

CAMRI Global Perspectives

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Sovereign Asset-Liability Management in Singapore

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Too Much Credit?

Debt: Can't live with it and can't live without it. Economic historians have often pointed out that credit is the oil that keeps an economy progressing. Others, most notably Reinhart and Rogoff*, have documented that excess credit has been behind the most devastating business cycles in global economic history. Credit abuse was behind the great US recession in 2008, it spread asset destruction and unemployment around most of the developed world, and prolonged the initial phases of economic recovery.

Singapore discovers credit

At the beginning of 2014, the developed world's economies appear to be finally emerging from their sluggish recoveries. Contemporaneously, the emerging economies' rates of growth are beginning to decelerate noticeably, foreign exchange

values are depreciating and stock markets are slumping.

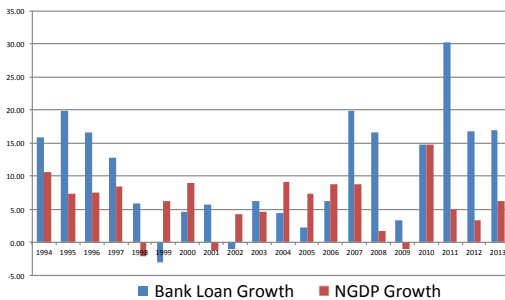
Are the Asian economies beginning to signal that the rapid build-up and easy access to low cost credit is beginning to create malfunction and distortions? This month we will examine some debt statistics from Singapore, one of Asia's most successful economies. Recently, Singapore has attracted global attention as its debt statistics have generated a contentious controversy over whether debt has built up too rapidly. Even the highly-regarded MAS has commented on criticisms over Singapore's growing debt, explaining that it is not a problem. The MAS pointed out that 'Singapore is not facing a credit bubble that puts the country or its banking system at any risk or crisis'.

Bank Lending has accelerated

There are two sets of data that are cause for concern, or at least need inspection. The

one that has probably drawn the most attention is the very rapid growth in bank loans. Since 2007, loans made by banks in Singapore have surged at an annual rate of 17% per annum. In comparison, they grew by 7.4% per annum over the previous 13 years. This acceleration in loan growth has not been matched by growth in the economy. In fact, bank debt grew 3 times faster than NGDP did in the past seven years.

Bank Loan Growth Swamps NGDP Growth



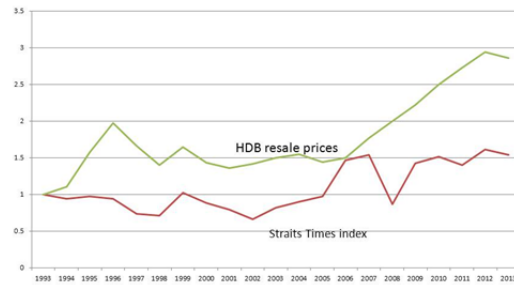
Source: MAS Table 1.3B Bank Assets of DBU's; GDP from Department of Statistics, Singapore National Accounts Gross Domestic Product

Real Estate Prices Took Off

What happened to this excessive credit growth? While it is impossible to know, one statistic does stand out: Singapore's real estate (RE) market has exploded over the same period. Resale prices of HDB flats rose 104% between 2006 and 2012. In comparison, the Straits Times Index increased by a rewarding, but less spectacular, 65% implying that investment in real estate thoroughly outperformed investment in equities during this period. In

the 13 years prior to this burst of credit growth, real estate prices outperformed the Straits Times Index by just 4 percentage points. Their performance was virtually identical.

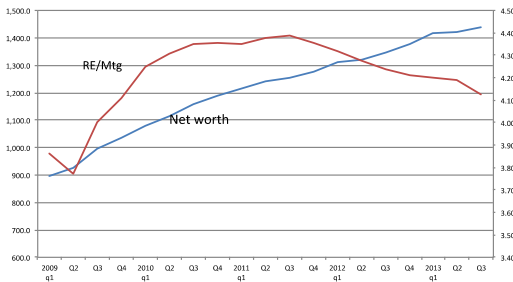
HDB flat Resale prices Outperform ST Index (index to 1993)



Source: HDB and Straits Times Index

From an alternative perspective, the increase in liabilities used to fund RE purchases has been thoroughly overwhelmed by the increase in RE asset values. At its peak in 2012, RE values were 4.4 times outstanding mortgage debt, or conversely, mortgages accounted for only 22.8% of RE values. This is a relatively conservative lending standard. This ratio (RE/Mortgages) did decline slightly, along with RE prices, in 2013 after the government imposed stricter lending limits on RE lending and purchases, which inhibited some demand. The following chart also highlights the steady rise in household net worth, that in Q3 2013 climbed to \$1.44 trillion, or more than enough to pay off all household debt if RE values fell by 50%.

Household Net Worth (mils S\$) Keeps Rising and RE assets are 4 times mortgages



Source: Department of Statistics, Singapore Household Balance Sheet

Foreign Capital Inflows Contribute

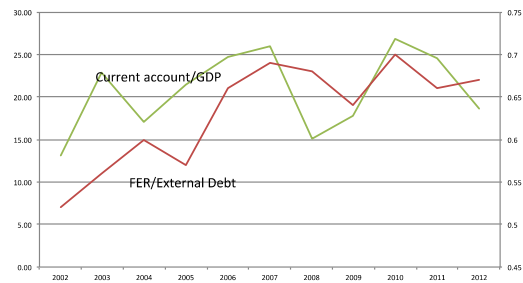
Of course bank lending for real estate hasn't been the only factor contributing to the surge in real estate prices. Inward investment from rapidly growing countries in the Asian region has also contributed. Because Singapore has an open capital market structure, it is susceptible to large inflows of foreign capital, which contribute to inflation in real estate prices.

Current Account Surpluses Help Singapore

Singapore has also benefited from a healthy current account surplus over all of the past 13 years. Surpluses ranged between 15% and 25% of GDP. Since Singapore's currency is unregulated, its foreign exchange reserves have also grown over the past decade and the Singapore dollar has appreciated against all currencies. A current account surplus also implies that Singapore does not have to borrow to fund its balance of payments; it is a creditor country.

There is no evidence suggesting that Singapore has funded the growth in its real estate assets with external debt. Singapore's public debt has increased over the past dozen years, but at a slightly slower pace than the accretion in its foreign exchange reserves.

Foreign Exchange Reserves Growing Relative to External Debt



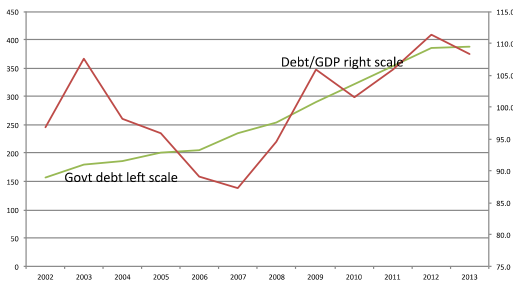
Source: Department of Statistics, Singapore International Accounts for External Debt and Current Account Balance; and National Accounts for GDP. Foreign Exchange Reserves from Monetary Authority of Singapore Reserve Statistics.

Public Debt Above 100% of GDP

Another source of debt controversy is the relatively large size of Singapore's public debt. Over the past 5 years, the same years as the explosion in RE prices, public debt increased at a faster pace than GDP did. As a result, the ratio of public debt to GDP has jumped to 111.4% in 2012, from a low of 87% in 2007. The MOF argues that public debt is used for (1) investment in Singapore's infrastructure, and (2) issued specifically to meet the investment needs of the Central Provident Fund, and not to fund temporary budget deficits. Moreover, the MOF states that the returns from their

investments greatly exceed the cost of borrowing. In 2013, advance data indicates that the debt to GDP ratio declined slightly, probably a reflection of the government's efforts to tighten up lending standards to the construction and real estate industries.

Singapore Gov't Debt Rising



Source: Department of Statistics, Singapore Public Finance

In Conclusion

Although Singapore's debt to GDP ratio is one of the highest in Asia, the global rating agencies have given Singapore's short-and long-term public debt their highest and safest rating: AAA. It is well-earned. Second, the household balance sheet is financially sound. Household net worth is sufficient to keep debtors at bay, even if RE prices fell by 50%. Of course such a dire drop would depress consumer psychology and have negative knock-on effects on subsequent economic growth. Third, the country's economy enjoys a comfortable and stable current account surplus. Finally, the monetary authority has recently taken measures to slow the surge in loan growth. These tighter lending standards have already cooled the appreciation of RE

prices, and the demand for fancy cars in Singapore.

External Influences

The inevitable rise in global interest rates over the next few years will inhibit household spending as debt service costs rise commensurably, especially because most of the consumer debt in Singapore is borrowed at floating rates. However, with the economy at full employment, this should not prove to be an unsolvable problem.

As central banks in developed countries gradually reduce their monetary creation (QE), and the PBOC imposes new restrictions on bank lending in China, capital inflows to all emerging markets will diminish and in many cases become a capital outflow. Singapore, like all Southeast Asian economies, will experience smaller inflows, but because of its financial strength, large foreign exchange reserves, current account surplus and political stability, Singapore will be less affected than all of the other ASEAN nations.

* Growth in a Time of Debt, Carmen Reinhart and Kenneth Rogoff, May 2010.

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KEY INDICATORS TABLE (AS OF 7 February 2014)								
INDEX	LEVEL (LC)	%1MO (LC)	%1MO (USD)	%1YR (LC)	%1YR (USD)	INDEX	LEVEL	%1YR
S&P500	1797.02	-2.06%	-2.06%	21.60%	21.60%	3MO LIBOR	0.23	-19.91
FTSE	6571.68	-2.62%	-2.81%	9.76%	14.62%	10YR UST	2.68	37.11
NIKKEI	14462.41	-8.54%	-6.54%	29.45%	18.36%	10YR BUND	1.66	3.55
HANG SENG	21636.85	-4.74%	-4.79%	-3.29%	-3.34%	10YR SPG	3.59	-33.84
STI	3013.14	-3.41%	-3.16%	-4.96%	-7.02%	10YR SGS	2.41	56.91
EUR	1.36	0.14%		1.77%		US ISM	51.30	-1.90
YEN	102.30	-2.20%		9.26%		EU PMI	54.00	12.70
CMCI	1448.27	1.24%		-9.97%		JP TANKAN	8.00	188.89
Oil	99.88	6.63%		4.23%		CHINA IP	9.70	-5.80

Source: Bloomberg

APPENDIX

GLOSSARY OF KEY TERMS (Source: Bloomberg, with tickers in parenthesis. In US\$ where applicable)

S&P500: capitalization-weighted index of the prices of 500 US large-cap stocks (SPX)

FTSE: capitalization-weighted index of the prices of the 100 largest LSE-listed stocks (UKX)

NIKKEI: capitalization-weighted index of the largest 225 stocks of the Tokyo Stock Exchange (NKY)

HANG SENG: capitalization-weighted index of companies from the Hong Kong Stock Exchange (HSI)

STI: cap-weighted index of the top 30 companies listed on the Singapore Exchange (FSSTI)

EUR: USD/EUR exchange rate: 1 EUR = xx USD (EUR)

YEN: YEN/USD exchange rate: 1 USD = xx YEN (JPY)

CMCI: Constant Maturity Commodity Index (CMCIPI)

Oil: West Texas Intermediate prices, \$ per barrel (CLK1)

3MO LIBOR: interbank lending rate for 3-month US dollar loans (US0003M)

10YR UST: 10-year US Treasury yield (IYC8 – Sovereigns)

10YR BUND: 10-year German government bond yield (IYC8 – Sovereigns)

10YR SPG: 10-year Spanish government bond yield, proxy for EU funding problems (IYC8 – Sovereigns)

10YR SGS: 10-year Singapore government bond yield (IYC8 – Sovereigns)

US ISM: US business survey of more than 300 manufacturing firms by the Institute of Supply Management that monitors employment, production inventories, new orders, etc. (NAPMPMI)

EU PMI: Purchasing Managers' index for the 17-country EU region (PMITMEZ)

JP TANKAN: Bank of Japan business survey on the outlook of Japanese capital expenditures, employment and the overall economy, quarterly index (JNTGALLI)

CHINA IP: China's Industrial Production index, with 1-month lag (CHVAIOY)

LC: Local Currency

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