Box 1
Issues regarding interest rates, taxes and housing prices

In Taiwan, the problem of high housing prices results from a number of factors across various facets and thus can not be single-handedly addressed by one authority. With the aim of promoting a sound domestic housing market, government agencies would need to work together from the standpoints of demand, supply, and regulations of the real estate market.

1. The interest rate is only one of the many factors affecting house prices

1.1 The determinants of housing prices include supply, demand, and related regulations, while the interest rate is only one of the factors

Real estate trading volume and prices are determined by supply and demand factors, with an interplay of various forces, including taxation, household income, wealth effects, land supply, market expectations about home prices, and accessibility of real estate loans. Among those forces, real estate loans are affected not only by interest rates but also by loan restrictions such as loan-to-value (LTV) ratio caps as well as volume and prices of housing transactions.

1.2 International empirical research findings indicate that interest rates are not the crucial factor driving housing market booms

Cross-country empirical research findings[1] indicate that prior to the global financial crisis (GFC), a link between low interest rates and housing price bubbles was tenuous. After the 2008 GFC, housing prices in major cities in the US, the UK, Australia, and New Zealand have soared, mostly fueled by an increase in migrants alongside a slow adjustment in housing supply.

1.3 Taiwan's home price rises in the recent decade, albeit showing regional disparity, are partly due to a surge of capital inflows from residents repatriating offshore funds and foreigners investing in the local market

After the GFC, poor returns from offshore financial investments, coupled with a sharp reduction in estate and gift tax in 2009, led to massive offshore funds being repatriated by Taiwanese residents. In addition, excess domestic savings and low real estate holding costs caused those funds to flow into the housing market and, in turn, pushed up housing prices. From 2010 onwards, owing to a surge of capital inflows from residents repatriating offshore funds and foreigners investing in the local market, interest rates on new housing loans granted by domestic banks trended downwards. However, the movements in housing prices varied among cities, indicating that interest rates were not the key driver pushing up housing prices, but factors such as supply and demand in the region and market expectations were responsible.

2. Multi-faceted policy tools should be used to address housing price issues

2.1 Charged with achieving a variety of policy objectives by means of different monetary policy instruments, the Bank does not set interest rates based solely on concerns over housing prices

Rather than aiming the interest rate tool at housing prices, the Bank's policy rate decisions take into account a wide range of factors such as output, inflation, and domestic and foreign economic and financial conditions. Therefore, macro-prudential tools, such as LTV ratio caps, would be more suitable to contain financial risks associated with housing prices.

2.2 Addressing housing price issues with interest rate tools could have widespread impact on the economy but has a limited effect on curbing rising house prices

Given that interest rates do not directly affect housing prices, if central banks want to impact housing prices, they have to raise interest rates to a significant extent. However, a substantial rise in interest rates would hammer normal economic activities. Moreover, in view of the fact that financial supervisors are unable to regulate the behavior of major investors who provide their own capital for domestic real estate, it is hard to effectively contain growth in housing prices through interest rate hikes. The experience of Sweden, which failed to address housing price problems with interest rate hikes in 2010, showed that the effectiveness of interest rate tools in stabilizing housing prices was limited, for which the costs were much higher than the benefits.

3. LTV ratio caps could productively contain the risk associated with real estate lending, while taxation measures are relatively effective in reducing housing price volatility

3.1 LTV ratio limits could effectively control the increase in housing loans, and taxation would be more appropriate for containing the volatility in volume and prices in housing markets

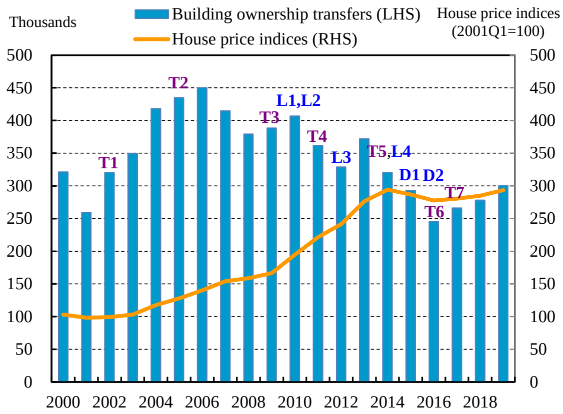
Studies[2] by the IMF and the Bank for International Settlements (BIS) indicated that measures such as LTV ratio caps could effectively control the growth of banks' housing loans and mitigate systemic financial risks. As for reducing housing price volatility, taxation on real estate would be more appropriate.

3.2 The Bank's mortgage-related regulations effectively controlled the expansion of mortgage credit, while taxation on housing had a more significant effect on curbing trading volume and prices

To cope with elevated housing prices, the Bank has introduced several pieces of rules on real estate loans since June 2010 (L1-L4 in Chart B1.1 and Table B1.1), and relevant ministries and agencies have also taken measures to promote a sound housing market (T4, T5 in Chart B1.1 and Table B1.2). After the consolidated tax on income from transactions of housing and land was implemented in 2016, relevant authorities and local governments successively adjusted related measures amid the downturn in the housing market. Meanwhile, the Bank gradually relaxed housing loan restrictions (D1-D2 in Chart B1.1, Table B1.1).

Domestic empirical research[3] suggested that capping the LTV ratio on real estate loans helped mitigate the impact of low interest rates on housing prices in Taiwan and real estate taxation measures affected the trading prices and volume in the housing market (T1-T7 in Chart B1.1, Table B1.2).[4] In particular, the consolidated tax on income from transactions of housing and land, adopted in 2016, had the most notable effect on reducing the trading volume in the housing market.

Chart B1.1 Building ownership transfers and house price indices



Note: L1 to L4 were the Bank's measures to restrict LTV ratios for real estate loans since 2010; D1 and D2 were measures to relax LTV ratios for real estate loans; T1 to T7 were major tax reforms adopted since 2000, detailed in Table B1.1 and Table B1.2.
Sources: CBC, MOF and MOI.

Table B1.1 Real estate loan measures since 2010

Year	Code	LTV ratios on real estate loan measures
Introducing LTV ratio restrictions		
2010	L1	• For second or more house-purchase loans in Specific Areas, capping the LTV ratio at 70%.
2010	L2	• Expanding the scope of Specific Areas, lowering the LTV ratio cap to 60%. • For land collateralized loans, capping the LTV ratio at 65%.
2012	L3	• For high-value housing loans, capping the LTV ratio at 60%.
2014	L4	• Further expanding the scope of Specific Areas. • For third or more house-purchase loans, capping the LTV ratio at 50%. • Adjusting the standards for high-value housing loans, lowering the LTV ratio cap to 50%. • For house-purchase loans granted to corporate legal entities, capping the LTV ratio at 50%.
Relaxing LTV ratio restrictions		
2015	D1	• Repealing restrictions on six Specific Areas. • Raising the LTV ratio cap of various real estate loans to 60%.
2016	D2	• Repealing LTV ratio limits on various real estate loans, except for high-value housing loans

Source: CBC.

4. Solution to elevated housing prices depends on the cooperation among relevant government agencies

4.1 High housing price problems should be addressed with coordinated efforts through policies related to taxation, land, real estate and finance

From 2018 onwards, housing prices stayed high and the mortgage burden remained heavy. As factors affecting housing prices and mortgage affordability are complicated, coordination among different policy areas involving taxation, land, housing and finance is necessary. In sum, the issue of elevated housing prices cannot be solved by a single agency.

Table B1.2 Real estate-related taxation measures since 2002

Year	Code	Real estate-related taxation measures
Measures to reduce tax burden		
2002	T1	• Land value increment tax: levying general land transaction at half the original tax rate.
2005	T2	• Reducing the applicable tax rates for general land to 20%, 30%, and 40%. • Granting real estate owners of long-term holding tax reductions and exemptions.
2009	T3	• Revising estate and gift tax from a progressive tax rate (up to 50%) to a single tax rate (10%).
Measures to increase tax burden		
2011	T4	• Levying a specifically selected goods and services tax.
2014	T5	• Introducing housing tax reforms, including an increase in the base tax rate for non-self-use housing.
2016	T6	• Levying a consolidated housing and land tax.
2017	T7	• Revising estate and gift tax from a single tax rate (10%) to a progressive tax rate (up to 20%).

Source: MOF.

4.2 Tax burden for real estate was low in Taiwan, which tended to fuel real estate investment

In recent years, local governments have successively increased the land value tax base; however, in 2020, the publicly announced land value only accounted for about 19.8% of the normal transaction prices. Moreover, many tax reduction and exemption regulations could easily lead to ineffective use of land, such as vacant land and land hoarding. This, together with a lower property tax burden and other favorable measures (e.g., a 50% reduction on land value increment tax effective from February 2002), have greatly reduced the tax burden on real estate transactions, which had possibly fueled demand for real estate investment.

4.3 Owing to large fluctuations in housing prices resulting from frequent movements of international capital, the Bank adopted appropriate management measures

Since 2019, overseas Taiwanese enterprises had increased investment in Taiwan. In order to avoid a rise in housing prices triggered by the large inflows of offshore funds, the government formulated measures to guide such funds towards non-speculative, industrial investments and limit capital flows into the housing market. The Bank also continued to regulate high-value housing loans by keeping the cap on the LTV ratio at 60%.

5. Conclusion

In 2016, Taiwan implemented consolidated taxation on income from transactions of housing and land with the aim of curbing short-term speculation. However, on the back of a low level of tax burden on holding real estate, it was still difficult to deter property owners from hoarding houses or land. From 2019 onwards, housing prices in Taiwan have stayed at a high level; nevertheless, this is an issue that cannot be solved by a single agency. Instead, it relies on the cooperation among ministries and agencies under the central and local governments to achieve a sound real estate market.

Notes: 1. IMF (2009), "Lessons for Monetary Policy from Asset Price Fluctuations," *World Economic Outlook*, October; Kuttner, Kenneth N. (2013), "Low Interest Rates and Housing Bubbles: Still No Smoking Gun," in Evanoff et al. (eds.), *The Role of Central Banks in Financial Stability: Has It Changed?* World Scientific, December.

2. Kuttner, Kenneth N. and Ilhyock Shim (2013), "Can Non-Interest Rate Policies Stabilise Housing Markets? Evidence from a Panel of 57 Economies," *BIS Working Papers*, No. 433, November; Zhang, Longmei and Edda Zoli (2014), "Leaning Against the Wind: Macroprudential Policy in Asia," *IMF Working Paper*, WP/14/22, February; Richter, Bjorn, Moritiz Schularick, and llHyock Shim (2018), "The Macroeconomic Effects of Macroprudential Policy," *BIS Working Papers*, No. 740, August.

3. Wang, Hong Ren, Chen, Nan Guang and Lin, Zi Yu (2017), "The Impact of LTV ratio on Taiwan's Real Estate Prices and Credits," *Quarterly Bulletin, Central Bank of the ROC (Taiwan),* Volume 39, Issue 3, September.

4. Measures included: (1) the land value increment tax was cut by half, from February 2002 to January 2005, and general land was levied at half the original tax rate (40%, 50%, 60%); (2) since February 2005, the applicable tax rates for general land have been reduced to 20%, 30%, and 40%. In addition, landowners with long-term holdings were granted reductions and exemptions; (3) from January 2010, considering the increasing demand for changing to different types of homes, the applicable preferential tax rates for self-use residential land have been relaxed.