

11 SEPTEMBER, 2019

Government bond market developments in Canada

Training Program – CEMLA

Nassau, Bahamas

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Outline

- 1. Context
 - Canada's Financial System
 - Fixed-Income Markets
 - Government Bond Markets
- 2. Government Bond Market Developments
 - Stock of debt outstanding and efforts to enhance liquidity
 - Decline in yields to historic lows
 - Electronification of markets / advances in electronic trading
 - Internationalization of Canadian debt markets, in particular GoC securities

Context – Key Features of Canada's Financial System

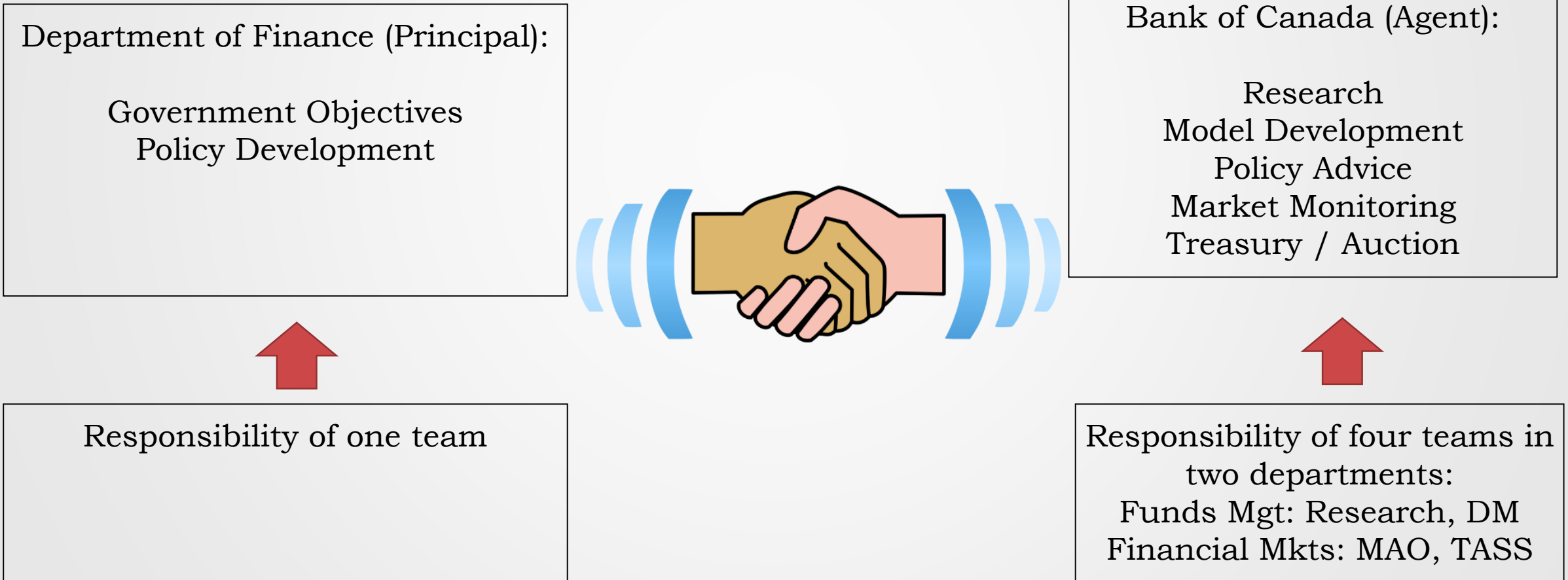
- Small open economy
- Confederation – 10 Provinces and 3 territories
- 3 Level Political System
- Flexible exchange rate regime
- Inflation targeting central bank
- Canada's Financial System Agencies & Committees
 - Bank of Canada (BoC)
 - Department of Finance (DoF)
 - Office of Superintendent for Financial Institutions
 - Canadian Deposit Insurance Corporation
 - Financial Consumer Agency of Canada
 - Coordination via committees involving the BoC, DoF, other gov't agencies and regulators

Context – Role of the Bank of Canada

- The Bank of Canada promotes the economic and financial welfare of Canada by fostering a stable and efficient financial system
- The Bank's four main areas of responsibility are:
 - Monetary policy
 - Financial system: The Bank promotes safe, sound and efficient financial systems, within Canada and internationally, and conducts transactions in financial markets in support of these objectives.
 - Currency: The Bank designs, issues and distributes Canada's bank notes.
 - Funds management: The Bank is the "fiscal agent" for the Government of Canada, managing its public debt programs and foreign exchange reserves.

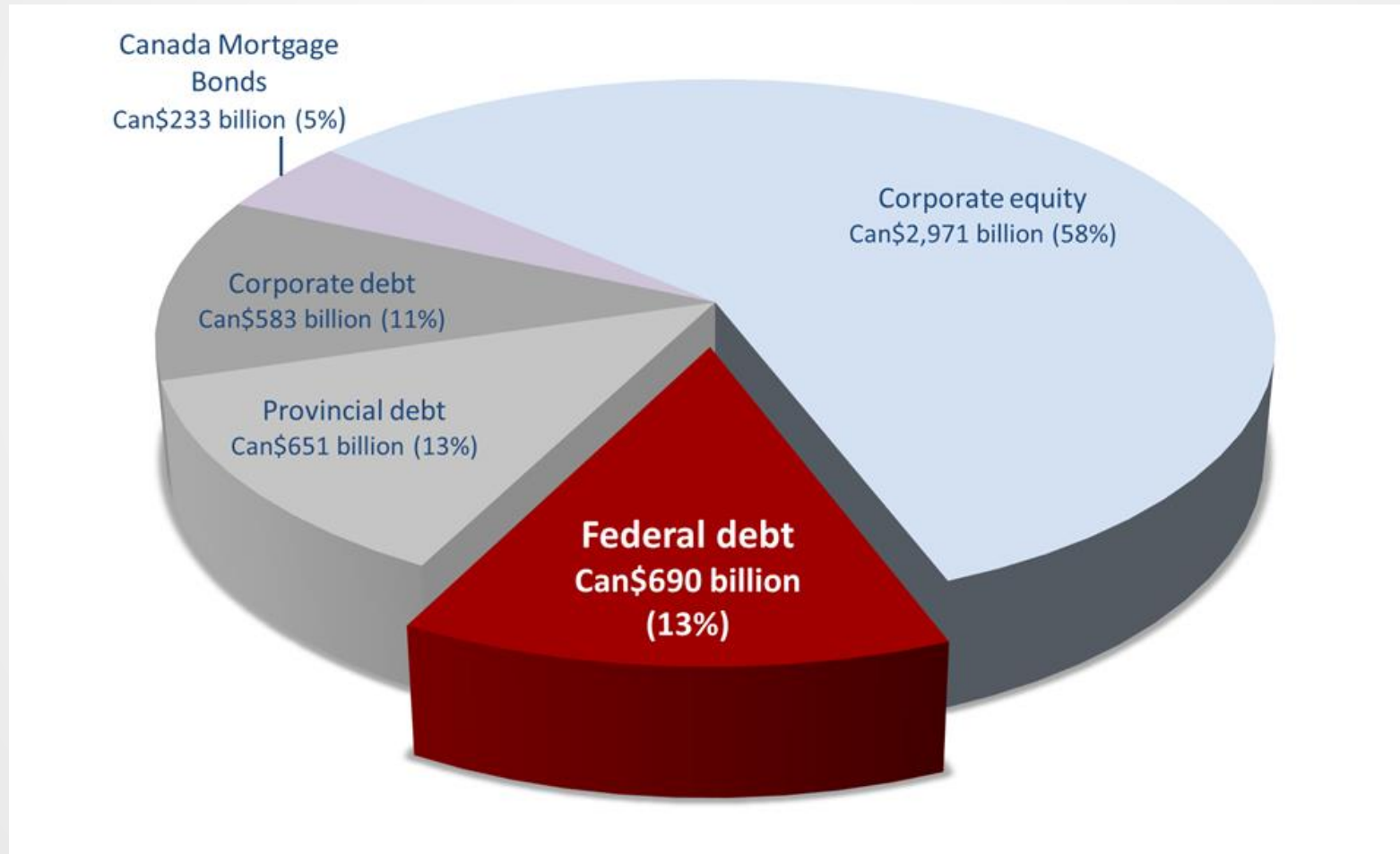
Context – Role of the Bank of Canada as Fiscal Agent

No DMO...Governance Structure: Principal – Agent Relationship



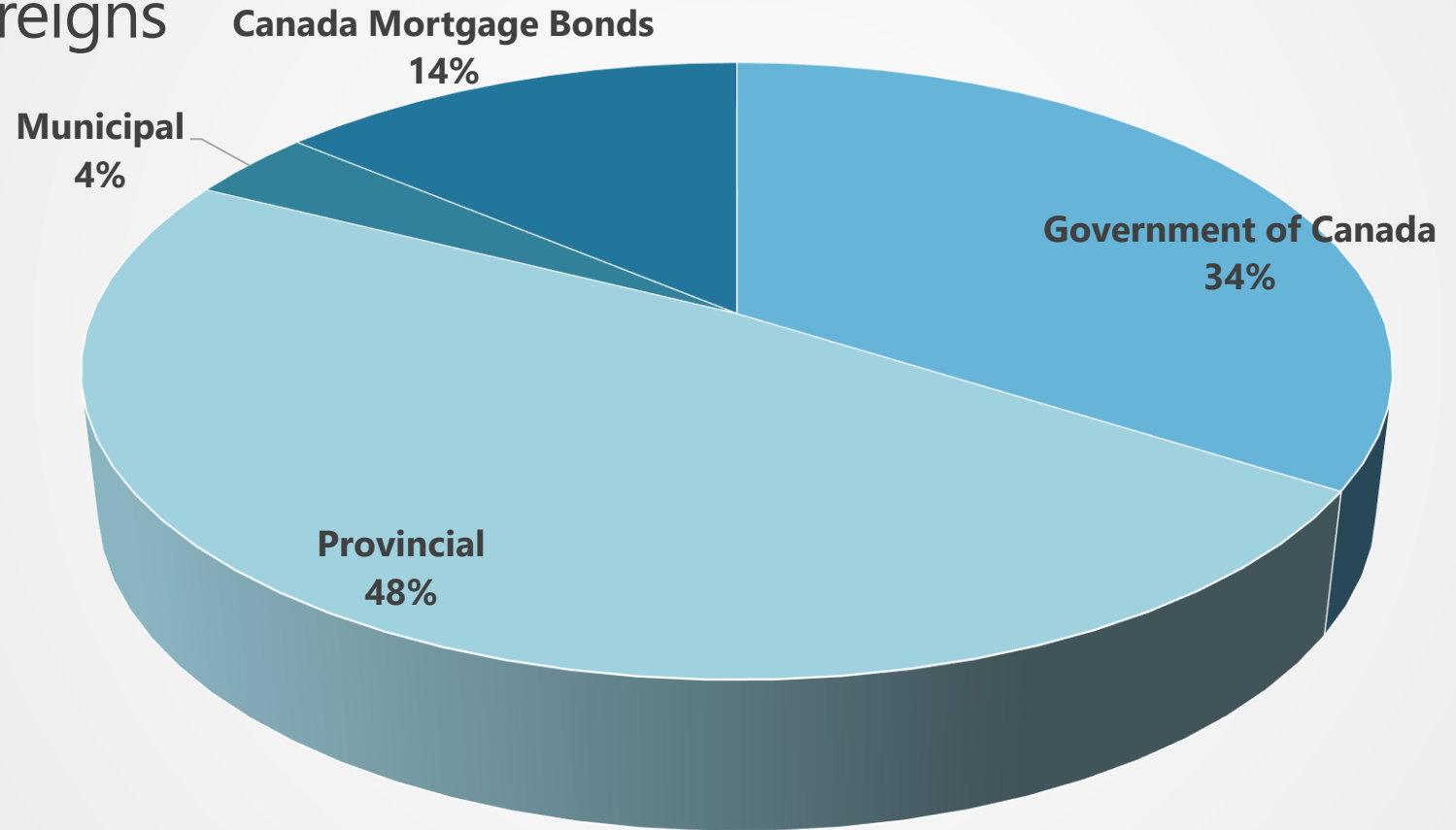
Context – Fixed-Income Markets

Chart 1: Size of Canadian capital markets by the largest asset classes, end of 2017



Context – Fixed-Income Markets

Chart 2: Outstanding Bonds by Sovereigns and Sub-Sovereigns



■ Government of Canada ■ Provincial ■ Municipal ■ Canada Mortgage Bonds

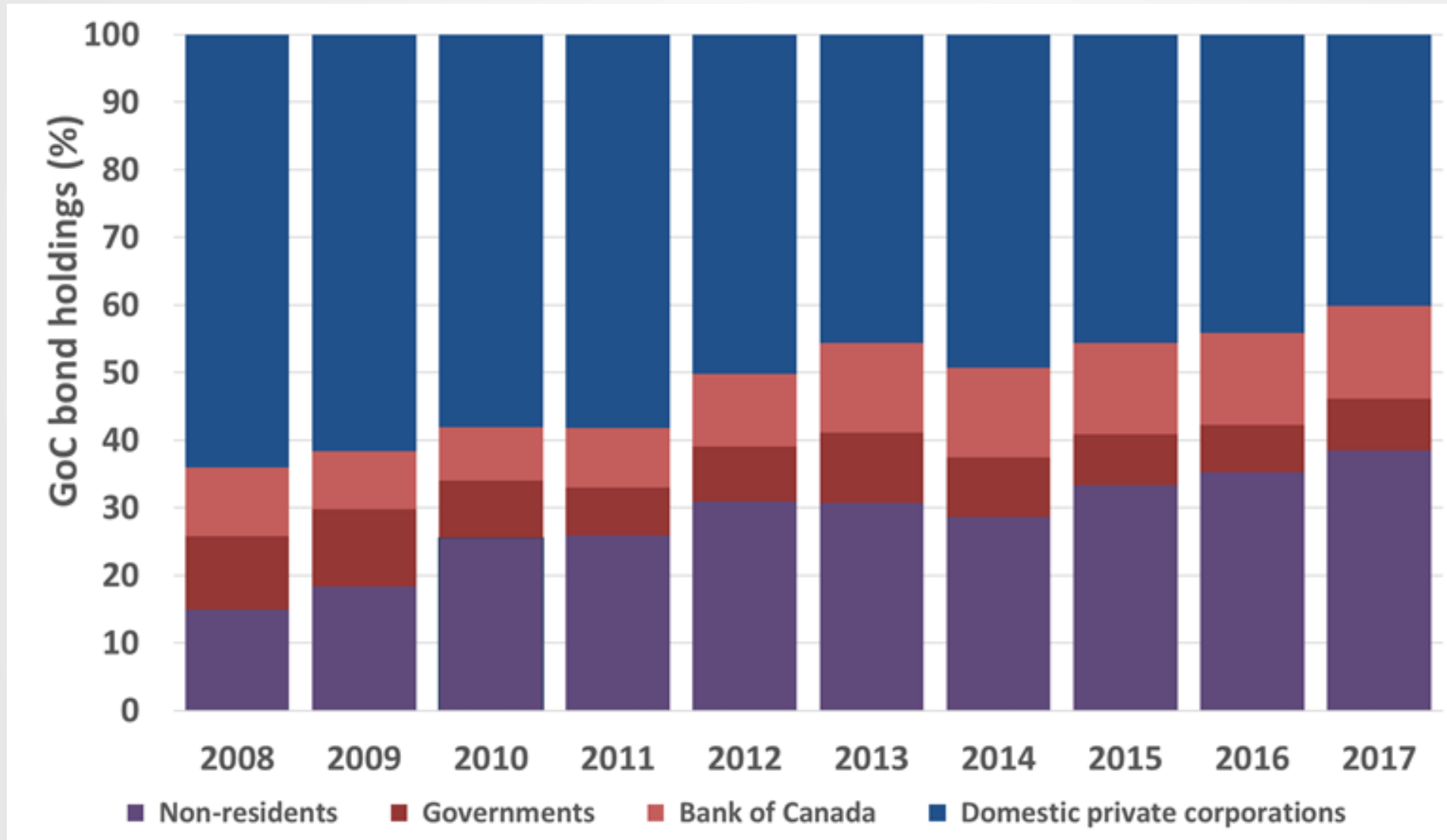
Context – Government Bond Markets

Table 1: Terms of the GoC securities contract

Borrower and issuer	The Government of Canada, which borrows money from investors in exchange for GoC securities.
A direct, unsecured and unconditional obligation	The GoC securities contract obliges the government to make payments on a direct loan (the government is both the issuer and the borrower) that is unsecured (not collateralized) and unconditional (no requirements must be met for payment).
Maturity date	The calendar date on which the government will redeem a security, fulfilling and ending the securities contract.
Par value, face value or principal	The amount of money the government will pay on the maturity date of the security and the amount used to compute the interest payments. For a GoC security, the par value is \$1,000.
Registered owner	The Canadian Depository for Securities Inc. (CDS) & Co., as nominee of CDS, is the registered owner of all GoC securities and facilitates the processing of payments. GoC securities exist only as electronic book entries in the records of CDS.
Beneficial owner	The individual or company that holds an interest in the security and so is entitled to receive any coupon payments and the principal amount on the maturity date of the security.
Coupon payment	A periodic interest payment made during the life of a bond. Securities such as T-bills that lack a coupon are called zero-coupon bonds.
Coupon payment dates	The dates when the government makes coupon payments. For GoC bonds with coupons, the coupon is paid on calendar dates semi-annually, and the maturity date of a bond is typically on one of the coupon dates.
Coupon rate	The per annum rate at which interest accrues. For nominal coupon bonds, the size of the payments is half the par value times the rate. For Real Return Bonds, the size of the payment is the par value times the rate times the inflation adjustment.

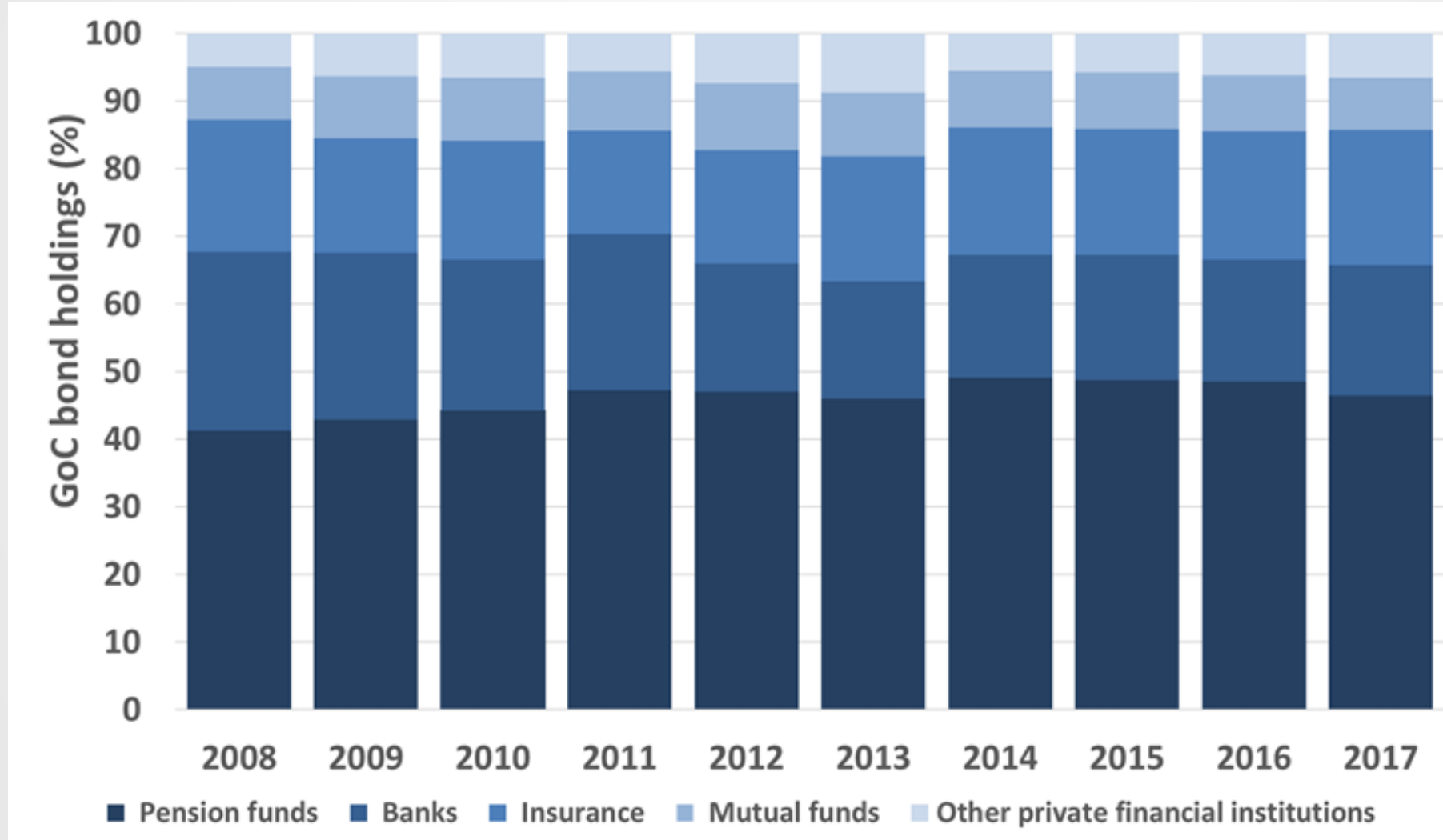
Context – Government Bond Markets

Chart 3: Holders of GoC bonds, by type



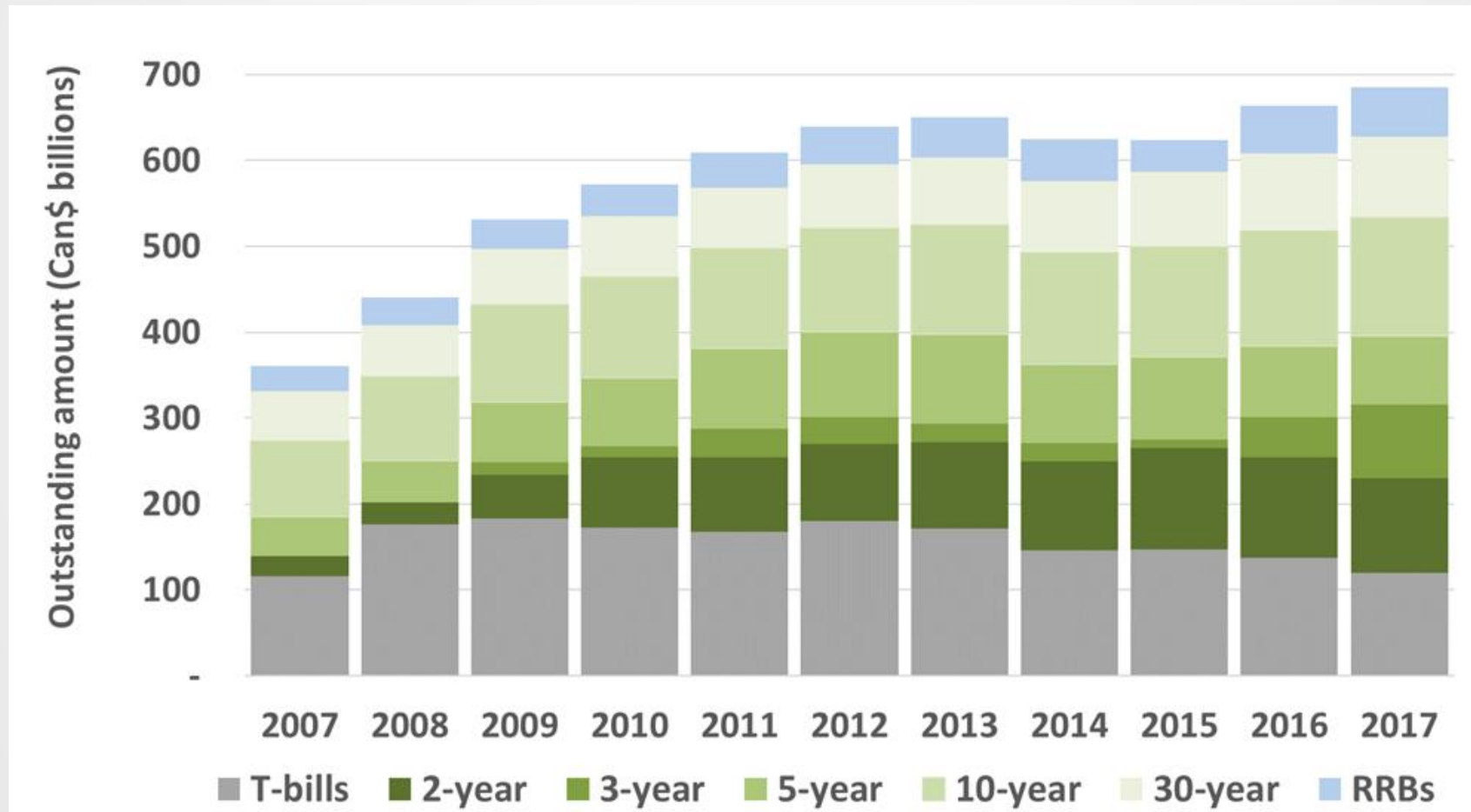
Context – Government Bond Markets

Chart 4: Domestic private holders of GoC bonds, by type



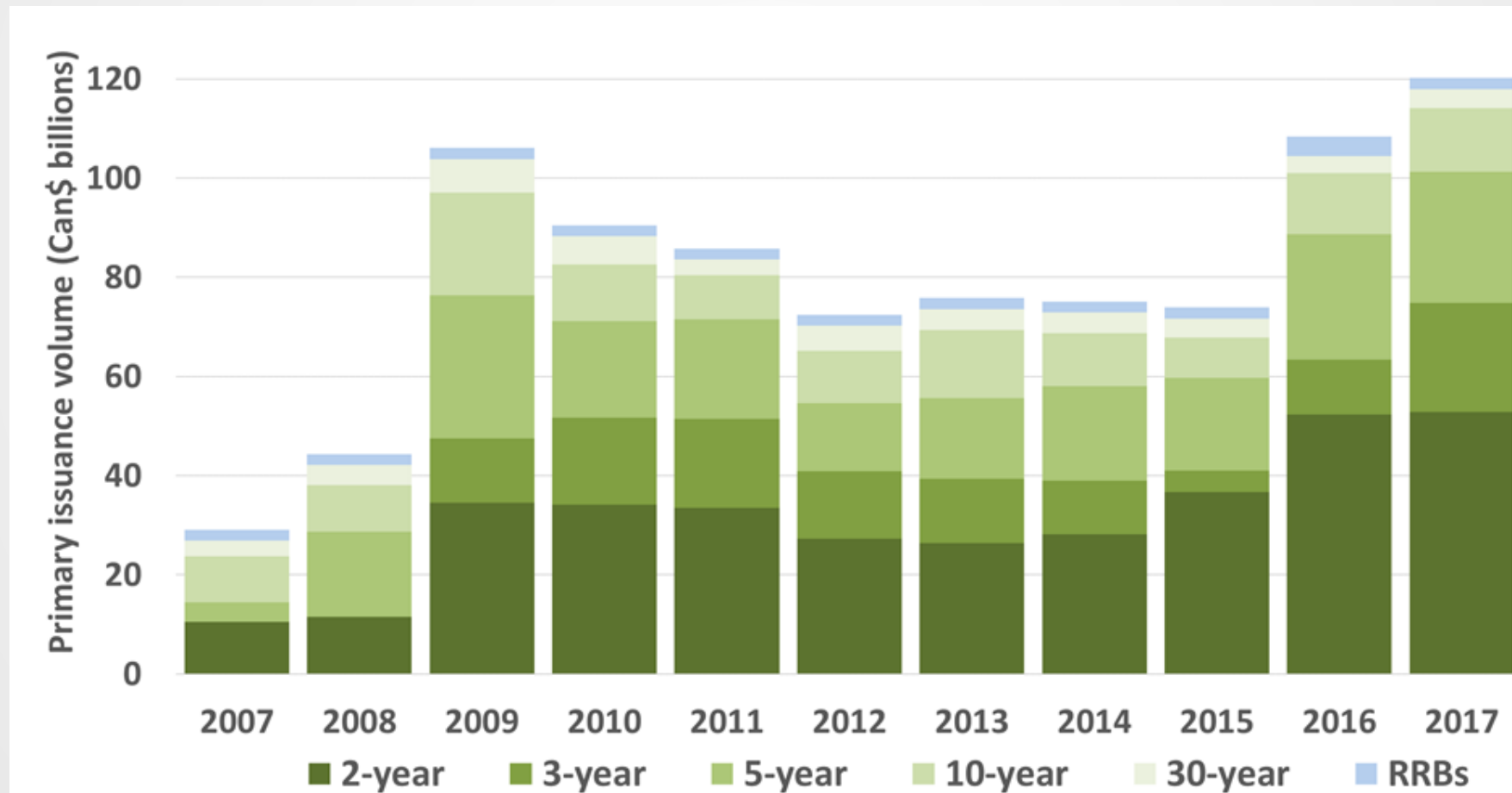
Context – Government Bond Markets

Chart 5: GoC securities outstanding, by security type at issuance



Context – Government Bond Markets

Chart 6: Annual gross issuance of nominal bonds and RRBs at the end of each year



Context – Government Bond Markets

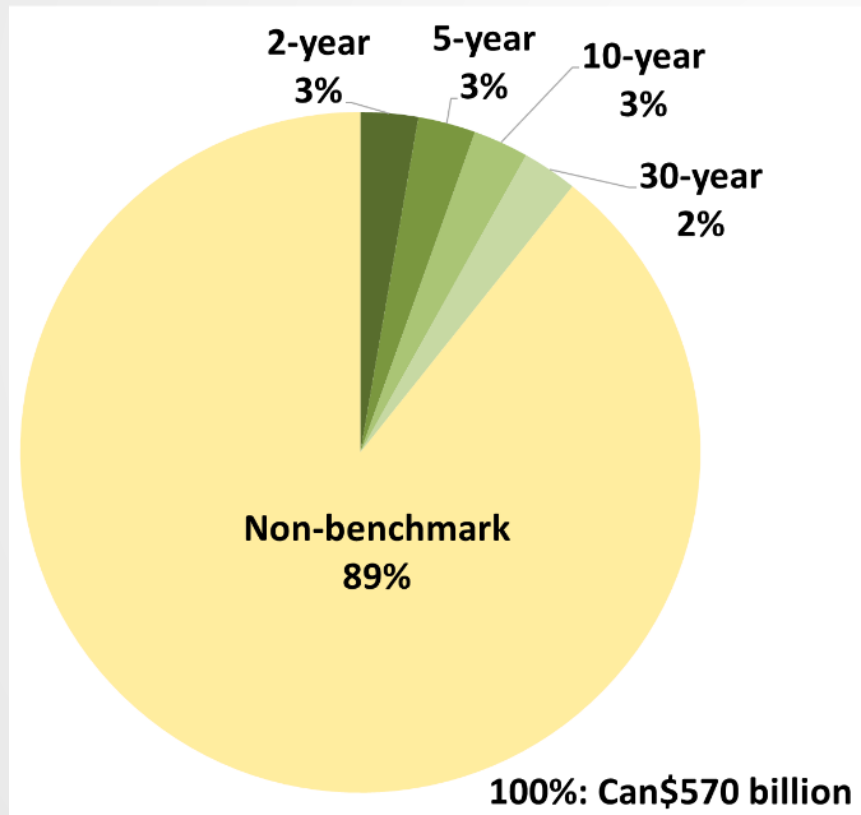
Table 2: Auction characteristics by security type

Security type	Auction frequency	Auction format
T-bills	Bi-weekly	Multiple price
2-, 3- and 5-year nominal bonds	1–4 times per quarter	Multiple price
10-year nominal bonds	1–2 times per quarter	Multiple price
Real Return Bonds	3–4 times per year	Uniform price
30-year nominal bonds	2–3 times per year	Multiple price
Ultra-long bonds	Ad hoc	Uniform price

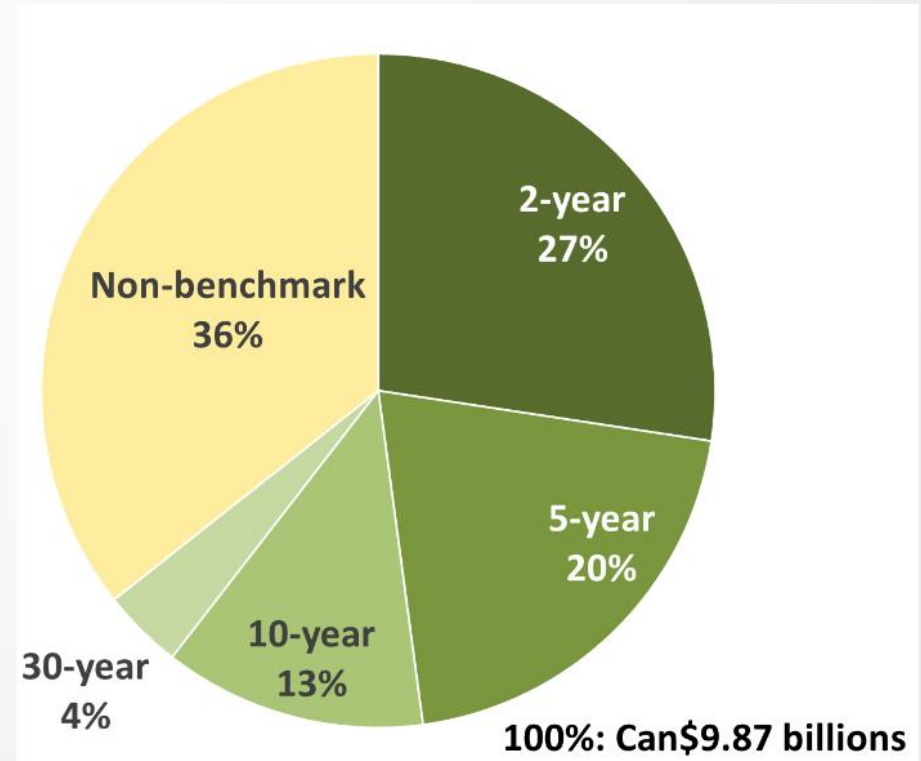
Context – Government Bond Markets

Chart 7: Chart 3: Amount outstanding and trading volume of GoC bonds, by benchmark type

3a: Amount outstanding by benchmark type



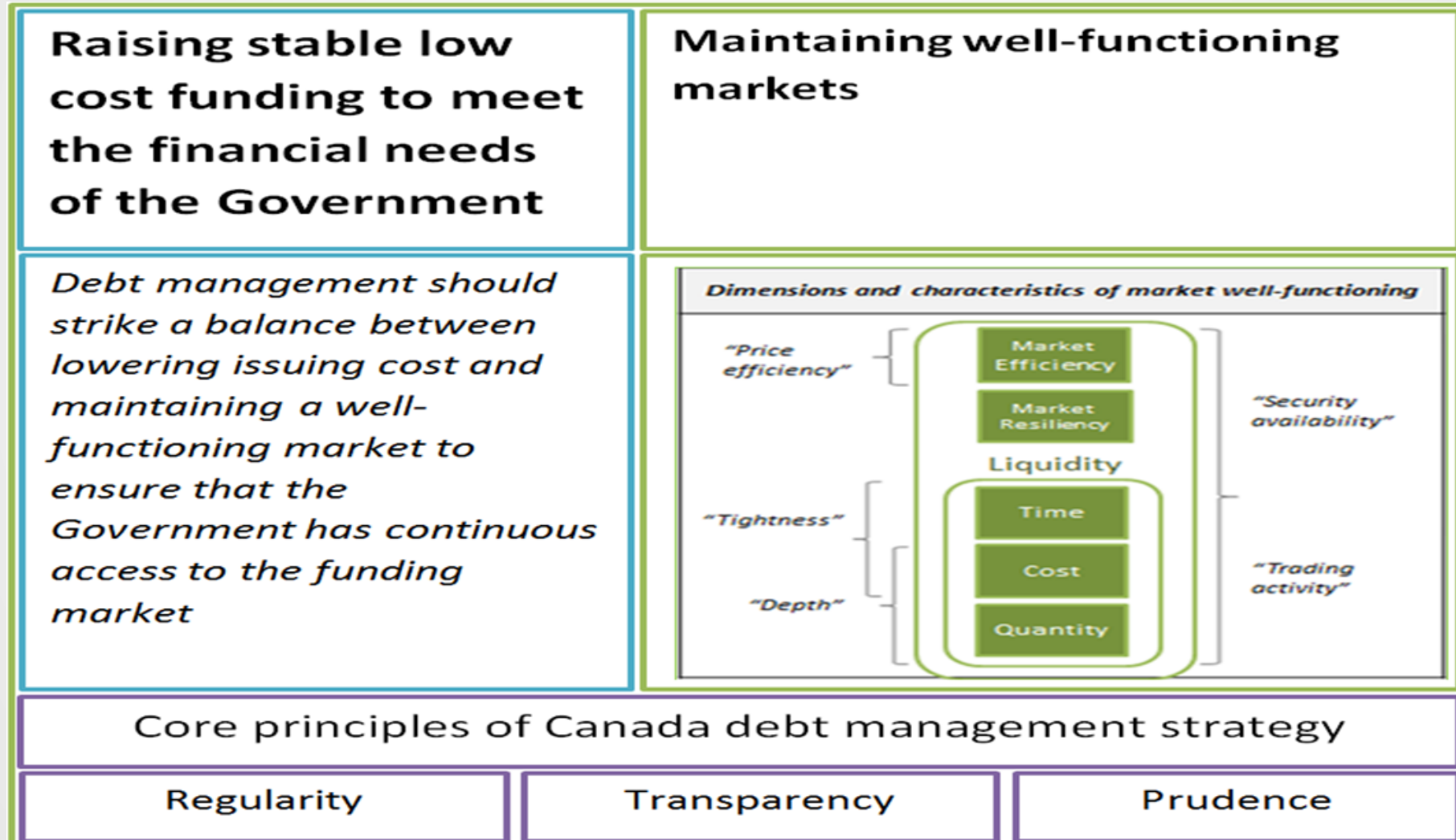
3b: Trading volume by benchmark type



Context - Government Bond Markets

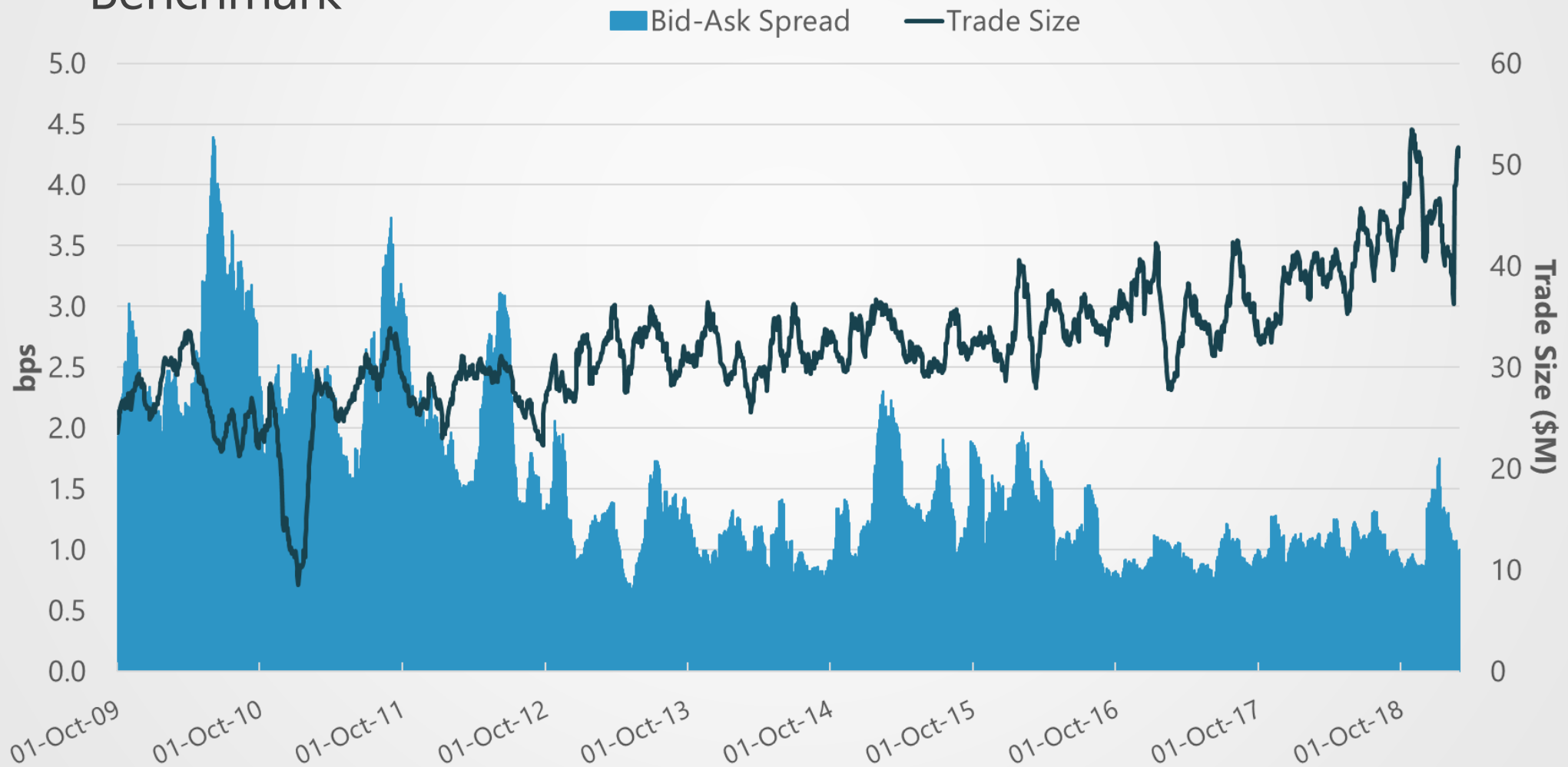
GoC Debt Management Strategy

Canada's Debt Management Objectives



Context - Government Bond Markets

Chart 8: Secondary Market Liquidity Attributes – 2Y GoC Benchmark

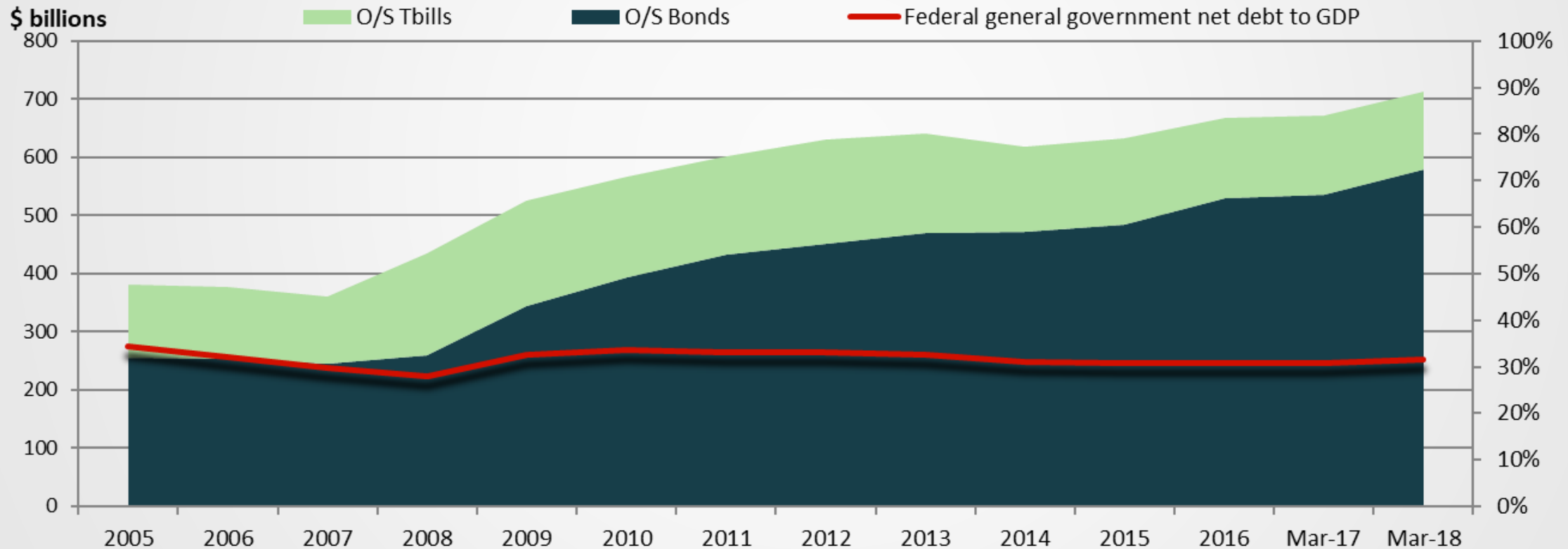


Government Bond Market Developments

1. Stock of debt outstanding and efforts to enhance liquidity

Chart 9:

Domestic Marketable Debt Outstanding



Source: Bank of Canada, Department of Finance, Statistics Canada, Projected

Government Bond Market Developments

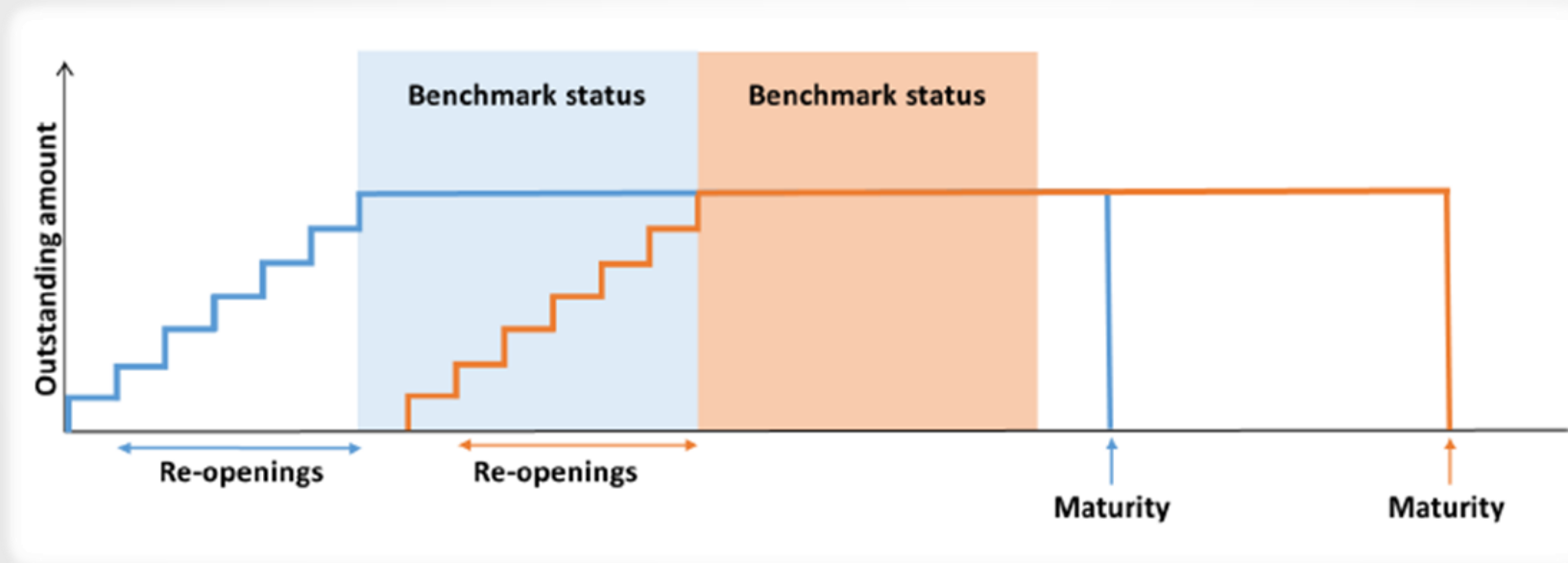
1. Stock of debt outstanding and efforts to enhance liquidity
 - Primary Market: Transparent & Consistent Issuance Process
 - Debt Management Strategy
 - Build large benchmark in key terms to maturity (e.g. 2-, 5-, 10- and 30-year)
 - Auction structure designed to ensure integrity
 - Quarterly Bond Schedule and Call for Tender process
 - Timely auction results release (averaged ~2 minutes)
 - Historical auction data available for download
 - Canada rare country AAA-rated by all major credit rating agencies.
 - Key message: created a thorough debt distribution framework and adjust issuance in response to market pressures
 - E.g. higher benchmark sizes in 10y and 30y, increased size of Tbill stock, cut auction sizes and reduced number of auctions in non-key maturities when govt revenues were higher than projected

Government Bond Market Developments

1. Stock of debt outstanding and efforts to enhance liquidity

Primary Market: Commitment to build liquid benchmarks

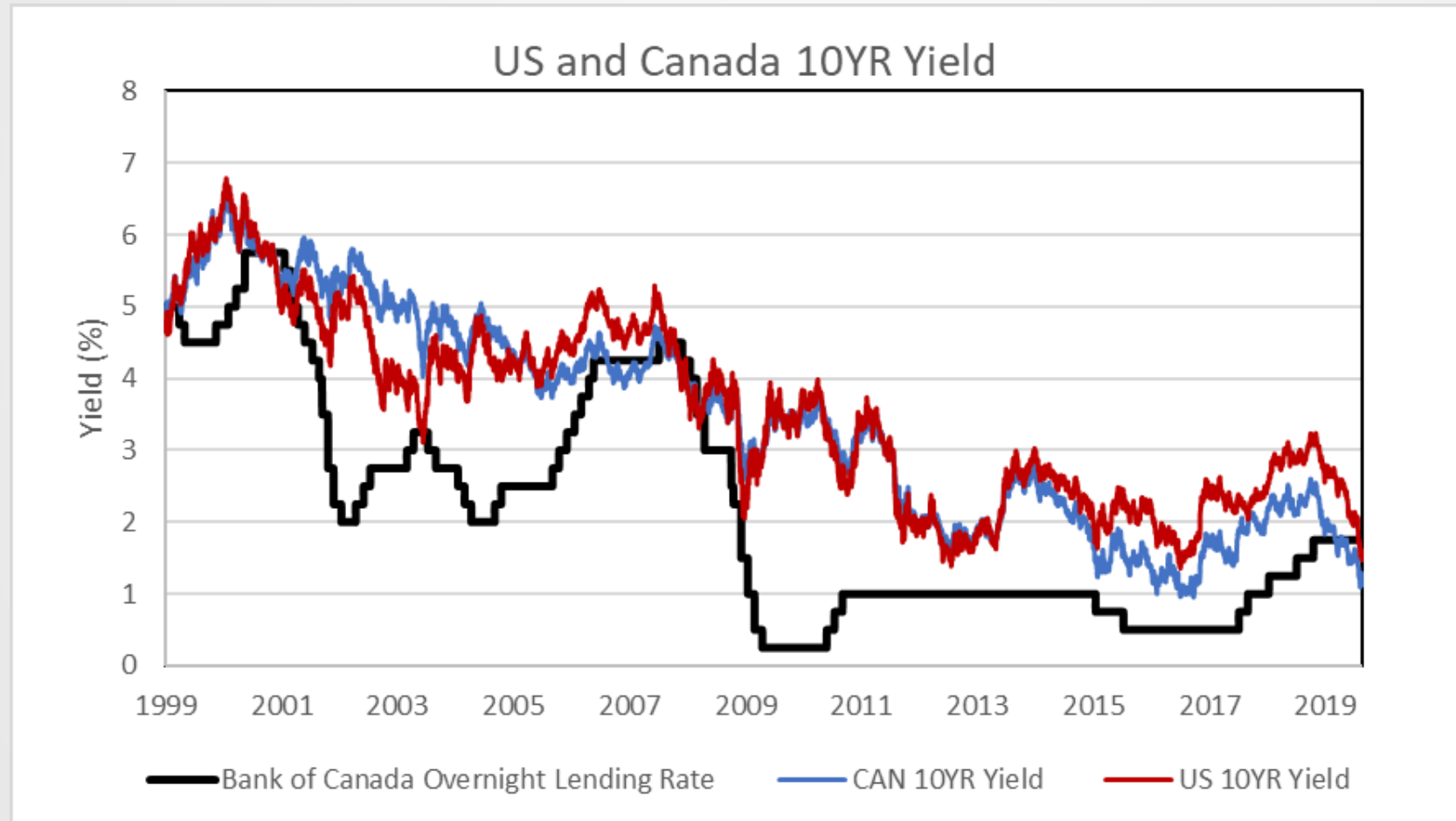
- Benchmark status typically achieved after multiple re-openings
- Target benchmark ranges are stated in the Debt Management Strategy



Government Bond Market Developments

2. Decline in yields to historic lows

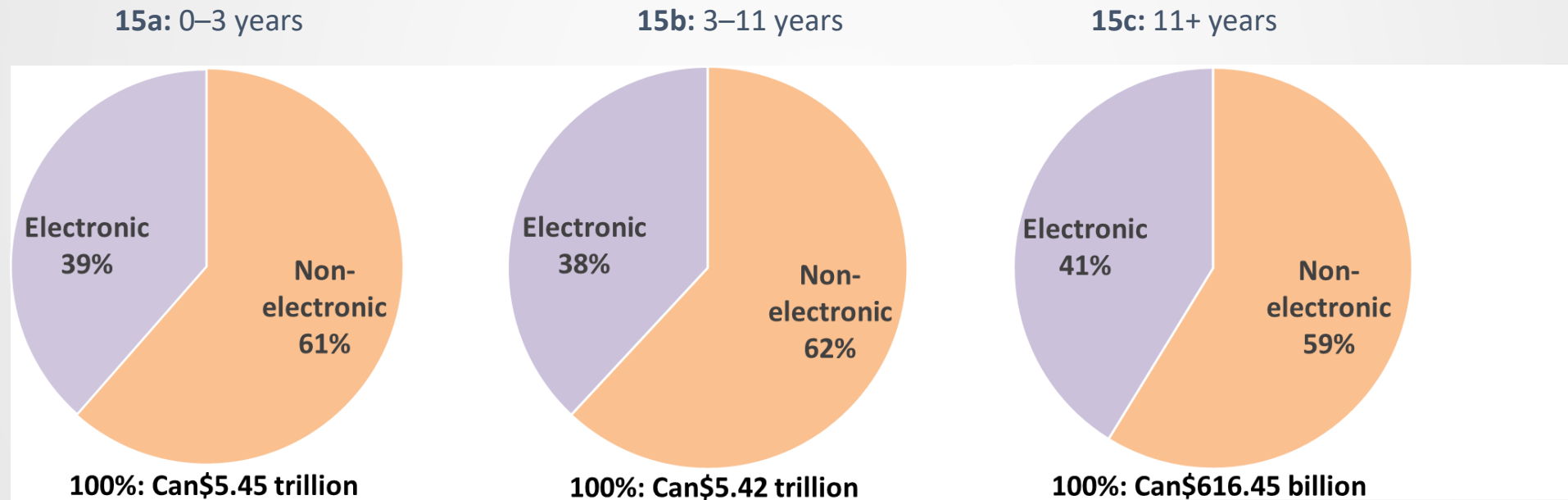
Chart 11: Long-term trend in bond yields and Policy Rates



Government Bond Market Developments

3. Electronification of markets / advances in electronic trading

Chart 12: Relative shares of electronic vs. non-electronic trading activity of GoC securities, by term to maturity

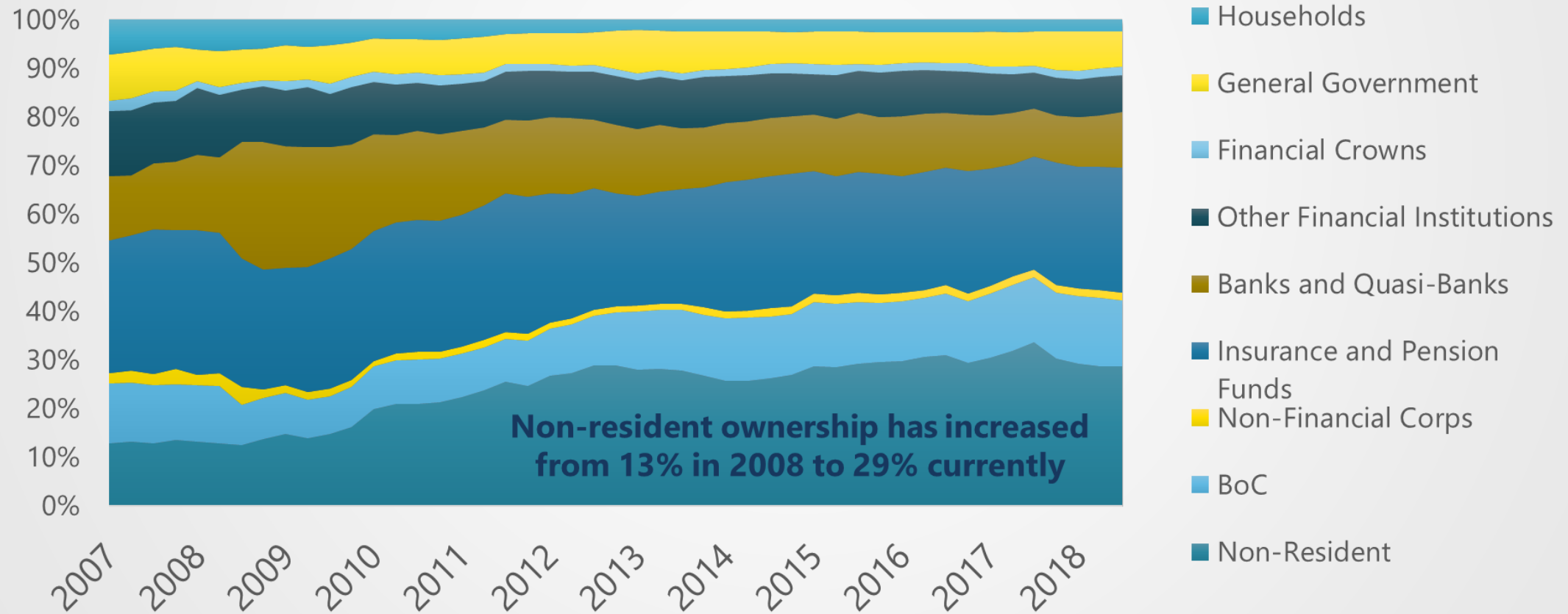


Source: Market Trade Reporting System

Government Bond Market Developments

4. Internationalization of Canadian debt markets, in particular GoC securities

- Chart 13: Ownership of GoC securities, by category type



Government Bond Market Developments

4. Internationalization of Canadian debt markets, in particular GoC securities

- Generally, the Bank of Canada does not consider increase in foreign holdings of government bonds as vulnerability (as is the case for some Emerging Market countries) because history has shown that Canadian domestic market is deep enough to absorb sharp declines in inflows or outflows.
- This is a benefit from having a developed domestic financial sector (pension funds, asset managers, insurance, corporate market, derivatives market) which has big needs for Government of Canada securities.

