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MACROPRUDENTIAL MEASURES FOR ADDRESSING HOUSING SECTOR RISKS

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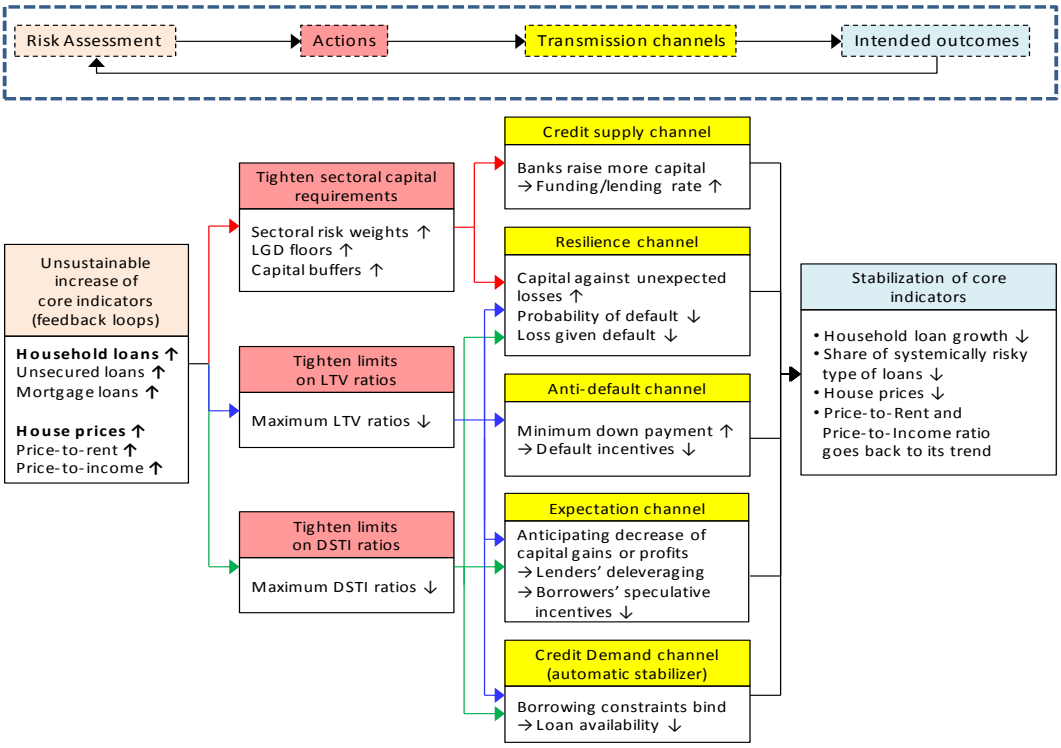
The targeted use of *sectoral* macroprudential tools can help address the build-up of systemic risk due to excess credit to the housing sector (IMF, 2014a and 2014b). These tools include sectoral capital requirements (risk weights or loss given default (LGD) floors), limits on loan-to-value (LTV) ratios, and caps on debt-service-to-income (DSTI) or loan-to-income (LTI) ratios.

Evidence shows that these tools can be effective in increasing the resilience of borrowers and the financial system to house price or income shocks. They also help contain the procyclical feedback between credit and house prices that can lead a housing boom to end in a costly bust (see Figure 1, and SDN/15/12). The main benefit of a higher risk weight is that it increases the resilience of lenders, while an important benefit of LTV and DSTI caps is to increase resilience of borrowers to asset price or income shocks (SDN/11/02). In particular, by enforcing a minimum down payment, LTV limits reduce borrowers' incentive for strategic default and lenders' LGD in a bust scenario.

Figure 1. Transmission Mechanism of Sectoral Macroprudential Instruments



Source: IMF Staff.

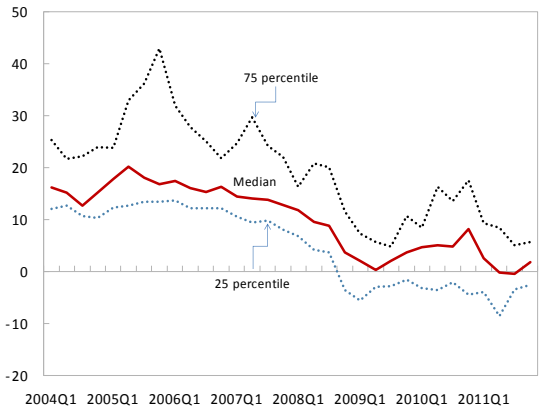
All these tools may also dampen mortgage credit growth, even if the effects on house prices are smaller. DSTI or LTI caps can be especially effective as automatic stabilizers—becoming more binding when house prices grow faster than disposable income, thereby helping smooth the credit boom and limit the procyclical feedback between credit and house prices. All tools can also reduce speculative demand by containing expectations of future house price increases.

A wide range of indicators should be used to assess the need for policy action, especially the growth of mortgage loans and house prices. These are core indicators of housing market vulnerability, since they jointly provide powerful signals of a procyclical build-up of systemic risk (Figure 2). Deviations of house prices from long-term trends can predict financial stress, especially when combined with credit growth (Borio and Drehmann, 2009, IMF, 2011a), while house price-to-rent and house price-to-income ratio can indicate over-

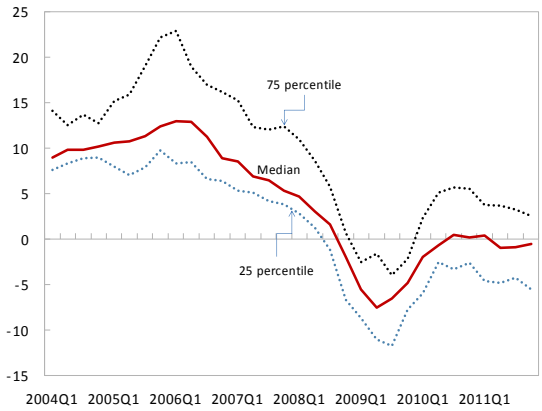
or under-valuation of house prices. In addition, other indicators should be closely monitored, such as (i) the average and the distribution of LTV, DSTI, and LTI ratios across new loans over a period, and outstanding loans at a given point in time; (ii) the share of foreign currency denominated mortgage loans or interest-only mortgage loans; and (iii) housing price growth by regions and types of properties.

Figure 2. Mortgage Loans and House Prices around the Global Financial Crisis

Mortgage loan growth
(In percent, Y-o-Y)



House price growth
(In percent, Y-o-Y)



Source: IMF staff calculation.

Note: The sample includes 18 countries that have been in a systemic banking crisis (Laeven and Valencia, 2012) and had at least two consecutive quarters of negative nominal house price growth during 2007–11, such as Belgium, Denmark, France, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Luxembourg, the Netherlands, Russia, Slovenia, Spain, Sweden, Ukraine, the U.K., and the U.S.

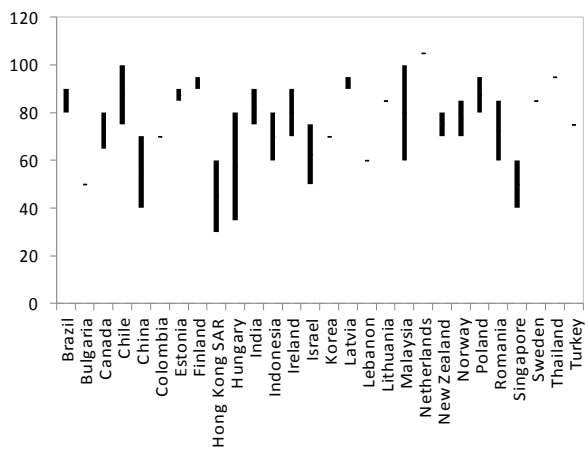
Sectoral tools should be activated or tightened when multiple indicators consistently point to rising systemic risk. A single signal, or mixed signals from multiple indicators, may not be sufficient for action. For example, strong growth in mortgage loans without house price growth may simply indicate improving housing penetration rather than an increase in risk. Conversely, a sharp increase in house prices, without strong mortgage loan growth, may reflect a shortage of housing supply requiring structural policies to improve supply rather than a macroprudential response.

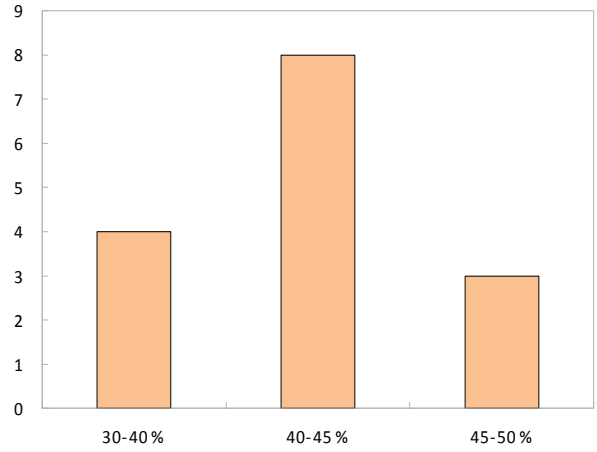
Policymakers should take a gradual approach when introducing or tightening sectoral tools. When several indicators show signs of a gradual build-up of risk in the housing sector, policymakers should first intensify supervisory scrutiny and step up communication. As a next step, sectoral capital requirements should be tightened to build additional buffers. Tighter limits on LTV and/or DSTI ratios can follow if these former defenses are not expected to fully meet policy objectives (See Figure 3 and Table 1 for country examples). LTV and DSTI caps should always be imposed on the flow of new household loans. Otherwise, it could precipitate distress by forcing existing high LTV or DSTI borrowers to provide more collateral or repay part of their loans.

Figure 3. Limits on LTV and DSTI Ratios and Number of Countries at Each Range

Limits on LTV ratios
(In percent)

Caps on DSTI ratios
(Number of countries)





Source: IMF staff calculation.

Note: Observed limits on LTV ratios are below 80 percent in more than half of 28 sample countries, and most countries with DSTI ratios have imposed 40–45 percent as the limit (eight out of 15 countries), and four countries restrict it to be below 35 percent.

Table 1. Use of Sectoral Macroprudential Tools

	Advanced Economies	Emerging Market Economies	Total
Sectoral Capital Requirements	Australia (2004), Hong Kong SAR (2013), Ireland (2001), Israel (2010), Korea (2002), Norway (1998), Spain (2008), Switzerland (2013)	Argentina (2004), Brazil (2010), Bulgaria (2004), Croatia (2006), Estonia (2006), India (2004), Malaysia (2005), Nigeria (2013), Peru (2012), Poland (2007), Russia (2011), Serbia (2006), Thailand (2009), Turkey (2008), Uruguay (2006)	23
Limits on LTV ratio	Canada (2007), Estonia (2015), Finland (2010), Hong Kong SAR (1991), Ireland (2015), Israel (2012), Korea (2002), Latvia (2007), Lithuania (2011), Netherlands (2011), New Zealand (2013), Norway (2010), Singapore (2010), Sweden (2010)	Brazil (2013), Bulgaria (2004), Chile (2009), China (2001), Colombia (1999), Hungary (2010), India (2010), Indonesia (2012), Lebanon (2008), Malaysia (2010), Poland (2013), Romania (2004), Thailand (2003), Turkey (2011)	28
Caps on DSTI ratio (including LTI caps)	Canada (2008), Estonia (2014), Hong Kong SAR (1997), Korea (2005), Ireland (2015, LTI), Lithuania (2011), Netherlands (2007), Norway (2010, LTI), Singapore (2013), United Kingdom (2014, LTI)	China (2004), Colombia (1999), Hungary (2010), Latvia (2007), Malaysia (2011), Poland (2010), Romania (2004), Thailand (2004)	18

Source: IMF staff calculation.

Note: Parentheses show the year a jurisdiction introduced currently imposed measures; changes tracked since 1990.

Combining sectoral tools can reinforce their effectiveness and mitigate the shortcomings of any single tool. For example, LTV limits—which cap the size of a mortgage loan relative to the appraised value of a house—may become less effective when house prices increase, but DSTI caps—which restrict the size of debt service payments to a fixed share of household incomes—continue to tie credit to household income. DSTI and LTI caps can also enhance the effectiveness of LTV limits by containing the use of unsecured loans to meet the minimum down payment. In a low interest rate environment, *stressed* DSTI caps (i.e., where DSTI under a specified stress scenario is capped) can complement LTV limits and mitigate defaults when interest rates eventually rise.

During housing busts, sectoral tools can be relaxed to contain feedback loops between falls in credit and house prices. A housing bust can result in a credit crunch that puts further downward pressure on house prices. Strategic default, fire sales and contraction in the supply of credit can create negative economic externalities that can be cushioned by relaxing these tools (IMF, 2011b; Geanakopolos, 2009; and Shleifer and Vishny, 2011).

Indicators that inform the tightening phase can also be used for decisions to relax. Fast-moving indicators, such as house transaction volumes and spreads on housing loans, can also guide relaxation decisions. However, a softening housing market is not sufficient alone to justify a relaxation. Evidence of systemic stress is required, such as a simultaneous decline in prices and credit, or an increase in non-performing loans or defaults. The relaxation would then be targeted to reduce stress in the housing market.

Any relaxation needs to respect certain prudential minima to ensure an appropriate degree of resilience against future shocks. If large additional buffers have been built during the tightening phase, they can be released to avoid a credit crunch without jeopardizing banks' resilience. However, the relaxation should not go beyond a "permanent floor", i.e., a level considered safe in downturns. Policymakers should also communicate clearly that a tightening can be followed by a relaxation so that market participants do not take an adverse view of the relaxation during downturns.

A relaxation of these tools can be effective, but may have limited effects when it is "pushing on a string." Even if policymakers loosen sectoral instruments, banks may be reluctant to provide credit due to increased risk aversion or capital constraints, and may apply more stringent lending standards than the regulatory thresholds. Potential borrowers may be reluctant to enter the housing market while prices are still falling. Nonetheless, the relaxation would still be useful in containing the spillback from falling prices and credit where it removes a binding constraint on some agents.

Policymakers should bear in mind that sectoral tools can create domestic or cross-border leakages, and unintended consequences. An increase in credit by domestic nonbanks and foreign bank branches may render the sectoral tools less effective or even ineffective if they are applied only to the domestic banking sector. Policymakers should then expand the regulatory perimeter to non-banks and foreign branches. Where there are separate regulators, inter-agency cooperation would be needed at the national or cross-border level. Extending the tools to un-regulated entities may require expanding the licensing regime to those institutions. Finally, policymakers may want to tailor limits on LTV and DSTI ratios to contain unintended distributional effects.

Containing housing booms and busts may require policy levers beyond macroprudential policy tools. Where fiscal distortions, such as mortgage interest relief, contribute to systemic risks in housing markets, they should be removed (e.g., UK and Netherlands). When supply constraints drive up asset prices (e.g., Hong Kong SAR, Sweden and Australia), structural policies to boost housing supply are needed.

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