

Speculative Investment Drives Out Good Investment: Why it is Important to Minimize Speculative Investment of Real Estate in Singapore

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Abstract

Put in simple terms, a 'bubble' refers to financial assets (like stocks or land) whose price grows out of proportion from its 'fundamental value'. Once the bubble bursts, the economy could fall into recession, and in the worst case scenario turns into an economic financial crisis. While most ASEAN economies suffered instantly from the burst of the crisis in 1997, mature economies, such as Singapore, Japan and the US, only suffered minor impacts at the time. Now, however, concerns are being raised as these mature economies have since experienced considerable economic slowdowns, most notably in Japan and Singapore, but also to a lesser extent in the US. It is plausible that bubble problems could reappear as future crises in these economies. This essay attempts to understand the anatomy of such bubbles and determine whether Singapore is prone to such a problem.

Keywords: *Investment-Real estate-Financial economics-Singapore*

JEL Classification: *G0, G11*

1. INTRODUCTION

Last year, Singapore's economy was heavily burdened by many unpleasant incidents. First, the SARS calamity distressed the tourism sector in Singapore, which affected the other sectors of the economy, particularly investment and exports.¹ Second, a 'bubble economy' surfaced in Singapore, signaled by a high-cost economy. Last year's newspaper headlines in Singapore constantly revolved around issues such as unemployment, job security and retrenchment.² Unemployment in Singapore hit a 17-year high of 5.9 percent.³ Since early last year the Singapore Government has been encouraging the private sector to accept wage cuts and to take the actions necessary to remain competitive in the global economy. Growing instability in the region, due to SARS and terrorism threats, has been cited as the main culprit for the recession in Singapore.

Singapore's position over the last year has been in stark contrast to its position during the economic crisis which hit East Asia in 1997. At that time, Singapore's economy stood tall among neighboring countries in the region, most of whom suffered badly from the economic crisis.

This essay argues that Singapore's economy is currently experiencing a 'bubble'. This 'bubble' has created structural rigidity in Singapore leading to a high-cost economy and over-investment in the real estate sector that is unproductive and mainly speculative in nature. To remain competitive in the global economy, it is imperative that the Singapore Government provides incentives so that funds flow to 'appropriate' sectors, meaning long-term profitable investments; and at the same time provides disincentives against speculative investments.

2. DEFINITIONS

As stated above, a 'bubble' refers to financial assets whose price grows out of proportion from its 'fundamental value'. When this 'bubble' bursts due to asset price reversals, economies can fall into recession, and, in the worst case scenario, an economic crisis can ensue. As Fan and Fan (1999) noted, according to J. K. Galbraith modern economies have undergone

¹ The Asian Development Bank (ADB) estimated that the impact of SARS reduced Singapore's annual GDP by 1.1-2.3%.

² Recent conditions have shown improvement. Preliminary estimates from the Manpower Ministry showed that the unemployment rate for December 2003 dipped to 4.5 percent, lower than last September's revised forecast of 5.5 percent. ("Surge in job openings in last quarter of the year" by Tammy Tan, January 31, 2004, *The Straits Times interactive*).

³ "Singapore hoping for a better 2004 after high unemployment last year", by Yusman Ahmad, *New Straits Times*, Malaysia, January 3, 2004.

sizable speculative waves and bubbles in the past. The biggest one was the 1929 stock market crash in the United States and the subsequent decade-long widespread depression of the 1930s. In Asia, the rapid export-led growth of Japan and Taiwan in the 1980s eventually resulted in the bursting of these two bubble economies in the early 1990s.

The Southeast Asian financial crisis, which affected mainly developing or newly industrialized economies like Indonesia, Thailand, Korea and Malaysia, can also be seen as having been triggered as the result of bursting asset bubbles. These economies experienced consistently high economic growth prior to the crisis, even being regarded as 'economic miracles' by the World Bank.

While these economies suffered instantly from the shock of the crises in 1997, mature economies, such as Singapore, Japan and the US, were only affected slightly at the time. Now, however, concerns are being raised as these mature economies have since experienced considerable economic slowdowns.

Of course, major events in the global economy, like terrorism, SARS and war, have contributed to the slowdown of these economies. Nevertheless, it is plausible that bubbles in these economies will reappear as future crises. As such, an understanding of the anatomy of (asset) bubbles is imperative in predicting whether bubbles will result in an economic crisis.

3. ANATOMY OF ASSET BUBBLES

Land investment in a small economy can easily fall into a speculative investment trap, or a 'land-myth', as Takeshi Hiramine (2003) noted:

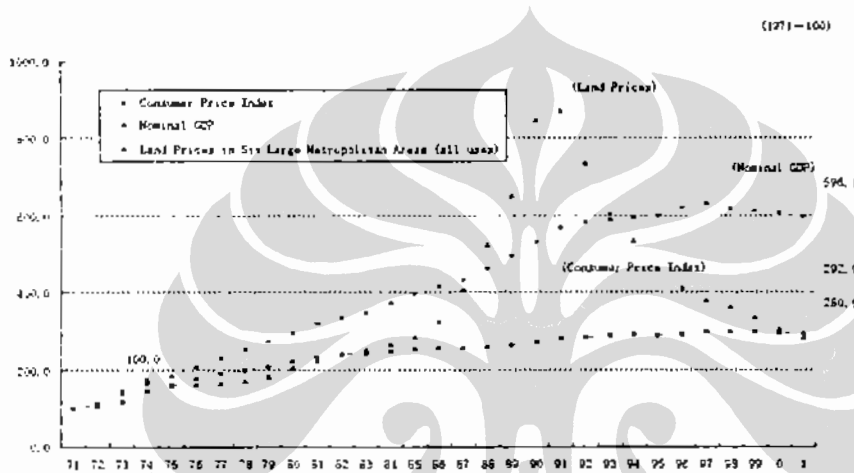
"In a small country such as Japan, in which a limited amount of land is available for development as residential, commercial, and industrial property, the price of land tends to reach high levels easily due to the relative scarcity of the land to begin with. In addition to this reason, I feel the Japanese still have an attachment to the land as an agricultural people even after the nation became an industrial society more than a century ago. With very few exceptions, such as during the oil crisis, land has consistently risen in value, especially after Japan entered a period of exceptionally high growth in the postwar period. This gave rise to the so-called land myth that land prices would always continue to rise."

The bursting of a bubble economy actually is quite useful as it provides a 'reality-check' or signal to move away from unproductive speculative investment in land as noted by the Japan White Paper on land (2002):

Until the bursting of Japan's bubble economy, there was a tendency to invest in land from the point of view of building up assets. This was on the premise that land prices would continuously rise. However, as a result of falling land prices - a trend that has extended for a long period beyond the bursting of the bubble - profits nowadays cannot be made by simply owning land, and in fact can only be made by making effective use of it.

Guest and McDonald (2002) found that in the 1990s the level of investment in Japan was excessive, in the sense that it exceeded the socially optimal level. The degree of over-investment in Japan in the 1990s averaged 5.5 percent of GDP per year according to their calculations. It is a coincidence that in the 1990s the land price in Japan also peaked to the highest level as shown in Figure 1.

Figure 1
Trends in Nominal GDP, the Consumer Price Index and Land Prices in Six Large Metropolitan Areas of Japan

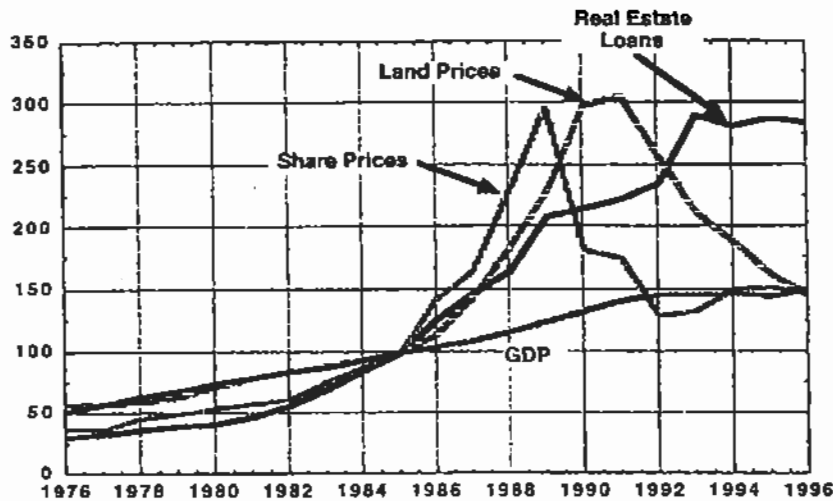


Source: Government of Japan (2002).

Note: The figures in each year are indexed to 1971, based on an index in 1971 of 100

Asset bubbles can also easily lead to bad loan problems, partly as a consequence of monetary policy as noted by Ostrom (1998). As Figure 2 indicates, this might result from substitutions in which investment was shifted from shares to land, especially after 1990. But this could also result from the fact that share prices realigned faster with the real economy represented by GDP.

Figure 2
Japan's Banking Problem: Loans Up, Prices Down



Source: Ostrom (1998).

4. THE CPF: A DISTINCTIVE FEATURE OF SINGAPORE'S ECONOMY

The Central Provident Fund (CPF) - a compulsory savings scheme - was established in 1955 and is held responsible for making Singapore one of the countries with the highest savings rates in the world. CPF contributions represent a large proportion of Singapore's national savings. In the CPF scheme, citizens are forced to save a considerable part of their income, which they can later use for insurance or for purchasing homes.

The CPF is said to add to the burden of doing business in Singapore for both local and foreign based entrepreneurs as the employers must contribute to CPF payments. Contributions must be made to the CPF for employees who are Singaporean citizens or permanent residents. The employer must deduct and pay the CPF Board a specified percentage of the employee's salary and must contribute to the employee's CPF account. Currently, due to high property prices in Singapore, most CPF savings are used for housing (Wai, 2001).

CPF was adopted for pragmatic reasons. Singapore began its nationhood as a country with minimal capital, relying on foreign capital in the form of Foreign Direct Investment (FDI) and domestic capital in the form of savings. This accumulation of capital led to economic growth through investment which in turn led to increased production capacity.

The CPF also acquires assets by using the savings it collects, usually in the form of government securities and advance deposits. By law, CPF monies not withdrawn by members must be invested in government bonds and deposits with the central bank (Tan, 2001).

However, recently individuals have been allowed to make their own investment decisions over CPF funds. Since January 1, 1995, members have been allowed to buy foreign stocks and bonds. At first, they could invest only in foreign securities listed locally or on the stock markets of Hong Kong, Malaysia, South Korea, Thailand and Taiwan. Now they are allowed to invest in regional markets through approved CPF managers. Approved CPF unit trusts were first permitted to invest in these markets in 1997. Beginning in 1999, investments in the stock markets of the United States and other Western countries, purchased through approved fund managers or unit trusts, were permitted. Investments in foreign assets were first limited to 20 percent of the market value of a unit trust fund. This increased to 40 percent in 1997 and 50 percent in 1999. These moves suggest that the government is prepared to allow individuals to diversify their investments from CPF balances and to position Singapore as a fund management center (Tan, 2001).

The flow of CPF funds, as described by Quek and Wu (1996), is as follows. The funds that the government receives from selling securities to savers (including the CPF) are initially held on deposit. These deposits are generally held with the MAS (Monetary Authority of Singapore) and then channeled into the Government of Singapore Investment Corporation (GIC), an important organization responsible for managing government funds by making profitable long-term international investment. So the CPF liabilities eventually appear as foreign assets. The yields on these foreign assets, to a certain extent, support the return to CPF savings. Not surprisingly, the CPF has shown (since the 1970s) a significant pattern of co-movement with both government debt and international reserves; increases in CPF liabilities almost equal increases in government debt.

Although many observers surmise that the government invests CPF funds directly into infrastructure and public housing, Prof Mukul Asher from the National University of Singapore stated that the numbers do not support this view as it has persistently run large budget surpluses, leading him to believe that CPF funds are largely invested offshore (DiBiasio, 2000). A recent study by the Singapore Government, conducted by the Department of Statistics, showed that around 42% of CPF funds were invested in property in 2001.⁴

⁴ The Business Times, 28 March 2003.

5. LAND AND HOUSING POLICY IN SINGAPORE

Phang (2001) stated that because of land policy in Singapore, the housing sector is dominated by public sector provisions. Currently, the government owns the majority of the land in Singapore, at more than 80 percent of total land, up from around 40 percent in 1960.

Most of the land was acquired at below market prices under the Land Acquisition Act of 1966, so that between 1973 and 1987, the government acquired land at 1973 rates rather than market rates (Phang, 1996). State land was made available for public housing, industrial estates, other public projects. Land use rights were also auctioned off for development to the private sector, including private residential developments.

As the market value for land is largely demand determined, resulting from its nature as a fixed supply, the wealth of consumers who demand land or buildings for residential or business purposes has a major effect on residential prices.

The CPF, as described above, is used by the Singapore government to enable its citizens to finance housing, especially for HDB flats. Foreigners are also allowed to own 100% of their assets in land or housing in the form of private houses or apartments. Figure 3 sketches a schematic view of the housing market in Singapore below.

To encourage home ownership, the Approved Housing Scheme (AHS) was set up in 1968. This allows members to use their CPF savings to buy housing units built by public sector statutory boards, of which the Housing and Development Board (HDB) is the most prominent. This program has been enormously successful. About 85 percent Singaporeans own their own homes, the highest rate of home ownership in the world (Asher, 1995).

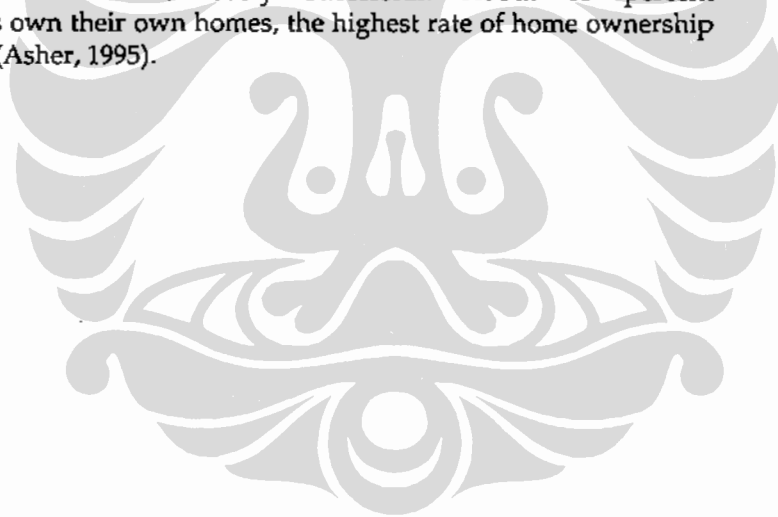
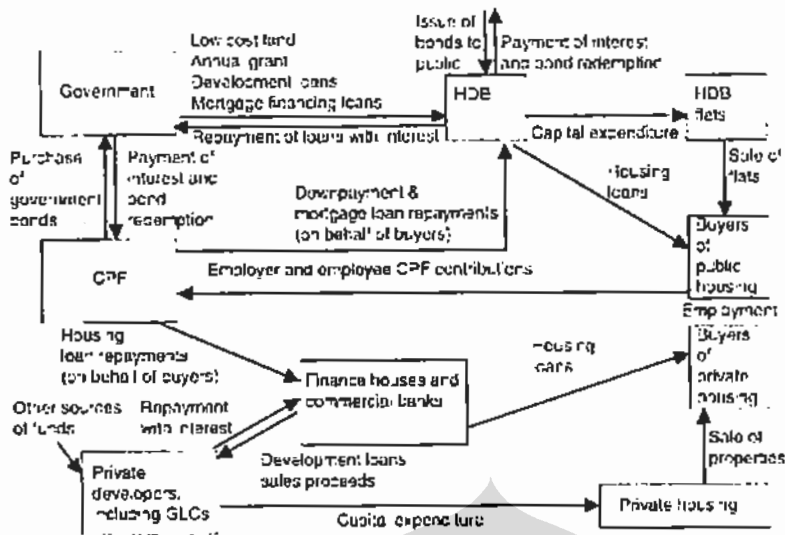


Figure 3
A Schematic View of Singapore's Housing Market



Source: Phang (2001).

Interestingly, CPF balances have not been used to provide loans to government or to statutory bodies to build housing or other infrastructure. The government consistently has financed all current and capital expenditure from operating revenue, and so has not yet needed to tap into CPF balances.

6. WEALTH EFFECT

Different kinds of wealth or assets impact consumption differently, as summarized by Case (2001). Basically Case (2001) argues that households may have a biased tendency to invest in real estate rather than the stock market. The strong preferential bias toward real estate is due to its over-appreciated prices, in part because the market price for real estate (and its movement) is less transparent and less visible compared to the stock market. Households also tend to view real estate investment as an end in itself (actually it is a form of 'consumption' rather than 'investment') and have a bequest motive (as strengthened by tax laws). Investment in housing is also motivated by different emotions than investment in stocks.

Looking at data from Singapore, residential property assets in Singapore actually represent more than four times personal disposable income. This figure is even higher than Japan – with ‘only’ 294% and the US with only 155%. Not surprisingly, residential property assets constitute the largest share of total household assets in Singapore, accounting for almost 50% of total assets. In contrast, shares and securities only represent 9.8% of household wealth in Singapore.

Table 1
*Residential Property Assets as % of
Personal Disposable Income, end 2000*

Country	%
Singapore	452%
Japan	294%
UK	292%
France	271%
US	155%

Source: Singapore Department of Statistics

Table 2
Singapore's Household Assets and Liabilities (figures at end 2001, in S\$)

Residential property assets	48.2%	Mortgage loans	72.1%
Private housing	22.8%	Private housing loans	29.7%
Public housing	25.4%	HDB loans	42.4%
Currency and deposits	29.9%	Personal and other loans	27.9%
Shares and securities	9.8%		
Equity in pension funds/CPF	13%		
Equity in life insurance	6%		

Source: Singapore Department of Statistics

Table 3
Household Financial Liability Ratios

	2000	1995	2000	1995
	Liabilities/PDI		Liabilities/GDP	
Singapore	174	118	88	63
HDB loans	74	34	38	18
Others	100	84	50	45
Private housing loans	52	39	26	21
Personal and other loans	48	45	24	24
United States	90	80	66	80
Japan	100	100	67	72
France	54	50	35	33
United Kingdom	116	107	78	74

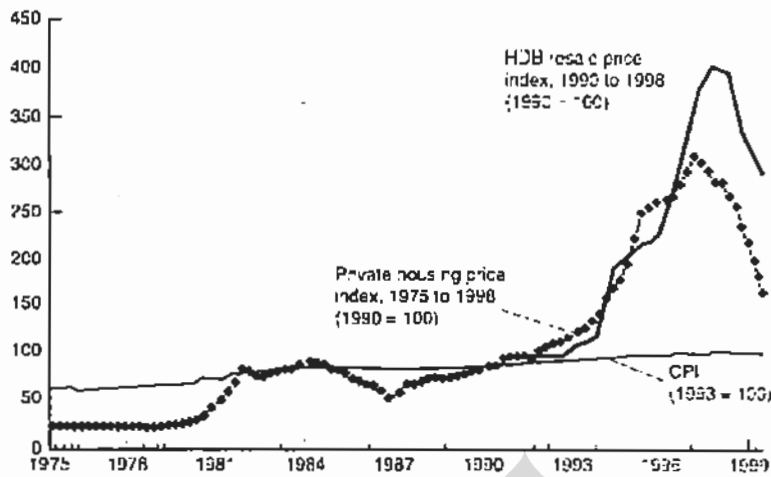
Source: Singapore Department of Statistics

In 2000, household financial liability ratios increased considerably, despite declines in housing prices. This could be due to the fact that liabilities or loan book values remained fixed to high purchase prices during boom periods, despite plummeting housing prices. This could also reflect the high ownership of housing in Singapore (up to 92%). The highest increment occurred in HDB loans, more than doubling from previous figures in 1995 for both Personal Disposable Income (PDI) and Gross Domestic Product (GDP).

7. TRACING SINGAPORE'S BUBBLES

This section questions whether Singapore suffers from a bubble economy. First, the pricing house index and HDB resale price for 1997 are examined as the housing price peak in Singapore, with a very high divergence from the CPI rate.

Figure 4
Singapore Housing Price Indices

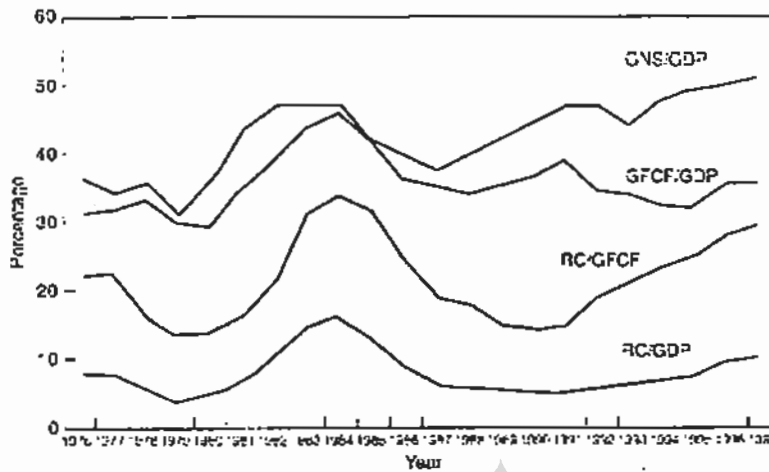


Source: Phang (2001).

Note: Both housing price indices are nominal price indices that are not adjusted for quality changes.

The share of Residential Construction (RC) in Gross Fixed Capital Formation (GFCF) has indeed shown an increase starting from 1991. However, the share of RC with GDP still remains low. This is because the share of GFCF to GDP (GFCF/GDP) has actually decreased, while the share of Gross National Saving to GDP (GNS/GDP) has increased considerably. This is an interesting phenomenon, where the GNS/GDP – starting from 1986 – has shown a continuing divergence from the GFCF/GDP indicator.

Figure 5
Shares of Residential Construction in Gross Fixed Capital Formation and GDP



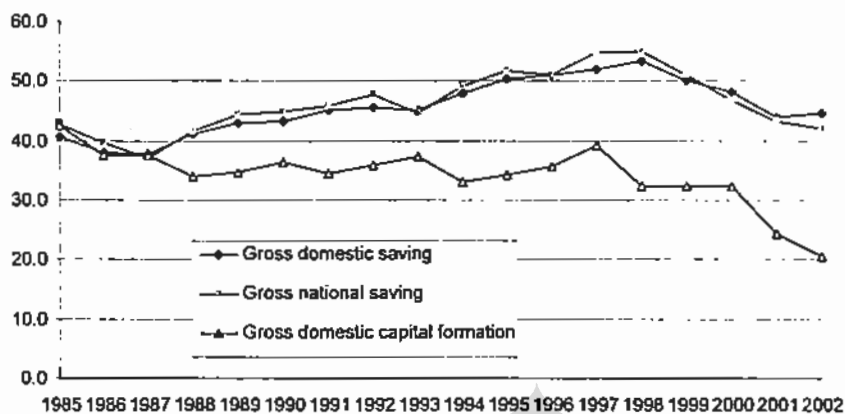
Source: Phang (2001).

Notes: GNS=Gross National Savings; GFCF=Gross Fixed Capital Formation; RC=Residential Construction

This divergence in Gross Domestic Savings and Gross Domestic Capital Formation has continued to the present. As shown in the Figure below, Gross Domestic Capital Formation dropped to 20%, its lowest since the 1980s. Housing prices are demand determined -as the number or supply of housing available is fixed in the short term, increase in demand results in an increase in the price of housing assets. This decreasing Gross Domestic Capital Formation could be attributed to the declining residential investment beginning in 1998.

Figure 6

Shares of Gross Domestic Savings, Gross National Savings and Gross Domestic Capital Formation in GDP, Singapore 1985-2002



Source: Key Indicators of Asia Pacific, Asian Development Bank (2003).

Singapore stock prices, represented by the Straits Times Index (STI), rebounded in 1999 and 2000 after plunging at the onset of the 1997 Asian financial crisis. This is similar to Japan, in which stock prices peaked before housing prices. Stock and security prices are listed daily in the newspaper; transactions and turnovers are frequent and readily apparent, while housing transactions and price information is less active and less transparent. It is safe to say that the drop in the STI index – reflecting the onset of the economic crisis – adversely impacted future expectations for economic conditions, leading to a drop in housing prices.

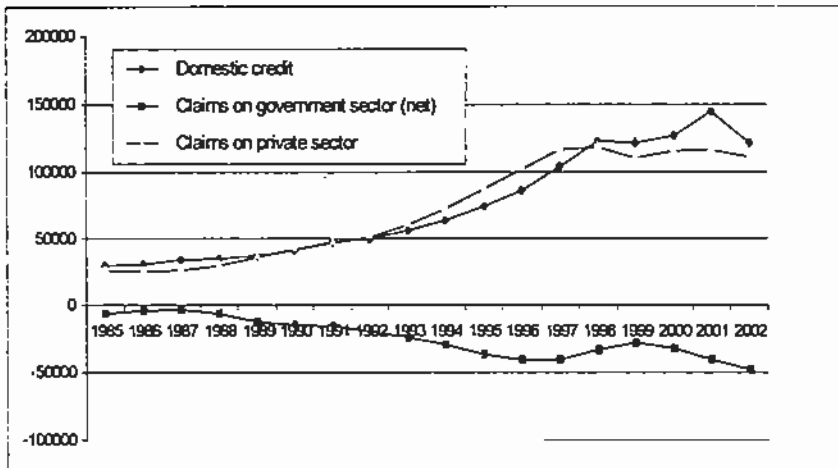
Figure 7
 Straits Times Index (STI)



Source: Asiachart.com (2003).

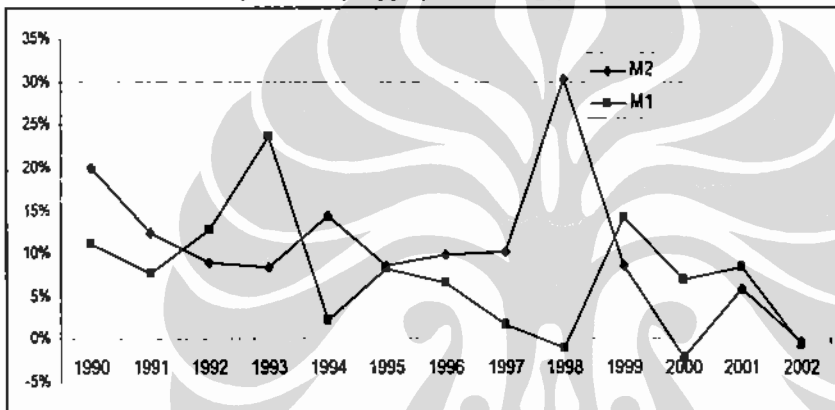
In the banking sector, domestic credit expansion continues to remain high despite the 1997 financial crisis – though levels have stabilized to some extent. During the onset of the 1997 financial crisis, the growth of M2 in Singapore increased considerably, demonstrating the inflexibility of the sterilization process in Singapore previously discussed.

Figure 8
Domestic Credit in Singapore, 1985-2002



Source: Key Indicators of Asia Pacific, Asian Development Bank (2003).

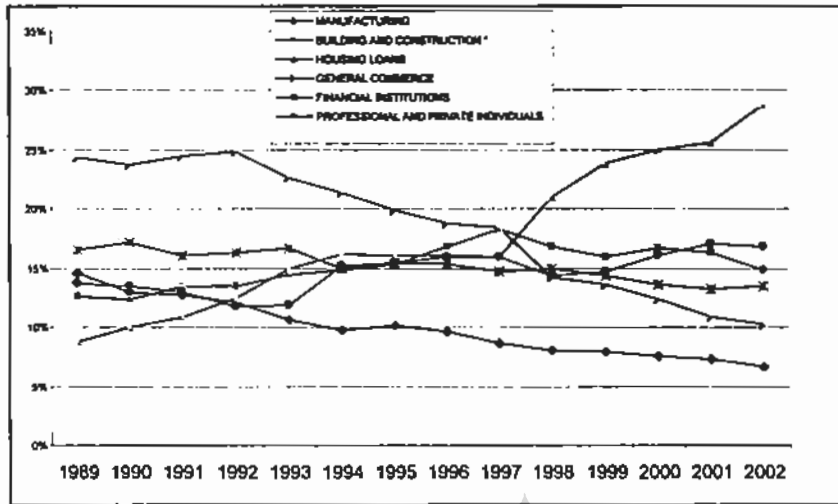
Figure 9
Growth of Monetary Aggregates in Singapore, 1985-2002



Source: Monetary Authority of Singapore.

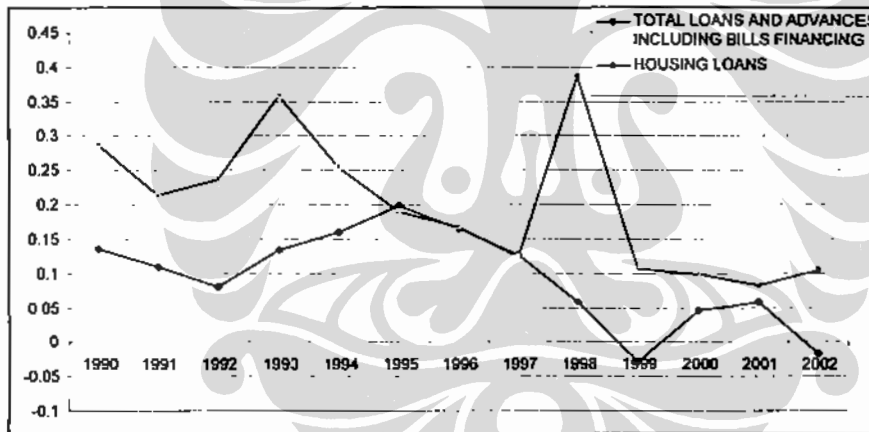
Starting in 1998, housing loans increased as a share of bank loans, reaching almost 30% in 2002. Previously, commerce loans ranked first in the share of bank loans. Actually bank loans have declined since 1996, posting negative growth in 1999. The growth of housing loans, on the other hand, peaked in 1998 at almost a 40% growth rate and have since stabilized at around 10% p.a.

Figure 10
 Share of Loans by Economic Sector in Singapore, 1985-2002



Source: Monetary Authority of Singapore.

Figure 11
 Growth of Total Loans and Housing Loans in Singapore, 1985-2002



Source: Monetary Authority of Singapore.

8. OVER-INVESTMENT IN SINGAPORE

Singapore, like Japan, displays symptoms of an asset bubble economy. The transmission mechanism of the bubble usually comes about in high asset prices, whether financial or real assets, which leads to an inflated valuation of wealth. How the increase in asset prices started in the first place remains unclear. Some attribute this to overly high expectations for the economy (especially in a booming economy), 'land myths' (that the price of land will continue to rise), or too much speculative investment – looking for high returns in short periods.

In Singapore, due to the CPF system, during boom times, as income increased, savings also went up – thus creating a need to find matching investment. This can lead to a condition described by the Austrian business-cycle theory⁵ as 'over-investment'. As the pool of profitable investment shrinks, the real estate sector seems to offer profitable ventures for investors. The demand-determined nature of real estate added to by rising expectations and investor demands (speculative or not) can then lead to the 'land-myth' described above.

This in turn can cause a change in consumption patterns. Increases in high asset prices causes asset owners to consume more since their wealth has increased. It then follows in the aggregate level the consumption rate is unsustainable since it lowers the necessary investment rate needed to sustain the growth of the economy. Then, as the economy over-heats, price levels go up to match the increase in aggregate demand.

The rise in land prices, viewed as an input to production, also affects the supply side, by increasing the cost of production – reducing the aggregate supply. This further pressures an already overheated economy.

In the presence of high inflation, and as monetary authorities respond to maintain the monetary base, increases in interest rates would also be expected to occur at the same time. Increases in price level erode export performance, while high interest rates create higher capital costs, thus making it difficult for investors to honor their loans. This make the economy prone and vulnerable to bad loans in the banking system.

As the population perceives the future performance of the economy will be 'bleak', the wheel starts to slow down. Expectations about profits go down, partially caused by declining export performance, consumption flattens and the so-called 'under-consumption' suggested

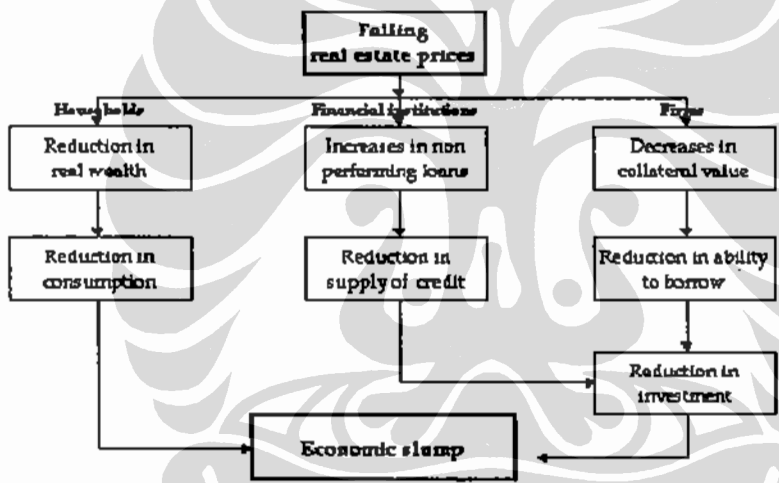
⁵ Developed by Austrian economists such as Ludwig von Mises and Friedrich Hayek in the early 20th century (The Economist, September 26th, 2002).

by Keynes during the 1930s depression starts. Declining real estate prices can bring about an economic slump as described in the Figure below. This is what might be currently happening in Singapore.

Basically, the transmission of the asset bubble results from an interaction between over consumption and over investment which abruptly turns into under-consumption in a short time period. In Singapore the onset of the 1997 financial crisis acted as an exogenous factor changing expectations about future economic conditions. Singapore's ability to maintain its economy during the crisis seems to be the reason that the emergence of the asset bubble in Singapore does not lead to worse conditions. In Singapore there are no serious bad-debt problems in the banking sector. However, consumer-banking did suffer -- with the credit card default numbers on the rise.

Consumers absorb most of the costs during the economic slump in Singapore, probably because they are the investors in real estate in the first place but also because the CPF fund is readily available for collateral. What remains a problem is that the role of the CPF fund as a pension and health scheme for the elderly seems to have lost its function, as more and more of the CPF fund is directed towards housing.

Figure 12
Impact of Real Estate Price Decreases on the Macroeconomy



Source: Kim (1999).

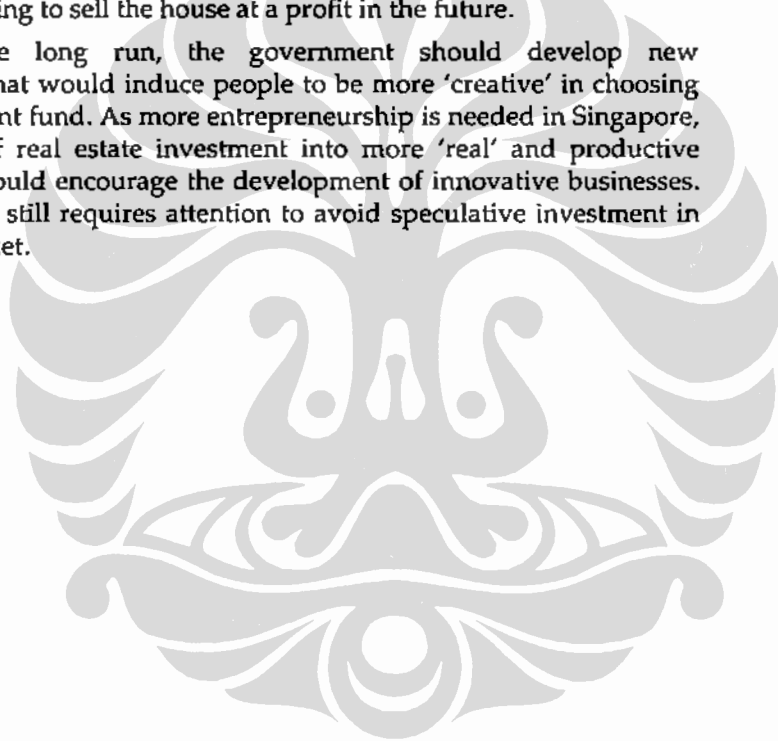
9. OVER-INVESTMENT AND SINGAPORE'S COMPETITIVENESS

The over-investment, particularly in the real-estate sector, is not only damaging to the economy (leading to an economic slump) but also to Singapore's competitiveness. More investment in real estate means that less investment is available for other more productive sectors. Over-investment in real estate also does not contribute to a country's production capacity. Despite government efforts to push for a more varied use of CPF funds, most households still choose to invest in housing.

Over-investment in real estate increases living costs in Singapore, another factor that reduces Singapore's competitiveness. The recent recovery in the Singapore economy could be used as a momentum to develop new mechanisms to discourage households from over-investing in housing. The push for a more flexible and variable wage structure would be a good start for this. With less fixed income, demand for credit would decrease. Banks would then be more prudent in channeling credit.

Other measures could be taken, such as adding supplementary safeguard policies to ensure that households really buy houses because they need a place to stay, and not just for temporary investment purposes, hoping to sell the house at a profit in the future.

In the long run, the government should develop new mechanisms that would induce people to be more 'creative' in choosing their investment fund. As more entrepreneurship is needed in Singapore, a diversion of real estate investment into more 'real' and productive investments could encourage the development of innovative businesses. However, this still requires attention to avoid speculative investment in the stock market.



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