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The Long-Term Evolution of House Prices: An International Perspective

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Lawrence Schembri
Deputy Governor
Bank of Canada

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Outline

Introductory remarks:

- **Motivation:** Housing is important; useful to provide context
- **Approach:** Examine house prices across time & countries (Advanced SOEs)

Long-run determinants of house prices:

- **Demand:** Macroeconomic, demographic, and credit conditions,
- **Supply:** Regulation and geography

Policy implications:

- **Macroprudential policy**: effectiveness & complementary role

Key messages

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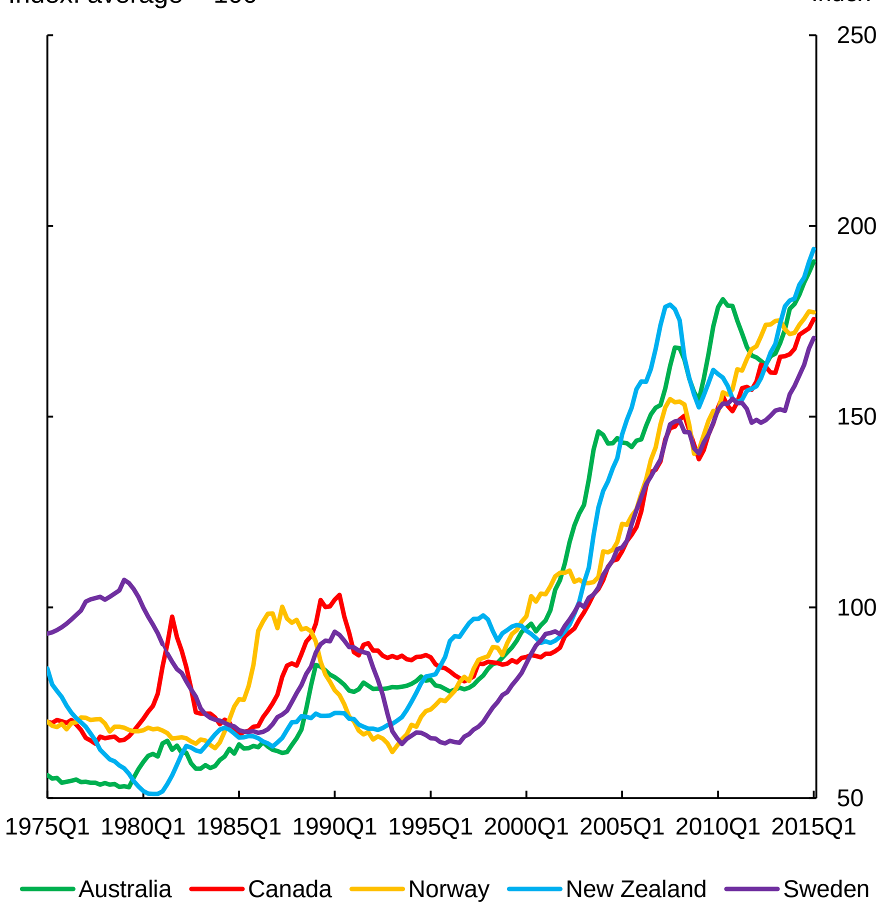
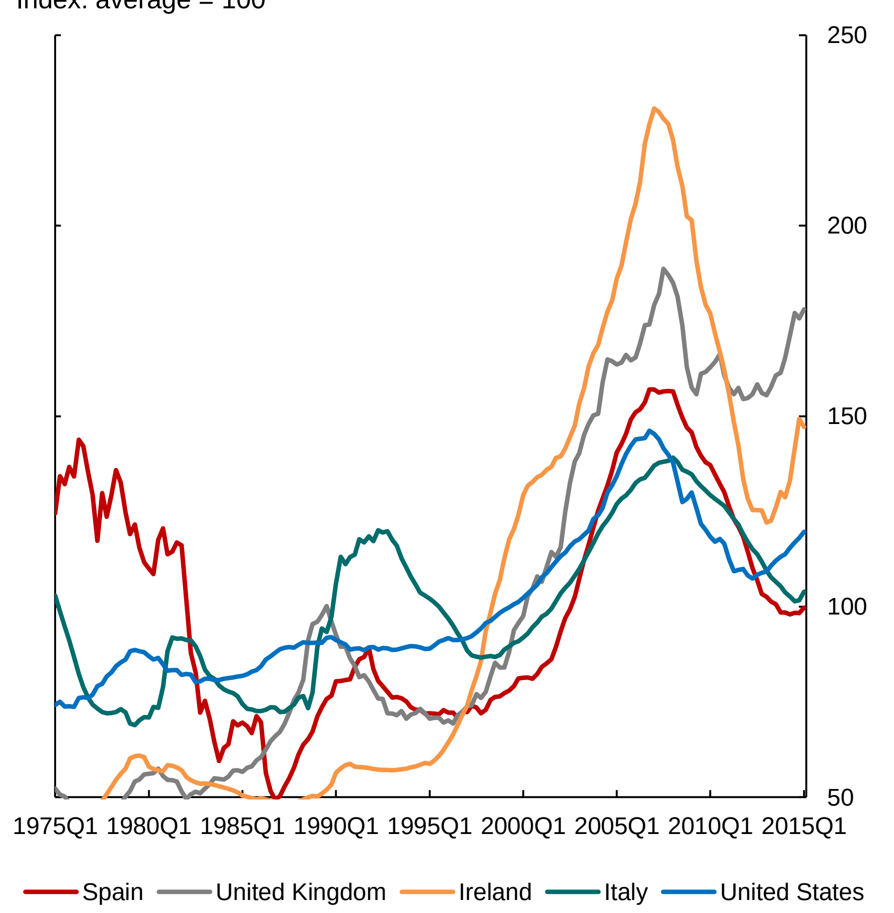
Real house prices have increased globally since 1995

a. Real house price index; no post-crisis correction
Index: average = 100



b. Real house price index; post-crisis correction
Index: average = 100



Conceptual issues – multiple dimensions

- Housing is both a consumption good (housing services) and an asset (store of wealth)
- Owner-occupied housing versus renting
- Single-family versus multiple unit
- Composite good: structure and land
- Existing versus new house

Focus: owner-occupied; existing singles & multiples; composite price

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Demand Factors

Demand factors

Macroeconomic

- Rising disposable incomes; lower long-term real interest rates

Demographic

- Population growth; migration

Credit conditions

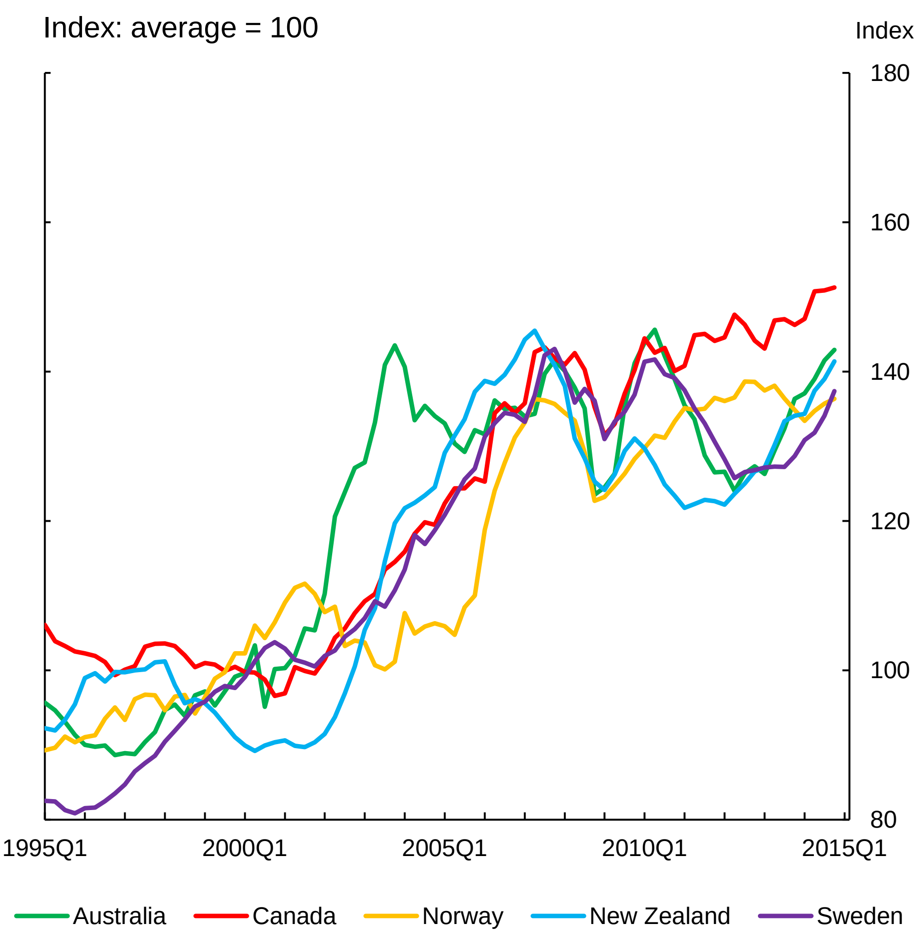
- Improvements due to financial liberalization and innovation

Other possible factors

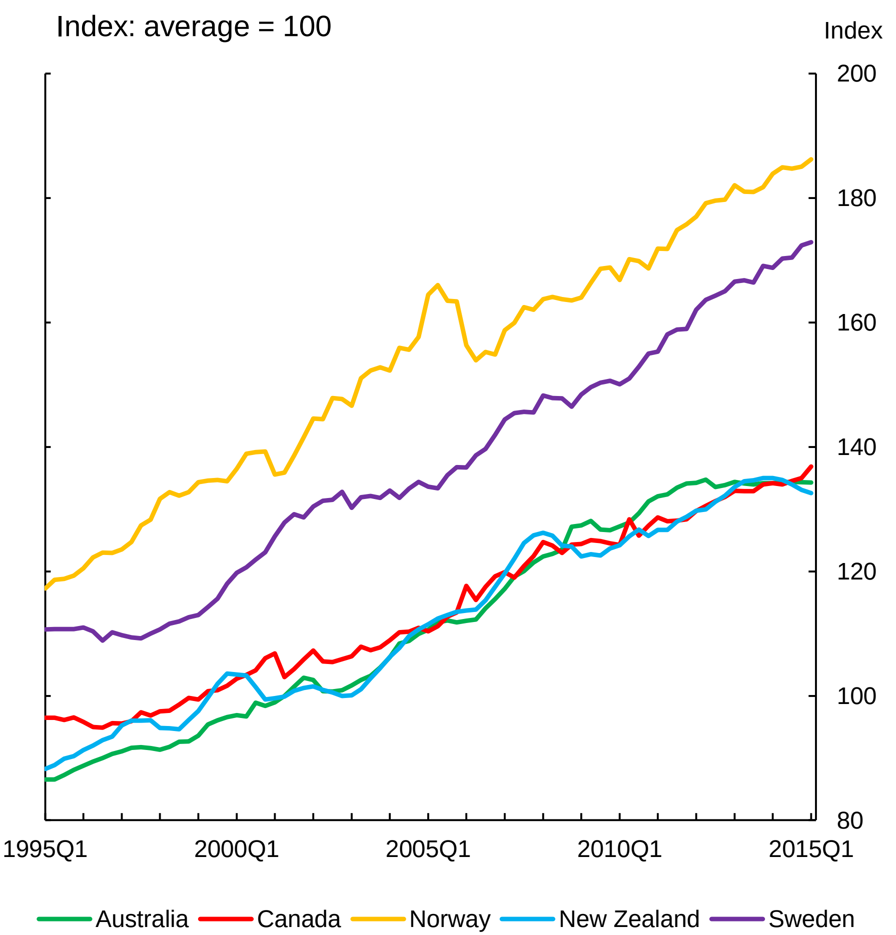
- Macro-policy framework improvements, international investment, preference shifts and regulatory/tax changes

House prices have increased relative to incomes

a. Nominal house price to income ratio



b. Real personal disposable income



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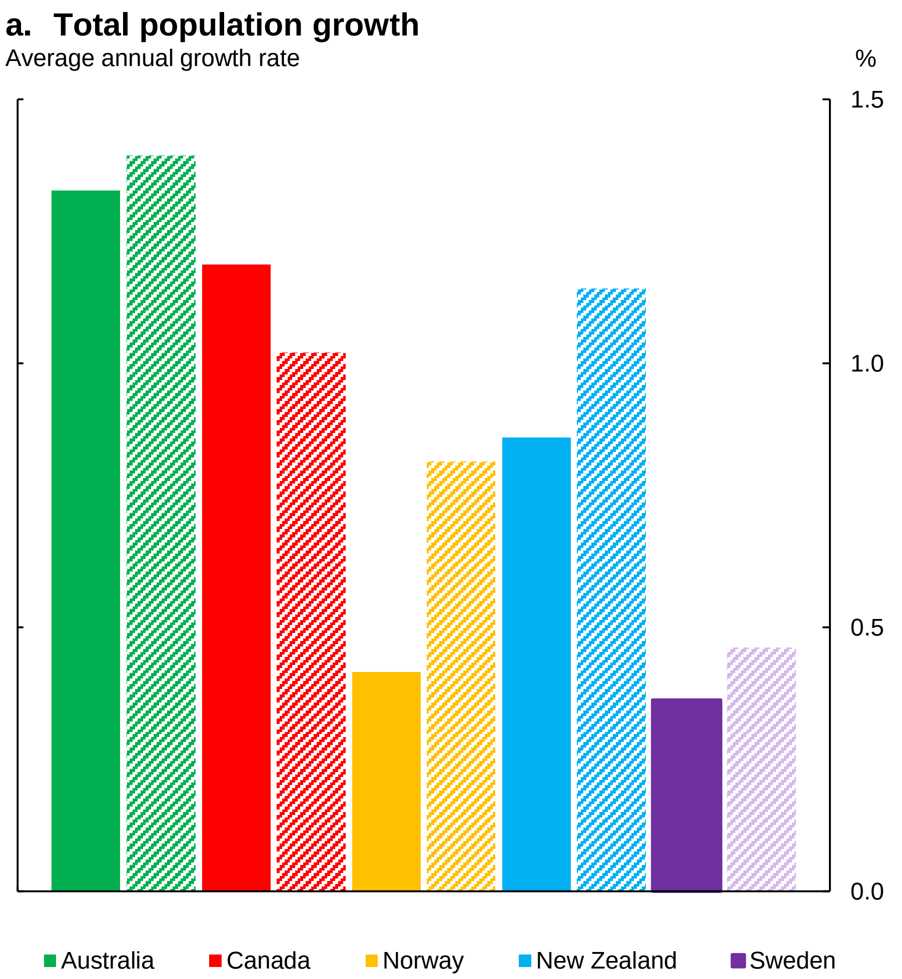
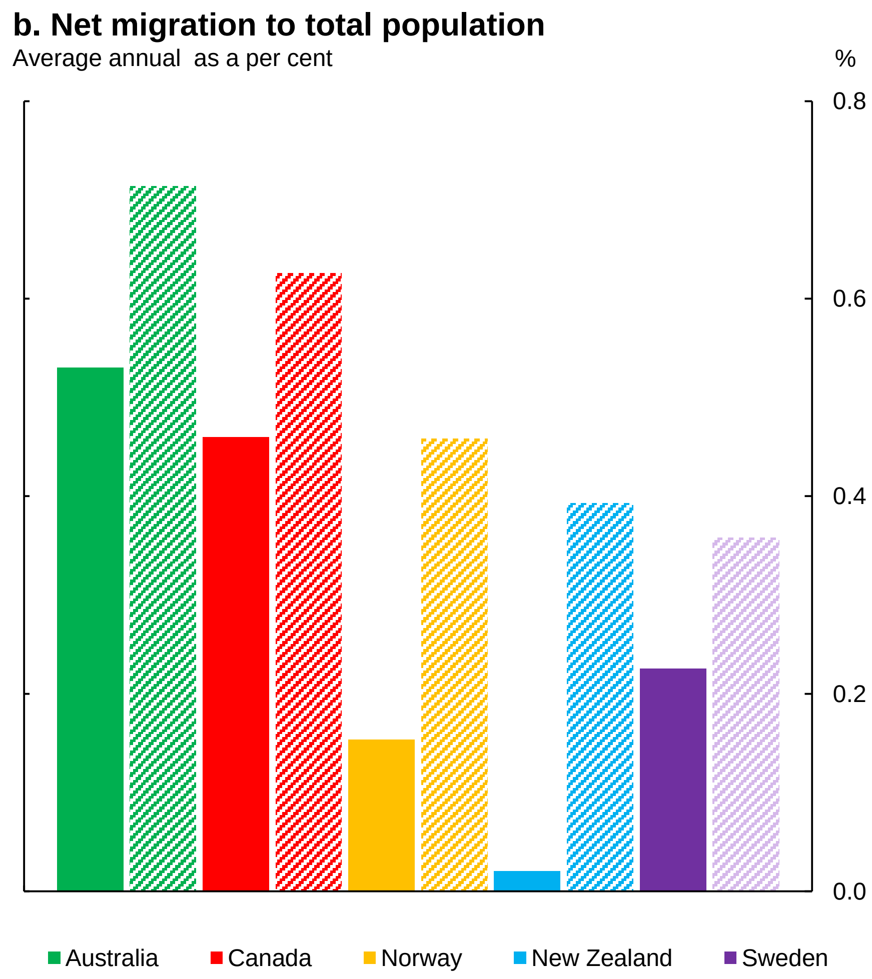
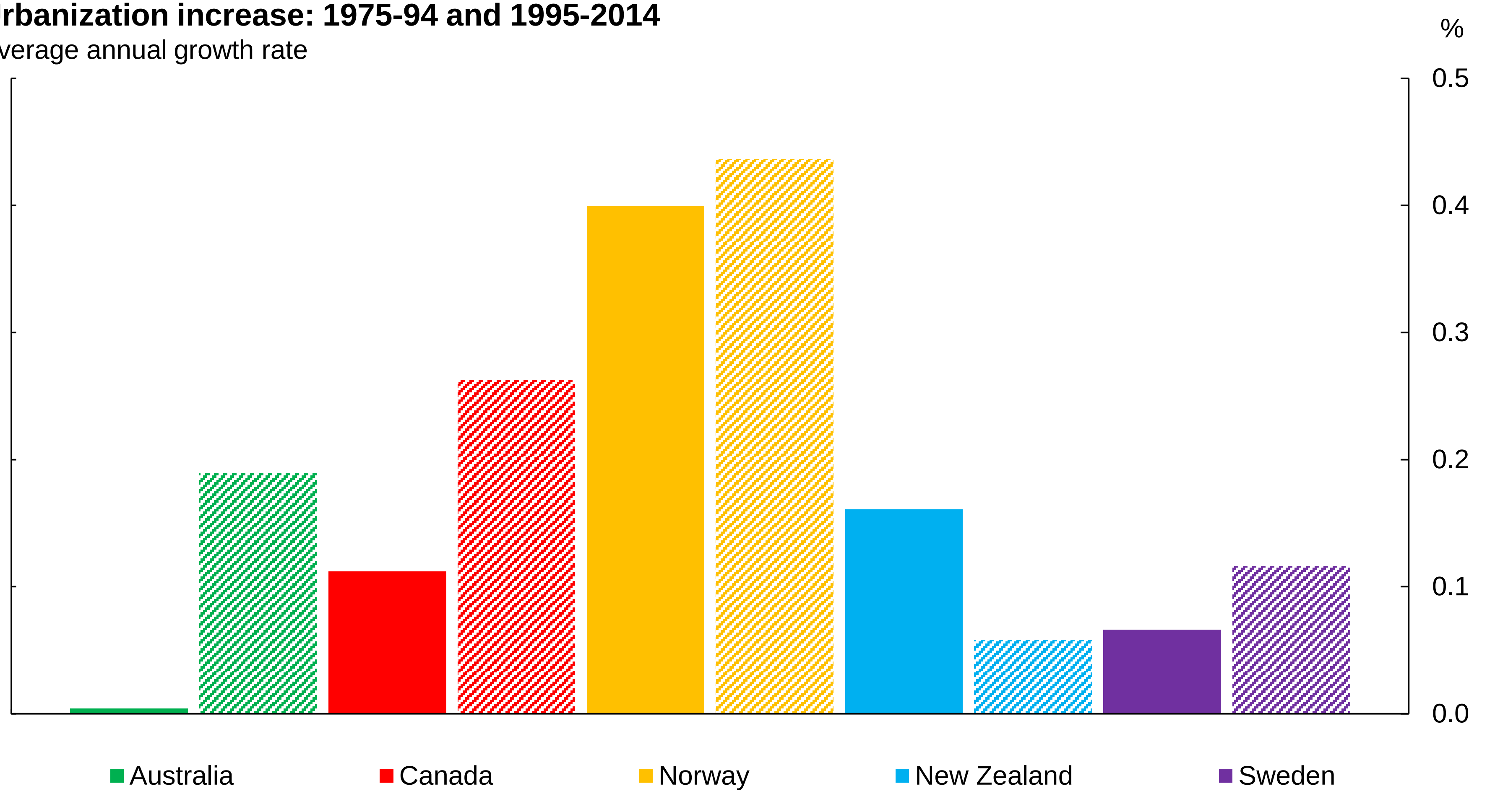
Population growth has contributed to house price increases, aided by net migration: 1975-94 and 1995-2014



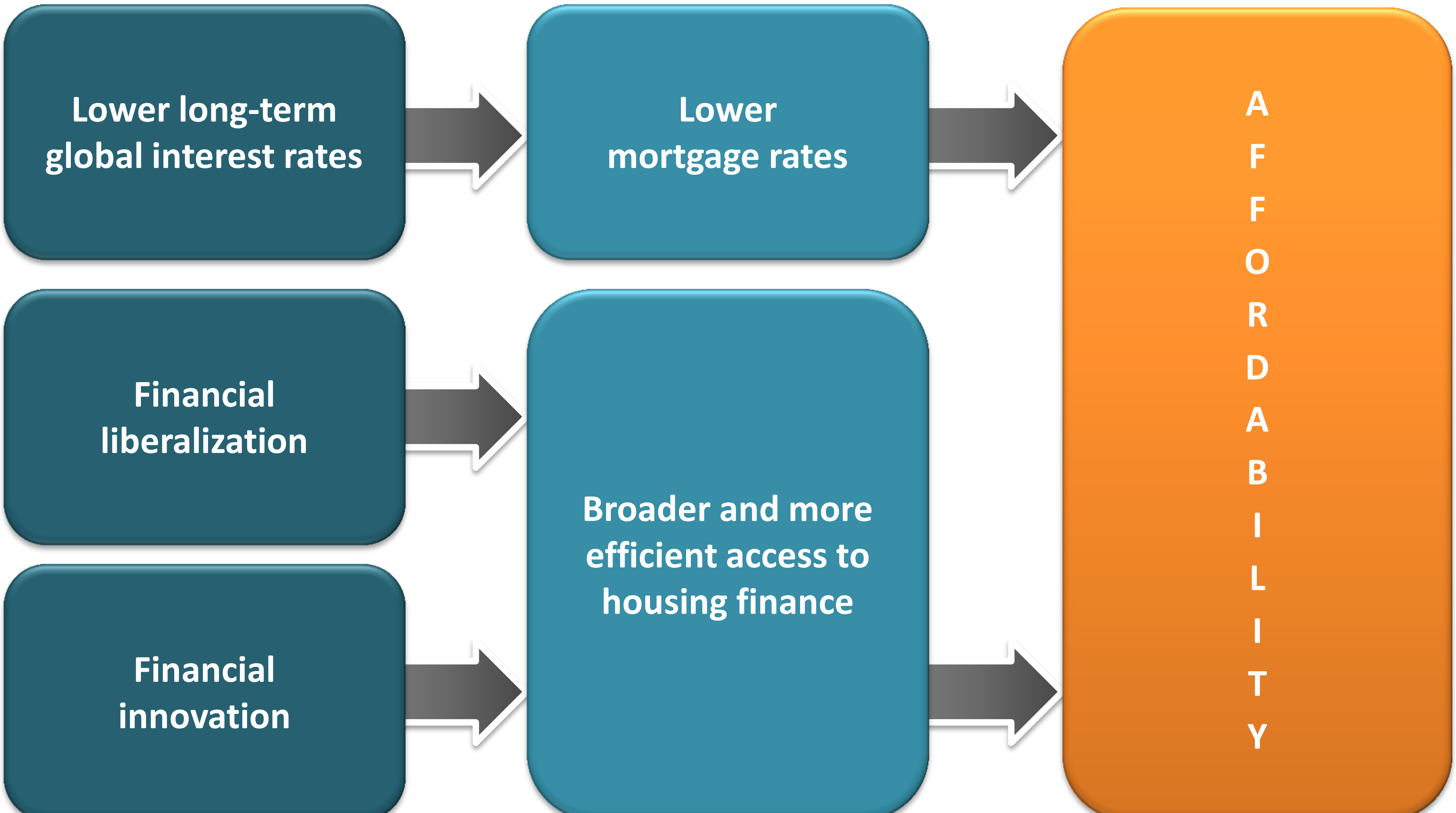


Increasing urbanization is important

Urbanization increase: 1975-94 and 1995-2014
Average annual growth rate

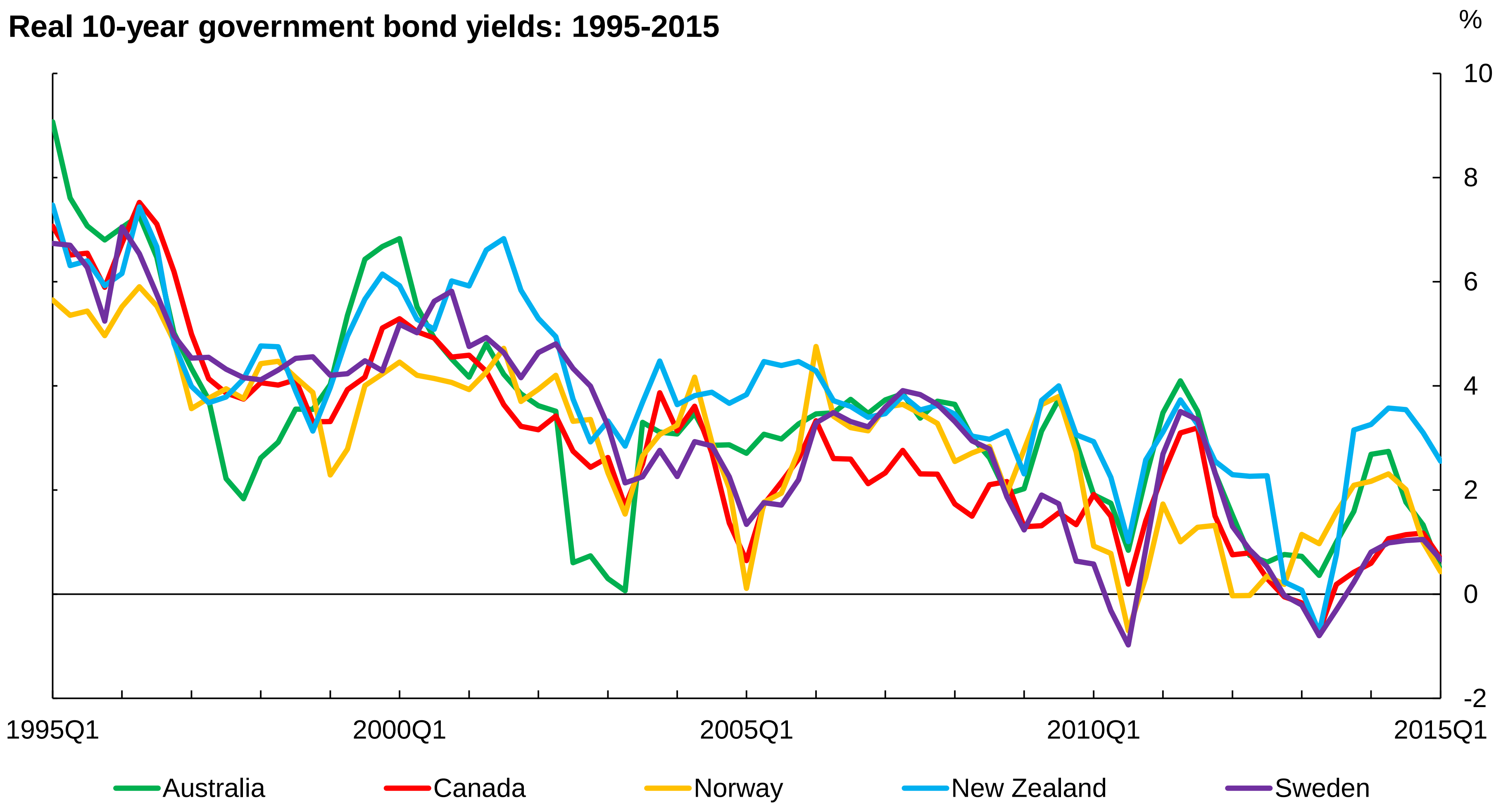


Credit conditions for housing finance have eased



Real long-term interest rates have trended downward since 2000

Real 10-year government bond yields: 1995-2015



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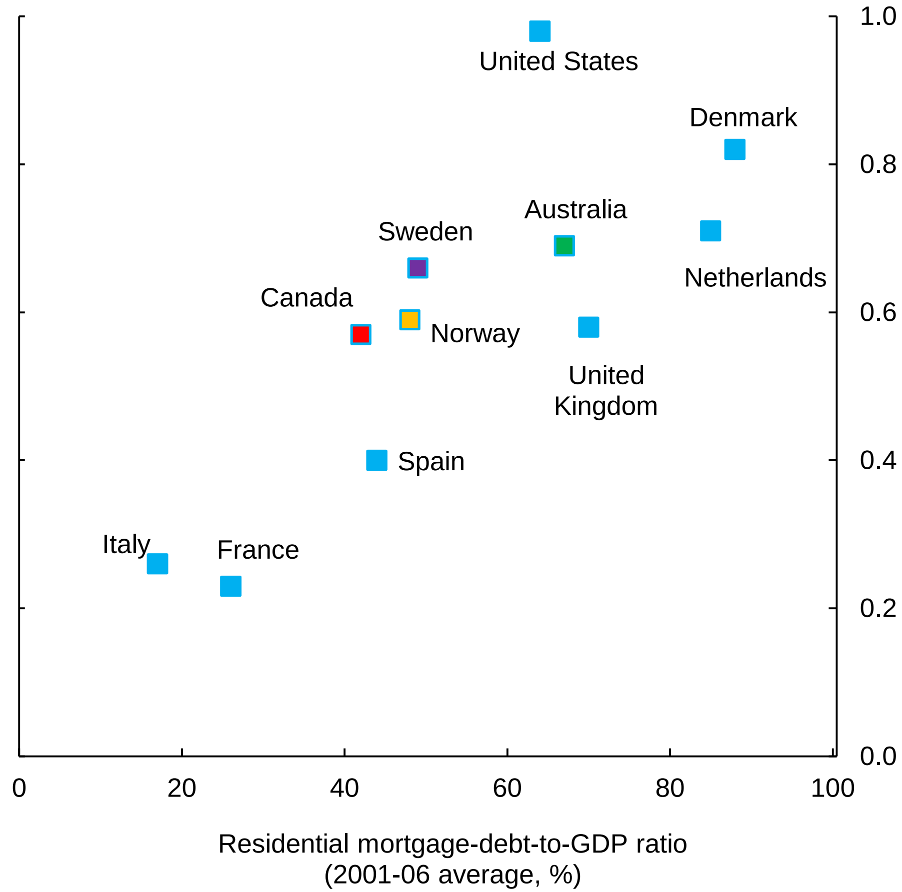
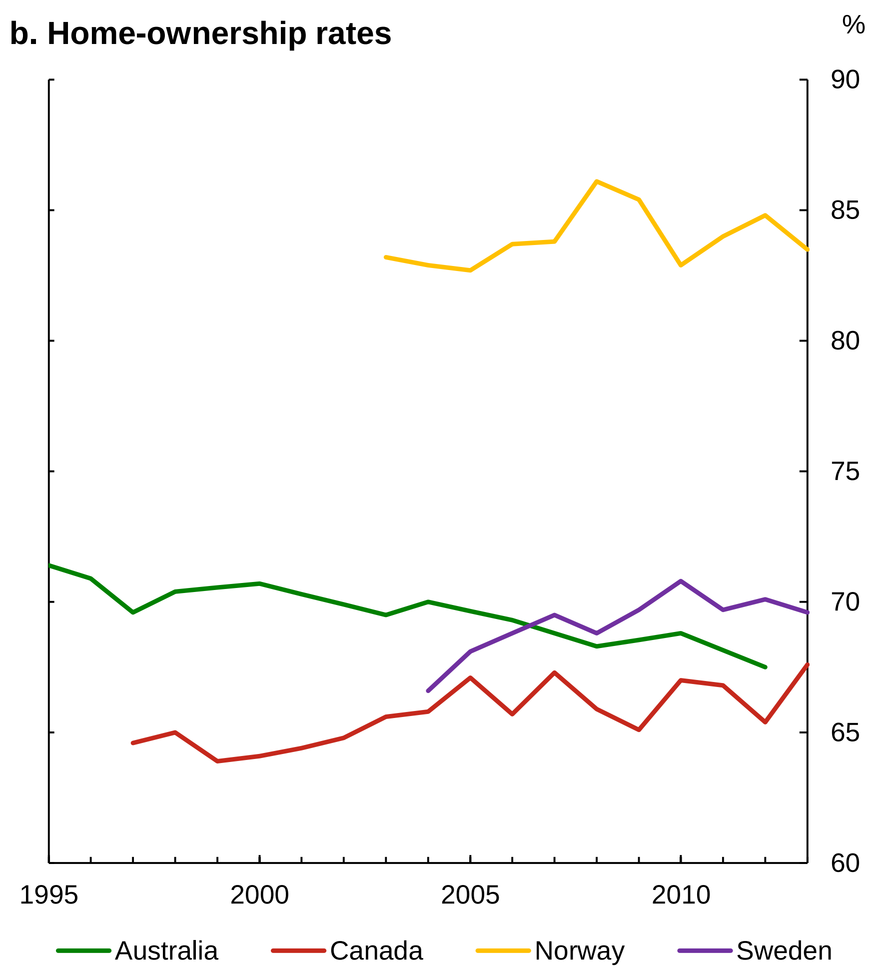
Housing finance index, mortgage market depth and home ownership rates

a. IMF mortgage market index and ratio of residential mortgage-debt-to-GDP

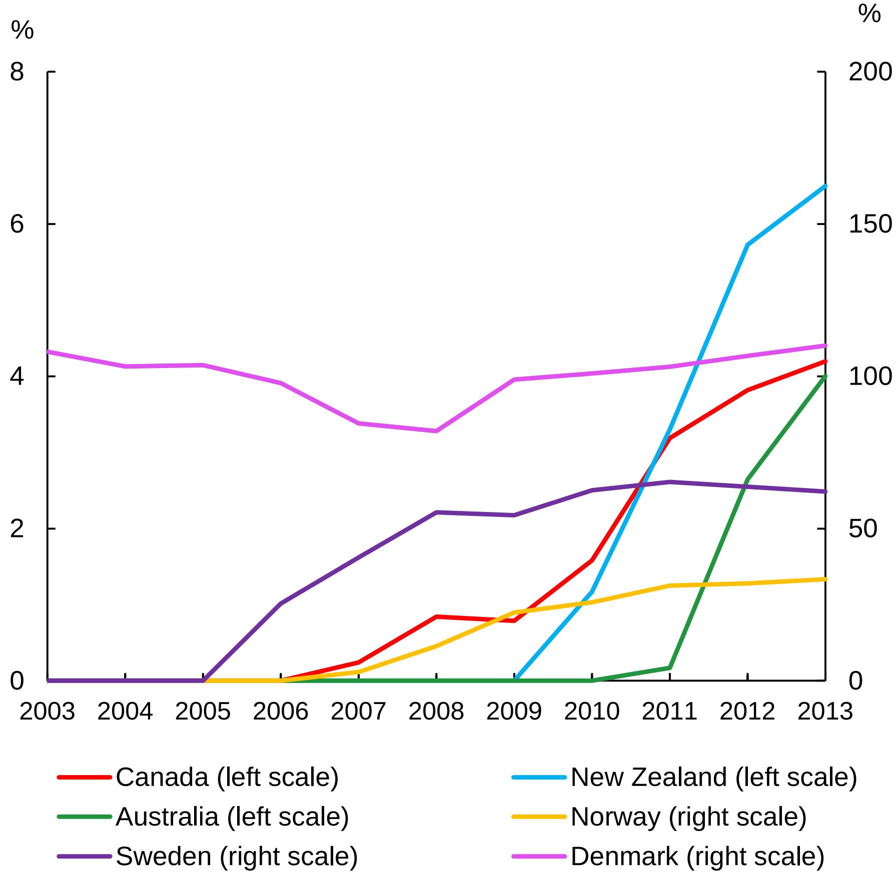


b. Home-ownership rates

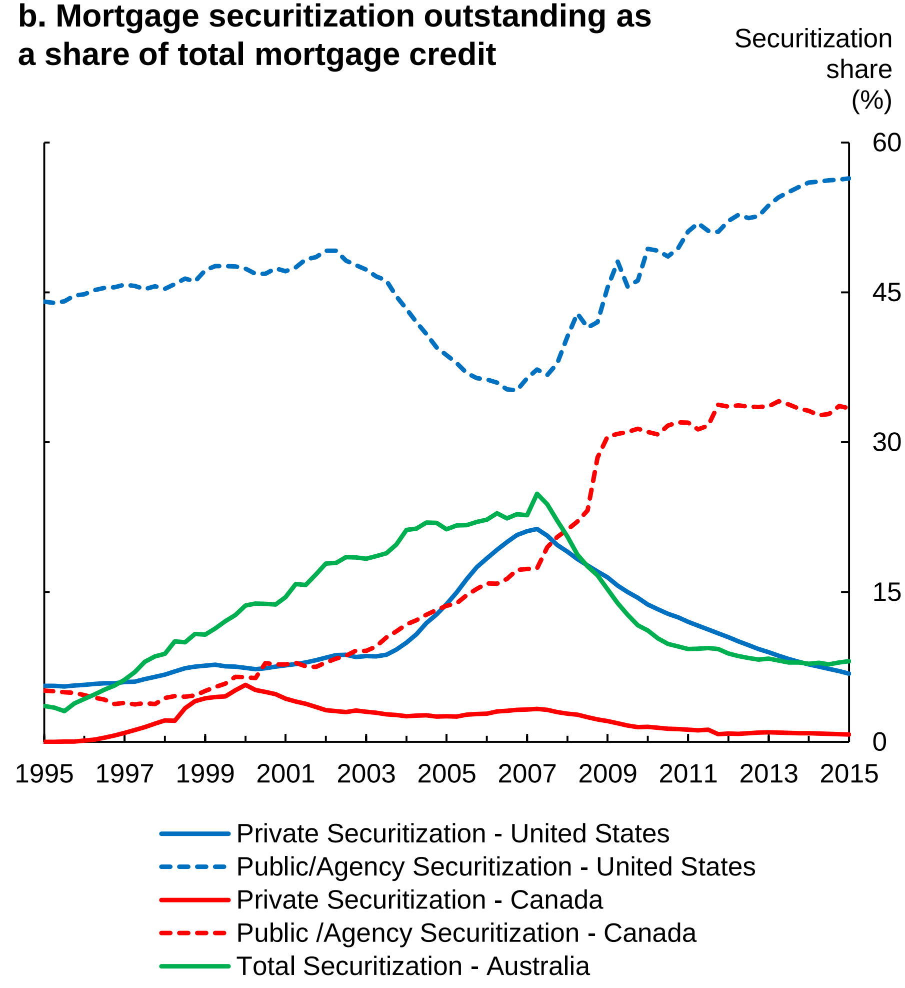


Mortgage funding by covered bonds and securitization has risen

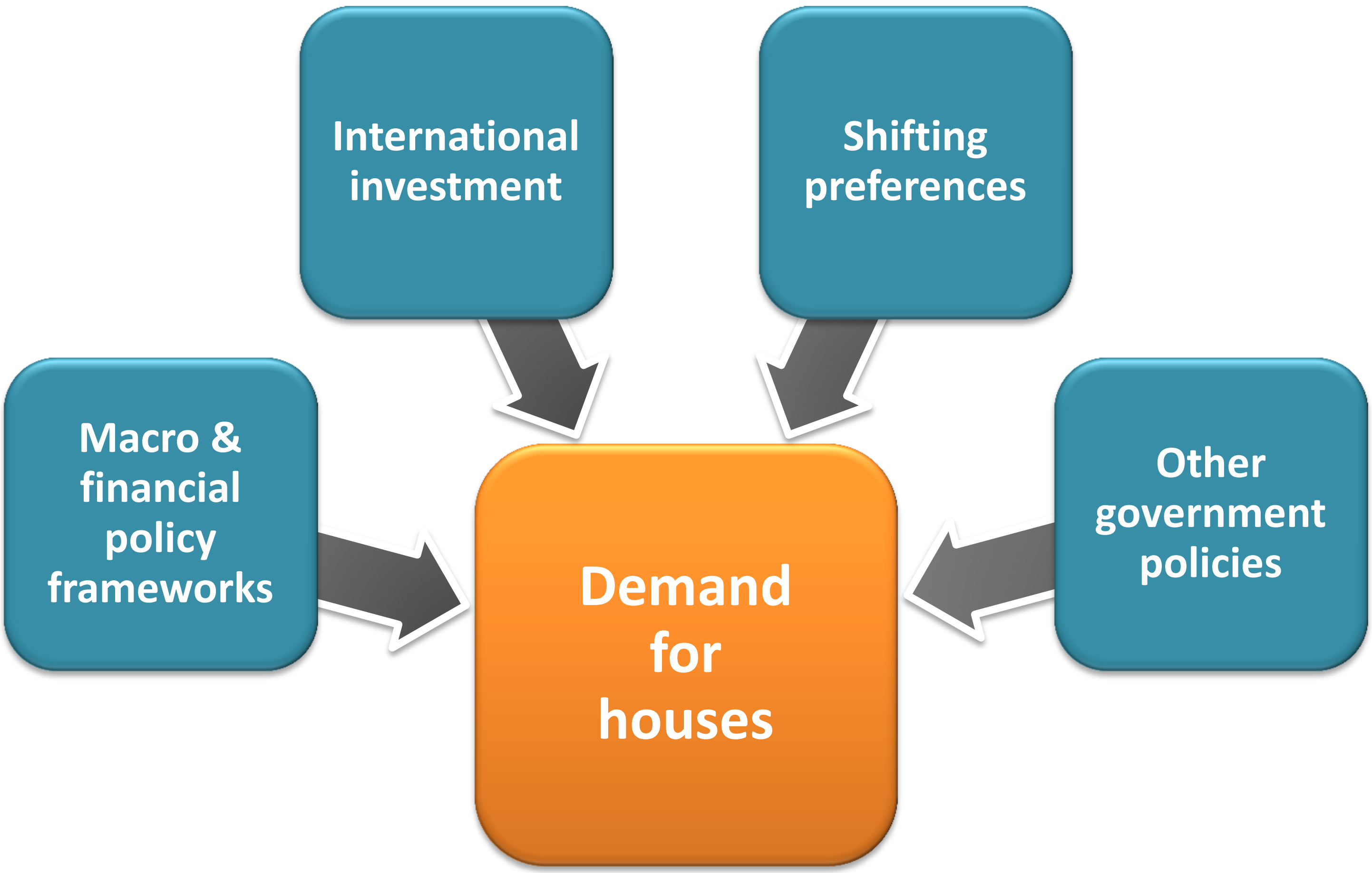
a. Covered mortgage bonds outstanding as a share of total household credit



b. Mortgage securitization outstanding as a share of total mortgage credit



Other factors supporting demand for houses



Supply Factors

Regulatory and physical constraints limit the price responsiveness of housing supply

Regulation

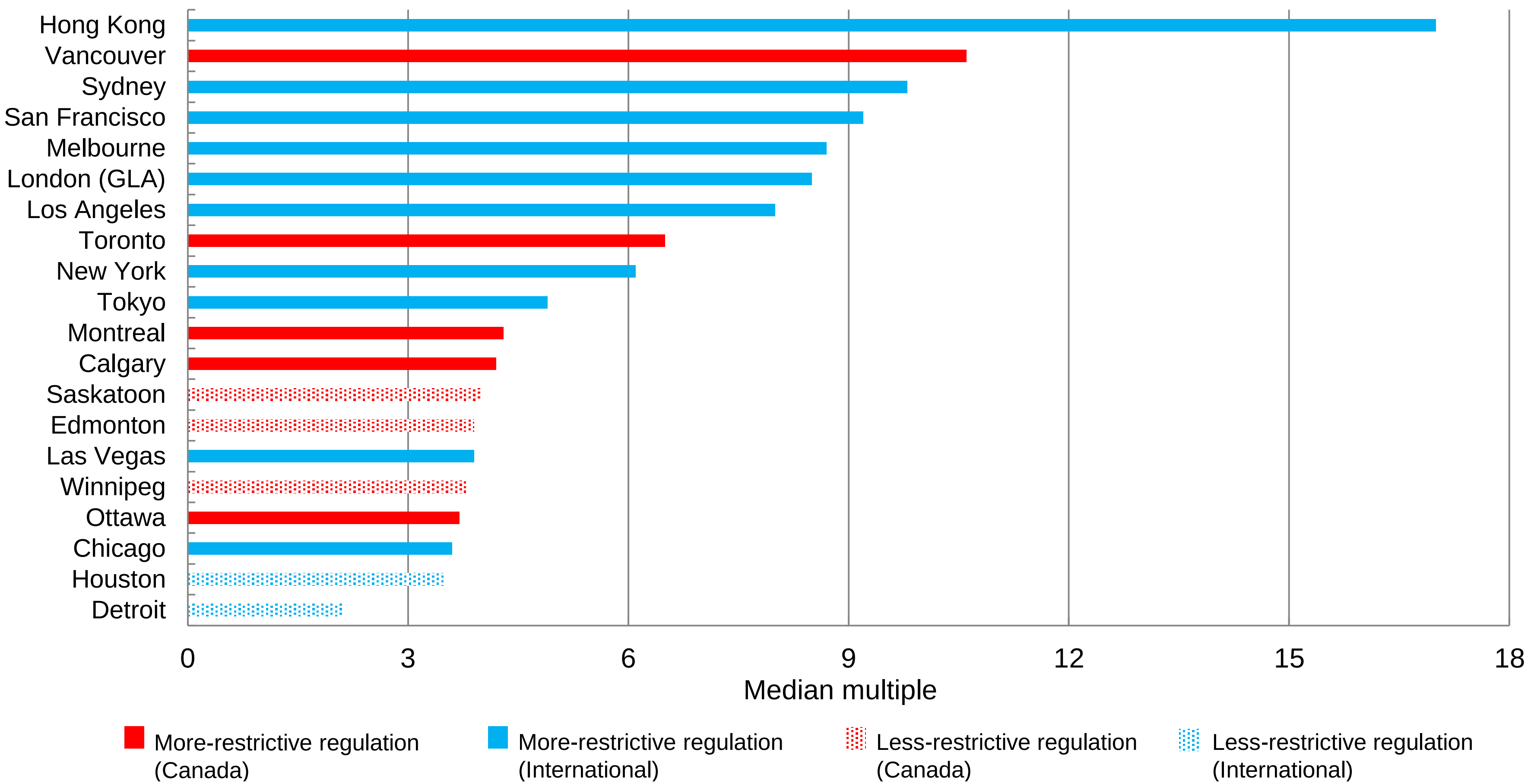
- Land use/zoning regulations
- Greenbelts
- Development fees

Geography

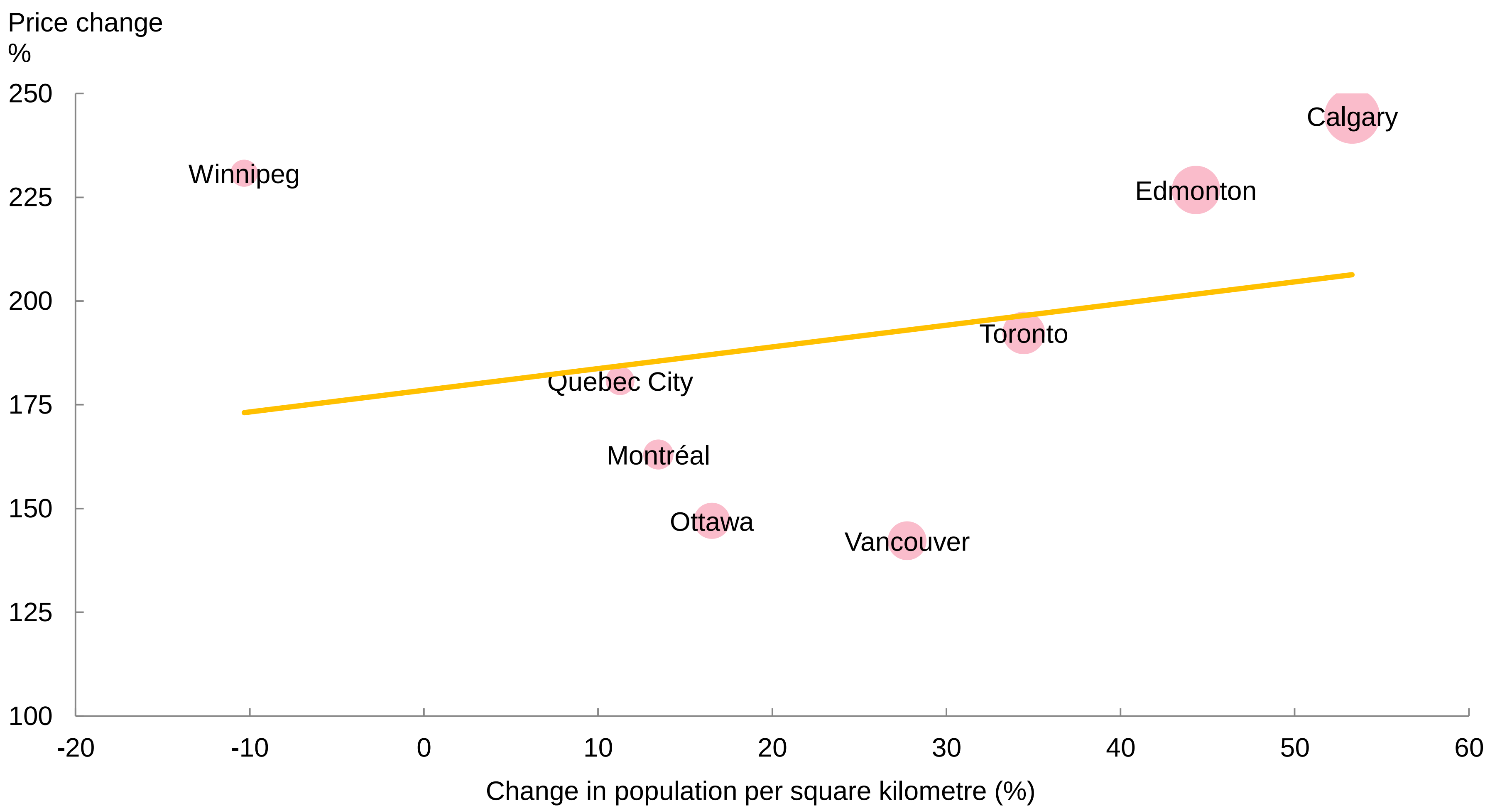
- Bodies of water
- Inhospitable terrain

Land-use regulation and geographical constraints increase price-to-income ratio

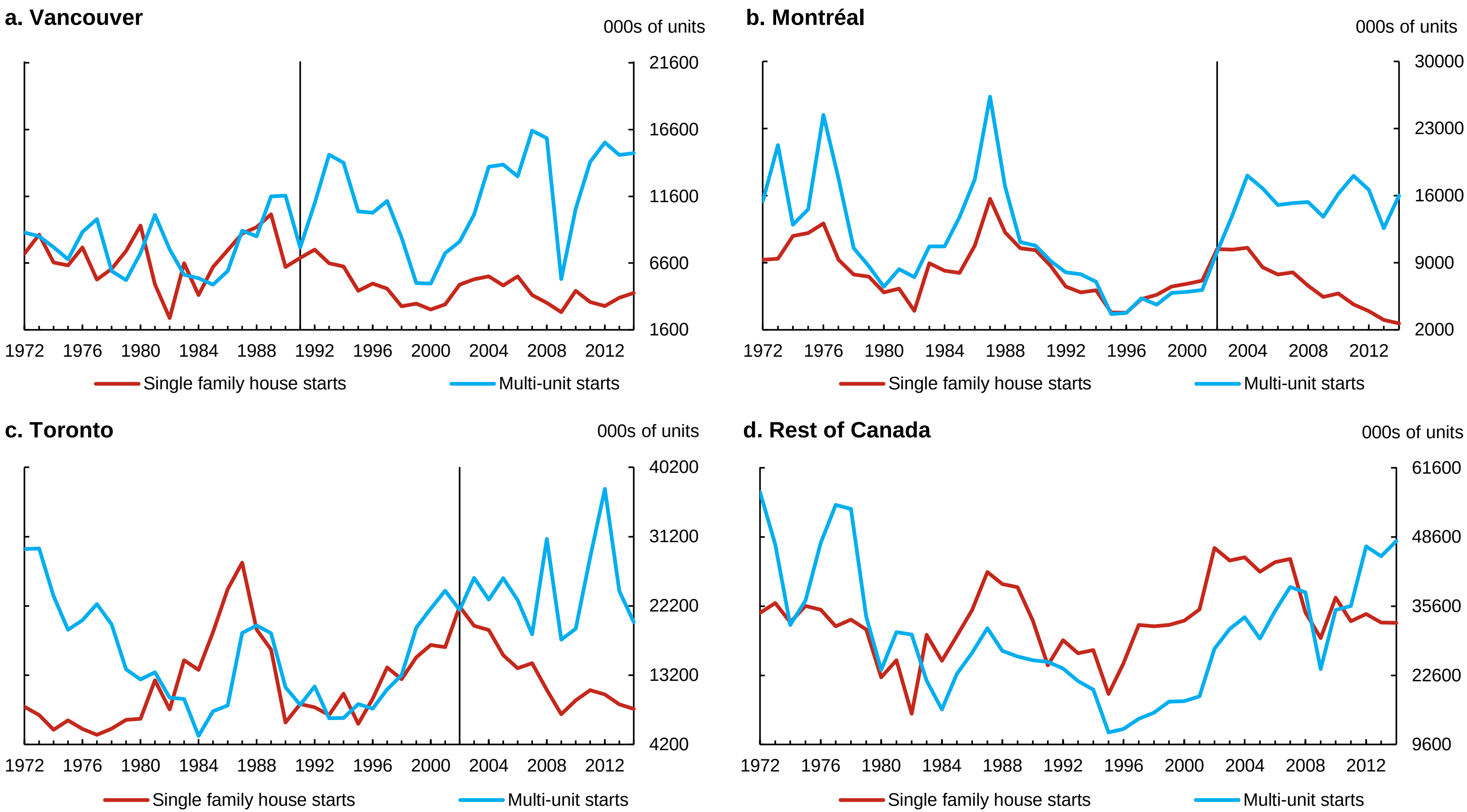
Median price-to-income ratio and land-use regulation: 2014



House prices rise with increases in urban density: 1995-2014

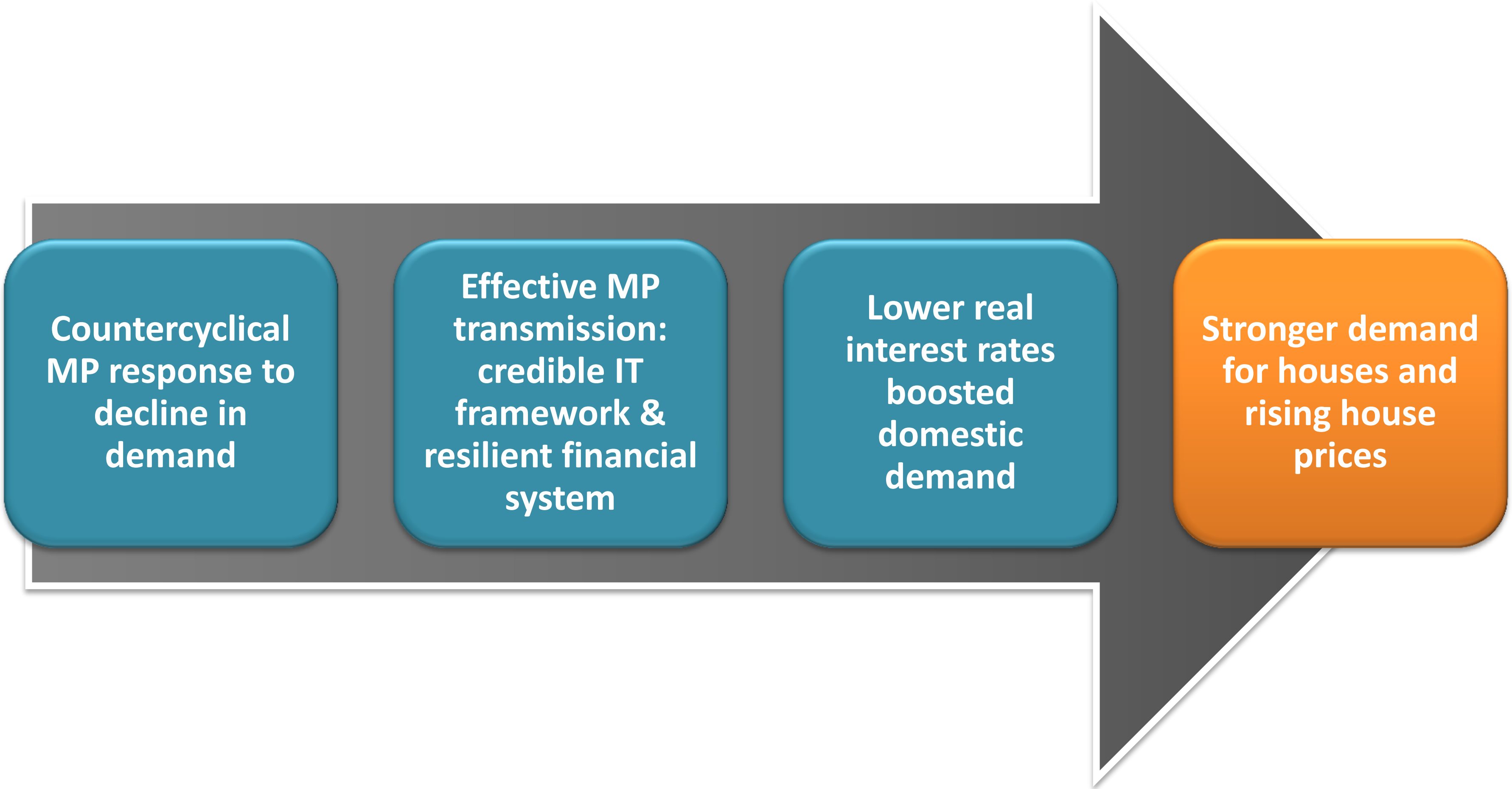


With population density increasing and binding supply constraints , multi-unit starts are dominating in Canada’s biggest cities



Policy Implications

Post-crisis monetary policy in advanced SOEs was effective



Implications of higher house prices for financial stability

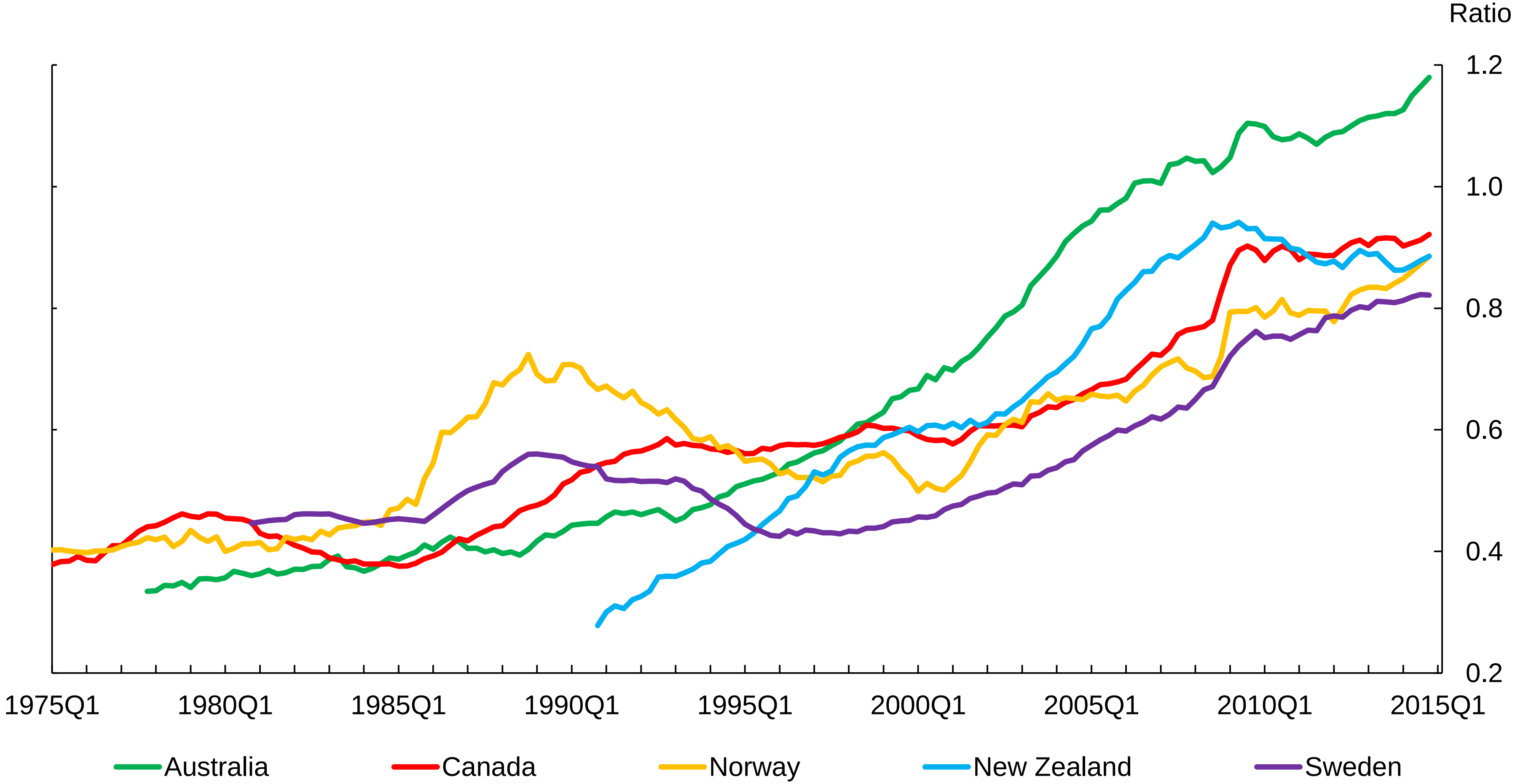
Two related vulnerabilities:

Associated with
household indebtedness and leverage

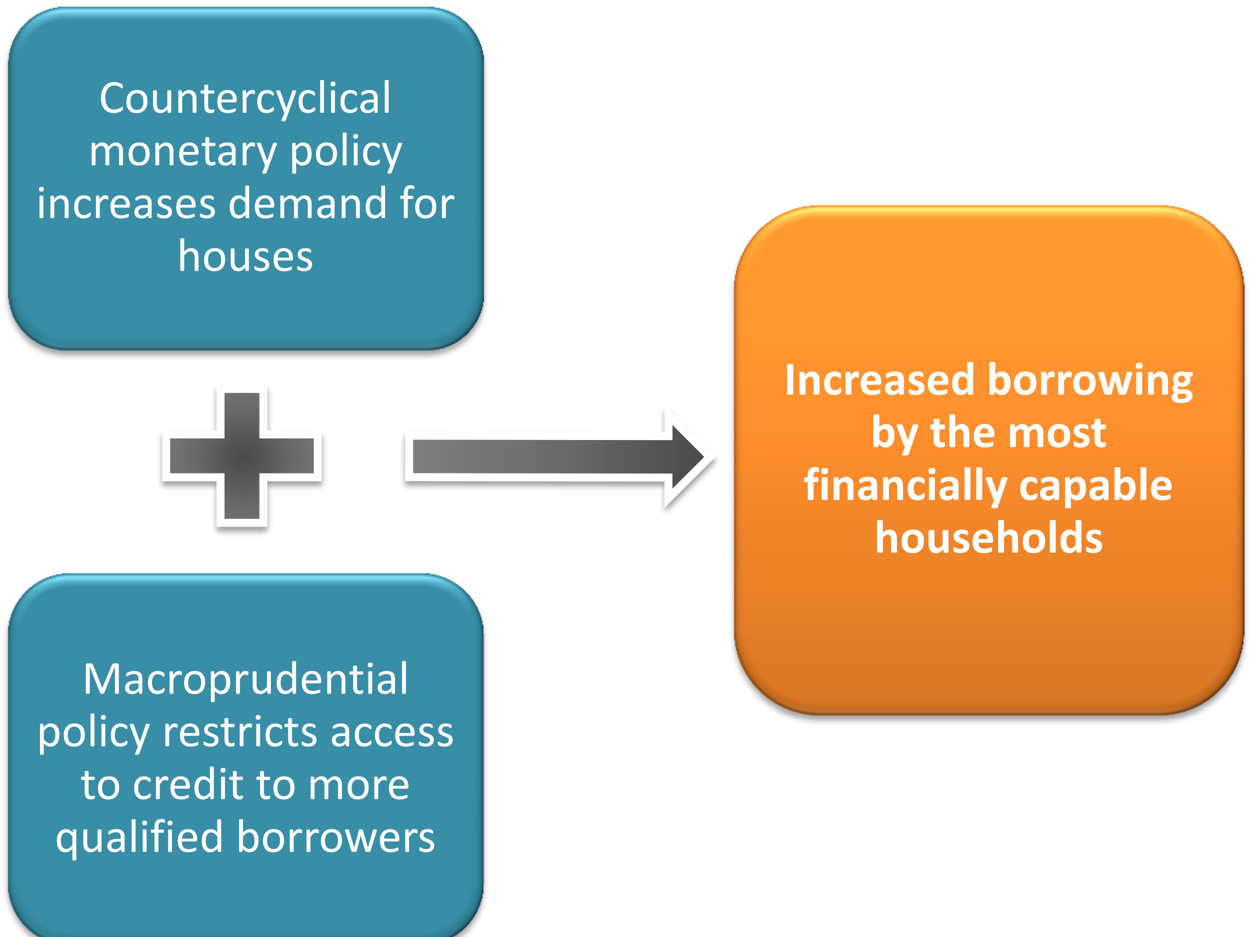
Potential source of
house price misalignment

Household leverage has grown, especially since 1995

Ratio of household-debt-to-GDP



Complementary role of macroprudential policy



Macroprudential policy: Effectiveness

Evidence on the effectiveness of loan-to-value and debt-to-income constraints and other policies

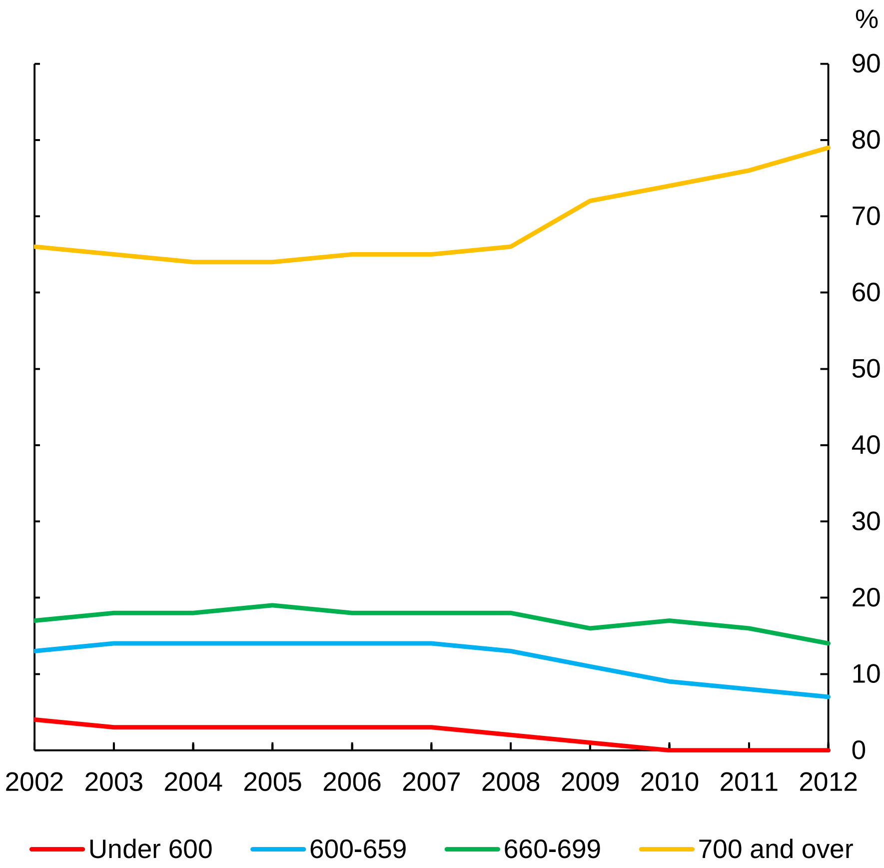
- Reduce procyclicality of household credit and bank leverage
- Moderate credit growth
- Improve quality of borrowers
- Lower rate of house price appreciation

Macroprudential tightening in Canada: 2008-12

Maximum amortization (insured mortgages)	40 years	25 years
LTV limit for new mortgages	100%	95%
LTV limit for mortgage refinancing	95%	80%
LTV limit for investment properties	95%	80%
Debt-service criteria	TDS capped at 45%	GDS capped at 39% and TDS ratio at 44%

Canadian post-crisis macroprudential policies contributed to higher borrower quality and lower household credit growth

a. Distribution of credit scores at origination (CMHC high-ratio mortgages)



b. Mortgage credit

Annualized 3-month growth rates

Key messages

Real house prices have been rising relative to income in Canada and other comparable countries for about 20 years due to:

- **Demand:** Demographic forces (population growth, migration), improving credit conditions, other factors
- **Supply:** geography and regulation reduced supply elasticity, especially in urban areas

Macroprudential policy experience:

- complementary to monetary policy and
- better suited to address financial vulnerabilities