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## Macro-prudential regulation – Lessons from Asia

- **Macro-prudential regulation is the gap in the regulatory framework in the West**
- **Its concepts are not fully defined and understood, and its effects are largely untested**
- **Lessons can be learned from Asia, where simple tools have reduced financial imbalances**

Macro-prudential regulation (MPR) is the new buzzword in the world of regulatory reform. By aiming to mitigate risks in the financial system as a whole, MPR was revealed during the financial crisis as the missing link between the traditional – ‘micro-prudential’ – regulation of individual financial institutions, and macroeconomic policy.

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Policy makers and academics in the West are thus busy trying to define MPR, clarify its objectives and develop analytical and institutional frameworks and tools to manage systemic risks. However, while MPR concepts are relatively new in the West, Asia has used them for several years (without explicitly calling them MPR). In this report, we discuss Asia’s experience with MPR, and lessons the West can learn from the East.

The key lessons are:

1. MPR typically relies on multiple instruments. System-wide measures, such as reserve requirements or caps on loan-to-deposit ratios, are used to control overall credit in the economy. However, these are not enough to manage risk in the financial system, so they are supplemented with sector-specific tools, such as loan-to-value ratios, which target emerging bubbles, most commonly in the property sector.
2. MPR is most effective when it is co-ordinated with monetary policy. Just as monetary policy alone is not sufficient to prick bubbles, neither is MPR. They complement rather than substitute each other. The interaction with fiscal policy and micro-prudential regulation is also important.
3. MPR is typically tightened (or loosened) gradually, in a similar fashion to monetary policy, not only to avoid a hard landing, but also to adjust to changing fundamentals. In addition, the gradual approach reflects the difficulties of assessing systemic risks.
4. While MPR does not always prevent bubbles, it does limit the build-up of leverage, which then makes the banking system more resilient in a downturn.
5. MPR tools, like any administrative measures, can be circumvented, leading to inefficient allocation of credit. They can also add to the complexity of the regulatory environment, and stifle competition and growth.
6. MPR can also have unintended consequences. By curbing imbalances in one sector, they can create them in another. Moral hazard is a risk too. If investors believe that the authorities can prevent bubbles and a collapse of asset prices, they will engage in risky behaviour and undermine the policy.



*The following article by Gerard Lyons on macro-prudential lessons that the West could learn from Asia appeared in the Financial Times on 28 July, 2010*

## **ASIAN LESSONS FOR THE WEST**

By Gerard Lyons

Learn from Asia. That is one lesson for Western policy makers as a result of this crisis. Over the last decade, Asian governments learned the benefits of anti-inflationary policies from the West. Now, Asia can export the lessons on macro-prudential measures. These should become a vital ingredient of the future policy tool-kit worldwide.

As regulators rush to impose new controls on financial institutions, it is easy to lose sight of some simple but effective ways to ensure greater financial stability. This is helping propel macro-prudential measures to the top of the regulatory debate, and rightly so. These are specific, targeted measures that help prevent bubbles and the build-up of financial imbalances. They work. My fear is Western policy makers are not grasping fully the benefits of macro-prudential measures and instead are opting for second-best regulatory solutions that satisfy political clamour but are not effective.

During the Lawson Boom in the late 1980s, I advocated domestic credit controls for the UK. They could have worked then but were not implemented. Now, following the Brown Boom and Bust, the case is overwhelming for greater controls targeted at the right area. Yet, it is not just the UK that could benefit, Europe and the US could gain too.

On the eve of this crisis, many would have doubted whether Asia's policy tools or institutions could have coped with the external shock we saw. But they did. Learning is a two-way process.

What is there to know? Asia's crisis of 1997-98 left a lasting memory. It taught countries the importance of self-insurance. In particular, foreign exchange reserves rose, and fiscal and external balances were rebuilt. Yet, crucially, these self-insurance measures were counter-cyclical. This is an important lesson for the West as, during the boom, its fiscal and monetary policies were often pro-cyclical, adding fuel to the fire.

In the West, there is a perception that if global imbalances persist this increases the risk of the next crisis. This adds to pressure to over-regulate the financial sector. But two wrongs do not make a right! Global imbalances are dangerous, but so too is excessive regulation, the unintended consequences of which are negative for lending, growth and jobs.

An alternative is effective, counter-cyclical, macro-prudential measures that, like those across Asia, need to be forward-looking, preventing valuation booms and credit bubbles. A clear lesson of the crisis was that if something seems too good to be true, or is out of line with reality then it probably is, and needs stopping before it gets worse.

Measures such as tighter loan-to-value ratios, debt-servicing caps or the prohibition of certain financial products have been used across Asia to prevent excesses in specific sectors. However, in the emerging world it was not just sector-specific measures that worked. System-wide tools proved effective, including reserve requirements, capital account restrictions, loan quotas or even capping exposures to risky counterparties or asset classes.

The authorities in Hong Kong have worked with the banks since early 1990s, who voluntarily agreed to tighten the loan-to-value ratio from 90% to 70%. Moreover, all institutions have a clearly defined and documented policy to assess the repayment capability of residential mortgage borrowers. One wonders whether such an approach would have helped in the US sub-prime problem. Recently, a potential bubble in luxury property prices in Hong Kong prompted specific measures, including stamp duties and lower loan-to-value ratios.

China has acted likewise, recently hiking down-payments, forcing higher lending rates for second homes, prohibiting third mortgages and introducing experiments on taxing home ownership in four major cities. Recently there has been tighter scrutiny of developers' financing, and this has had an immediate impact.

It's not all about restrictions. Even with specific measures, there needs to be joined-up thinking. If, in the West, people are unable to buy a property because of the need for a big deposit, many may be forced to rent, paying as much, if not more, than on a mortgage. Joined-up thinking should ensure that preventing a boom in one sector does not lead to problems spilling over elsewhere. In Hong Kong and Singapore, for example, controls on property borrowing went hand in hand with expanding housing supply. Central banks in the West could learn much from the curbs on lending and governments from the strategic thinking about the supply-side and about building homes.

South Korea adopted similar measures, curbing overall leverage in the financial sector. The Reserve Bank of India keeps a close watch on aggregate and sector credit growth, as well as incremental credit-deposit ratios of banks. To prevent overheating, it alters risk weights and provisioning norms.

In India and China, the use of reserve requirements has proven vital, taking pressure off the need for constant fine-tuning of interest rates, which may be too blunt a policy tool by itself. Reserve requirement ratios rose sharply in the boom, helping economic management. Central banks in the West should take note.

Although macro-prudential measures require judgement calls, they are simple to implement, can be targeted and, thus, effective. They are better than over-arching regulations that penalise the good with the bad. Such measures have proved effective in addressing credit growth and property booms, the root cause of most crises.

Monetary and fiscal policy must be co-ordinated to address economic issues. Macro-prudential measures can play a key role in achieving financial stability and avoiding regulatory overkill. Look East, not West.

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## The crisis changed how we think about financial regulation

A multitude of factors contributed to the global financial crisis, but the failure of financial regulation was a major one. One reason is that it was 'light-touch', and reliant on market participants' apparent ability to diversify risk away using securitisation and derivatives. A more likely reason is that it was blind-sided by the 'fallacy of composition', whereby regulators believed that if every individual bank is strong, the financial system as a whole is stable, when in fact they overlooked the big picture. The banks' collective, pro-cyclical behaviour undermined the entire financial system.

*Banks exacerbate economic cycles with their pro-cyclical credit provision*

Financial crises tend to follow big – and typically credit-fuelled – booms. During an upswing, perceived risk falls, and over-exuberance leads to the build-up of excessive debt and financial imbalances such as asset bubbles, which ultimately become unsustainable and unravel violently. Similarly, when asset prices fall and impairments start to rise, banks become risk-averse and cut back on lending. The Basel II Accord that requires banks to increase capital as creditworthiness declines, as well as fair-value accounting rules, further contributes to this pro-cyclical.

*The objective of MPR is to mitigate pro-cyclical*

The objective of MPR is to mitigate this pro-cyclical 'herd' behaviour, by 'taking away the punch bowl just as the party gets going', and by filling it up as the party loses steam. By controlling the amount and quality of credit available, banks should stay out of trouble during boom times, so the frequency and severity of downturns can be limited.

*Monetary policy is not sufficient for financial stability*

Isn't mitigating pro-cyclical the role of monetary policy? While monetary conditions have a direct impact on the stability of the financial system, monetary policy alone is not sufficient to prevent credit booms that culminate in crises. First, monetary policy only directly controls the price, not the quantity, of credit. Second, interest rates may be too blunt an instrument. Rate hikes of the magnitude required to prick a potential property bubble, for example, could seriously damage the real economy. This is why central banks, despite recognising the risks of asset bubbles, have not targeted them.

*MPR instruments can be system-wide or sector-specific*

### What exactly does MPR entail?

MPR is still a vague and elusive concept, meaning different things to different regulators. Sometimes, it simply refers to monitoring the financial system for vulnerabilities to inform monetary or micro-prudential policies. Increasingly, however, it refers to prudential measures that address those vulnerabilities. These can be broadly divided into system-wide, which aim to influence overall lending in the economy, and sector-specific, which, as the name implies, target imbalances in risky areas.

Property, which tends to be the culprit in the worst financial crises, is the most frequently targeted sector. There is an endless list of possible MPR instruments, but the most commonly proposed tools are summarised in Tables 1 and 2.



**Table 1: Example of system-wide macro-prudential instruments**

Tool	Strengths	Weaknesses
<b>Counter-cyclical capital buffers</b>	<ul style="list-style-type: none"> <li>• Can reduce overall lending</li> <li>• Build a cushion that can be drawn down when boom turns to bust</li> <li>• Relatively easy to implement</li> </ul>	<ul style="list-style-type: none"> <li>• To reduce overall lending, banks may chose to lend less to socially beneficial areas, and maintain lending to lucrative but risky sectors</li> <li>• Buffer can be increased by issuing equity instead of reducing lending</li> <li>• Too blunt an instrument, may stunt growth</li> <li>• Drag on banks' return on equity (ROE), which may encourage risky behaviour to maintain ROE</li> <li>• Given that financial crises happen, on average, every 20 years, and cannot be prevented, costs may not warrant the benefit</li> </ul>
<b>Forward-looking loss provisioning</b>	<ul style="list-style-type: none"> <li>• Builds cushion that can be drawn down when boom turns to bust</li> <li>• Creates perception of systemic prudence</li> </ul>	<ul style="list-style-type: none"> <li>• Future losses are hard to estimate, could lead to inefficient allocation of banks' capital</li> <li>• Potentially misleading if badly estimated and may encourage moral hazard assuming there is protective cushion for the downside</li> <li>• Does not necessarily reduce risky lending</li> <li>• Given that financial crises happen, on average, every 20 years, and cannot be prevented, costs may not warrant the benefit</li> </ul>
<b>Variable liquidity ratios</b>	<ul style="list-style-type: none"> <li>• Increase cost of lending, which may reduce overall credit</li> <li>• Mean that cash and other liquid assets are available when a crisis hits</li> </ul>	<ul style="list-style-type: none"> <li>• Inefficient use of liquid assets that could be used more productively</li> <li>• Very costly for banks, thus could have negative impact on the financial system and the economy</li> <li>• May encourage risk-seeking behaviour by banks to maintain ROE</li> <li>• Liquidity metrics for micro-prudential regulation will not be properly calibrated for years, so perhaps it is pre-mature to think of them for MPR</li> </ul>
<b>Reserve requirements</b>	<ul style="list-style-type: none"> <li>• Reduce total volume of lending by requiring banks to hold more deposits at the central bank</li> <li>• Easy to implement</li> </ul>	<ul style="list-style-type: none"> <li>• Not effective when banks have other sources of funds than deposits, or if reserves are already high</li> <li>• Not the most efficient use of finance</li> <li>• Reduce overall lending but not necessarily risky lending</li> </ul>
<b>Limits on currency mismatches</b>	<ul style="list-style-type: none"> <li>• Limit default risks if local currency suddenly depreciates</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent access to potentially cheaper finance thus preventing financial development and efficiency</li> </ul>
<b>Loan quotas</b>	<ul style="list-style-type: none"> <li>• Reduce overall lending</li> </ul>	<ul style="list-style-type: none"> <li>• Require tight regulatory oversight</li> <li>• Difficult to enforce, especially in a market with too many credit providers or sophisticated credit markets</li> </ul>

Sources: Standard Chartered Research, BIS, Brookings Institution, FSB



**Table 2: Example of sector-specific macro-prudential instruments**

Tool	Strengths	Weaknesses
<b>Loan-to-value (LTV) caps</b>	<ul style="list-style-type: none"> <li>• Reduce lending to risky sectors thus preventing the build-up of systemic risk</li> <li>• Limit speculation as speculators need more equity and face lower returns</li> <li>• May limit the risk of property bubbles</li> <li>• Intervention is targeted; thus quite effective and with limited side-effects</li> <li>• Easy to implement and tweak according to developments in the market without losing credibility</li> </ul>	<ul style="list-style-type: none"> <li>• Difficult to implement in a financial system with large shadow banking sector, non-bank credit providers, or deep credit markets</li> <li>• Can be circumvented by borrowers topping up their mortgages with other personal loans</li> <li>• Potential for policy errors</li> <li>• May be perceived as discriminating against less wealthy people so politically challenging</li> </ul>
<b>Debt-to-income (DTI) caps</b>	<ul style="list-style-type: none"> <li>• Only qualified borrowers get access to credit</li> <li>• Less reliance on asset collateral</li> </ul>	<ul style="list-style-type: none"> <li>• Can be pro-cyclical, as personal income correlates with economic cycle</li> <li>• May not prevent defaults in downturn for borrowers who suddenly find themselves out of a job</li> </ul>
<b>Property taxes</b>	<ul style="list-style-type: none"> <li>• Increase holding cost of property or transaction costs, thus limiting demand</li> </ul>	<ul style="list-style-type: none"> <li>• May discourage home ownership for less privileged</li> </ul>
<b>Prohibitions on risky products (e.g., multiple mortgages by the same person, interest-only mortgages)</b>	<ul style="list-style-type: none"> <li>• Direct limit on leverage</li> </ul>	<ul style="list-style-type: none"> <li>• Can be circumvented by taking out loans in different buyers' names</li> <li>• Interventionist, may encourage corruption</li> </ul>
<b>Differential interest rates on risky products</b>	<ul style="list-style-type: none"> <li>• Increase the cost of speculation</li> </ul>	<ul style="list-style-type: none"> <li>• Enforcement</li> </ul>
<b>Sector-specific risk-weights, loan-loss provisioning, capital or reserve requirements</b>	<ul style="list-style-type: none"> <li>• Build buffers against losses on risky loans</li> <li>• More targeted than system-wide measures, thus likely to be more effective</li> </ul>	<ul style="list-style-type: none"> <li>• Could encourage creative accounting</li> <li>• Difficulties of categorising 'risky' sectors</li> <li>• Complexity in implementing</li> </ul>
<b>Caps on a single counterparty or asset-class exposure</b>	<ul style="list-style-type: none"> <li>• Direct limit on risk exposure</li> <li>• Limit concentration risk</li> </ul>	<ul style="list-style-type: none"> <li>• Could be seen as a form of directed lending</li> <li>• Inefficient allocation of resources in case of policy errors</li> </ul>

Sources: Standard Chartered Research, BIS, Brookings Institution, FSB

### Asia's experience

*Asia has been using MPR for several years*

Even though there has been little progress in the development of MPR in the West, where, in the 1960s and 1970s, such policies (e.g., the 'corset' in the UK, which controlled credit growth by making banks hold a portion of their assets in interest-free reserves if growth in their liabilities was faster than a pre-set limit) were perceived as failing in their objectives while distorting the markets, Asia has been using MPR for several years.

India and China, for example, commonly use reserve requirements to control credit. Charts 1 and 2 illustrate the tightening and expansion of reserve requirement ratios (RRRs) commensurate with credit growth (with the exception of China in 2009, when the historically large credit expansion reflected the government's sizeable stimulus). Taiwan, Brazil, Turkey and Saudi Arabia are among countries that also rely heavily on RRRs as part of monetary policy. This reduces the need for constant fine-tuning of interest rates, especially when policy makers face the dilemma of raising interest rates only to encourage more capital inflows, thus replacing a domestic liquidity problem with a foreign one.



*In addition to price stability, the RBI aims to maintain financial stability*

In addition to standard inflation measures, the Reserve Bank of India (RBI) keeps a close watch on aggregate and sector credit growth, as well as banks' incremental credit-deposit ratios, and capital outflows are still quite tightly regulated. Korea, on the other hand, reins in credit growth by imposing caps on loan-to-deposit ratios.

*System-wide measures are typically supplemented by measures targeted at problem sectors*

Asian countries recognise that reducing overall lending is not enough to manage risk in the financial system. More targeted measures are thus used to address specific imbalances, in addition to the overall lending measures. The RBI, for example, adjusts risk weights and provisioning norms to problem sectors: during the boom period between 2004 and 2008, it increased risk weights on commercial real estate, individual housing loans and other consumer credit, and relaxed them during the global financial crisis. Since November 2009, it has tightened risk weights and provisioning norms to problem sectors again, as well as introducing LTVs. Banks' exposure to capital markets is also capped at 40% of net worth (of which, no more than 50% can be exposed to investment funds, including private equity vehicles).

*Hong Kong has used LTVs since 1991*

Asia also has a long history of property-market measures. Hong Kong, for example, partly due to its US dollar peg – which makes its monetary policy powerless to control the economic cycle – has used LTVs since 1991, and the banks have always had clear policies to assess creditworthiness of residential mortgage borrowers. Other countries have also used these measures extensively, especially since the Asian Crisis, when over-exuberant lending to real estate contributed to the crisis. Examples of recent property-cooling measures, introduced since the global financial crisis in Asia, are summarised in Table 3.

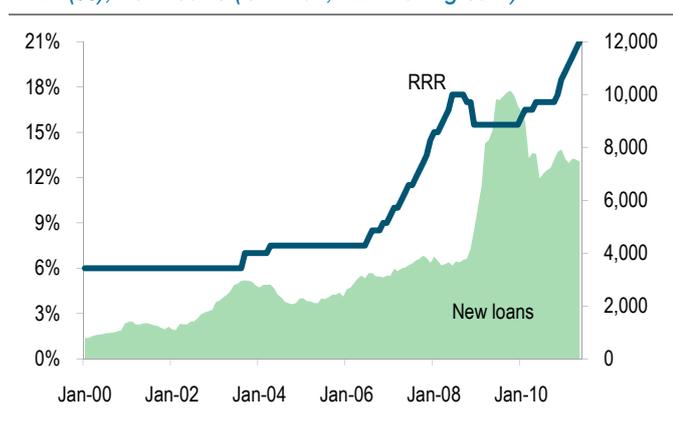
*Korean authorities also regularly tweak LTVs and DTIs to keep house prices stable*

Korean authorities regularly tighten LTV and DTI ratios when the housing market strengthens, and relax them when it weakens (see **On the Ground, 20 January 2011, 'South Korea – Housing-market update'**). For example, the government relaxed LTV and DTI ratios in 2008 as the housing market slowed and tightened them again in 2009 as it accelerated. It then lifted the DTI regulations in September 2010 to address renewed housing-market weakness, before reintroducing them again in April 2011.

*Gradualism reflects difficulties of assessing bubbles and mitigates risk of policy mistakes*

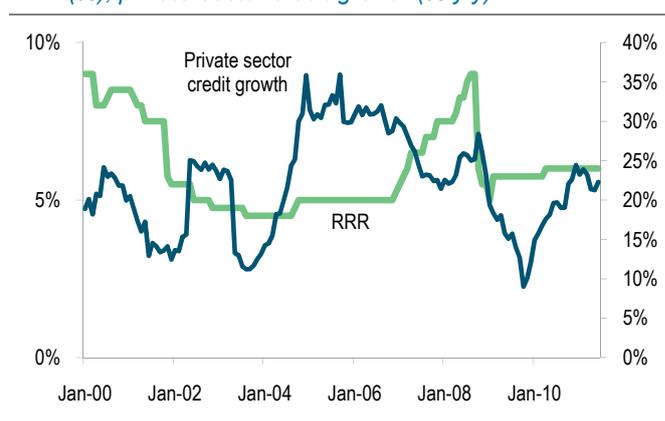
Asian countries tighten or loosen MPR measures gradually, in a similar fashion to monetary policy, not only to prevent a hard landing, but also adjust to changing fundamentals. The gradual approach also reflects the difficulties of assessing the bubble risks. For example, Hong Kong has tightened its macro-prudential policy seven times since October 2009, gradually tightening the LTV ratio, introducing new restrictions and expanding the scope of the measures from the luxury segment to the overall market.

**Chart 1: China – reserve requirement and new loans**  
RRR (%), new loans (CNY bn, 12M rolling sum)



Sources: Bloomberg, Standard Chartered Research

**Chart 2: India – reserve requirement and credit growth**  
RRR (%), private-sector credit growth (% y/y)



Source: Bloomberg



Similarly, China’s State Council’s measures introduced in April 2010 have become progressively stricter with subsequent announcements.

The property measures have been commonly applied to the retail property sector, but there is no reason why they could not be extended to target commercial real estate or other bubbly sectors.

**Table 3: Highlights of property-cooling measures in select Asian countries since the global financial crisis**

Measures	
<b>China</b>	<ul style="list-style-type: none"> <li>• Lower LTVs to limit leverage and property-market access</li> <li>• Higher interest rates on second-home mortgages, and a tighter definition of ‘second homes’, to take account of existing ownership to limit speculation</li> <li>• Prohibiting mortgages on third homes to prevent speculation</li> <li>• Introducing residency requirements for buyers</li> <li>• Clamping down on developers’ financing</li> <li>• Penalising developers who hoard land (i.e., fail to develop land within specified time frame)</li> <li>• Experimental schemes to tax home ownership in Shanghai and Chongqing</li> <li>• The requirement that local governments set property price targets</li> <li>• Expansion of housing supply, especially on the lower-end of the market (social housing)</li> </ul>
<b>Hong Kong</b>	<ul style="list-style-type: none"> <li>• Lower LTVs and cap on maximum loan amount to limit leverage and property-market access</li> <li>• Tighter debt-servicing ratios</li> <li>• Higher stamp duty for short-term property ownership to limit speculation</li> <li>• Tighter regulations on the selling process to improve transparency</li> <li>• Expansion of housing supply</li> </ul>
<b>Korea</b>	<ul style="list-style-type: none"> <li>• The tightening and then relaxing of LTVs</li> <li>• The tightening and then relaxing of DTIs</li> </ul>
<b>Singapore</b>	<ul style="list-style-type: none"> <li>• The lowering of LTVs on second mortgages and loans for commercial real-estate purchases</li> <li>• Prohibiting interest-only loans</li> <li>• Raising stamp duty</li> <li>• Extension of the holding period for the imposition of stamp duty to four years from three</li> <li>• Discontinuing developers’ support programmes</li> <li>• Expansion of housing supply</li> </ul>

Sources: Local regulators, Standard Chartered Research

**Is the policy working?**

*The effectiveness of MPR is difficult to assess because it is often used in conjunction with other policies*

The problem with assessing the effectiveness of macro-prudential measures is that they have often been used in tandem with other policies, so their effect is hard to pinpoint. For example, the new property measures introduced in China came in addition to Beijing’s more general efforts to tighten monetary conditions, by increasing reserve requirements, hiking interest rates and introducing loan quotas.

*Loan-to-deposit ratios and RRRs have been relatively successful in controlling overall credit*

The evidence suggests that system-wide measures have been relatively successful in controlling credit growth. Korea’s caps on loan-to-deposit ratios have been effective in controlling overall lending (Chart 3), and India’s RRR tightening in 2007-08 was accompanied by a slowdown in private-sector credit growth, as were recent increases in RRR in China (Charts 1 and 2).

*Counter-cyclical buffers remain untested*

On the other hand, the favoured systemic approach of the Basel Committee on Basel Supervision (BCBS) – counter-cyclical capital buffers – remains largely untested. The closest example was ‘dynamic provisioning’ in Spain, which had mixed results. While dynamic provisioning increased the resilience of the banking sector when the crisis hit, it did not prevent Spain’s large credit and property bubble. When these two bubbles burst, they hurt the real economy so much that the bad debts are now damaging the banking sector. However, it should be noted that much of the irresponsible lending was by the small regional banks, *cajas*, which were exempt from dynamic provisioning.

*The RBI's changing provisioning requirements have been more effective than varying risk weights*

### MPR may not always prevent bubbles...

In terms of sector-specific measures, in 2005 the RBI's higher capital weighting to claims on households was followed by a decline in such loan growth. The RBI says that changing provisioning requirements has been more effective than varying risk weights. This is because provisioning impacts profitability, while changing of risk weights impacts capital levels. Since Indian banks' capital adequacy ratios are well above regulatory requirements already, sensitivity to changing risk weights is smaller.

However, despite having property-related measures in place for years, Asia remains susceptible to property cycles.

*Despite MPR, Asia remains susceptible to property cycles*

Chart 4 shows that China's State Council's measures curbed property price rises when they were first introduced, but prices then started to climb again. Following the latest measures in January, transactions have come down, and prices have stabilised, although they remain stubbornly high in major cities. However, we envisage a build-up of unsold inventories that will drive prices down by 10-20% in H2-2011, especially in Tier 2 cities (see **On the Ground, 1 June 2011, 'China – Real estate still on the verge of adjustment'**).

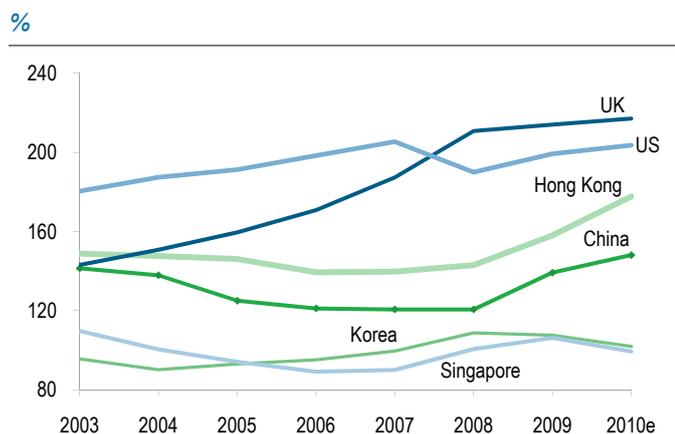
*Property prices in China remain high, while those in Hong Kong and Singapore continue to rise*

In Hong Kong and Singapore, despite ongoing tightening of MPR measures, property prices continue to rise (Charts 5 and 6), although transaction volumes in Hong Kong are down some 20-30% since the end of 2010 and speculative activity in both is thought to have declined. Moreover, the two countries have significantly tightened MPR in recent months (Hong Kong's latest measures were announced in early June, see **On the Ground, 10 June 2011, 'Hong Kong – Another round of property-cooling measures'**), so the effect of these stricter measures has yet to be observed. Korea, on the other hand, is an example where the constant fine-tuning of MPR since 2008 seems to have kept house prices stable (Chart 6).

*MPR is more effective when accompanied by effective monetary policy*

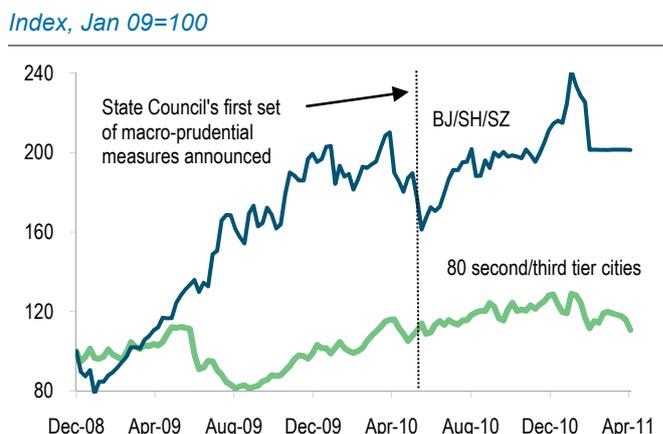
Rising property prices may simply reflect the fact that MPR measures can only do so much if monetary policy is incorrectly set, as was the case in Hong Kong in the 1990s owing to the peg, and is also an issue in Singapore. Conversely, perhaps the reason why property-cooling measures are finally having an effect in China is that they are now accompanied by more aggressive monetary tightening. So while monetary policy alone is not sufficient to prick bubbles, neither is MPR. In an ideal world, they complement rather than offset each other.

**Chart 3: East vs. West – bank credit-to-GDP ratios**



Source: Fitch

**Chart 4: China's property prices – Beijing, Shanghai, Shenzhen vs. 80 Tier 2 and 3 cities**



Sources: CRIC, Standard Chartered Research



Moreover, in China, there are also other, structural, reasons why real-estate prices remain high, including structurally low real interest rates combined with the lack of alternative investment vehicles for household savings, or no property holding cost in the absence of property taxes. In Hong Kong and Singapore, property prices are fuelled by structurally limited supply and Chinese cash purchases, especially in the luxury segment, to which leverage-curbing MPR measures do not apply.

**...but it does increase the resilience of the financial system**

Hong Kong suffered a huge property boom and bust from about 1992-2003, notwithstanding active MPR measures in the boom years, but the banks suffered relatively little, considering the 65% property price decline. In the aftermath of the Asian Crisis the mortgage delinquency ratio was only 1.43%. Similarly, none of the Asian economies experienced a banking crisis during the latest global downturn.

*MPR may not always prick bubbles, but it does increase financial-sector resilience*

The reason is that even if measures such as LTVs and DTIs do not always prevent property bubbles as such, they do limit the build-up of leverage, which, in turn, makes the banking system more resilient during a downturn. And this is already very worthwhile. After all, the goal of MPR is stability of the financial system. Pricking bubbles may just be a by-product, in cases when they are credit-driven.

*1ppt decline in GDP increases the mortgage default ratio by 3bps for countries that use LTVs, and by 5bps for those that do not*

A recent study by the Hong Kong Monetary Authority (HKMA) shows the success of LTVs more broadly in limiting the impact of macroeconomic fluctuations on the banking system. The study found that a 1ppt decline in GDP increases the mortgage default ratio by 3bps for countries that use LTVs, and by 5bps for those that do not.

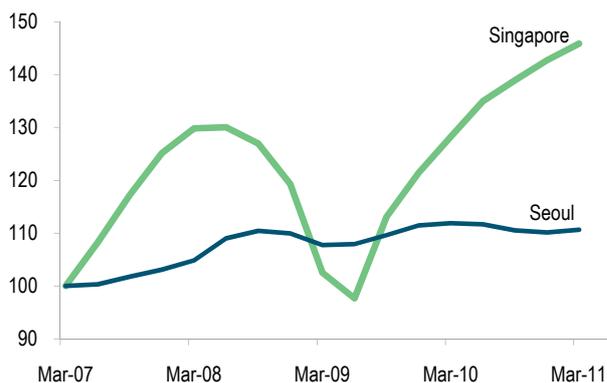
Chart 7 shows that tightening (easing) of property regulations in Korea correlates with a decline (increase) in mortgage lending (while Chart 6 shows that prices remain stable too). Similarly, growth in new mortgage approvals in Hong Kong, shown in Chart 8, declined last year, as MPR was tightened. More broadly, Chart 3 shows that bank credit-to-GDP ratios in Asian countries have been considerably lower than those in the US and UK, although the recent rise in these ratios in Hong Kong is something to monitor.

**Chart 5: Hong Kong – property prices (all and luxury)**  
Index, Jan-93=100



Sources: CEIC, Standard Chartered Research

**Chart 6: Singapore and Seoul – property prices**  
Index, Mar-07=100



Sources: Datastream, Standard Chartered Research

## MPR is not a panacea – issues and risks to consider

Unlike price stability, or financial *instability*, financial stability is difficult to define and measure. The MPR concepts are complex and not fully understood, and empirical research and experience is lacking, Asia's experience notwithstanding. Following are some of the key issues that policy makers need to consider in the development of the new regulatory framework.

*MPR requires significant judgment on the part of policy makers; here lie the risks*

*We need to better understand the impact of MPR on the real economy*

### Identifying systemic risks and calibrating the right policy response

The most difficult aspect of MPR is assessing financial vulnerabilities. This is because it is hard to distinguish between 'irrational exuberance' and fundamentals-driven growth during an upswing, especially in rapidly growing economies, just as it is impossible to know how much worse things are going to get in a downturn.

Monetary policy committees, too, have to make judgements on issues, such as the optimal level of unemployment or whether there is an output gap, when setting interest rates to target inflation. However, unlike MPR, monetary policy has a clearly defined, measurable objective of price stability; and decision-making is supported by extensive experience and academic research on the impact it has on the economy.

Better monitoring tools and analytical frameworks are needed so that regulators can identify emerging systemic risks, and distinguish those from any false positives. Ultimately, the goal should be for the relevant macro-prudential body to have a transparent decision-making, signalling and communication system, just as monetary policy committees have.

### Unintended consequences

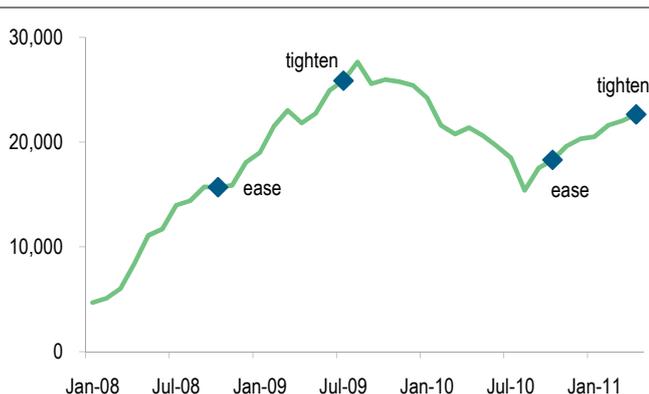
*Poor judgment could lead to policy mistakes that stifle growth*

Since pinpointing vulnerabilities and deciding on appropriate tools to manage these risks calls for considerable wisdom and fine judgement on the part of the regulators, there is a risk of judgment errors, political intervention and regulatory capture (when regulators yield to pressure from banks). Policy mistakes could stifle innovation and growth, and create distortions by interfering with the price mechanism and optimal allocation of resources.

Curbing imbalances in one sector could create them in another part of the economy, or have other unintended consequences. For example, LTVs, as any other administrative tool, can be circumvented. Hong Kong's LTV limits in the 1990s were evaded by people using other types of personal loans to top up their mortgages, although this is where micro-prudential oversight can be effective.

**Chart 7: Korea – mortgage lending**

Rolling 12M sum, KRW bn



Sources: Datastream, Standard Chartered Research

**Chart 8: Hong Kong – mortgage approvals**

y/y % (LHS) and 12M rolling total HKD trn (RHS)



Sources: Datastream, Standard Chartered Research



*MPR measures could be circumvented, leading to inefficient allocation of credit, creating moral hazard, or stifling competition*

Moreover, LTVs are often criticised for restricting access to credit to the less privileged who do not have enough cash for a down-payment, even if they could afford to service a mortgage. However, a recent study by the HKMA found that mortgage insurance programmes, which allow banks to provide mortgage loans in excess of the required LTV ratio to qualified borrowers, mitigate this problem without impacting effectiveness of the LTV tool.

Counter-cyclical buffers, too, may not have their desired effect on lending growth. Even if they prove effective at reducing aggregate lending, they may not prevent risky lending to bubbly sectors. Banks can simply choose to reduce lending in less exciting areas. They can also issue capital instead of reducing lending to top up the capital buffer, an easy task during an upswing.

MPR can also encourage moral hazard – a false sense of security that may only encourage risk-taking. For example, if investors expect authorities to influence asset prices, including preventing their collapse, they will continue to fuel asset bubbles, assuming the risk of a correction is low. If MPR acts like a ‘put option’ for investors, policy-making will be more difficult to manage in the long run.

Finally, if MPR increases the complexity of the regulatory environment, barriers to entry into financial services will increase, and only large institutions may have the resources to comply. This would make the ‘too-big-to-fail’ problem bigger.

*The interaction with monetary policy is particularly important*

### **Interaction with other policies**

The interaction with other policy instruments, including fiscal and monetary policy, but also micro-prudential policies, is also an important consideration as it raises the issue of the cumulative effect the various policies will have both on the economy and on banks. It is important to understand how MPR will fit into the broader policy framework, particularly the relationship with conventional monetary policy. For example, if, by slowing credit growth, MPR measures also slow the real economy, interest rates will be lower than otherwise. A country could then end up with rationed credit, at low prices, which could be inefficient and damaging. Savers would be disadvantaged and asset prices could still rise, counteracting the MPR measures.

*Who should be in charge of MPR and what their powers should be has yet to be determined*

### **Institutional structures and governance**

Most of the macro-prudential debate in the West has focused on *who* should be in charge of macro-prudential policy-making, even before agreeing on *what* they should be doing. Should macro-prudential powers rest with central banks that already monitor vast amounts of macro-economic data or an independent regulatory body? Should the chosen institution then only have powers of recommendation, or of direct policy action?

The EU’s recently established European Systemic Risk Board, tasked with macro-prudential oversight, is expected to provide recommendations on how to deal with looming systemic risks, instead of taking action to address these vulnerabilities. As a result, its effectiveness is likely to be diluted. Meanwhile, it may complicate efforts of similar bodies established at the national level, such as the Bank of England’s new Financial Policy Committee.



***Clear ownership of MPR  
is a pre-requisite***

By contrast, the RBI has both monetary policy and prudential responsibilities, and this is arguably the reason why it has been successful at maintaining financial stability in the Indian economy. Assigning macro-prudential responsibility to the central bank should not only prevent duplication of monitoring efforts, but also limit potential problems of policy co-ordination among disparate institutions, and with monetary policy. Moreover, to the extent that a central bank is independent, it will be the least likely to fall victim of regulatory capture; a key consideration, given that macro-prudential policy is often used to counter the effects of unintended consequences of government policies.

The UK's Financial Policy Committee, which will consist of members of the central bank as well as external members, similar to the Monetary Policy Committee, is thus a sensible institutional set-up. In the US too, although the independent Financial Stability Oversight Committee (FSOC) is headed by the treasury secretary, it is the Federal Reserve that will actually decide how to deal with 'systemically important' firms. Moreover, the Fed's own Office of Financial Stability Policy and Research will support the FSOC's decision-making.

While progress has been made on setting MPR bodies, more remains to be done to clearly define roles and responsibilities, in order to make them effective.

**Scope**

***MPR should cover the  
entire financial system...***

Another issue is that of scope. First, should MPR extend to the entire financial system, or just the banking sector? Since much of the US sub-prime and bank debt was not just held by the banks but also by insurance companies, pension funds and other investment vehicles, it seems obvious that MPR should cover the entire financial system. Similarly, dynamic provisioning in Spain did not apply to the *cajas*, which were chiefly responsible for fuelling the country's property bubble. Regulating all financial entities will avoid regulatory boundary problems that encourage risk to migrate to the unregulated sector, threatening financial stability.

***...but then focus on  
credit-fuelled bubbles***

Second, a question should be asked whether MPR should only focus on credit-fuelled bubbles that directly affect the banking sector, or bubbles in general, such as stock-market bubbles, which can also have devastating consequences on the real economy even if they do not impact banks directly. At this point, given the fuzziness about the role of MPR, it is probably best to limit its remit to imbalances in the financial system. Moreover, credit-fuelled bubbles are much more systemically risky than those financed by equity, such as the dot-com bubble.

***And it should be  
internationally co-ordinated***

Third, should MPR be internationally co-ordinated? Because cycles vary across countries, and even across regions and sectors within countries, MPR, like monetary policy, should be a national tool. But the risk is, if the macro-prudential regime is not co-ordinated at an international level, it will be ineffective, because of the inter-connectedness of the global financial system. It may also place financial centres at a disadvantage, and regulatory arbitrage could distort international capital flows, which could undermine the policy.

Asia already monitors systemic risk at a regional level. Through the Surveillance Process, the Association of Southeast Asian Nations (ASEAN) identifies emerging risks in the region and raises any issues with finance ministers and central banks. Under the Economic Review and Policy Dialogue, the ASEAN+3 (China, Japan and South Korea) finance ministers meet regularly to discuss policy issues. This ensures that macroeconomic policies are broadly consistent across the region, and that financial systems are sound.



### Conclusion

While all agree that macro-prudential regulation is a gap in the regulatory framework, there is little consensus on how to fill it. Much work remains to be done on developing MPR objectives, analytical tool-kits, including the design of systemic risk indicators and policy instruments, and governance structures. As with any new regulation, there is risk that MPR will simply lead to the proliferation of new rules, which would increase the complexity and opacity of the regulatory environment without necessarily making the financial system safer.

However, it does not have to be so complicated. Instead of reinventing the wheel, the West can study the East's approach of using simple tools like LTVs or DTIs to limit leverage in the financial system, thus making it safer.



## Disclosures Appendix

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