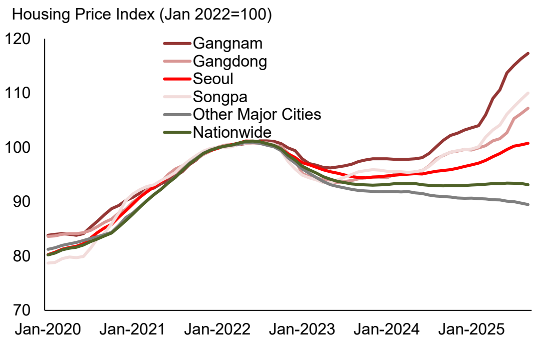
4. Assessing the Effectiveness of Korea's Macroprudential Measures[1]

Property prices in the Seoul Metropolitan Area (SMA), especially in key high-demand districts, rose sharply in 2025. In response, the Korean authorities implemented several rounds of macroprudential measures to cool the housing market. This Selected Issue assesses the effectiveness of Korea's macroprudential tightening on Seoul's housing prices, drawing on past tightening, and discusses the related policy implications.

Context

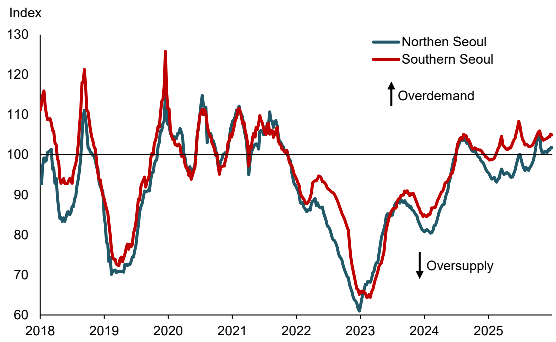
1. **Property prices in Seoul have surged in 2025 amid easing financing conditions and a notable shift in homebuyers' preference.** Notwithstanding the domestic political uncertainty in the first half of 2025, as well as geopolitical and trade tensions, housing prices in the SMA increased sharply, driven by strong demand in key Seoul districts such as Gangnam, Seocho, and Songpa. This stands in stark contrast to housing markets outside the SMA, where prices have declined slightly over the same period (Figure A4.1). The rise in prices in SMA reflects a combination of looser financial conditions – lowered interest rates and strong appreciation of the equity markets, an accelerating shift in homebuyers' preferences toward housing in Seoul, and expectations of continued price appreciation, which have contributed to rising housing demand relative to supply (Figure A4.2) (BOK, 2025).

Figure A4.1. Housing Price



Source: Korea Real Estate Board
Note: Other Major Cities refer to the six metropolitan cities of Busan, Daegu, Incheon, Gwangju, Daejeon, and Ulsan

Figure A4.2. Apartment Sales Price Supply and Demand



Source: Korea Real Estate Board
Note: The index indicates that values above 100 signify excess demand, while values below 100 indicate excess supply.

2. **In response to these developments, the authorities implemented a comprehensive package of demand- and supply-side measures (Table A4.1).** On the demand side, credit-based measures —including tighter mortgage loan limits, reductions in loan-to-value (LTV) ratios, and an expansion of debt-service-ratio (DSR) requirements to cover *jeonse* loans — were the primary tools used to dampen housing demand. In addition, the re-introduction and expansion of land registration permit requirements for home purchases were aimed at curbing speculative demand, notably by imposing a minimum two-year owner-occupancy obligation. On the supply side, the authorities announced a large-scale housing development plan in SMA to address persistent shortages in new housing supply.

[1] Prepared by Justin Lim, Economist

Table A4.1. Macroprudential Measures Implemented in 2025

Measures	Land Permit	Mortgage Loan Limit	*Jeonse* loans	LTV	Loan Maturity	Housing Supply
March	Re-implemented for key districts in Seoul					
June		Loan limit capped at KRW 600m for SMA	Prohibition of *jeonse* loans with conditional ownership transfer	Prohibition of lending for additional home purchases in regulated areas (LTV =0)	Reduced to within 30 years	
Sept			*Jeonse* loan limits are reduced	LTV ratio reduced from 50 to 40 percent in regulated areas		1.35 million of new houses in SMA to be built in 2026-2030
October	Expanded to cover all districts in Seoul and selected areas in Gyeonggi	Loan limit caps are further reduced and differentiated by property value	DSR requirements implemented for *jeonse* loans			

Source: BOK, FSC, Korea Research Institute for Human Settlement (KRIHS) and AMRO staff compilation

Empirical Framework and Findings

3. **An empirical approach is used to assess the effectiveness of Korea's macroprudential measures by using the local projection method (Jordà 2005) drawn from past macroprudential tightening.** Korea's past macroprudential policy action data from 2006 to 2024 is obtained from the IMF's Integrated Macroprudential Policy (IMaPP) database. This approach involves estimating a series of monthly regressions of the log-difference in property prices between periods $t + h$ and $t{-}1$ $(y_{t+h} - y_{t-1})$ on a macroprudential tightening measure at time t, over a 24-month time horizon (h = 0,1,2…., 24), to assess the cumulative effect of the tightening on property prices over this period. Specifically, we estimate:

$$y_{t+h} - y_{t-1} = \alpha_h + \beta_h Tighten_t + \sum_{l=1}^{6} \gamma_l \Delta y_{t-l} + \sum_{k=-6}^{6} \delta_k \Delta Controls_{t+k} + \sum_{m=1}^{2} \eta_m (X_{t+h} - X_{t-1}) + \zeta_h \Delta LTV_{t-h} + \varepsilon_h,$$

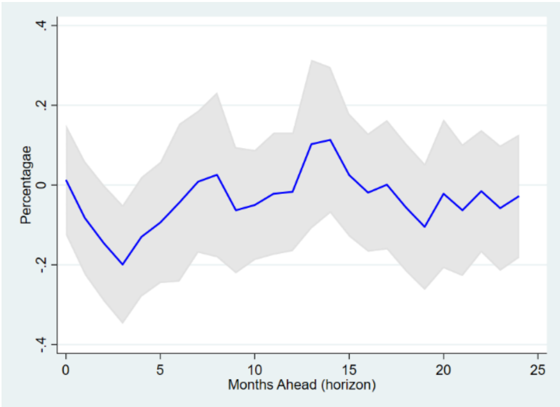
where $Tighten_t$ is a dummy variable that takes value 1 for a tightening measure and 0 otherwise, $\sum_{l=1}^{6} \gamma_l \Delta y_{t-l}$ are the lagged dependent variables, while $\sum_{k=-6}^{6} \delta_k \Delta Controls_{t+k}$ accounts for changes in macroprudential measures over a six-month window surrounding the tightening episode at time t, that is, covering the six months preceding and up to six months following the tightening measure, and $\sum_{m=1}^{2} \eta_m (X_{t+h} - X_{t-1})$ denotes a vector of fundamentals determinants over the time horizon h, including change in policy rate and industrial production growth. ΔLTV_{t-h} captures the magnitude of adjustments to the average LTV ratio to account for the intensity of the LTV tightening.

4. **While near-term price pressures may have moderated following the implementation of these measures in the short term, their longer-term impact is less clear**. Estimates suggest that a tightening measure lowers house prices by about 0.1 percent on average over a two-year period per policy action, although the estimates are not statistically significant (Figure A4.3a). By contrast, the estimated impact is almost twice as large and is statistically significant for the pre-2017 period (Figure A4.3b). This suggests diminishing

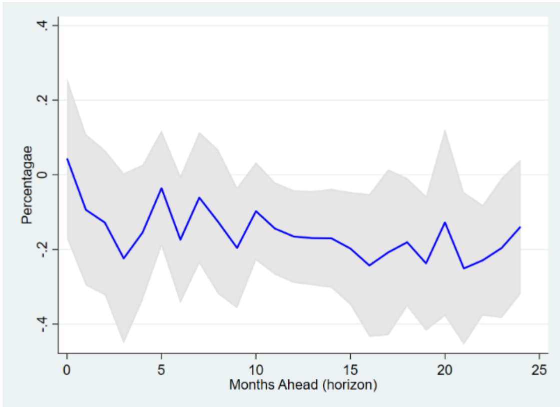
marginal effectiveness as these measures were progressively tightened over time, reflecting endogenous behavioral responses – most notably, homebuyers' substitution away from bank borrowing to other financing sources (Alam et al, 2025 and Biljanovska et al, 2023).

Figure A4.3. Local Projection: Cumulative Response of Seoul's House Prices to Macroprudential Policy Tightening

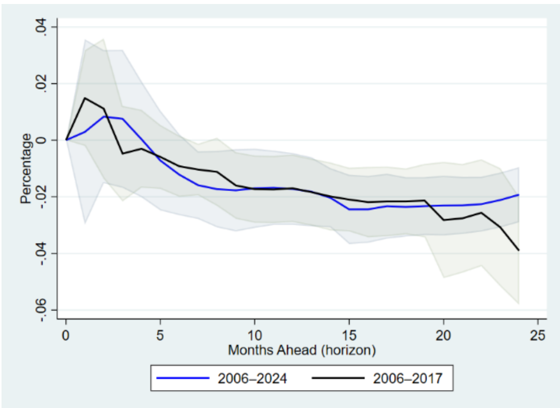
a) All Measures, 2006 - 2024



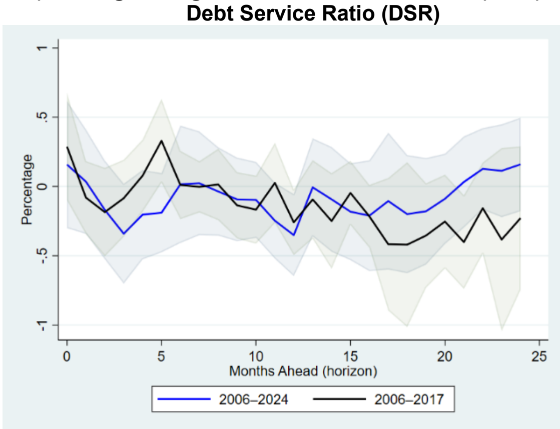
b) All Measures, 2006 - 2017



c) A 1-ppt Reduction in the LTV Ratio



d) A Tightening of Debt Service-to-Income (DTSI) / Debt Service Ratio (DSR)



Source: IMF Integrated Macroprudential Policy (iMaPP) Database, AMRO staff calculations
Note: The lines display the coefficients of cumulative responses of Seoul's house price over the 24 months following a tightening in macroprudential policy. The grey shaded areas to 1.96 standard deviations.

5. Further regression analysis suggests that reductions in the LTV ratio have had a more lasting impact on house prices. A closer examination of Korea's most frequently used macroprudential tools—namely the LTV and debt-service ratio (DSR)—also suggests diminishing effects over time (Figures A4.3c and A4.3d). House prices initially rose in the first three to six months following an LTV tightening, reflecting the tendency for authorities to tighten policy during periods of rapid price appreciation (IMF, 2019a). However, the dampening effects become more evident and persistent thereafter – estimates including the post-2017 period indicate that a 10-percentage point reduction in the LTV ratio is associated with an average decline in house prices of about 0.2 percent, compared with roughly 0.4 percent in the pre-2017 period, consistent with findings from other studies on Korea (IMF, 2019b). By contrast, a tightening of the DSR ratio is estimated to reduce house prices by about 0.2 percent within the first 12 months, but its impact becomes less clear beyond that point.

Conclusion and Policy Implications

6. **Overall, the empirical evidence suggests that Korea's macroprudential tightening has helped temper housing demand pressures.** The results point to a clear pattern of diminishing marginal effectiveness, particularly in the post-2017 period, as repeated use of similar instruments appears to have induced behavioral adaptation and policy circumvention. Among the main tools, LTV-based measures appeared to have delivered comparatively more persistent effects than DSR tightening, though even these impacts are modest relative to the scale of recent price increases. Notwithstanding these findings, studies have shown that combining LTV, DSR, mortgage loan limits and other instruments more effectively curbs excessive household leverage, supports banking sector resilience, and stabilizes housing markets while mitigating policy circumvention and overall systemic risk (Choi et al, 2025, Durante et al, 2025 and ECB, 2023). Accordingly, the authorities should continue to adopt a broad range of relevant macroprudential tools to address housing demand, rather than relying on any single instrument, irrespective of the instruments' relative effectiveness.

References

Alam, Z., Alter, A., Eiseman, J., Gelos, G., Kang, H., Narita, M., Nier, E. & Wang, N., 2025. Digging deeper—Evidence on the effects of macroprudential policies from a new database. Journal of Money, Credit and Banking, 57(5), pp.1135–1166.

Bank of Korea, 2025. Financial stability report, December 2025. Seoul: Bank of Korea.

Biljanovska, N., Chen, S., Gelos, G., Igan, D.O., Martinez Peria, M.S., Nier, E. & Valencia, F., 2023. Macroprudential policy effects: Evidence and open questions. IMF Departmental Paper No. 2023/002. Washington, DC: International Monetary Fund.

Choi, C., Choo, D., Yoon, J. & Lee, G., 2025. Analysis of the effectiveness of macroprudential policy and its optimal policy mix with monetary policy in Korea. BOK Issue Note, 21 September. Seoul: Bank of Korea.

Durante, E., Rusnak, M. & Tereanu, E., 2025. A decade of borrower-based measures in the banking union. Macroprudential Bulletin, 29. Frankfurt: European Central Bank.

European Central Bank, 2023. The more the merrier? Macroprudential instrument interactions and effective policy implementation. Occasional Paper Series No. 310. Frankfurt: European Central Bank.

International Monetary Fund (IMF), 2019a. Singapore: Financial sector assessment program—Technical note on macroprudential policy. Washington, DC: International Monetary Fund.

International Monetary Fund (IMF), 2019b. Republic of Korea: Selected issues. IMF Country Report No. 19/133. Washington, DC: International Monetary Fund.

Jordà, Ò., 2005. Estimation and inference of impulse responses by local projections. American Economic Review, 95(1), pp.161–182.