



Irving Fisher Committee on  
Central Bank Statistics

BANK FOR INTERNATIONAL SETTLEMENTS

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IFC Satellite meeting at the ISI Regional Statistics Conference on *"Is the household sector in Asia overleveraged: what do the data say?"*

Kuala Lumpur, Malaysia, 15 November 2014

## Measuring property prices: the experience of property markets in Hong Kong<sup>1</sup>

Raymond Yuen, Hong Kong Monetary Authority

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<sup>1</sup> Discussion of the presentation *"How should we measure residential property prices to inform policy makers?"* by Jens Mehrhoff, Deutsche Bundesbank. The views expressed are those of the author and do not necessarily reflect the views of the BIS or the central banks and other institutions represented at the meeting.

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## Session 2

Discussion of “How should we measure residential property prices to inform policy makers?” by Jens Mehrhoff & property market developments in Hong Kong

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**Presentation at the Satellite Meeting of the IFC**  
**ISI Asian Regional Conference**

**Kuala Lumpur, 15 November 2014**



- Mr. Mehrhoff's paper provides a careful study of residential property price data and their usage for different analytical and policy objectives, such as monetary policy making and financial stability assessment
- He also discusses the recent developments in the German residential property market using a dashboard with geographical breakdown. Given the diversity from region to region and city to city, he calls for a spatial study
- In my presentation, I will give a summary of his paper and discuss the case of Hong Kong, focusing on the key property market data and their recent developments, and also the implementation of macro-prudential measures and other tax measures



## Summary of paper (1)

- There requires a constant quality residential property price index to allow us to make like-with-like comparisons
- There are several distinct purposes for which a residential property price index is required. Different purposes require different indices, particularly in terms of aggregation using either flows or stock data
  - Short-term business cycle analysis: flows
  - National accounts and CPI: flows and stock
  - Macro-prudential concerns: flows and stock



## Summary of paper (2)

- A dashboard approach (with geographical breakdown) is used to assess residential property market developments in Germany
  - Price and valuation indicators: price-to-rent, price-to-income, household debt, credit exposure of banks
  - Construction and activity indicators: completed housing units
- Spatial diversity makes nationwide average not useful for analysis and policy design

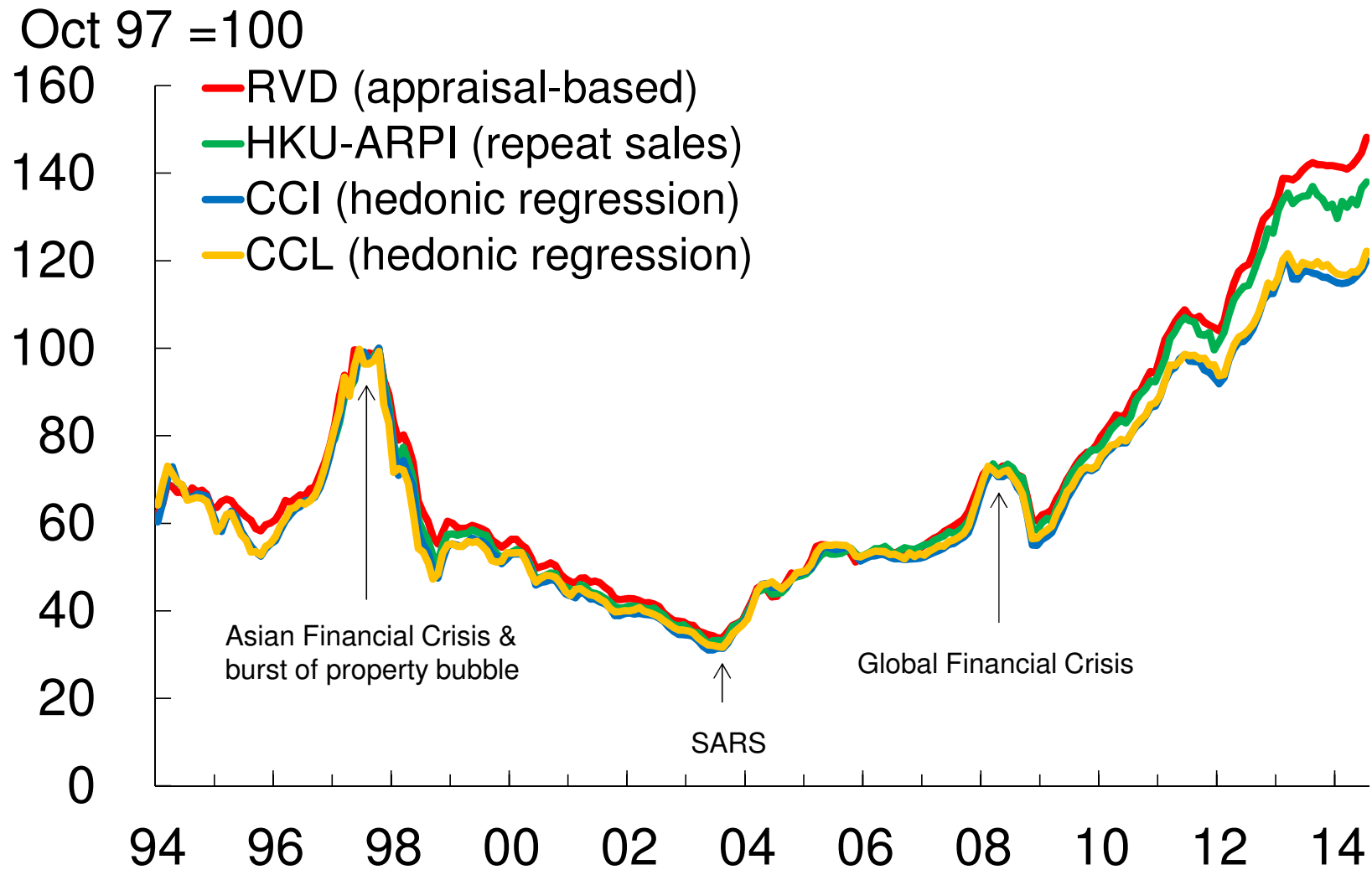


# Residential property price indices: the case of Hong Kong

Compiling institution	Sector of compiler	Data coverage	Quality adjustment	Starting date	Reporting lag
Rating and Valuation Department (RVD)	Public	All transacted dwellings	Appraisal-based & stratified by flat size	January 1986	1½ months
Centaline Real Estate Agency (CCI)	Private	transacted dwellings in 118 pre-selected popular estates (35% of total transactions)	Hedonic regression & stratified by estate and region	January 1994	1½ months
Centaline Real Estate Agency (CCL)	Private	transacted dwellings in 118 pre-selected popular estates (through Centaline)		1 <sup>st</sup> week 1994	1 week
University of Hong Kong (HKU-ARPI)	Academic	All transacted dwellings with a repeat sales pair	Repeat sales & stratified by region	July 1991	2½ months



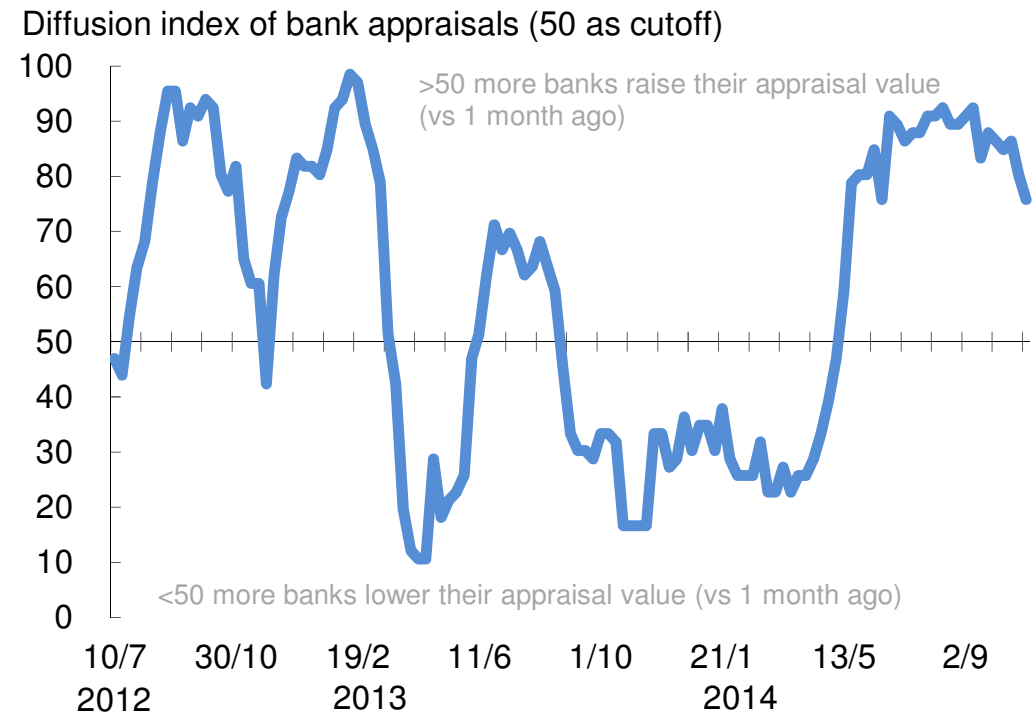
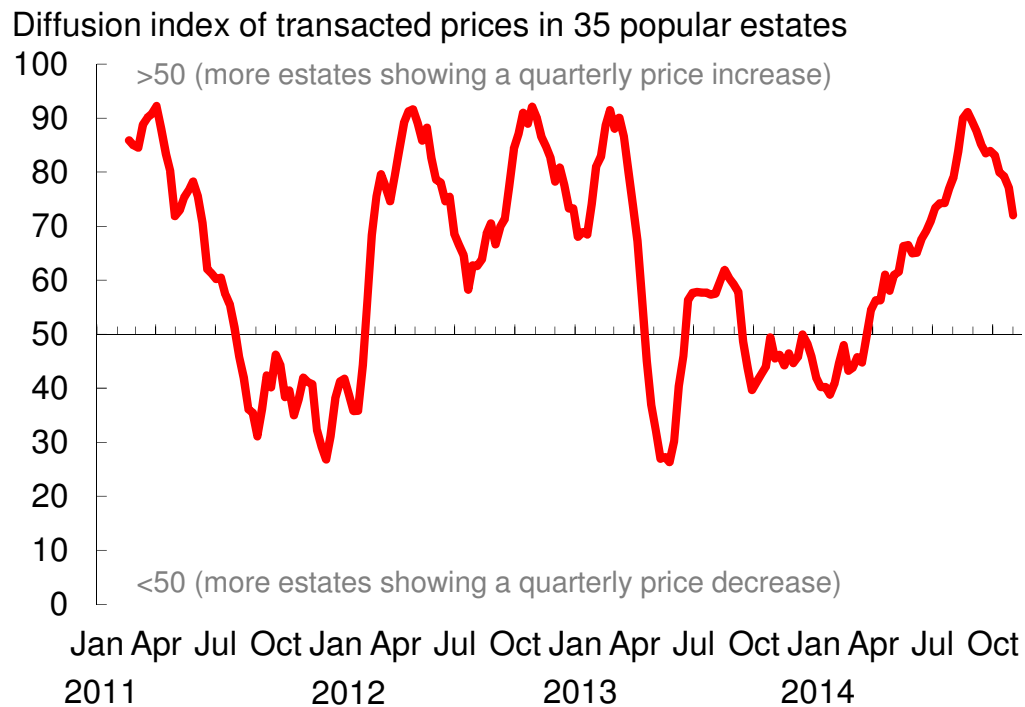
# Residential property price developments in Hong Kong





# Alternative indicators of residential property price dynamics

- Diffusion index = (% increase - % decrease) + 50
- DIs are not precise measures but timely and somewhat indicative of turns
- DI of bank appraisals provides additional information about credit stance

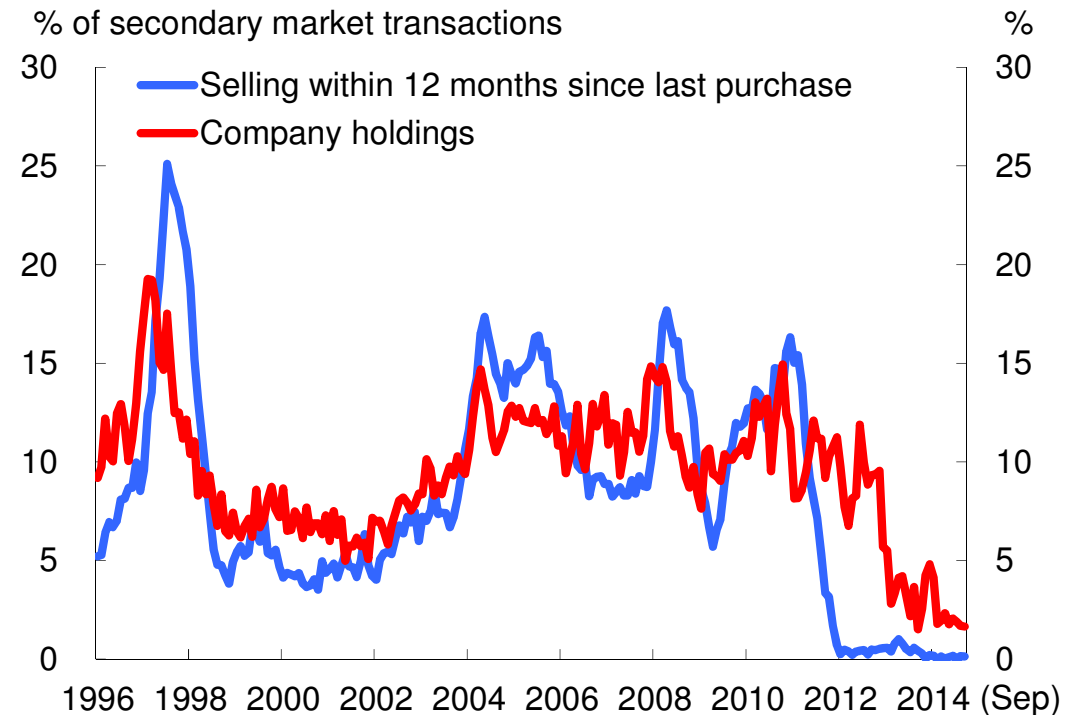
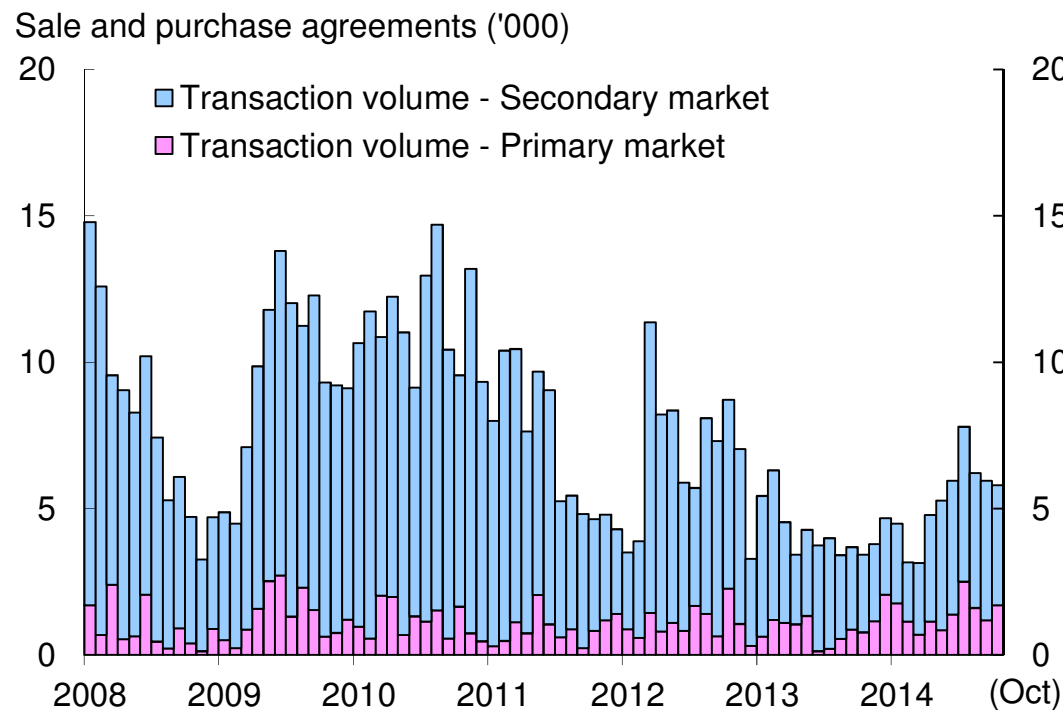






# Transaction data

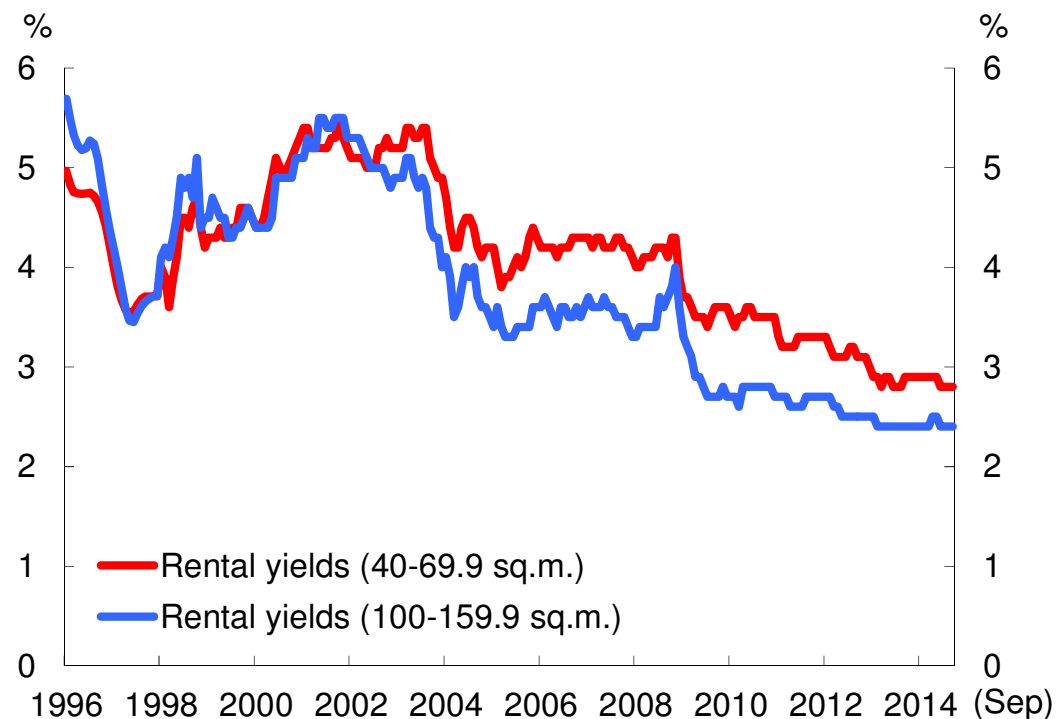
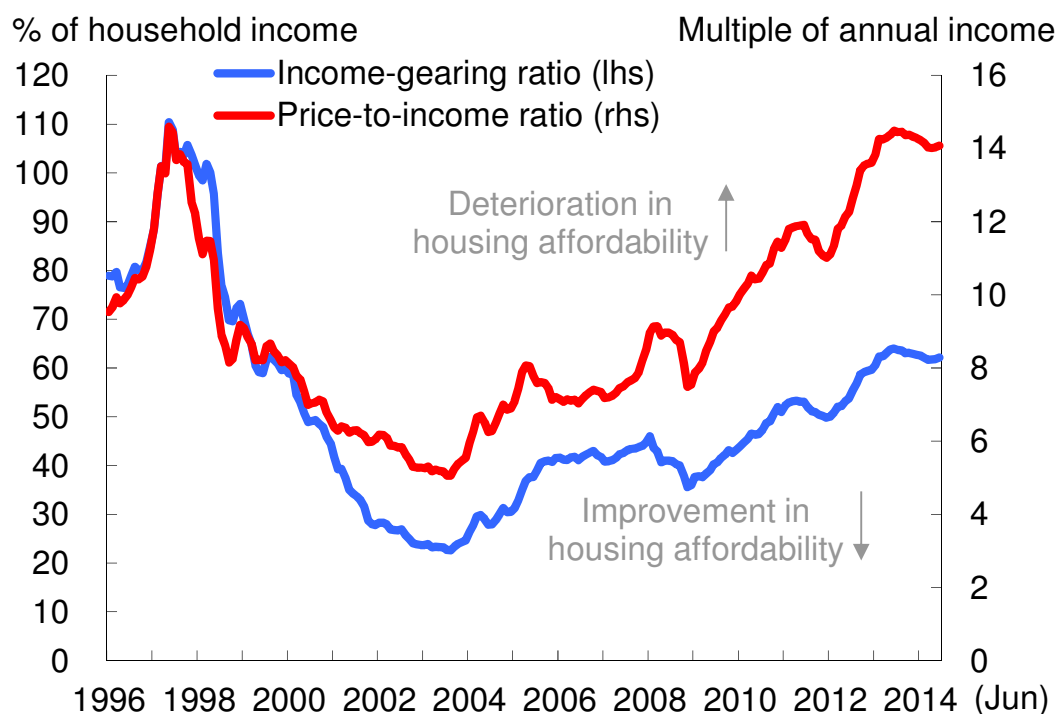
- Property price-trading volume correlation
  - Stein (1995), Berkovec & Goodman (1996), Leung, Lau & Leong (2012)
- Flipping trade and company purchase can show speculative and investment demand



# Affordability measures and rental yields (inverted price-to-rent ratio)



- Price-to-income ratio is a key valuation indicator
- Income-gearing ratio shows mortgage repayment and servicing ability
- Rental yields are compared with risk-free interest rate and capital return



# Macro-prudential measures on banks' mortgage lending business

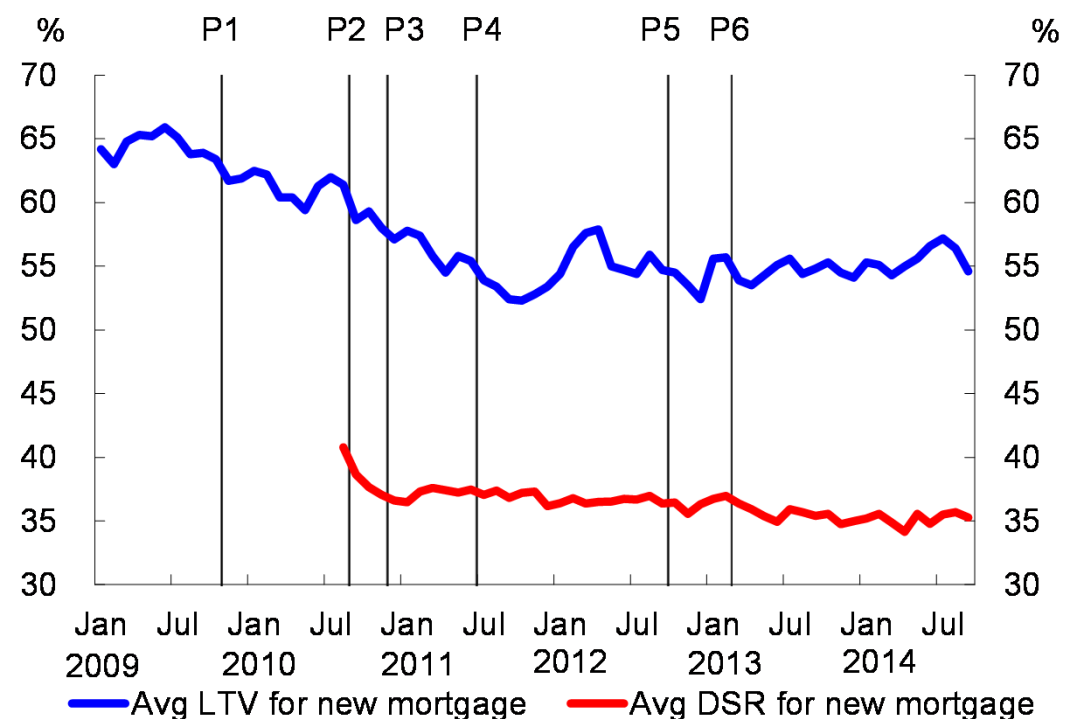
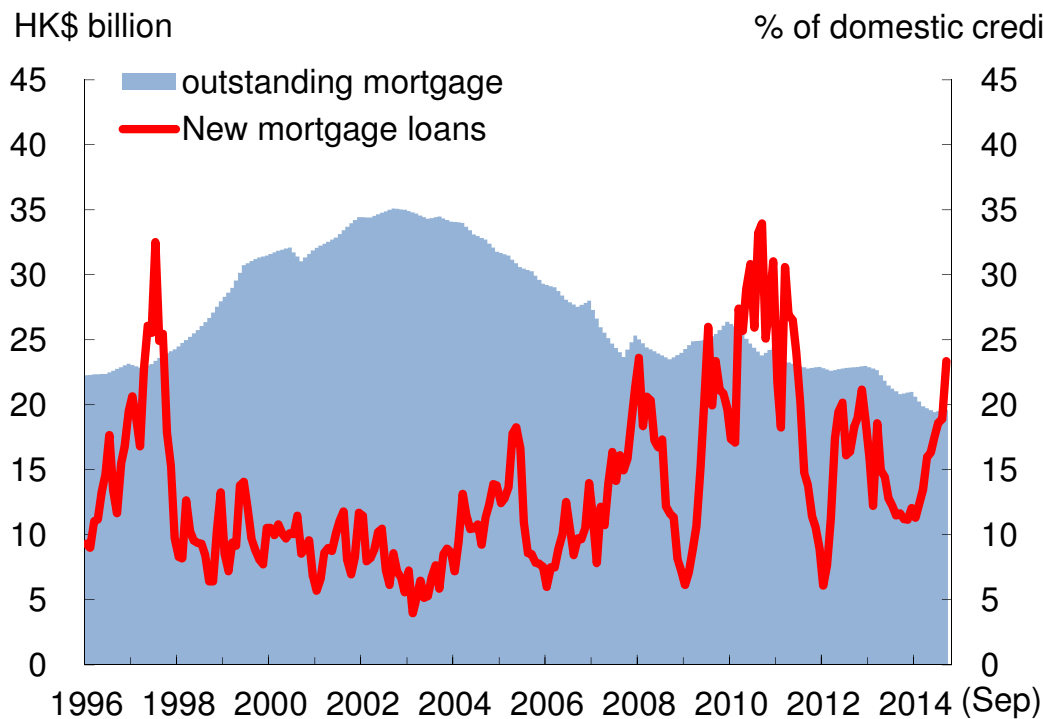


- HKMA introduced six rounds of macro-prudential measures since October 2009
  - Policy objective: banking and financial stability
    - Creating buffers for banks and households against price correction, not targeting at property price level
  - Tightened underwriting standards
    - Loan-to-value ratios (LTV)
    - Debt-serving ratios (DSR) and stress-testing
  - Targeted at luxury homes, investment properties, multiple mortgages, and mortgage repayment by foreign income sources
  - Close supervision and more on-site examinations



# Impact on borrowers' leverage and banks' credit exposure (1)

- Banks' exposure to mortgage business decreased
- Bank specific information on LTV and DSR distribution
  - Average LTV fell from about 65% in early 2009 to 55% recently
  - Average DSR declined from 42% to 35%





## Impact on borrowers' leverage and banks' credit exposure (2)

- Wong, Tsang and Kong (2014)
  - Borrowers' leverage has decreased, as LTV cap is found to be a binding factor on the actual LTV ratio in the market
  - Credit growth has moderated
  - Banking sector resilience to property price shocks has increased, mainly through reducing borrowers' leverage
    - Counterfactual study shows that the non-performing loan ratio would increase significantly should there be a property price shock
  - Loan market disequilibrium could contribute to a state-dependent effect of LTV policy on credit growth
    - Calibrating the LTV tool to target credit growth requires an accurate estimate of both loan demand and supply, but these are not observable.
    - Operationally, the modelling risks could pose challenges for policymakers



## Tax measures

- Special stamp duties (SSD)
  - 10-20% tax if a buyer resells within 3 years
- Buyer's stamp duties (BSD)
  - 15% tax if purchased by non-locals
- Doubling of the *ad valorem* stamp duty rates DSD
  - Except first-time home buyers



- HKMA (2014)
  - We construct a vector auto-regression (VAR) model to study the impact of these measures on residential property prices, transaction volume and mortgage loans while controlling for other economic and financial factors.
  - There are two policy variables in the model, representing the prudential measures and demand-management measures respectively. They are constructed as step function variables, equal to zero when no measures are in place, and increasing by one for each new “count” of tightening
  - Findings:
    - Macro-prudential measures help dampen mortgage loan growth and transaction volume but do not appear to have a direct impact on residential property prices
    - Tax measures have dampened transaction volume and growth in residential property prices, while the impact on mortgage loan growth is indirect through dampening transaction volume and prices



## Concluding remarks

- Macro-prudential measures can be useful to mitigate leverage build-up of and contain credit growth, but have limited effect on property prices
- Effective macro-prudential policy requires the ability to assess systemic risk, deploy and calibrate the tools, and close the regulatory gaps
- For the communication strategy, it is necessary to state clearly the policy intent of the macro-prudential measures
- It is important to think ahead about when and how to exit from the macro-prudential measures.