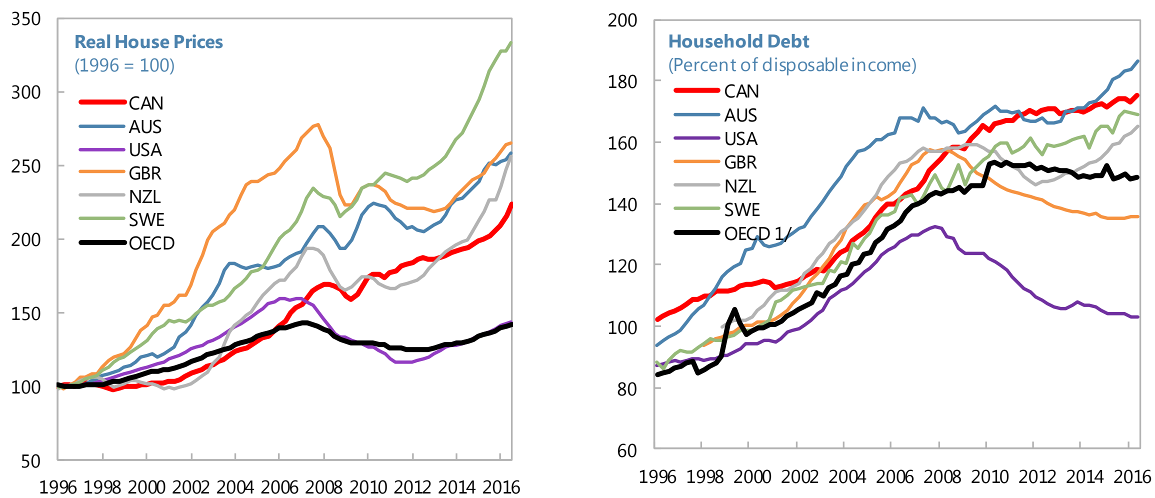
HOW ADVANCED ECONOMIES TACKLE HOUSING MARKET IMBALANCES: LESSONS FOR CANADA[1]

A. Introduction

1. **Housing market imbalances, fostered by the low interest rate environment and abundant liquidity, have been a concern in several advanced countries in recent years**. Strong population growth in the major urban areas has also been a factor in some countries. Rapidly rising housing prices usually have been coupled with rising household indebtedness (Figure 1). High household debt raises the vulnerability of the financial system to a sharp house price correction. This has led to countries making use of prudential- and macroprudential measures to reduce housing imbalances. With the rapid acceleration in house prices across countries, housing affordability has also become an issue for public policy (Table 1).

Figure 1. Selected countries: Trends in Real House Prices and Household Debt



Sources: OECD Statistics and IMF staff calculations

[1] Prepared by Zsofia Arvai (MCM) and Yulia Ustyugova (WHD).

Table 1. Housing Affordability Ratings by Country: Major Housing Markets
(Over 1,000,000 population)

Country	Affordable (3.0 & Under)	Moderately Unaffordable (3.1-4.0)	Seriously Unaffordable (4.1-5.0)	Severely Unaffordable (5.1 & Over)	Total	Median Market
Australia	0	0	0	5	5	6.6
Canada	0	1	3	2	6	4.7
China (Hong Kong)	0	0	0	1	1	18.1
Ireland	0	0	1	0	1	4.7
Japan	0	1	1	0	2	4.1
New Zealand	0	0	0	1	1	10.0
Singapore	0	0	1	0	1	4.8
United Kingdom	0	2	12	7	21	4.5
United States	11	22	8	13	54	3.9
Total	11	26	26	29	92	4.2

Sources: 13th Annual Dermographia International Housing Affordability Survey, 2017.

2. **Housing market trends often exhibit stark differences across regions within a country.** While some key factors affecting housing markets such as interest rates and access to credit are common, other factors such as demographics, income trends, investor activity, including foreign buyers, housing market expectations, building activity and land-use constraints, often vary across regions. The interplay of demand and supply factors drive housing booms in major markets.

3. **Economies around the world have used a variety of policy tools to deal with housing market booms.** These include macroprudential measures based on prudential tools such as caps on loan-to-value ratios (LTV), debt-service-to-income ratios (DSTI), and higher risk weights and provisioning, as well as traditional fiscal policy measures, including property taxes, sellers' and buyers' stamp duties, and capital gains tax.

4. **This chapter provides a summary of the demand measures some economies have taken to target speculative and investment demand, as well as regional imbalances**. Peer group economies discussed in this chapter are advanced economies that have experienced rapid house price growth and household debt (Australia and New Zealand); have introduced measures targeting high household indebtedness and investment properties (U.K.); or have had a longer history of macroprudential measures aiming at speculative and investment property demand (Hong Kong SAR and Singapore). Policies to improve the supply of residential properties, while very important to reduce imbalances, are beyond the scope of this chapter.

5. **We find that economies tackled housing market imbalances both by progressively expanding the scale and coverage of prudential-based tools and modifying real estate taxation**. The latter measures were aimed solely or predominantly at foreign buyers in some countries and both at resident and non-resident speculative and investment demand in others. Some economies have introduced housing market measures that are tailored geographically or by

property value. Loan-to-income (or debt-to-income) ratios are among the latest macroprudential measures to be increasingly employed as they directly target household indebtedness.

B. Australia and New Zealand

6. The rise in real house prices and household indebtedness in Australia and New Zealand has been among the fastest across advanced countries over the past two decades. After a lull following the global financial crisis, both house prices and household debt ratios started to pick up again in 2013, and household debt as a ratio of disposable income now exceeds 185 percent in Australia and 165 percent in New Zealand, representing all-time highs in the respective countries.

7. The price increases have been skewed toward the major cities. In Australia, the two most populous cities, Sydney and Melbourne, have seen house price increases well above the national average in recent years, and rank high in the unaffordability index. In New Zealand, the house price increase was particularly pronounced in Auckland, reflecting rapid population growth and geographical constraints limiting the supply response. In both countries, the highly concentrated banking sector has a large housing exposure.

8. Demand by private property investors has been an important driver of housing market dynamics in both countries. Both resident and non-resident buyers have been active in the market for investment properties. Specifically, in Australia, interest-only mortgages have become a focus of supervisory guidance.

Prudential and Macroprudential Measures

9. Both countries put in place prudential and macroprudential measures as the rise in house prices and indebtedness accelerated.

- **<u>Australia.</u>** After issuing a prudential practice guide on sound risk management practices for residential mortgage lending in November 2014, the Australian Prudential Regulation Authority (APRA) announced one month later a further increase of the level of supervisory intensity with a focus on higher risk mortgages, such as interest-only and high loan-to-value ratio mortgages, investor lending growth above a benchmark of 10 percent, and strong loan serviceability tests with sufficient interest rate buffers and floors.

- In July 2015, APRA announced an increase in average mortgage risk weights for large banks using the internal risk based ratings approach from around 16 to at least 25 percent by July 2016.

- In March 2017, APRA reiterated its focus on risky lending and tightened the rules for interest-only mortgages: financial institutions are expected to limit new interest-only lending to 30 percent of total new mortgage lending, and within that to tightly manage new interest-only loans extended at high LTVs. Furthermore, the Australian Securities and Investments Commission has stressed the importance of lenders and brokers ensuring that consumers are not provided with unsuitable interest-only loans, and the budget 2017 more generally includes initiatives for a more accountable banking system.

- **New Zealand.** The Reserve Bank of New Zealand (RBNZ) introduced several rounds of macroprudential measures: The first round of measures in October 2013 focused on a cap on the share of high loan-to-value ratio loans in general, while the second round in 2015 had a specific focus on investor loans in Auckland, and the third round in 2016 primarily targeted residential property investors in general.

- First round: in October 2013, the RBNZ placed an exposure limit ('speed limit') on high loan-to-value ratio residential mortgage lending. Banks were required to restrict the flow of new mortgages at LTVs over 80 percent to no more than 10 percent of their total residential mortgage lending.

- Second round: The RBNZ announced additional measures in May 2015, with effect of November 2015, as prices picked up again in 2015 after an initial moderation of house price increases:

  - The maximum share of loans with LTV of more than 70 percent for residential property investors in Auckland was set at 5 percent.

  - The existing 10 percent speed limit for loans at LTVs of greater than 80 percent was retained for owner-occupiers in Auckland.

  - For the rest of New Zealand, the speed limit for all residential mortgage loans with a LTV ratio above 80 percent was raised from 10 to 15 percent, to reflect the more subdued housing market conditions there.

  - In addition, in the period between 2013 and 2015, capital requirements for housing loans were adjusted to better align risk weights with the underlying risk of the exposure, with higher risk weights for residential property investor compared to owner-occupier mortgage loans.

- Third round: The October 2016 measures eliminated geographic differentiation as rapid house price increases were spreading beyond Auckland and further tightened the rules for residential property investors compared to owner-occupiers:

  - *Owner-occupiers:* The existing 10 percent speed limit for loans at LTVs greater than 80 percent in Auckland was extended to the rest of the country.

  - *Residential property investors:* For all borrowers in New Zealand, a 5 percent speed limit was set for loans at LTVs greater than 60 percent.

- As the share of lending at high debt-to-income (DTI) ratios is high and increasing, around a third of borrowers have a DTI of 500 percent, the introduction of a DTI ratio or similar instrument into the macroprudential toolkit is under discussion and the RBNZ has recently issued a consultation paper on "serviceability restrictions as a potential macroprudential tool in New Zealand".

Real Estate Taxation

10. Real estate taxation in both Australia and New Zealand tilts investment decisions towards housing and has the potential to amplify housing cycles. Key elements of the tax system that work in this direction are tax concessions on capital gains and the possibility to apply losses from negative housing investment gearing to income from other sources. In 2015, New Zealand strengthened the enforcement of existing capital gains taxation rules by introducing a presumption of resale intention at purchase if an investment property is being resold within two years ("bright-line test"). A withholding tax for non-residents that resell within that period was also introduced. In a similar vein, the Australian government intends to increase the withholding tax for non-residents in mid-2017 and to exclude them from the main residence capital gains tax exemption from mid-2019. The government recently also introduced a penalty for non-residents who leave their property vacant for more than six months per year. Within already existing foreign investment approval rules for non-residents, foreign ownership in larger new apartment developments is planned to be restricted to 50 percent.

11. As demand for real estate for investment purposes has been considerable, Australia and New Zealand also put in place specific restrictions and measures targeting real estate investors. The fiscal based measures primarily target foreign investors in Australia, while in New Zealand, the measures are aimed at speculative activity without differentiating between residents and non-residents.

- **Australia.** Real estate purchases by foreigners require foreign investment approval. However, this allows for only imperfect tracking of foreign buyers' activity as only part of the approvals lead to actual real estate purchases.
    - Non-resident foreigners generally need to apply for and receive foreign investment approval before purchasing any residential property in Australia.
    - Non-resident foreigners will normally be allowed to purchase new dwellings in Australia without being subject to any conditions. There is no limit on the number of new dwellings a foreign non-resident may purchase, but approval is generally required prior to each acquisition.
    - Non-resident foreigners generally cannot purchase established dwellings as homes, for use as a holiday home or to rent out.
    - Foreign buyers have to provide citizenship and visa details, as well as Foreign Investment Review Board clearance, through the stamp duty process.

12. Several Australian states levy additional stamp duties on foreign buyers. The stamp duty surcharges vary among states:

- *Victoria:* In 2015, additional stamp duty was introduced to any arrangement or transaction that involves the transfer of an interest in residential property to a foreign purchaser. For transactions between July 2015 and July 2016, the surcharge was 3 percent. After 1 July 2016, the additional duty rate is 7 percent. There is also a 1.5 per cent surcharge on land tax.

- *New South Wales:* In June 2016, a 4 percent stamp duty surcharge was imposed on foreign buyers of residential property. The stamp duty surcharge was set to rise to 8 percent as of July 1, 2017. In addition, the annual land tax on foreign homeowners would rise to 2 percent from 0.75 percent.

- *Queensland:* In October 2016, 3 percent surcharge was levied on foreign purchases of houses and apartments.

13. In both Australia and New Zealand, the prudential measures would appear to have had at least a temporarily moderating effect on house price increase and credit growth, and they helped to improve the resilience of household and bank balance sheets. However, prices have still been increasing at a fast pace, further eroding affordability.

C. United Kingdom

14. Following a large drop in the aftermath of the global financial crisis, UK house prices resumed their rise in 2012, while household debt stopped falling. Household debt to disposable income declined between 2007 and 2015 by more than 20 percentage points, but remained high by historical standards at around 137 percent in 2016 and started rising in 2017. The buy-to-let segment of the housing market has been buoyant with the share of buy-to-let mortgages in GDP, while much smaller than owner-occupier mortgages, continuously growing.

Macroprudential Measures Based on Prudential Tools

15. The UK Financial Policy Committee (FPC) identified two risks from high levels of household indebtedness: a direct risk to the resilience of the UK banking system, and an indirect risk via its impact on economic stability. In particular, buy-to-let borrowers are seen as potentially more vulnerable to rising interest rates because these loans are more likely to be interest only and extended on floating-rate terms, and affordability tends to be tested at lower stressed interest rates than for owner-occupied lending.

16. In June 2014, the FPC recommended two policy measures to address the loosening of underwriting standards in the owner-occupied mortgage market and a significant increase in the number of highly indebted households. In September 2014, it requested powers of Direction over the mortgage market. Additionally, since 2013 the FPC had powers of direction over sectoral capital requirements for residential and commercial mortgages.

- **The affordability test.** When assessing affordability, mortgage lenders should apply an interest rate stress test that assesses whether borrowers could still afford their mortgages if, at any point over the first five years of the loan, the Bank Rate were to be 3 percentage points higher than the prevailing rate at origination.

- **The loan to income flow limit.** The Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) should ensure that mortgage lenders do not extend more than 15% of their total number of new residential mortgages at loan to income ratios at or greater than 4.5.

- **Powers of Direction.** In September 2014, the FPC requested powers to direct the PRA and FCA to require regulated lenders to place limits on residential mortgage lending, both owner-occupied and buy-to-let, by reference to: (a) loan to value ratios; and (b) debt-to-income ratios, including interest coverage ratios for buy-to-let lending. In the same month, the PRA published a Supervisory Statement setting out its expectations for underwriting standards for buy-to-let mortgages.

17. By end-2016, the FPC had been granted powers to direct both owner-occupied and buy-to-let mortgages. In April 2015, the Government gave the FPC powers of Direction over the PRA and the FCA in relation to LTV and LTI limits for owner-occupied mortgage lending, and in November 2016 over buy-to-let mortgages as well. In 2016, in concluding its review of the June 2014 recommendations, the FPC agreed to maintain the LTI measures at their original calibration as they were expected to continue to provide insurance against a deterioration in credit underwriting standards.

Measures Based on Fiscal Tools

18. The prudential-based tools were complemented by tax-based measures for the owners of additional properties. In its Spending Review and Autumn Statement 2015, the UK government announced a Five Point Plan for housing to support low-cost home ownership for first-time buyers.[2]

19. As part of this plan, higher rates of Stamp Duty Land Tax (SDLT) were required for additional properties.[3] The government explained its intent to impose higher duty on owning additional properties by noting that they can affect other people's ability to get on to the property ladder. The higher rates are 3 percentage points above the existing SDLT rates, and took effect from April 1, 2016 (Table 2). The government announced that some of the additional tax would go to provide £60 million for communities in England where the impact of second homes is particularly acute. The tax receipts also help double the affordable housing budget. As a further measure, as of April 2017, the amount of income tax relief landlords can obtain for the financing costs of residential properties have been restricted.

[2] See Section 6.6 in Spending Review and Autumn Statement 2015

[3] Consultation outcome on Higher rates of Stamp Duty Land Tax on purchases of additional properties

Table 2. United Kingdom: Stamp Duty Rates for Property Transactions

Property Value	Stamp Duty Rate for Owner-Occupiers	Stamp Duty Rate for Second Property/Buy-to-Let
		(No duty payable properties costing under £40,000)
Up to £125,000	0%	3%
The next £125,000 (the portion from £125,001 to £250,000)	2%	5%
The next £675,000 (the portion from £250,001 to £925,000)	5%	8%
The next £575,000 (the portion from £925,001 to £1.5 million)	10%	13%
The remaining amount (the portion above £1.5 million)	12%	15%

Sources: UK authorities and IMF staff calculations.

D. Hong Kong SAR and Singapore

Macroprudential Measures Based on Prudential Tools

20. Hong Kong SAR and Singapore have been using macroprudential policies to contain risks arising from the housing market for more than two decades. Both economies had a period of sharply rising housing prices and speculative activity in the mid-1990s which prompted the authorities to introduce a package of cooling measures, most importantly imposing lower limits on LTVs. Some of these measures were subsequently reversed following the onset of the Asian financial crisis, but they helped the banking sector weather the stress of the Asian crisis well, with lower LTVs providing banks with a cushion to absorb price corrections, and maintained incentives for borrowers to continue servicing their loans.

21. Both economies embarked on a new tightening cycle in 2009 to cool renewed housing market pressures that were driven to some extent by foreign and domestic speculative and investment demand. Following the global financial crisis, house prices grew strongly again driven by historically low interest rates,[4] credit availability, strong economic prospects, limited housing supply amid the rapidly growing number of resident households, and demand by non-residents. By April 2017, house prices almost tripled in Hong Kong SAR compared to 2009, and increased by about 50 percent in Singapore. The new measures have progressively expanded the scale and coverage of macroprudential policy.

- **Hong Kong SAR.** The authorities gradually lowered the caps on LTV and debt service ratio (DSR), extended the prudential focus from luxury homes to investment properties, and later, to those where borrowers repay their debt with foreign income or have multiple mortgages. The LTV cap became differentiated, with a lower cap on higher-valued properties and investment properties. The banks were also required to compute the stressed DSTI ratio for all types of

[4] While house prices have risen more quickly than median incomes, all-time low mortgage interest rates have reduced debt servicing costs.

properties, including residential, commercial and industrial properties, assuming a mortgage rate increase of 300 basis points. Additionally, a risk weight floor of 15 percent was introduced on all residential mortgages for banks using the internal ratings-based approach, given the concern that the risk weights generated by banks' internal models were too low. In May 2017, the risk weight for new mortgages was raised to 25 percent.

- In early 2015, the Hong Kong SAR authorities announced new macroprudential measures to safeguard financial stability. Renewed concerns about the above-trend credit-to-GDP ratio and housing price growth prompted the authorities to announce a countercyclical capital buffer of 0.625 percent that was activated at the beginning of 2016. It was accompanied by a capital conservation buffer of 0.625 percent and higher loss absorbency surcharges between 0.25 - 0.625 percent for domestic systemically important banks under Basel III. While these measures go beyond the property sector, their implementation was expected to enhance banks' overall resilience and reduce their vulnerability to property sector shocks.

- In May 2017, the HKMA also tightened the capital requirements for banks with respect to their lending to property developers.

- **Singapore.** During both tightening episodes, the macroprudential toolkit was progressively broadened and refined. The macroprudential measures targeted speculative activity, while protecting owner-occupied mortgages. LTV limits were set at lower levels for holders of multiple mortgages to reduce access to credit for investment properties, while insulating households with single mortgages. Over the last tightening episode, the authorities introduced caps on loan tenors and DSTI to prevent borrowers from becoming overindebted. Also, some measures were tightened incrementally over time—for example, by capping the LTV on second and additional mortgages at lower and lower levels. Such refinement of individual measures helped close loopholes but led to higher regulatory complexity.

Measures Based on Fiscal Tools

22. Taxes on property transactions were an integral part of the response to housing market imbalances both in Hong Kong SAR and Singapore.

- **Hong Kong SAR.** On several occasions, the government raised taxes on property transactions in conjunction with the macroprudential measures. A Special Stamp Duty of up to 15 percent on residential properties resold within specific time periods was introduced in November 2010. This amounted to 15 percent within first six months of purchase, 10 percent between six and 12 months, 5 percent between 12 and 24 months.

    - In October 2012, the Special Stamp Duty was raised to up to 20 percent on resales within 36 months (20 percent within first six months of purchase, 15 percent between six and 12 months, 10 percent between 12 and 36 months), while a Buyer's Stamp Duty of 15 percent was introduced for buyers of residential properties who are not Hong Kong SAR permanent residents. This was followed by a doubling of the existing ad valorem stamp duty rates to a maximum of 8.5 percent in February 2013. The ad valorem stamp duty is on nonresidential and multiple residential property purchases.

- **Singapore.** Concern about speculative activity by foreigners and domestic corporations led to the imposition of a higher stamp duty for these groups to discourage property "flipping". The share of transactions with foreign buyers (excluding companies) increased sharply from around 11 percent in early 2010 to 20 percent in late 2011.

  - ***Stamp duty for foreign buyers.*** In December 2011, a 10 percent stamp duty was imposed on foreigners and corporate entities buying any residential property. In January 2013, the foreign buyer's stamp duty was raised to 15 percent.

  - ***Stamp duty for investment property. A buyer's stamp duty*** was imposed in December 2011 with a rate of 3 percent on permanent residents buying second or subsequent residential property or Singapore citizens buying their third residential property. In January 2013, buyer's stamp duties were raised both for permanent residents and Singapore citizens. Depending on the number of properties owned, the buyer's stamp duty could be as high as 10 percent.[5]

  - ***Stamp duty for investment property. A seller's stamp duty*** was introduced in February 2010 on all private properties sold within one year of purchase at a rate between 1- 3 percent. In 2011, the stamp duty was raised significantly to 16 percent for a holding period of up to one year but with every additional year of holding period reducing the stamp duty by 4 percentage points. After a sustained period of softer housing markets, stamp duty rates were reduced by 4 percentage points for each year of holding period and eliminated beyond three years in 2017.[6]

23. In Hong Kong SAR, tighter macroprudential policy and stamp duties helped enhance the resilience of the banking system and limit household leverage. The average LTV ratio at origination declined by about 10 percentage points in four years to 55 percent in mid-2013 and mortgage lending growth slowed (though it has rebounded since mid-2014). The impact on house prices has been less clear; prices leveled off following the measures but resumed growing in mid-2014.

24. In Singapore, home prices have remained flat since end-2011, while the volume of transactions has declined. The share of foreign buyers collapsed in the first half of 2012 to 5½ percent after peaking at 20 percent earlier. This could be attributed to new macroprudential measures targeting foreigners and weakening external investment sentiment, with buyers from China falling by nearly 50 percent.[7]

---

[5]See details at the following website: Singapore Buyer's stamp duty and additional stamp duty

[6]See details at the following website: Singapore Seller's stamp duty

[7] Such a drastic decline may also reflect the impact of the economic slowdown in China.

E. Conclusion

25. Low interest rates and abundant liquidity globally has led to significant demand pressures on housing markets around the world. Economies have tackled growing imbalances with the continued tightening of prudential-based tools and, in some cases, targeted tax measures. While the outcomes of these policies are not straightforward to assess, and up-to-date empirical evidence is not readily available for the individual economy cases, the measures likely have slowed down increases in house prices and household indebtedness, and improved the resilience of the financial sector to housing market related shocks.[8] The trend towards coordinating prudential measures with tax-based measures is likely to improve the overall effectiveness of macroprudential policy in cases when speculative and investment demand play a major role.

[8] See the chapter on "Macroprudential Tools at Work in Canada" for an empirical analysis of the effectiveness of individual macroprudential policy measures implemented in Canada and of the overall effectiveness of different prudential-based tools for a wider set of advanced and emerging countries.

References

13th Annual Demographia International Housing Affordability Survey, 2017, available at http://www.demographia.com/dhi.pdf

Bank of England, 2014-2016, Financial Stability Report, HM Treasury, 2015, Policy Paper—Spending Review and Autumn Statement

HM Treasury, 2016, Consultation outcome—Higher rates of Stamp Duty Land Tax (SDLT) on purchases of additional residential properties

Hong Kong Monetary Authority, 2011–16, Half-Yearly Monetary and Financial Stability Report

International Monetary Fund, Article IV Consultation—Staff Report and Selected Issues Paper for Australia, Hong Kong SAR, New Zealand, Singapore and United Kingdom, Various years (Washington: International Monetary Fund)

Monetary Authority of Singapore, 2011-2016, Financial Stability Review.

Reserve Bank of Australia, 2014-2017, Financial Stability Review.

Reserve Bank of New Zealand, 2014-2017, Financial Stability Report.

Websites of the Australian Prudential Regulation Authority, Bank of England, Hong Kong Monetary Authority, Monetary Authority of Singapore and Reserve Bank of New Zealand.