Inquiry Outlook	Current Outlook
Deficit/(Surplus)	6.7	15.0	(0.5)	14.5
Investment in Capital Assets	14.2	14.2	(1.4)	12.8
Non-Cash Adjustments	(7.1)	(7.4)	–	(7.4)
Loans to Infrastructure Ontario	0.4	0.4	–	0.4
Other Net Loans/Investments	1.5	0.5	(0.6)	(0.0)
Debt Maturities	21.5	21.5	0.3	21.8
Debt Redemptions	0.1	0.1	0.1	0.1
Total Funding Requirement	37.3	44.3	(2.1)	42.1
Canada Pension Plan Borrowing	(0.0)	(0.0)	–	(0.0)
Decrease/(Increase) in Short-Term Borrowing	–	–	–	–
Increase/(Decrease) in Cash and Cash Equivalents	6.0	3.3	0.2	3.5
Pre-Borrowing from 2017–18	(11.5)	(12.4)	–	(12.4)
Total Long-Term Public Borrowing	31.7	35.1	(1.9)	33.2

Note: Numbers may not add due to rounding.

Domestic and International Borrowing

As of November 15, 2018

Total Long-Term Borrowing
(\$ Billions)



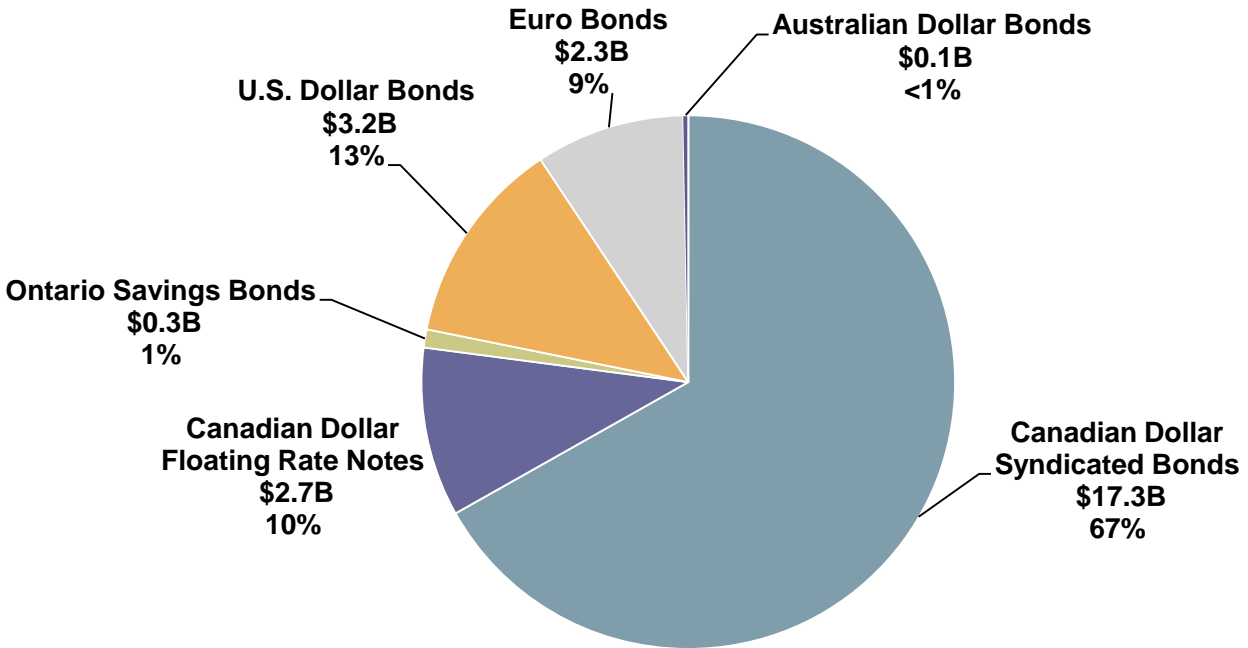
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Foreign	34%	51%	41%	19%	28%	18%	21%	19%	26%	38%	22%
Domestic	66%	49%	59%	81%	72%	82%	79%	81%	74%	62%	78%
Weighted-Average Term	8.6	8.1	12.8	13.0	12.4	13.6	14.1	14.2	13.9	12.1	13.4

Note: Numbers may not add due to rounding.

Source: Ontario Financing Authority.

2018–19 Borrowing Completed: \$25.9 Billion

As of November 15, 2018



2018–19 Total Borrowing Requirement: \$33.2B
Borrowing Completed: \$25.9B
Domestic: 78%
International: 22%
Average Term: 13.4 years

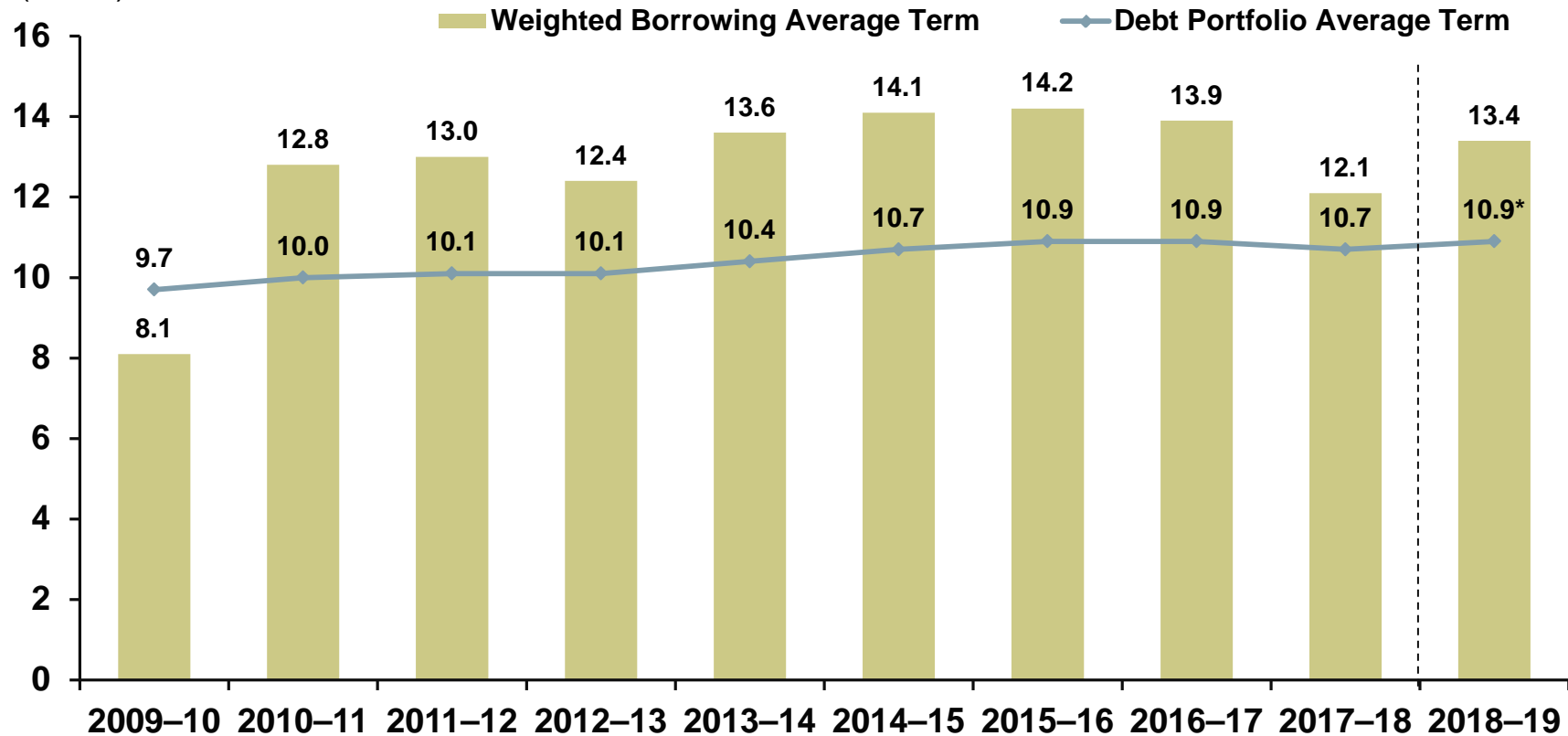
Note: Numbers may not add due to rounding.

Weighted-Average Term of Borrowings

- Going back to the beginning of fiscal 2010–11, Ontario has issued \$77.3 billion of bonds with terms longer than 30 years to lock in low interest rates

As of November 15, 2018

Average Term
(Years)



*The debt portfolio average terms are on a forecast basis for 2018–19 as of October 31, 2018.

Source: Ontario Financing Authority.

Domestic Borrowing Program

- Narrow Bid-Ask Spreads
- Large and diverse domestic underwriting syndicate of 12 dealers make active markets in Ontario bonds
- Ontario accounts for 14.0 per cent of the FTSE TMX Universe Bond Index, 18.8 per cent of the FTSE TMX Mid Bond Index and 19.5 per cent of the FTSE TMX Long Bond Index¹
- Ontario bonds accounted for 59.0 per cent of Canadian provincial bond trading in 2017²
- Regular issuance of 5-year, 10-year and 30-year issues, which are re-opened to achieve benchmark size
- Large Order Procedure set up to accommodate large investors

Canadian dollar Benchmark Bonds

(As of November 14, 2018)

Term	Ontario		Canada	
5 yr (old)	1.35% March 8, 2022	\$5.00B	1.75% March 1, 2023	\$15.00B
5 yr (new)	2.60% September 8, 2023	\$4.75B	2.00% September 1, 2023	\$12.00B
10 yr (old)	2.60% June 2, 2027	\$7.65B	1.00% June 1, 2027	\$15.00B
10 yr (new)	2.90% June 2, 2028	\$7.45B	2.00% June 1, 2028	\$13.50B
Long (old)	2.80% June 2, 2048	\$12.70B	3.50% December 1, 2045	\$16.40B
Long (new)	2.90% June 2, 2049	\$9.10B	2.75% December 1, 2048	\$14.90B

¹ PC Bond, as of December 31, 2017.

² Investment Industry Regulatory Organization of Canada (IIROC) Market Trade Reporting System - Provincial Bond Total Trading.

U.S. Dollar Borrowing

- Fixed and floating rate Global Bonds in 3, 5, 7 and 10 years, with benchmark size of U.S.\$1B plus
- Fixed and floating U.S. Medium-Term Notes (USMTN) in 2-10 years
- Total U.S. denominated bonds of C\$40.4B outstanding projected as of March 31, 2018
- U.S. commercial paper (1-270 days), with about C\$1.0B outstanding as of October 31, 2018

- Global Bonds and USMTNs are offered in SEC-registered format
- Financial information filed by the Province is available to investors electronically through the SEC's EDGAR system
- Eligible Ontario bonds are included in a number of bond market indices and sub-indices including BofA Merrill Lynch, Citi and Barclays Capital
- Notes issued under the Province's U.S. Commercial Paper Program are exempt from SEC registration under the U.S. Securities Act

Recently Issued U.S. Dollar Bonds

Maturity	Issue Details			
	Issue Date	Maturity Date	Amount (U.S.\$)	Coupon
3 years	February 12, 2018	February 12, 2021	3.00 billion	2.55%
5 years	October 17, 2018	October 17, 2023	2.50 billion	3.40%
7 years	September 11, 2014	September 10, 2021	2.00 billion	2.50%
10 years	April 27, 2016	April 27, 2026	1.00 billion	2.50%

Sources: Bloomberg, Ontario Financing Authority.

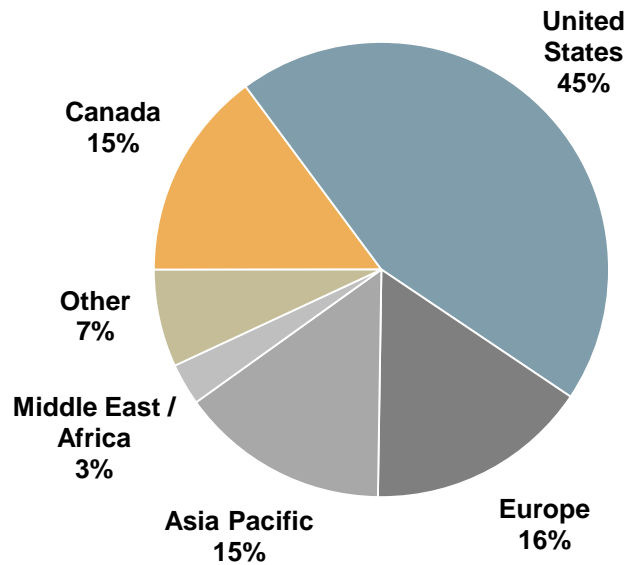
Ontario's Green Bonds

- Ontario plans to issue its next Green Bond by the end of the fiscal year, after realigning the program to support the new government's approach to addressing environmental challenges
- Ontario's Green Bonds capitalize on the Province's ability to raise funds at low interest rates
- They serve as an important tool to help Ontario finance transit and energy efficiency projects
- Assurances:
 - Ontario's Green Bond Framework has been developed in consultation with the Center for International Climate and Environmental Research — Oslo (CICERO)
 - An assurance audit is performed by the Auditor General of Ontario verifying amounts allocated to selected projects and tracking the amount of Green Bond proceeds
- Ontario's issues under the Green Bond program will carry the full faith and credit of the Province of Ontario with no project risk
- Ontario is currently the largest issuer of Canadian dollar Green Bonds, with four green issues totaling \$3.05 billion

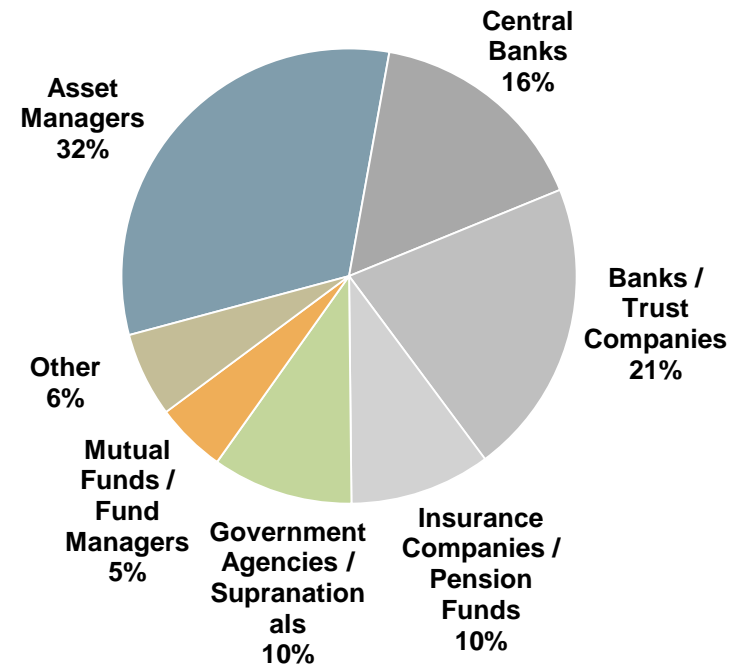
U.S. Dollar Market

- Core market with annual issuance since 1991
- Right-sized bond issues to meet demand
- U.S. dollar investors diversified both geographically and by type

USD by Geography¹



USD by Investor Type¹



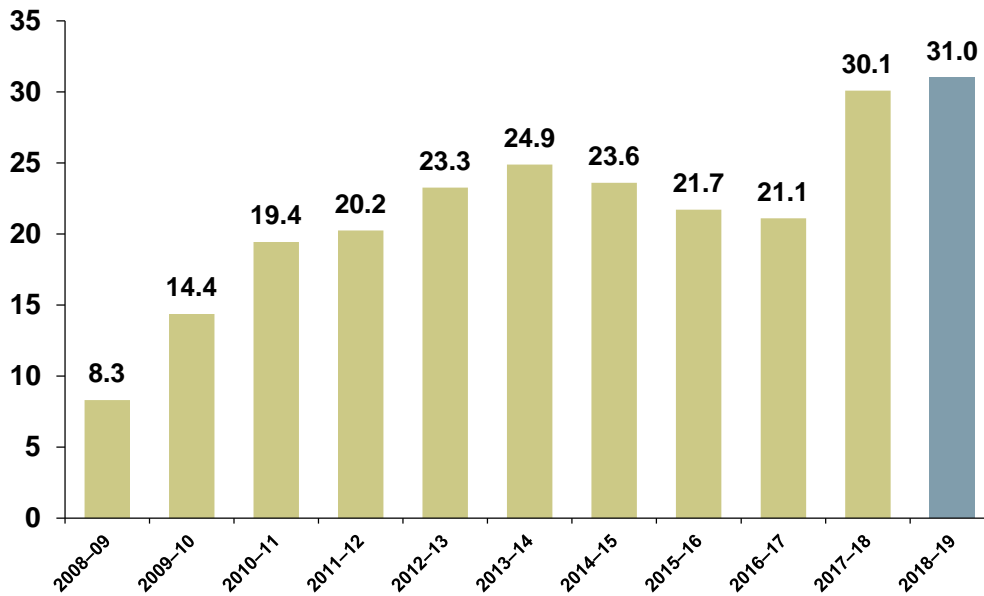
¹ Since 2010.

Source: Ontario Financing Authority.

Liquidity and Short-Term Borrowing Capacity

- Liquid reserves (cash and short-term investments) are maintained at levels sufficient to ensure the Province is able to meet its short-term financial obligations
- Ontario treasury bills and U.S. commercial paper are very well received in the money markets and provide additional borrowing capacity if required
- Large capacity for short term borrowing: \$48.0 billion authorized and \$29.0 billion available

Average Unrestricted Liquid Reserve Levels
(\$ Billions)



Note: As of October 31, 2018

Source: Ontario Financing Authority.

(\$ Billions)	C\$ T-Bill Program	U.S.\$ Commercial Paper Program	Total
Currency	Canadian Dollars	U.S. Dollars	–
Maturity	1 day-3 years*	1-270 day(s)	–
Authorized	C\$33.0	C\$15.0	C\$48.0
Outstanding	C\$18.0	C\$1.0	C\$19.0
Available	C\$15.0	C\$13.9	C\$29.0

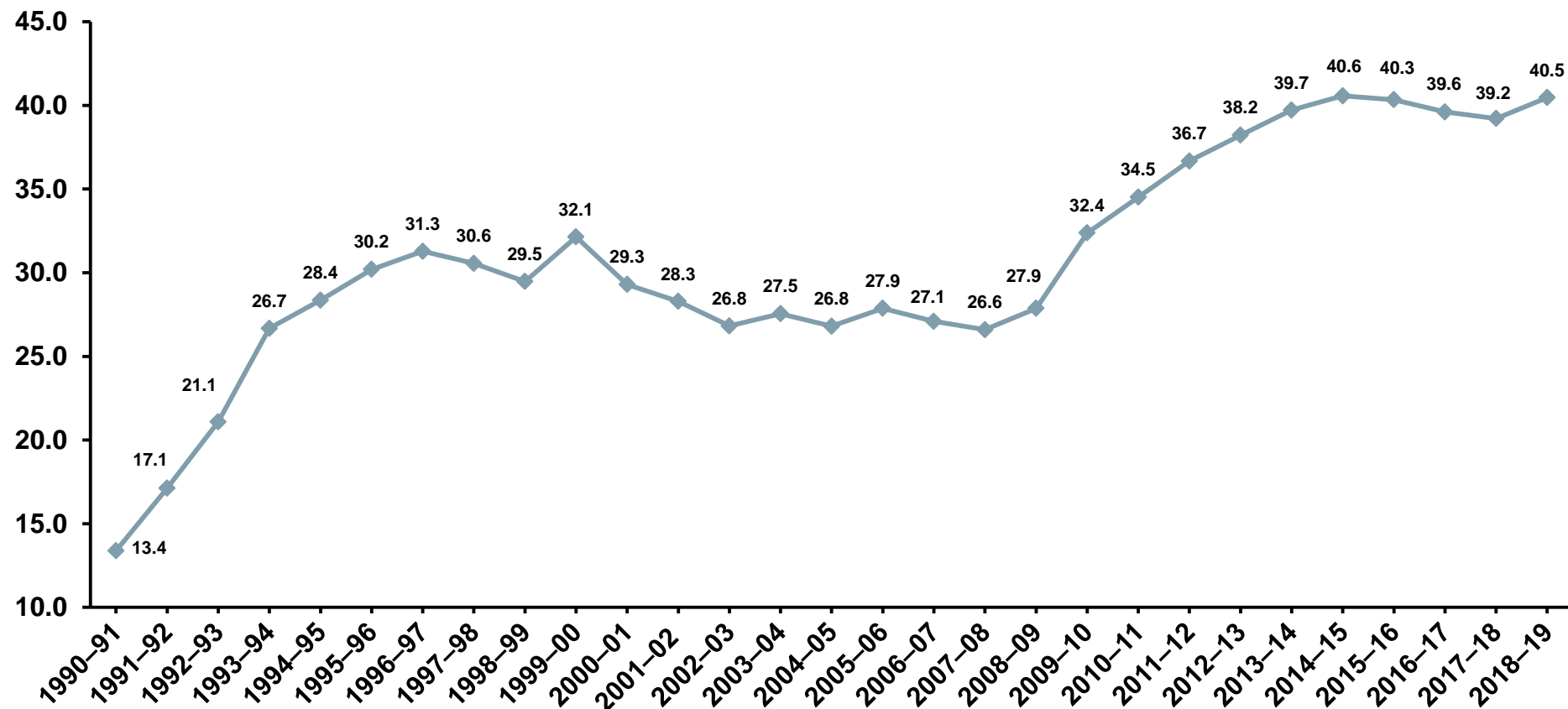
*Regular issuance of 3M, 6M and 1Y T-Bills

Note: As of October 31, 2018. Numbers may not add due to rounding.

Net Debt-to-GDP

- In 2018–19, the net debt-to-GDP ratio is projected to be 40.5 per cent, or 0.3 percentage points lower than the 40.8 per cent forecast by the Independent Financial Commission of Inquiry (Commission) report¹

Per Cent

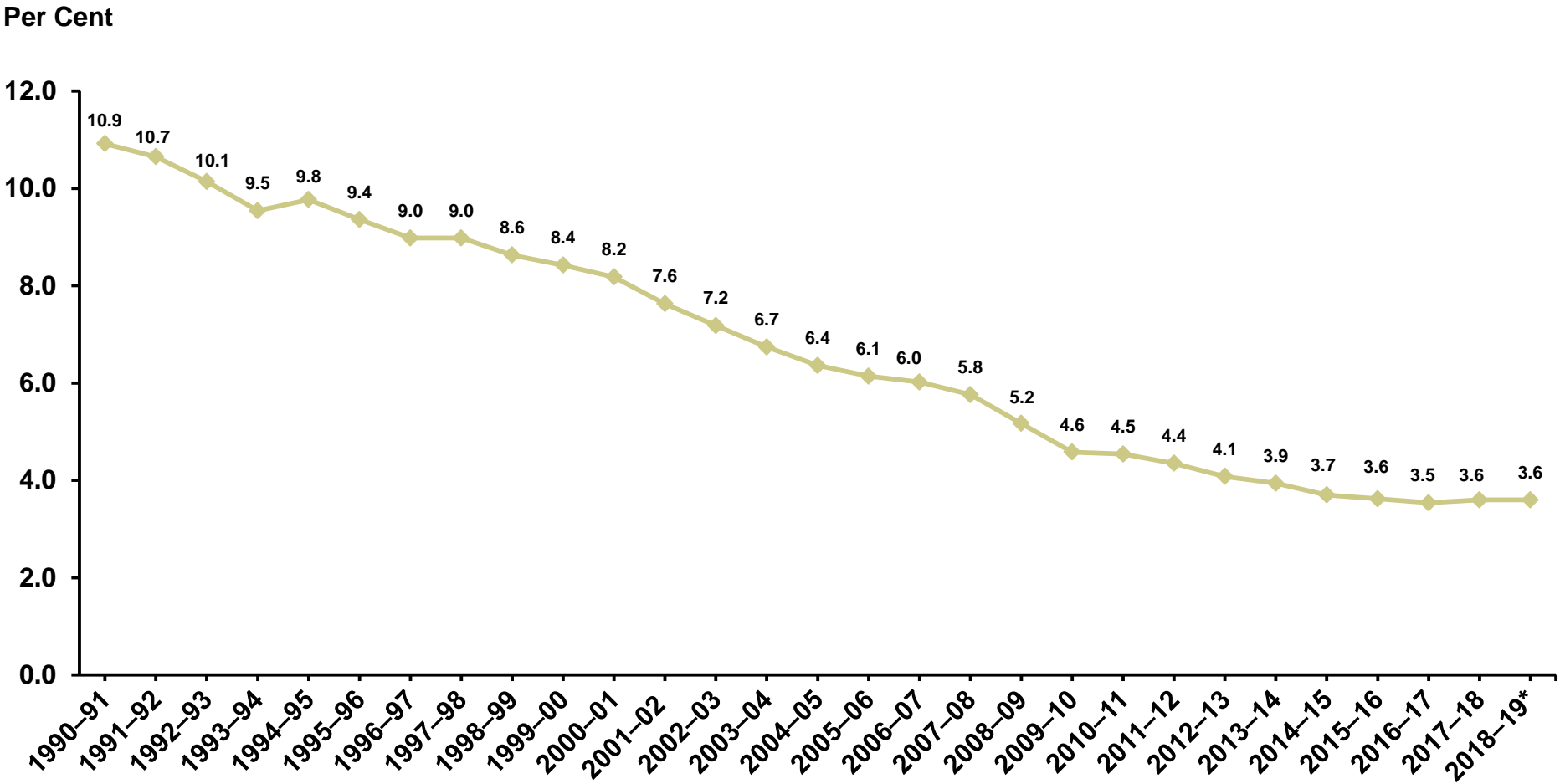


Notes: Net Debt has been restated to include broader public-sector net debt, starting in 2005–06. Net Debt has been restated retroactively from 2001–02 for the adjustments resulting from the revised accounting treatment of jointly sponsored pension plans.

¹To ensure consistency and comparability of numbers between the current outlook and the Commission's baseline forecast, the Commission's Net Debt as a Per Cent of GDP estimate has been revised from 40.5 per cent to 40.8 per cent after updating GDP with the most recent numbers from Statistics Canada's *Provincial and Territorial Economic Accounts, 2017*.

Sources: Statistics Canada and Ontario Ministry of Finance.

Effective Interest Rate (Weighted Average) on Total Debt

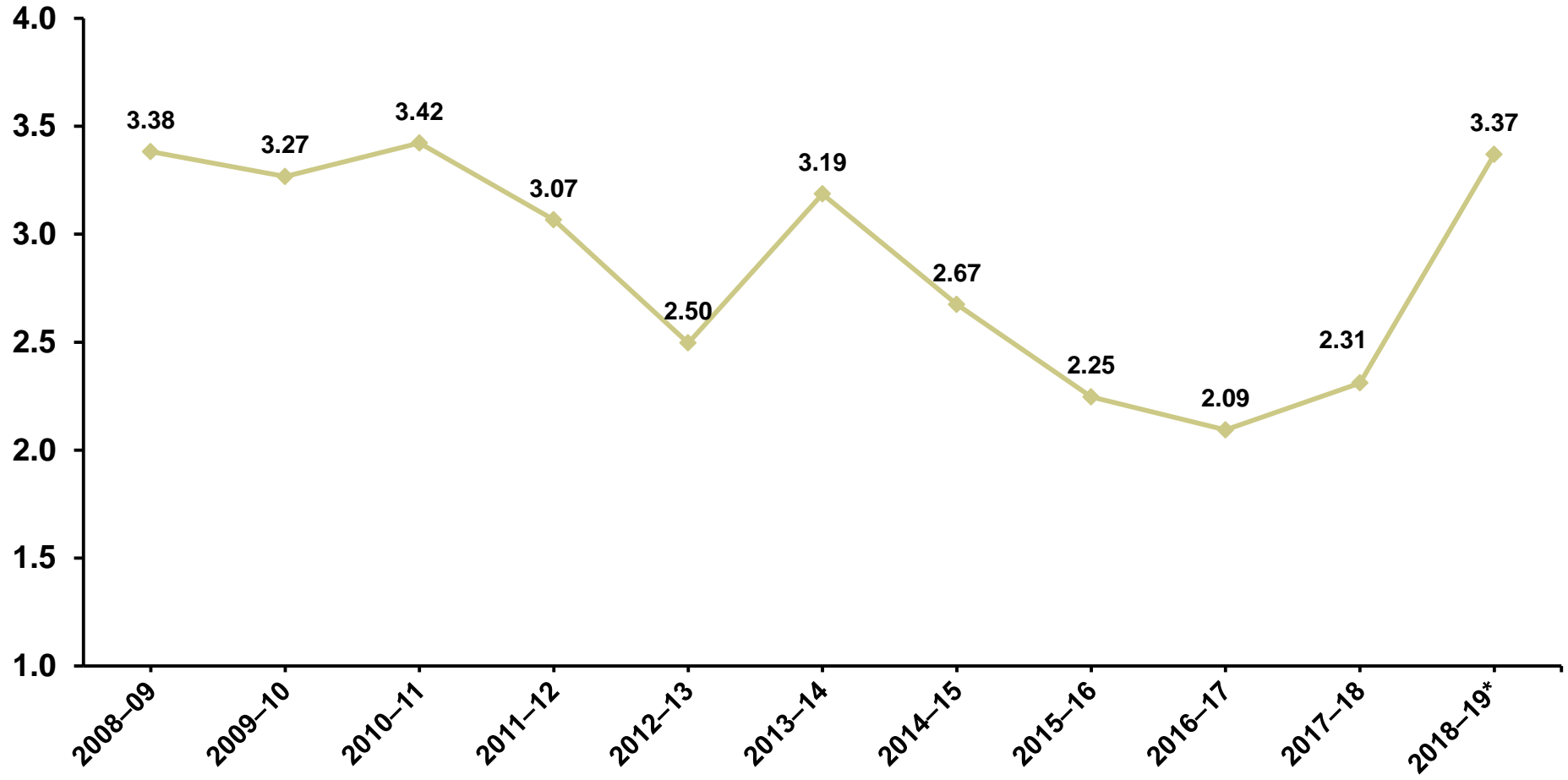


*As at September 30, 2018.

Sources: Public Accounts of Ontario (1990-1991 to 2017-2018), and Ontario Financing Authority.

Average Annual Ontario Borrowing Rates

Per Cent



*Projected average annual Ontario borrowing rate for 2018-19.

Source: Ontario Financing Authority.

Risk Management

- Monitor and manage debt maturity profile to limit refinancing risk
- Maintain a high level of liquid reserves and short term borrowing capacity
- Enforce strict credit limits for financial and investment counterparties
- Have collateralized swap agreements in place for most swap counterparties

	Exposure	Policy Limit
Foreign Exchange	0.2%	5.0%
Net Interest Rate Resetting	12.7%	35.0%

Of outstanding debt, as of October 31, 2018.

Note: Excludes Ontario Electricity Financial Corporation debt.

Economic and Fiscal Summary

- **Ontario's Economy**

- Ontario's economy grew by 2.8 per cent in 2017, following a 2.3 per cent rise in 2016

- **Ontario's Current Fiscal Outlook**

- The government is projecting a deficit of \$14.5 billion in 2018–19. This is a \$0.5 billion improvement compared to the baseline for planning provided by the independent Financial Commission of Inquiry
- The government is committed to restoring balance on a modest, reasonable and pragmatic timetable

- **Mortgage Market**

- Conservative mortgage market
- All high ratio residential mortgages issued by banks must be insured and the large majority is guaranteed by the federal government¹

¹For homes with a purchase price of less than \$1 million.

Ontario Overview

- Located in prime area with close ties to many major U.S. cities
- Ontario has a diverse economy with direct taxation powers and stable growth
- Ontario had a population of 14.3 million in 2018 and nominal GDP of \$826 billion in 2017, representing almost 40 per cent of Canada

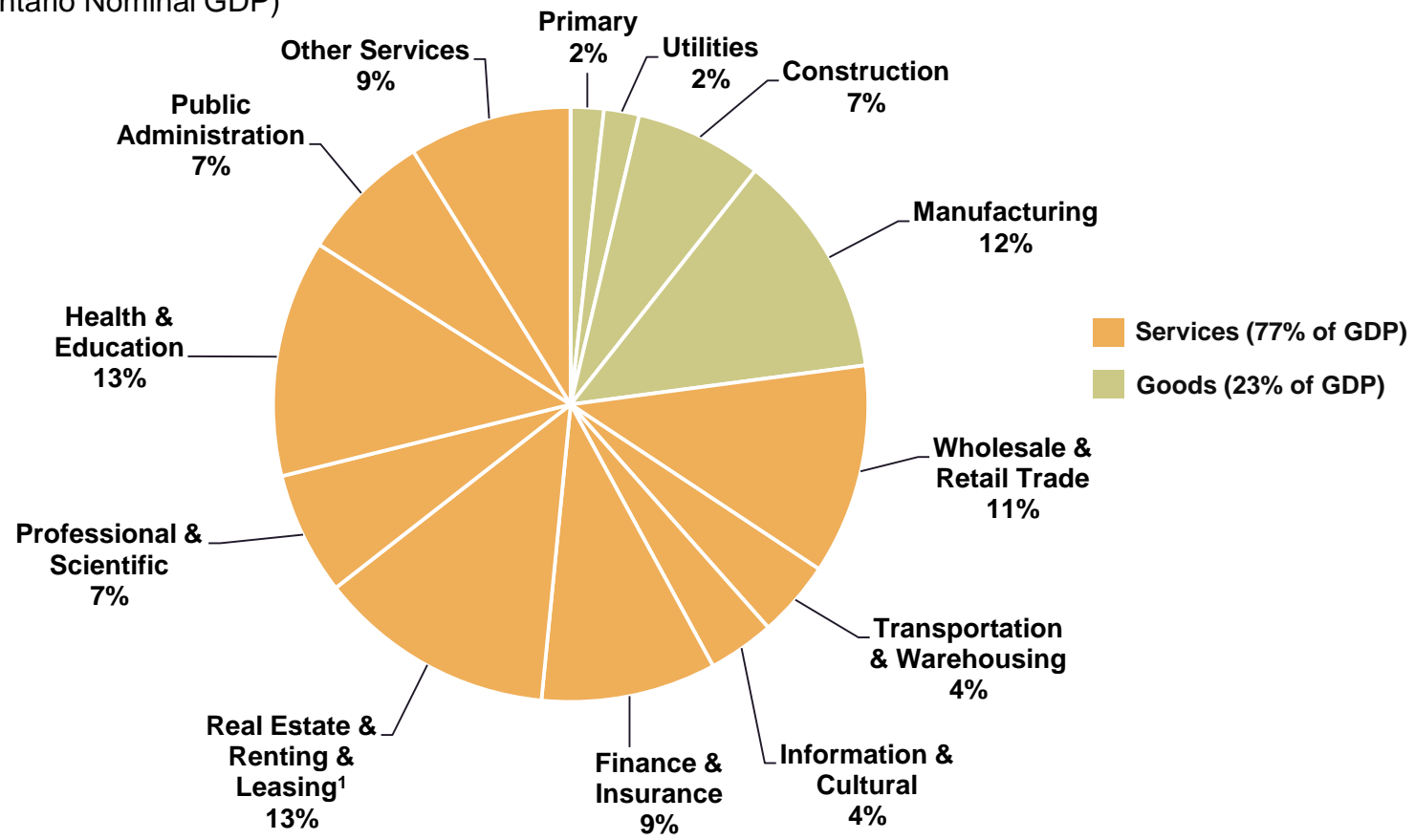


Ontario's Diverse Economy

- Ontario has a diverse economy, with extensive financial and business services, manufacturing and a smaller primary sector (which includes energy) compared to the rest of Canada

Structure of the Ontario Economy, 2017

(Per Cent Share of Ontario Nominal GDP)



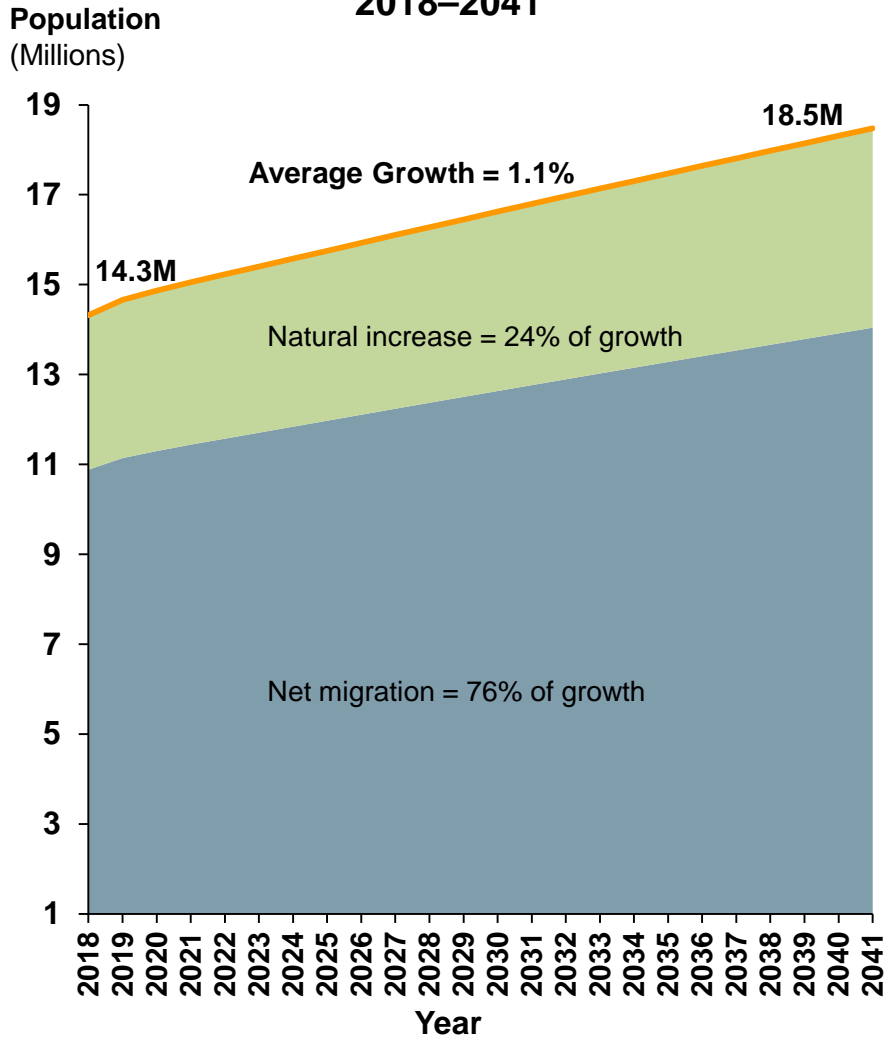
¹ Includes estimate of imputed rental income on owner occupied dwellings.

Sources: Statistics Canada and Ontario Ministry of Finance.

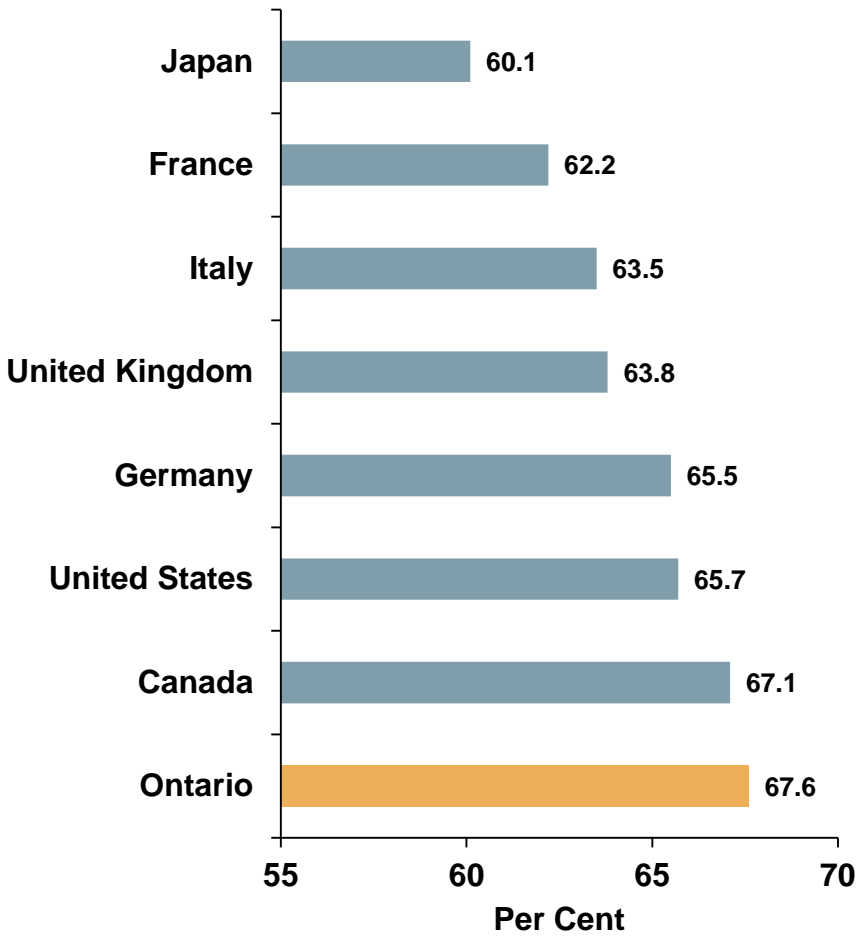
Note: Numbers may not add due to rounding.

Favourable Demographics

**Ontario Population Projection
2018–2041**



**Working-Age (15–64) Population Share
Compared to G7 (2017)**

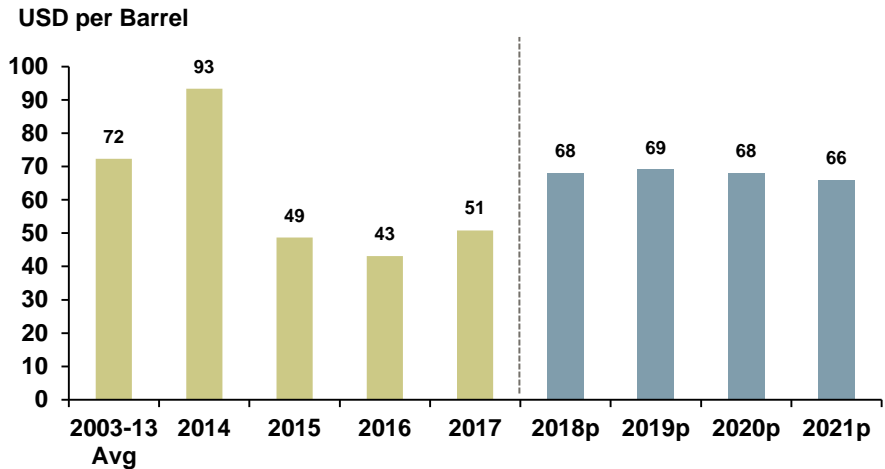


Sources: Statistics Canada for 2018 and Ontario Ministry of Finance projections.

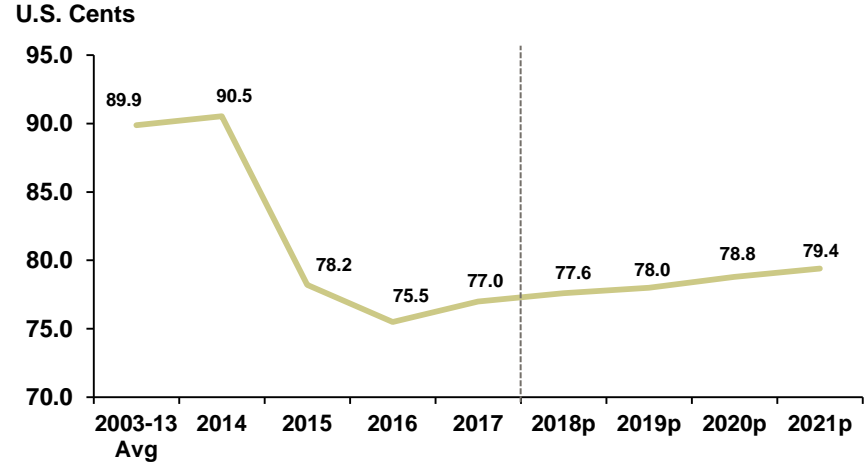
Sources: Statistics Canada and The World Bank.

Global Factors Still Supportive to Ontario's Growth

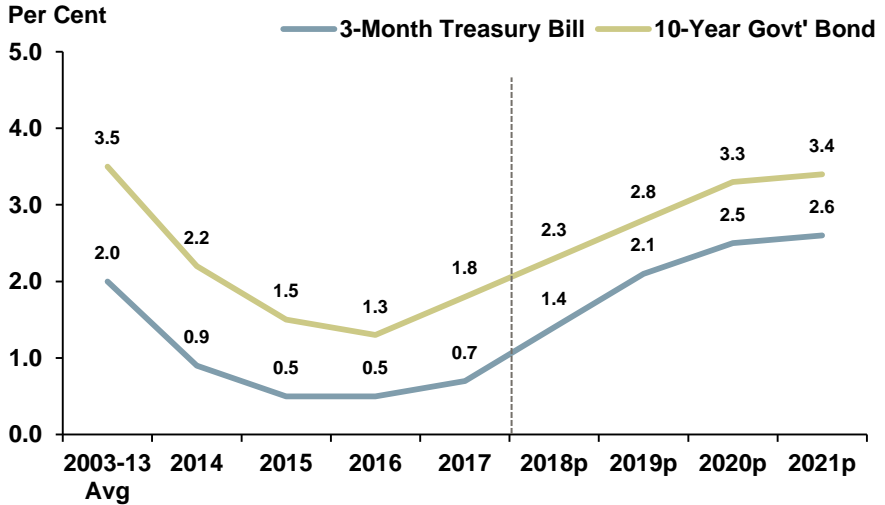
WTI Oil Prices



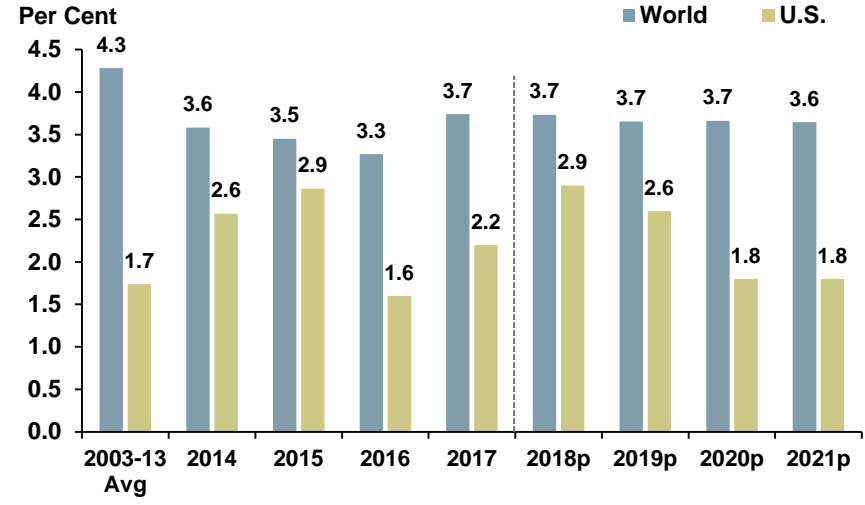
CAD/USD Exchange Rate



Canadian Interest Rates



World and U.S. Real GDP Growth

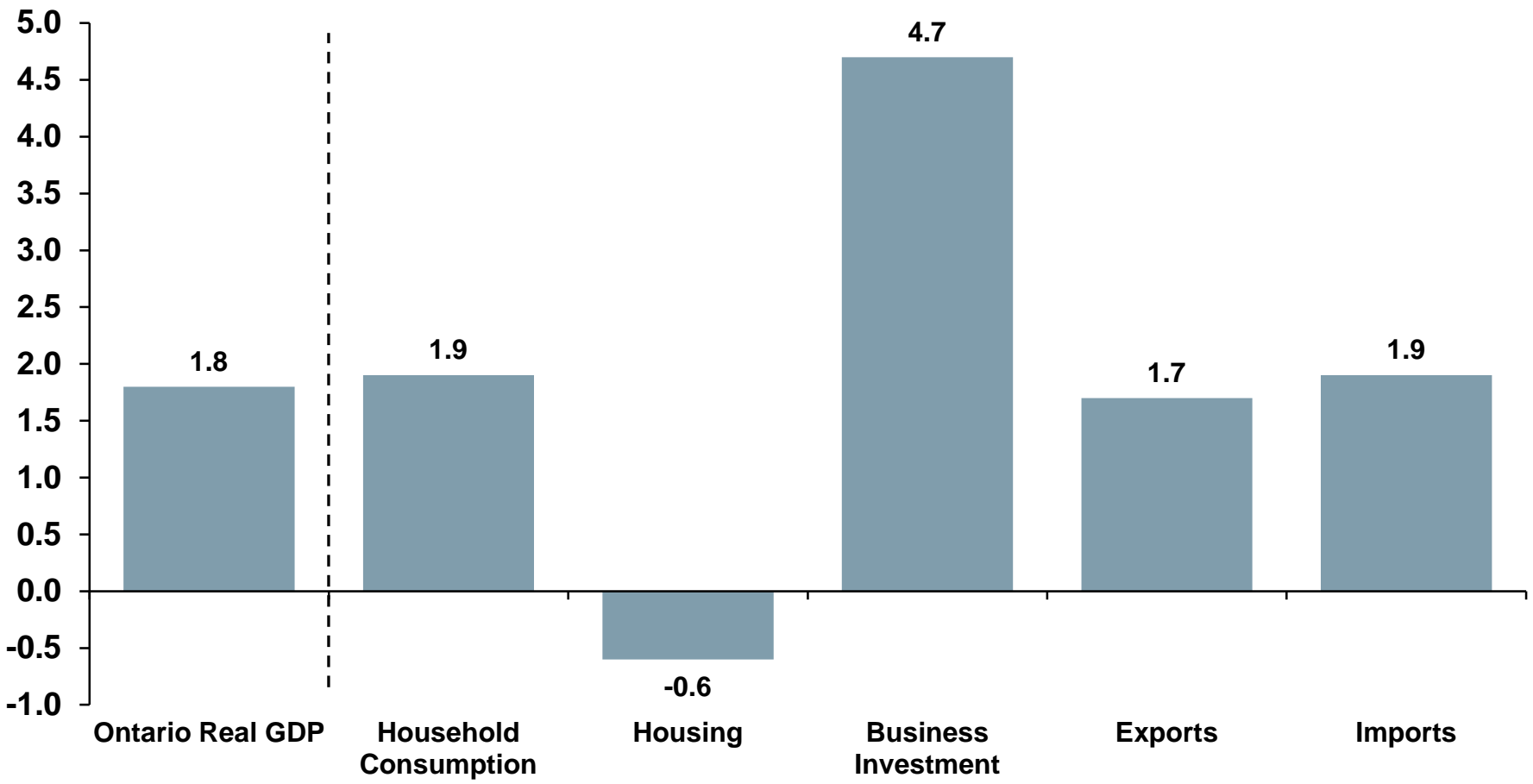


p = Ontario Ministry of Finance planning projection based on external sources.

Sources: U.S. Energy Information Administration, Bank of Canada, U.S. Bureau of Economic Analysis, "Blue Chip Economic Indicators" (October 2018), Ontario Ministry of Finance Survey of Forecasters (October 2018) and Ontario Ministry of Finance.

Ontario Economic Growth Broadly Based

Average Annual Growth from 2018 to 2021
(Per Cent)



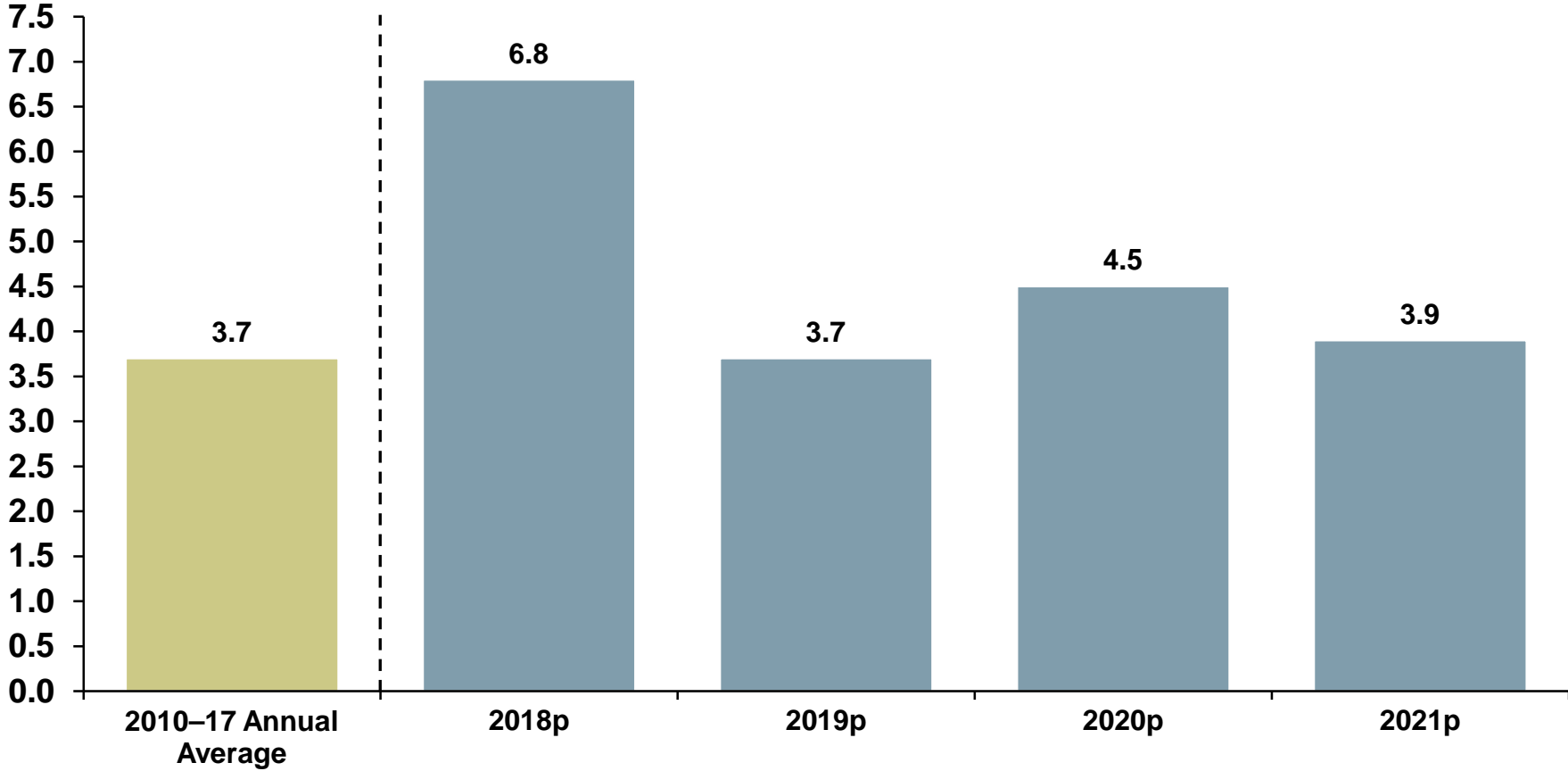
p = Ontario Ministry of Finance planning projection.

Note: Business investment includes non-residential construction, machinery and equipment and intellectual property products.

Sources: Statistics Canada and Ontario Ministry of Finance.

Strong Business Investment Growth Projected

Real Business Investment Growth
(Per Cent)



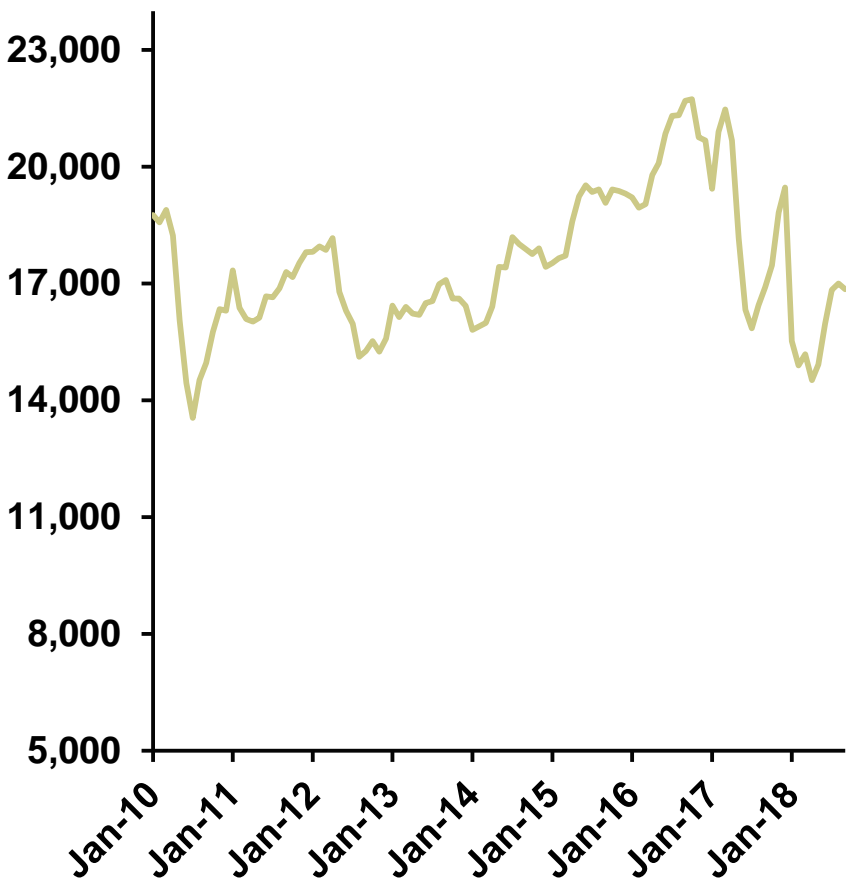
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Note: Business investment includes non-residential construction, machinery and equipment and intellectual property products.

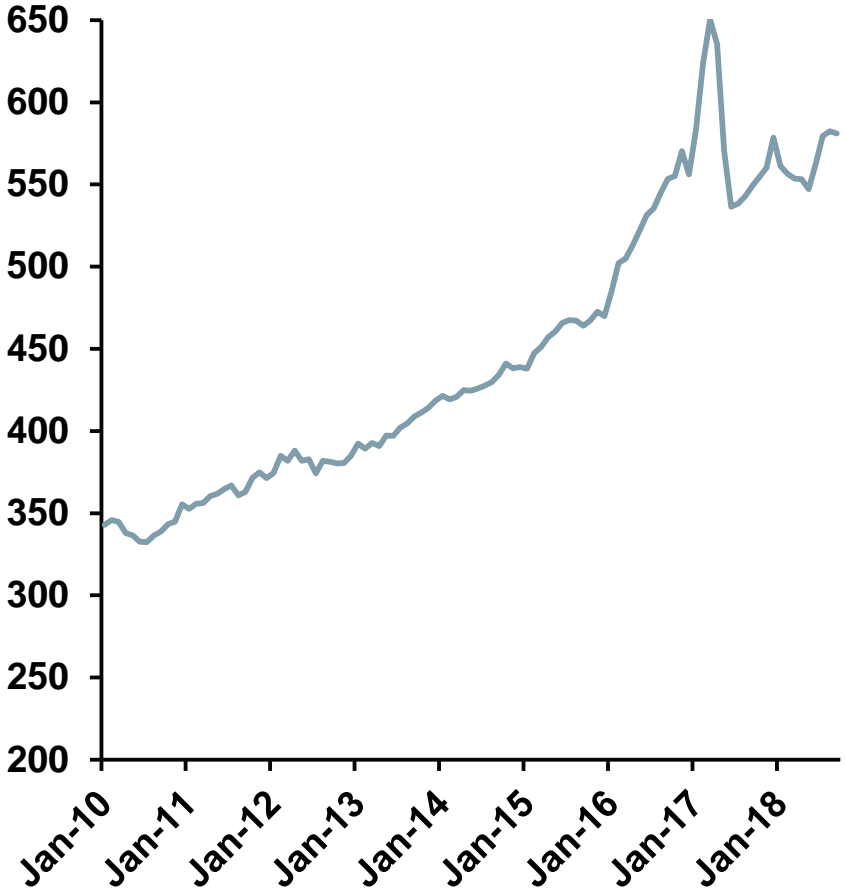
Sources: Statistics Canada and Ontario Ministry of Finance.

Ontario Housing Market Rebalancing

MLS Ontario Home Resale Volumes
(Units)



Average MLS Ontario Home Resale Price
(\$ Thousands)



Source: Canadian Real Estate Association.

Ontario's Fiscal Plan

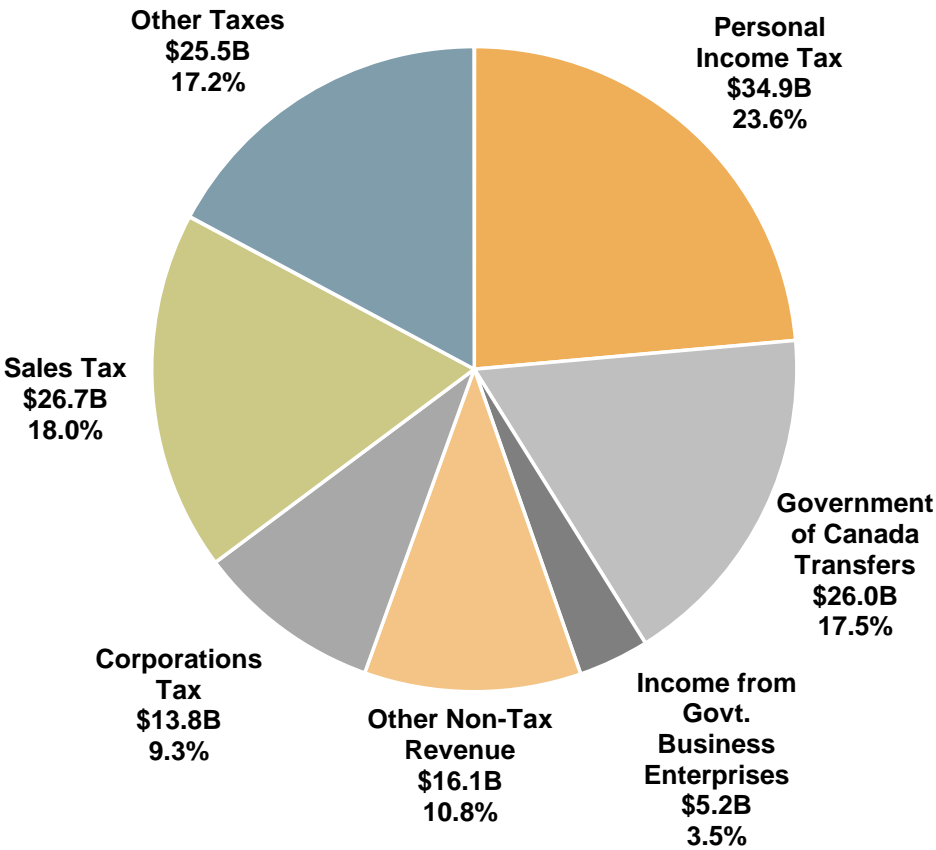
- The government is projecting a deficit of \$14.5 billion in 2018–19, a \$0.5 billion improvement compared to the \$15 billion reported by the Commission
- The government is committed to restoring balance on a modest, reasonable and pragmatic timetable

Fiscal Summary (\$ Billions)	Actual	Commission Revised Baseline	Current Outlook
	2017–18	2018–19	2018–19
Revenue	150.6	150.9	148.2
Expense			
Programs	142.4	152.4	149.2
Interest on Debt	11.9	12.5	12.5
Total Expense	154.3	164.9	161.8
Surplus/(Deficit) Before Reserve	(3.7)	(14.0)	(13.5)
Reserve	–	1.0	1.0
Surplus/(Deficit)	(3.7)	(15.0)	(14.5)
Net Debt as a Per Cent of GDP	39.2	40.8	40.5
Accumulated Deficit as a Per Cent of GDP	25.3	N.A.	26.1

Note: Numbers may not add due to rounding. To ensure consistency and comparability of numbers between the current outlook, the Commission's baseline forecast and prior year results, the Commission's Net Debt as a Per Cent of GDP estimate has been revised from 40.5 per cent after updating GDP with the most recent numbers from Statistics Canada's *Provincial and Territorial Economic Accounts, 2017*.

Composition of Revenue 2018–19

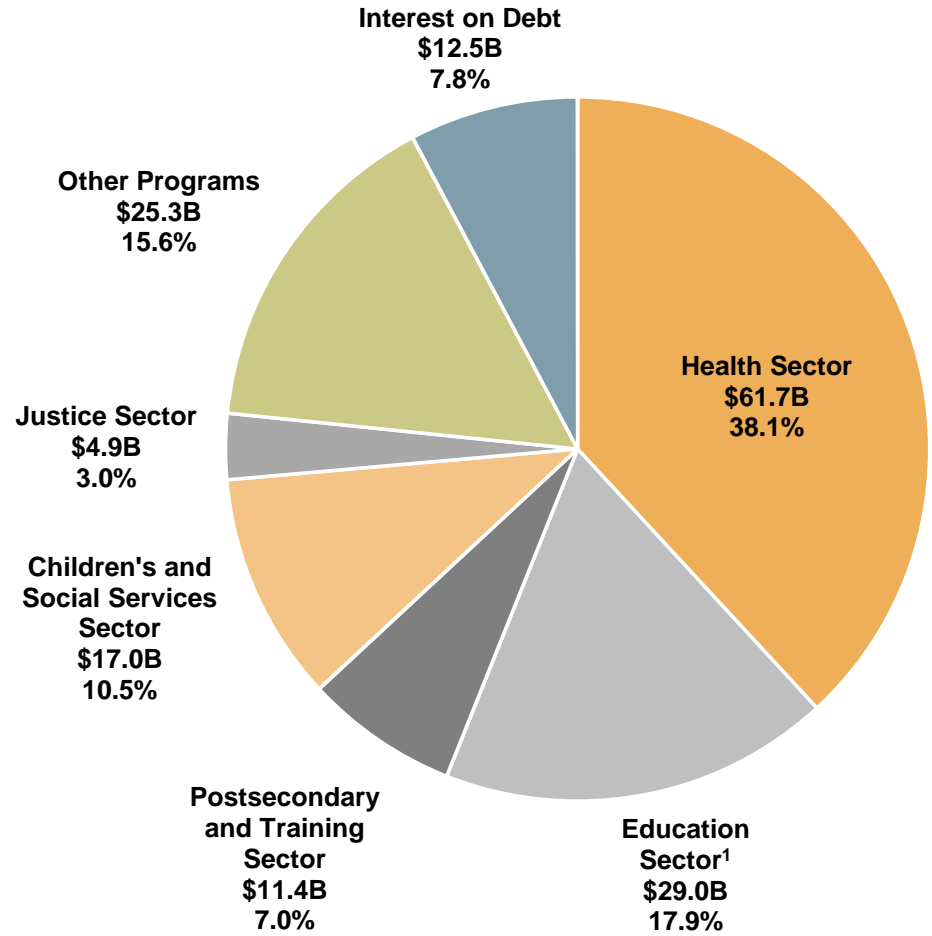
Revenue \$148.2 Billion



- Revenue sources are diversified
- Taxation revenues account for 68.1 per cent of total revenues
- Government of Canada transfers including the Canada Health Transfer, Canada Social Transfer and Equalization account for 17.5 per cent of total revenues
- Net Income from Government Business Enterprises (Liquor Control Board of Ontario, Ontario Lottery and Gaming Corporation, Hydro One Ltd, and Ontario Power Generation Inc.) account for 3.5 per cent of total revenues
- Other Non-Tax Revenues such as Fees, Donations and Other Revenues from the broader public sector, Vehicle and Driver Registration fees, and Sales and Rentals, account for 10.8 per cent of total revenues

Composition of Total Expense 2018–19





Expense \$161.8 Billion



- The largest expense is the Health Sector at \$61.7 billion, accounting for 38.1 per cent of total expense
- Interest on Debt, included as part of total expense, is \$12.5 billion, or 7.8 per cent of total expense

¹ Excludes Teachers' Pension Plan. Teachers' Pension Plan expense is included in Other Programs

Credit Ratings

Rating Agencies	Long-term Rating	Short-term Rating	Outlook
	Aa2 (N)	P-1	negative
	AA- (N)	F1+	negative
	AA (low)	R-1 (mid)	stable
	A+	A-1	stable



Investor Relations
Ontario Financing Authority
1 Dundas Street West, Suite 1200
Toronto, Ontario M5G 1Z3
Canada

Telephone: (416) 325-8000

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