

Housing Price Index

Many developed countries have experienced asset price inflation even during the low inflation period. As the boom and bust of asset prices affect economic and price stability, many countries now monitor asset price cycles closely. The International Monetary Fund (IMF) has in fact regarded the housing price index as one of the key indicators of financial soundness. Housing price indices in Thailand must be treated with caution as data are from private real estate firms and are confined to specific types of property, namely commercial offices and luxury condominiums in the central business areas. On account of the close linkage between the property sector and the economy, the Bank of Thailand (BOT) has, in collaboration with the Government Housing Bank (GHB), constructed quarterly housing price indices starting from 1990 to present.

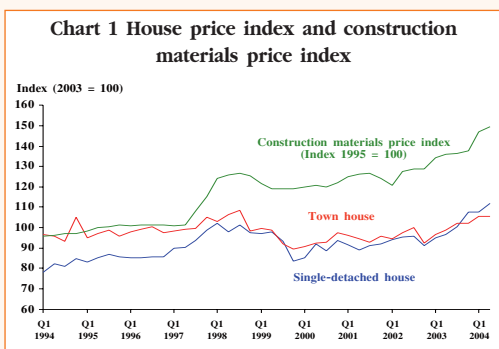
Methodology

The indices represent house price appreciation within the medium- to low-end price range in Bangkok and its vicinity, which includes Nonthaburi, Samutprakarn and Patumthani. There are three indices:

(1) **House Price Index** (excluding land) is characterized by type: single-detached house or town house. A hedonic methodology is used to compute this index, based on the reason that no two houses are alike in physical characteristics and/or location. The model thus adjusts for these differences. (2) **Land Price Index** is based on the quarterly median price rather than the hedonic approach because data on land characteristics are unavailable. Land price indices for each district is constructed, then weighted with the ratio of each district's land size to total land size to obtain quarterly series of the aggregate land price index. (3) **Housing Price Index** is a weighted average of (1) and (2). The combination between the house price and the land price is done using the ratio 40:60 and 45:55 for single-detached houses and town houses, respectively.

Table 1 Methodology of constructing the Housing Price Index

Index	Methodology	Remarks
1. Single-Detached House Index and Town House Price Index	Hedonic Price Model	Covers all districts
2. Land Price Index	Median Price	Compiled for each district and then combined to obtain the composite index
3. Housing Price Index	Weighted Index	Covers all districts



Source: Government Housing Bank, Ministry of Commerce and Bank of Thailand

Results

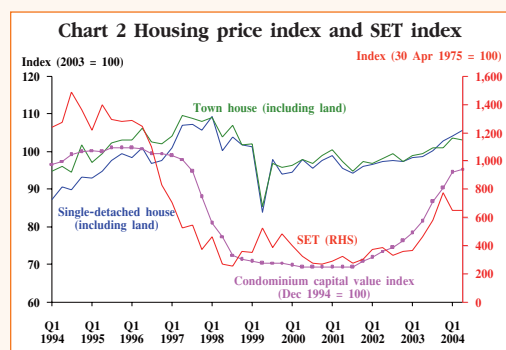
1. The **Single-Detached House Price Index** and **Town House Price Index** (excluding land price) move in line with the Ministry of Commerce's wholesale construction price index. The correlation between these indices is hardly surprising since the cost-based approach is employed in the GHB's house appraisal.

However, in terms of magnitude, the change in house price indices is less than that of the wholesale construction price index. This is because the total cost of building a house includes not only the cost of construction materials but also labour costs, profit margin, and contractor tax. Note that construction costs lead house prices which reflects higher construction costs for contractors during the later periods.

2. The **Land Price Index** represents the weighted average of land price in 22 districts across Bangkok and its vicinity (11 in Bangkok, 5 in Nonthaburi, 4 in Samutprakarn, and 2 in Patumthani). The index reflects the business condition reasonable well as follows:

2.1 Before the 1997 economic crisis, land prices rose continuously at around 9 per cent per annum during 1991 to 1997. If data from 1988 to 1991 were available, a higher rate of land price increase would have likely been observed during that period.

2.2 The land price index dropped slightly following the crisis. The drop was due to the price cut of many completed projects, which wanted to sell off housing inventories from the market. The V-shape slump during 1999 Q2 reflected debt restructuring and asset liquidation carried out by the Financial Sector Restructuring Authority (FRA), whose valuation was subsequently used as a market benchmark. After assets were sold off, housing inventories in the market declined leading to an increase in asset prices corresponding to the new market condition. Land prices rose slowly since 2001 as the real estate business was clearly in recovery.



Source: Government Housing Bank, Jones Lang LaSalle (Thailand) Limited, Stock Exchange of Thailand and Bank of Thailand

3. The **Housing Price Indices** are constructed by combining each type of the house price index with the land price index, whose movement is consistent with the land price index in 2.2. Overall, the behaviour of Thailand's housing price indices is in line with that of other countries^{1/}, i.e. peaks in Thailand's stock price index lead peaks in housing price indices by about 3 years. Moreover, the sharp drop in the stock price index in 1996 preceded the fall in house prices by around 2 years. The housing price indices also move in line with prices of luxury condominiums in Bangkok's Central Business District (CBD) area.

Limitations of the Index

Data used by the BOT in constructing these indices are from the GHB database which covers mostly medium- to low-end houses in some parts of the periphery of central Bangkok. They do not represent the overall housing price inflation in Thailand as they do not take into account high-end houses and those in the CBD areas. Although the MPC was fully aware of this limitation, they perceived that these indices were a step towards the construction of an indicator for the real estate sector and could be used to monitor house and land price conditions. The MPC thus decided to publish these index series.

Publication of the Index

In order to provide the public with information about the housing price indices, on 15 October 2004, the BOT published these index series and the methodology^{2/} on BOT's website (www.bot.or.th) and the Real Estate Information Center's website (www.reic.or.th). The house price indices, land price index and housing price indices will be updated quarterly and released at the end of January, April, July, and October of each year.

^{1/} Borio and Mcquire (2004), "Twin Peaks in Equity and Housing Price", *BIS Quarterly Review*, March 2004, pp. 79-93.

^{2/} Noppadol Buranathanung, Ashvin Ahuya, Chatsurang Kanchanasai, Rotelak Preecha and Thammanoon Sodsrichai (2004), "Housing Price Index: the Thai Experience", Bank of Thailand, *BOT Discussion Paper*, DP/03/2004