

# Effectiveness of Macroprudential tools: Some Asian experiences

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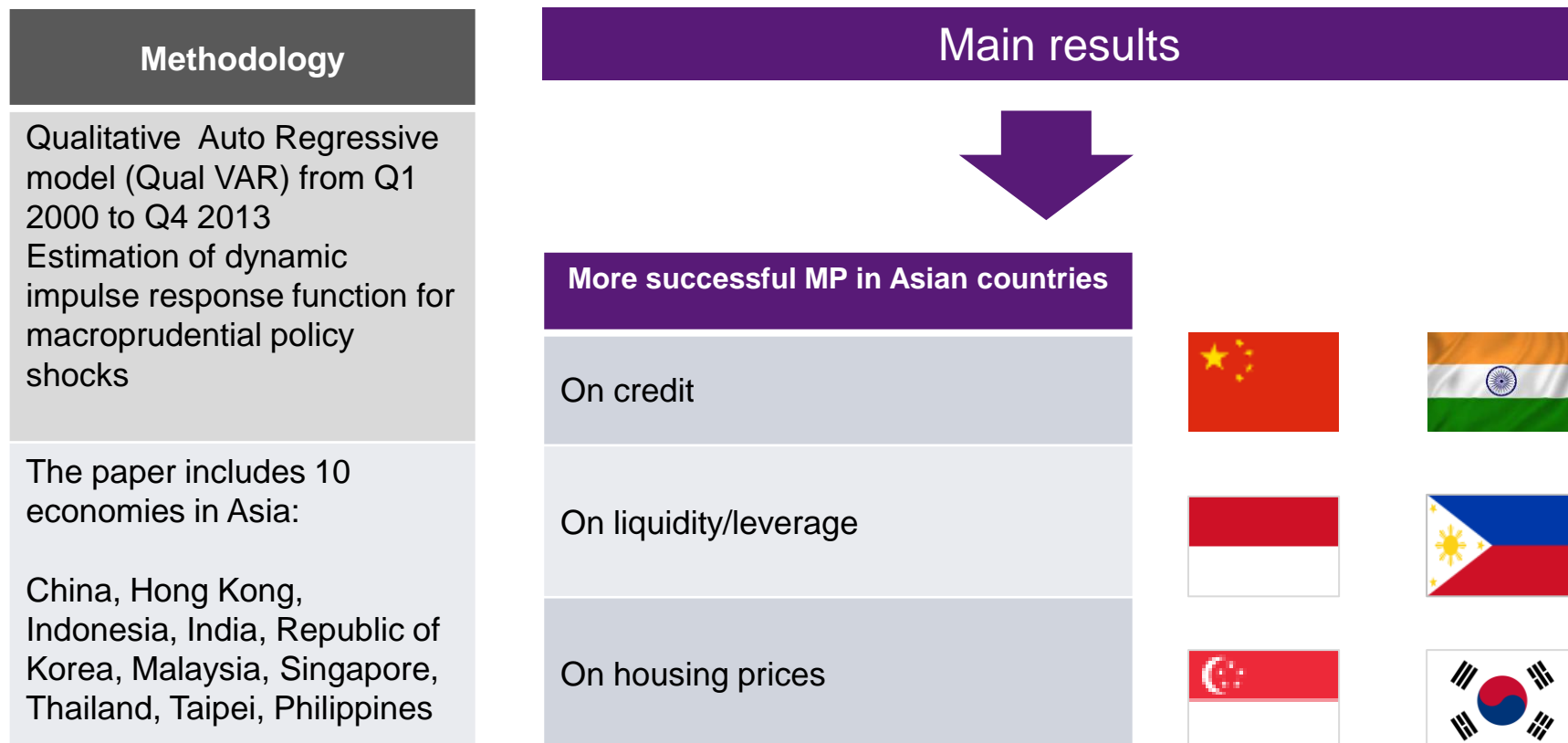
## KEY ISSUES

- 1 GENERAL THEMES FOR EXISTING LITERATURE**
- 2 MACRO PRUDENTIAL TOOLS FOR HOUSING PRICES: HONG KONG VERSUS SINGAPORE**
- 3 MACRO PRUDENTIAL TOOLS FOR LIQUIDITY/CREDIT CONTROL: THE CASE OF CHINA**



# GENERAL THEMES FOR EXISTING LITERATURE

Lee, Asunción and Kim (2015) find that macroprudential policies can be effective in Asia but effectiveness will depend on country and target (on credit, leverage or housing prices)



Bruno, Shim and Shin (2015) are more cautious on the usefulness of macro prudential tools: positively directly but not indirectly

### Methodology

Panel regressions analysis without country fixed effects from Q1 2004 to Q3 2013

Effects of macroprudential policies on three variables: bank capital flows, bond flows and credit

### Results

General effectiveness of macroprudential tools in slowing down bank and bond inflows

However, spillover effects (shift to other sources of credit) quite relevant (growth of other assets may be bigger)

This means that macroprudential measures may have a direct impact but not necessarily indirect

Table 5. Macroprudential measures. This table summarises the macroprudential measures taken by 11 Asia-Pacific economies over 2004-2013.

	Monetary measures			Prudential measures			All macroprudential measures		
	Tighten	Loosen	Total	Tighten	Loosen	Total	Tighten	Loosen	Total
Australia	0	0	0	1	0	1	1	0	1
China	34	7	41	21	2	23	55	9	64
Hong Kong SAR	0	0	0	11	2	13	11	2	13
India	17	7	24	11	2	13	28	9	37
Indonesia	2	1	3	1	0	1	3	1	4
Korea	1	0	1	12	6	18	13	6	19
Malaysia	2	3	5	4	0	4	6	3	9
New Zealand	2	0	2	1	0	1	3	0	3
Philippines	6	3	9	0	1	1	6	4	10
Singapore	0	0	0	9	1	10	9	1	10
Thailand	1	2	3	3	1	4	4	3	7
Total	65	23	88	74	15	89	139	38	177

# Synchronized or opposite policy cycles?

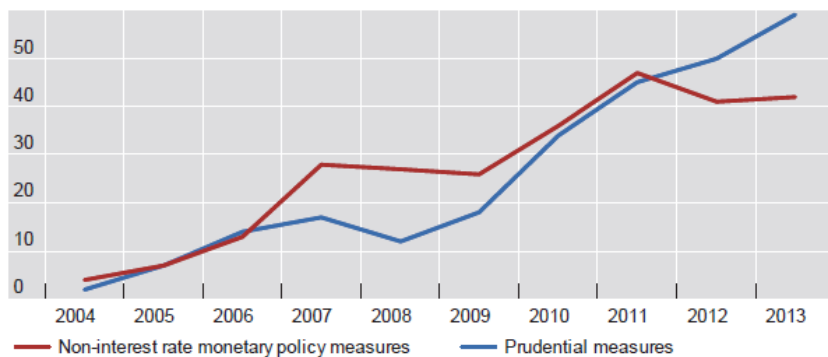


Figure 2. Macroprudential policy cycle in Asia-Pacific

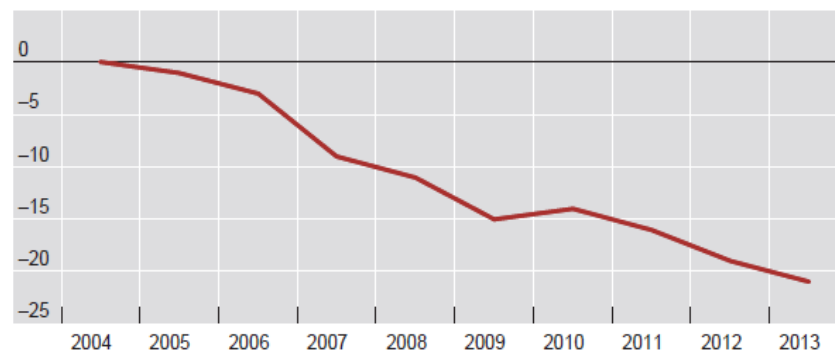


Figure 3. Bond inflow policy cycle in Asia-Pacific

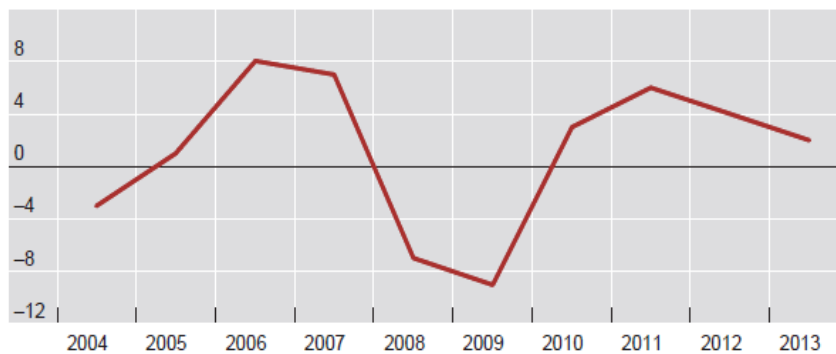


Figure 4. Banking inflow policy cycle in Asia-Pacific

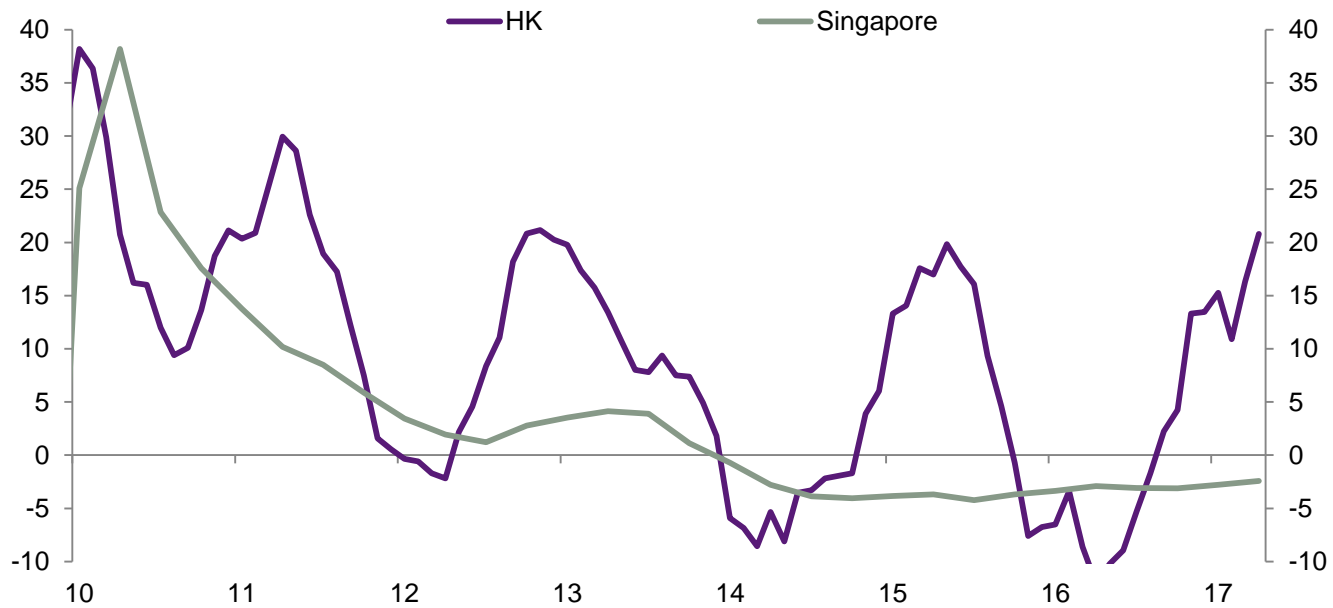


# 2

## MACRO PRUDENTIAL TOOLS FOR HOUSING PRICES: HONG KONG VERSUS SINGAPORE

# The tale of two cities: Hong Kong and Singapore real estate prices

Hong Kong and Singapore Residential House Price (%YoY)



Source: Natixis, CEIC



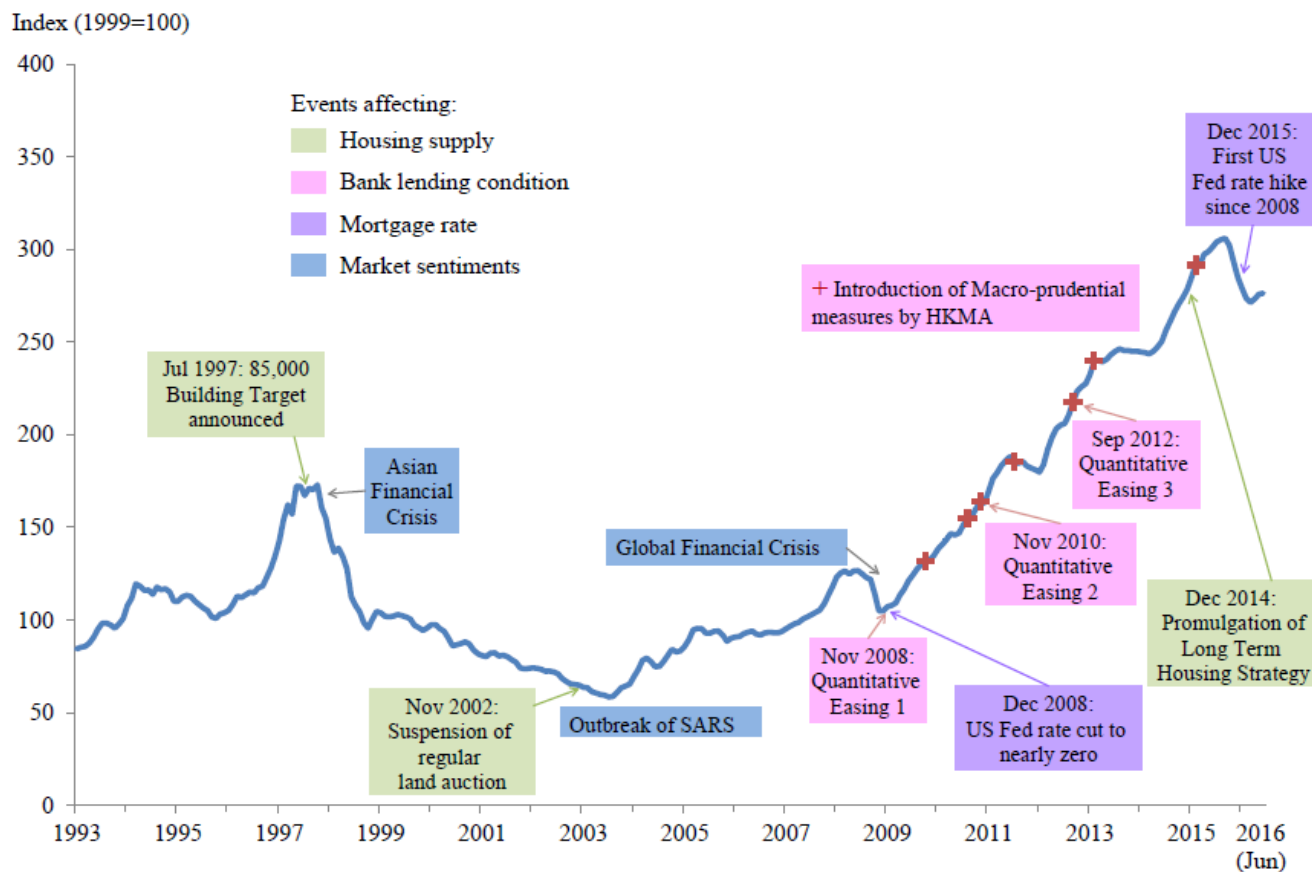
# Since peak in prices, Singapore has introduced aggressive macro-prudential measures

Macroprudential Measures to cool the real estate market in the past	
14-Sep-09	Removal of the Interest Absorption Scheme (IAS) and Interest-Only Housing Loans (IOL)
14-Sep-09	Resinstating the Government Land Sales
14-Sep-09	Non renewal of assistance measures for property developers.
20-Feb-10	<b>Reduce of LTV limit</b> for all housing loans provided by financial institutions regulated by MAS to 80% from 90%
30-Aug-10	Increase the holding period for imposition of Seller's Stamp Duty (SSD) from 1 year -> 3 years.
30-Aug-10	For property buyers who already have one or more outstanding housing loans at the time of the new housing purchase: increase the <b>minimum cash payment</b> from 5% to 10% of the valuation limit.
8-Dec-11	<b>Additional buyer's stamp duty</b>
5-Oct-12	<b>Restricted loan tenure</b> limit of 35 years on the tenure of all loans for residential property.
6-Oct-12	<b>Tightening of LTV limits</b> if the tenure exceeds 30 years or the loan period extends beyond the retirement age of 65 years. For these loans the LTV limit will be: 40% for a borrower with one or more outstanding residential property loans, and 60% for a borrower with no outstanding residential property loan.
12-Jan-13	<b>Tightening of LTV limits:</b> loans : 60% -> 50% . if the loans tenur is longer than 30 years (or does beyond the borrower's retirement age) : 40% -> 30% <i>-for second housing</i>
12-Jan-13	<b>Rise in minimum cash-down payment:</b> <i>- for third housing loans : 10% of the valuation limits to 25%</i> <i>- for second housing loans : 10% of the valuation limits to 25%</i>
12-Jan-13	<b>Mortgage servicing ratio</b> (for HDB and executive condos (ECs) only): MSR capped at 30% of a borrower's gross monthly income. <i>- for loans granted by financial institutions:</i> <i>- for loans granted by HDB: reduce of the cap:</i>
12-Jan-13	<b>ABSD:</b> <i>-Rise in ABSD &lt;math&gt;\diamond&lt;/math&gt; 5 and 7 percentage points across the board.</i> <i>-ABSD is imposed on permanent residents purchasing their 1st residential property and on Singaporeans purchasing their second residential property</i>
28-Jun-13	<b>Introduction of a Total Debt Servicing Ratio (TDSR)</b> framework for all property loans granted by financial institutions to individuals.
28-Jun-13	Refinement of rules related to application of <b>LTV limits</b>

Source: MAS Website, Natixis

# But also Hong Kong has without much apparent success

## Housing price index and major market events



Sources: R&VD and HKMA.

# Why such large difference between Hong Kong and Singapore?

Similar cities with a large share of non-resident purchases, similar income per capita and household indebtedness so why?

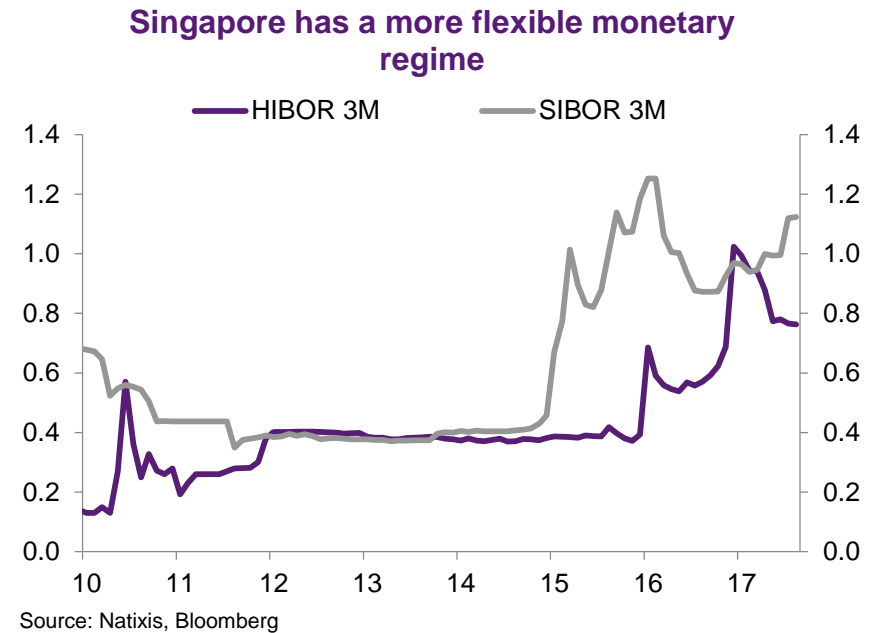
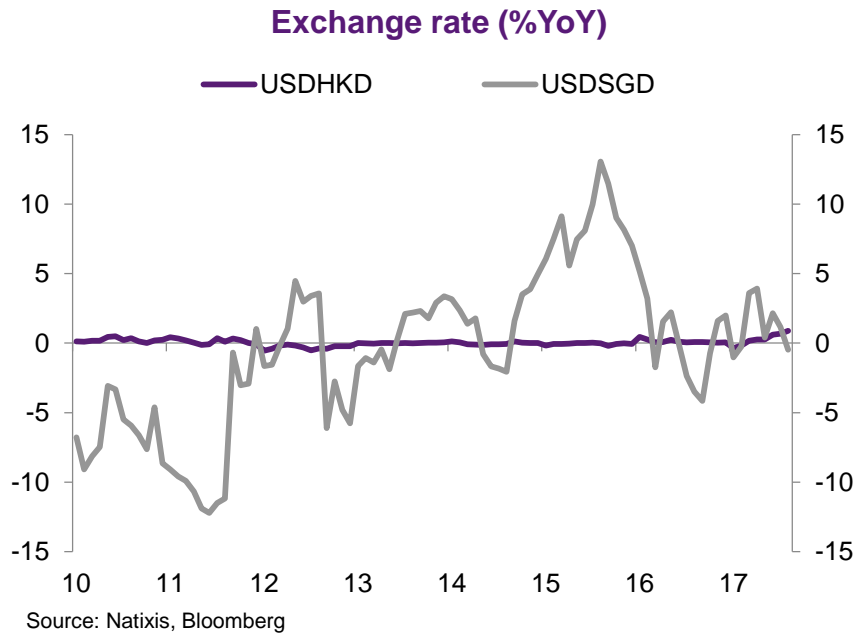


Source: <https://stuckincustoms.smugmug.com>



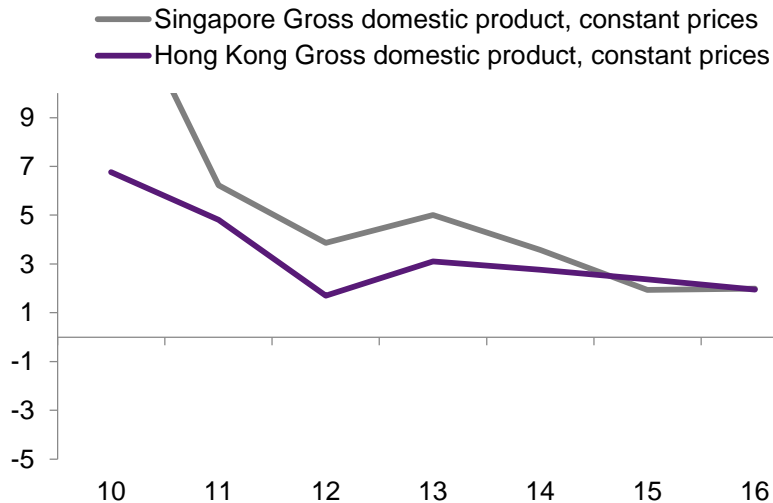
Source: <http://www.asiaone.com/>

# Singapore has more space in terms of demand policies: exchange rate and interest rates can be used as tools



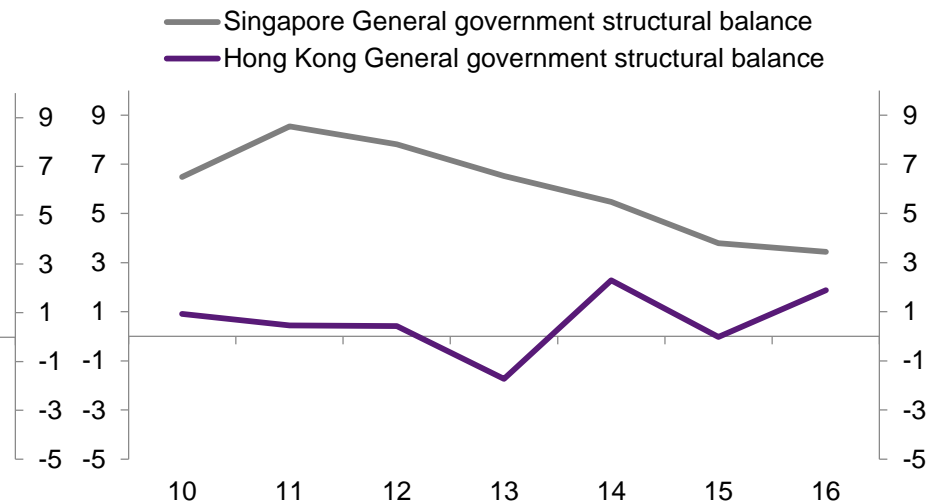
# HK has attempted to use fiscal policy to constraint demand but does not seem to have helped with housing price increases

Growth rates have converged in recent years



Source: Natixis

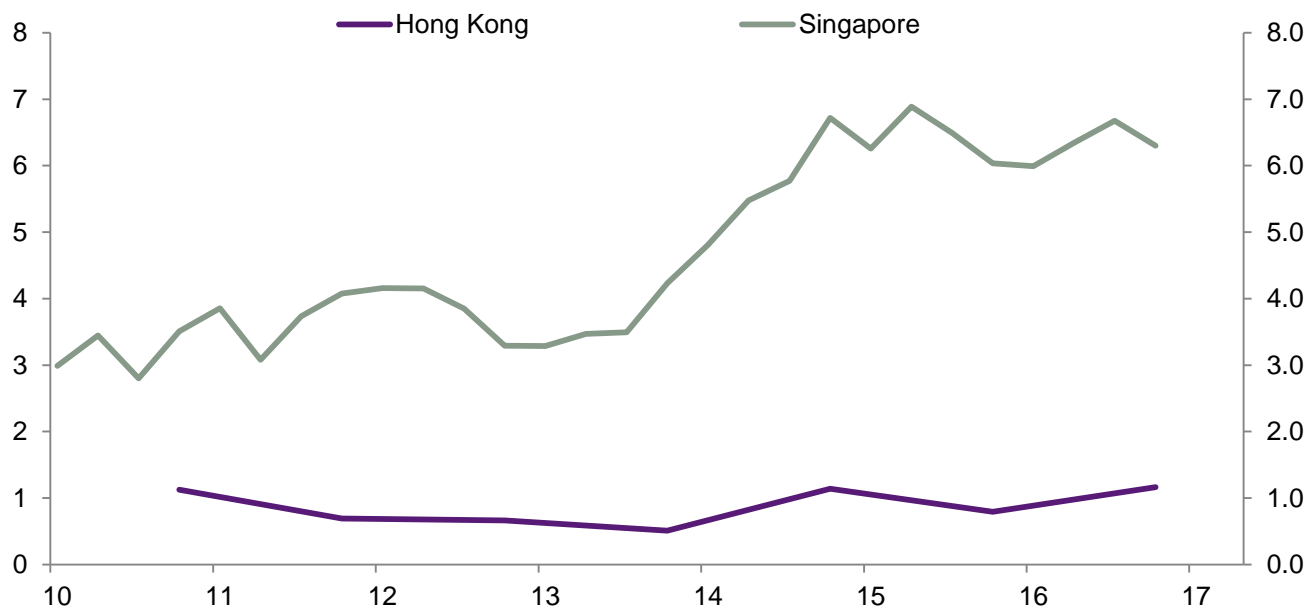
Singapore has a larger structure surplus (%of GDP)



Source: Natixis

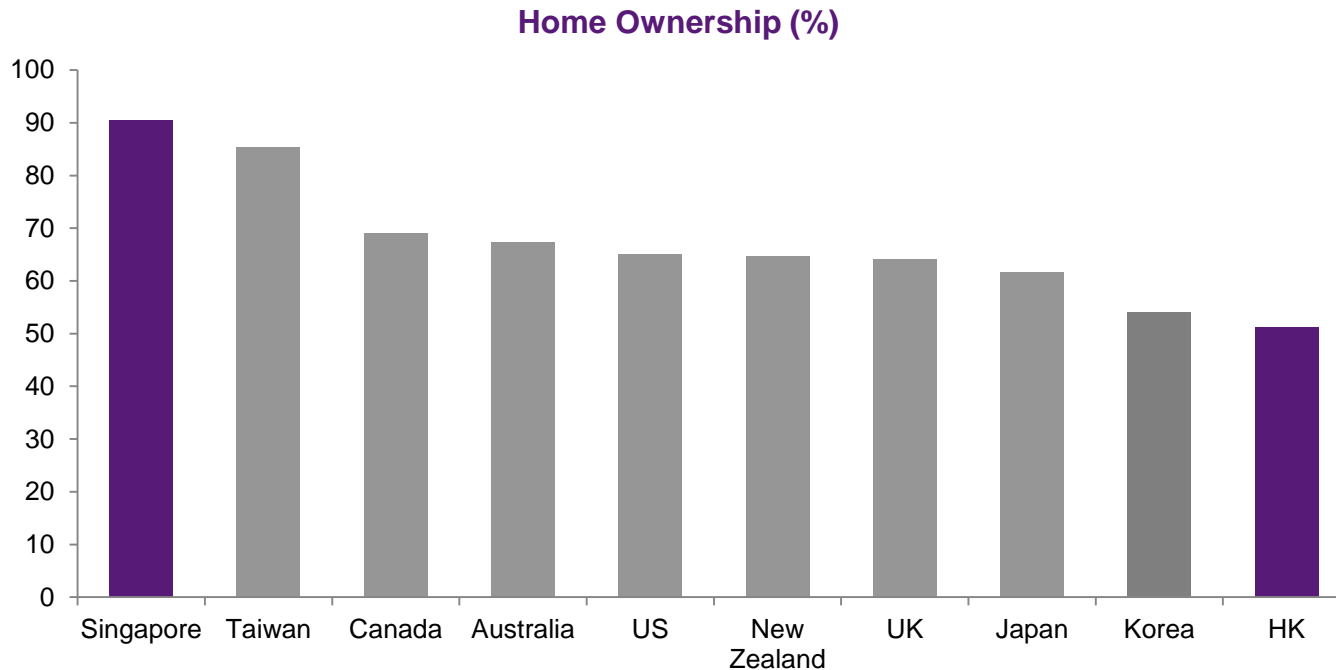
# Macro-prudential measures cannot overcome supply-side constraints

Supply of Hong Kong is the problem (%YoY)



Source: Natixis, CEIC

But also clear differences in market structure, such as ownership. Investment reasons pay more of a role in HK



Source: Department of statistics, Natixis

**Ineffectiveness of macro prudential tools in Hong Kong (versus Singapore) for housing prices may be explained by:**

1. Lack of demand policies (fiscal policy not enough in the absence of monetary/exchange rate policy)
2. But also lack of supply policies, in particular land
3. Also housing market structure very relevant

**Hard to solve all problems only with macropru!**





# 3

## MACRO PRUDENTIAL TOOLS FOR LIQUIDITY/CREDIT CONTROL: THE CASE OF CHINA

# Macro Prudential Assessment (MPA): clearly beyond macro prudential

Seven key criteria for PBoC to produce a quarterly report card for banks  
Banks must pass each: 4 of them being key

Criteria	Subcomponent	Relative relevance
Capital and Leverage	Capital adequacy ratio	80
	*Local SIFI capital surcharge	
	*Countercyclical factor	
	Leverage Ratio	20
	Total loss absorbing capacity (TLAC)	Pending
Assets and Liabilities	Growth of broad credit (inc. WMPs) below M2 growth target by 20%	60
	Same for entrusted loan	15
	Interbank funding no more than 33% of total liabilities	25
Liquidity	Liquidity coverage ratio (LCR)	40
	Net stable funding ratio (NSFR)	40
	Compliance with reserve requirement ratio (RRR)	20
Asset Quality	NPL ratio	50
	Coverage ratio	50
Pricing Behavior	Interest rate pricing	100
External Debt	External funding	100
Implementation of credit policy	Subjective judgement of credit conditions	70
	Use of central bank funds	30

# A tool to address weaker/riskier banks by limiting their sources of funding

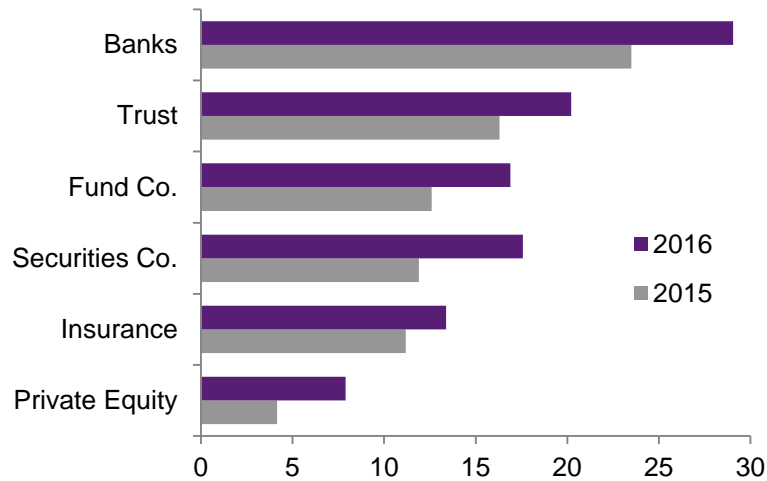
## The evolving regulation

1. Limits of repo-financing first
2. Then limits on wealth management products
3. Then non collateralized funding tools (such a non-negotiable certificates of deposits NCDs)
4. Now market has moved to money market funds

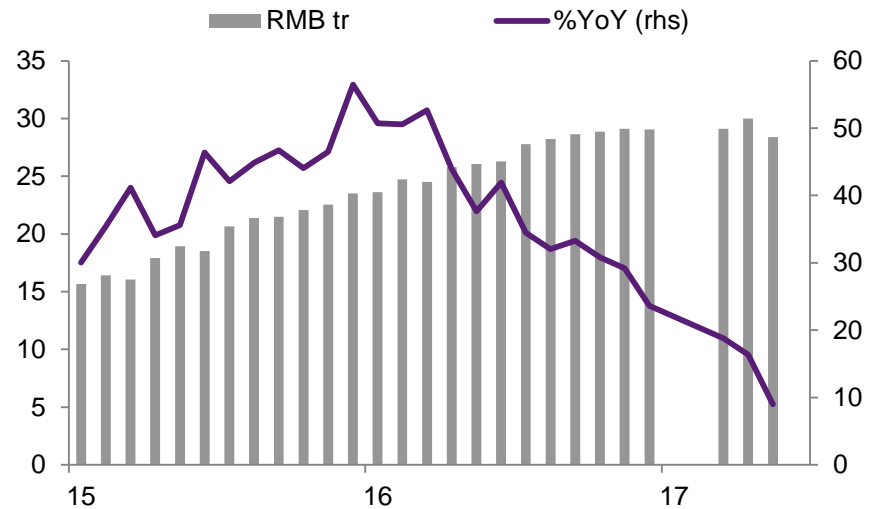
**So far, not successful as credit moved away from banks into shadow banking.  
Such macro prudential tools pushing for an even more dual banking sector.**

# Banks are key issuers of Wealth Management Products (WMPs), but the speed has slowed down in response to regulatory pressure

Size of WMP and Asset Management by Industry (RMB tr)



Banks' Wealth Management Products



Source: Natixis, CEIC

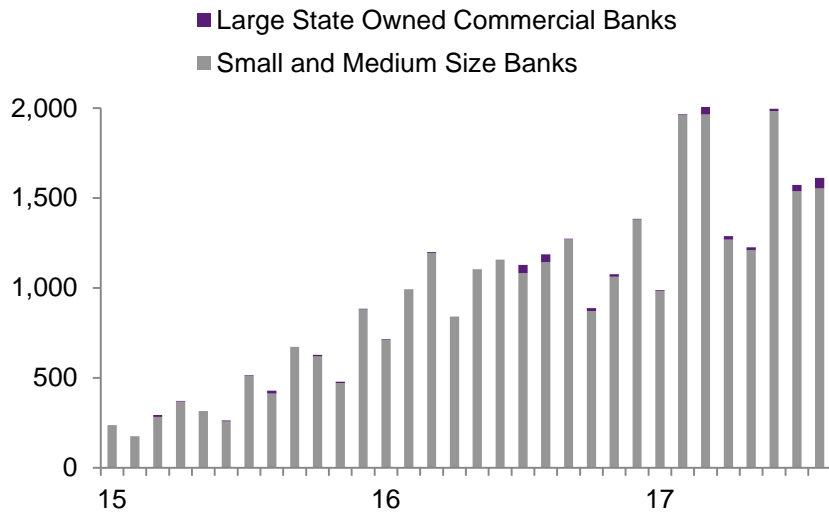
Source: Natixis, CBRC, WIND

Related Research:

[Key risk to China's shadow banking in 2017: Banks and WMPs](#)

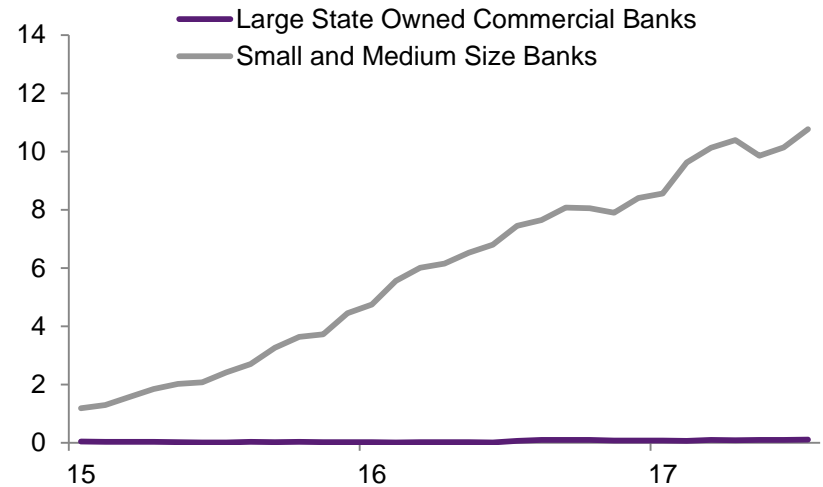
# Small banks very dependent on Negotiable certificate of deposits (NCDs)

**NCD Issuance (RMB bn)**



Source: Natixis, WIND

**Outstanding NCDs (% of Total Liabilities)**



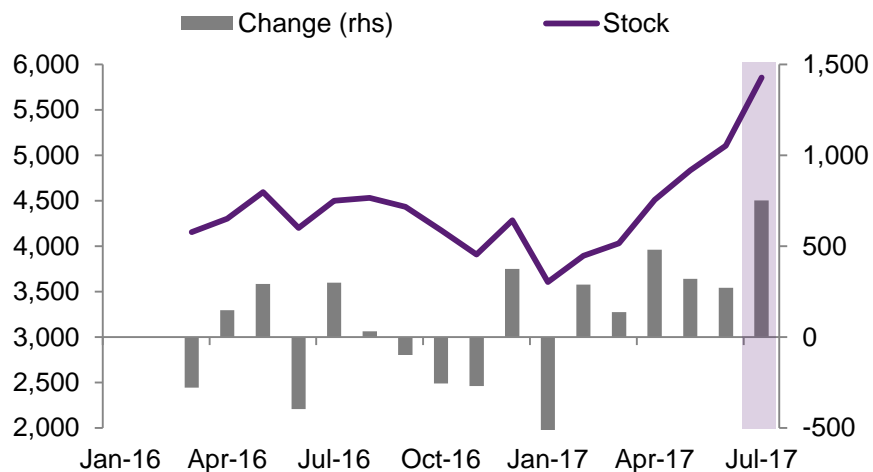
Source: Natixis, WIND

Related Research:

[China's financial leverage: An endless cat and mouse game continues to benefit large banks](#)

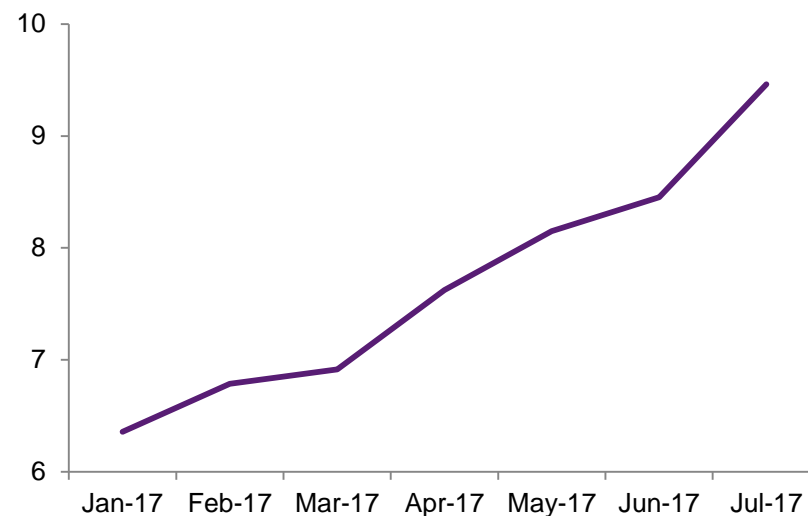
# With new regulations, liquidity scarce banks have also developed new ways through money market funds

Money Market Funds (RMB bn)



Source: Natixis, AMAC

Relative size to the Interbank Market (%)



Source: Natixis, WIND

## In sum

- The flurry of new funding instruments for Chinese banks is another sign of China's financial innovation. While positive in a vacuum, the reality is that the risks associated with such innovation do need to be assessed carefully.
- Chinese regulators are obviously aware, which explains their zeal to introduce new sources of financing in the PBoC's MPA. However, that is only pushing banks new – and increasingly less safe – sources of funding.
- In addition, given the large share of state-owned ownership in Chinese banking sector with a much larger deposit base, the search for funding is only affecting one part of the banking sector.
- All in all, China is using macro prudential tools aggressively to manage credit growth. The unintended consequences are:
  - Growing shadow banking
  - Growing banks' off-balance sheet positions as they are not included in MPA
  - Increasingly dual banking sector

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