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THURSDAY SPECIAL REPORT

Redefining affordability of homes

New NUS study suggests a longer-term way of looking at the issue of affording your own home

By Jessica Cheam

AT THE recent General Election, one of the most contentious issues was the affordability of housing.

Opposition politicians argued that the Government had allowed property prices to rise so much that homes were no longer affordable to the masses. Rebutting this, the ruling People's Action Party trotted out figures from the Housing Board proving that homes - especially for first-time buyers - remained affordable.

The 'proof' centred on what is known as the 'debt-to-service ratio' (DSR), defined as the proportion of monthly income that goes into paying the mortgage.

For first-time buyers of new HDB flats in non-mature estates, the DSR averaged 23 per cent last year, well below the internationally recognised threshold of 30 per cent for housing affordability.

Still, there seemed to be a disconnect among voters, especially in the so-called 'sandwiched' middle class, who were not entirely convinced by the numbers.

After all, HDB resale flat prices had risen some 65 per cent in the past three years, even as average household income remained relatively stagnant.

This has worried older Singaporeans like Mr Ong Soon Yam, 60, who is himself happily retired with a private property but is afraid his 30-year-old son will not have such an easy time with getting on the property ladder. His son and his son's fiancee have a combined income of about $10,000, but this doesn't seem to be enough to enable them to buy a private property.

Their income is too high for them to qualify for a new HDB flat, so they are looking in the HDB resale market. But prices there are at record levels and they are baulking at the high cash premium - known as cash over valuation or COV - demanded by sellers.

Mr Ong echoes the thoughts of many in his generation as he tells the The Straits Times: 'During my time, homes were not so expensive. I managed to pay it off quite quickly and upgraded. Today, my son's combined income of $10,000 is not enough to get him a home of the size and location of my first home - and he will be burdened with a debt for 30 years.'

Long-term affordability

NOW, two economists have released a new study that attempts to shed new light on the housing affordability debate.

For Professor Tilak Abeysinghe from the National University of Singapore (NUS) and PhD student Gu Jiaying from the University of Illinois, the DSR used by HDB is only a 'short-run indicator' and the issue of affordability must viewed with a long-term lens. They point out, for example, that HDB's DSR calculations are premised on home buyers taking 30-year home loans. Mathematically, the results can differ by simply lengthening or shortening the loan period. Indeed, during the GE, some opposition candidates argued that a more reasonable loan period would be 20 years, which could tip the DSR numbers over the acceptable range.

In their version of long-term affordability, the study's authors looked at two different factors.

The first was the total lifetime income of households in various income groupings. Here, the authors obtained government data from 1990 to 2007 and computed lifetime income from predicted annual household earnings over the working life for various birth cohorts.

The second factor was the average price of a house. Here, the authors took the data from average prices of public and private properties published on the websites of HDB and the Urban Redevelopment Authority.

Taking that same internationally accepted 30 per cent level, if the ratio of total lifetime income to average house price is 0.3 or below, the house is affordable in the long term.

Running the numbers, the study found that, at low interest rates of around 3 per cent, resale flats that are three-room or larger are generally affordable in the long term for income groups above the 20th percentile.

These numbers do not seem to contradict the PAP's assertion that homes are still affordable to the masses. But Singapore is now experiencing a low-interest environment. The study also indicates that affordability significantly decreases when mortgage interest rates rise to 5 or 7 per cent.

In fact, members of the public can go to a website (see graphic for url) hosted by the NUS Singapore Centre for Applied and Policy Economics (Scape) and calculate for themselves if a new home is affordable to them using this measure. Data is available for HDB resale flats across all 26 HDB towns.

Short-term accessibility

BUT the study's authors also went beyond long-term affordability.

Their analysis also introduces a shorter-term measure of affordability, which they call housing 'accessibility'.

Accessibility is simply defined by the ratio of the cash a buyer needs to make all the upfront payments for a new home to his household savings at that point in time. Upfront payments include down payment for a property and any COV payable for resale HDB flats. Savings includes Central Provident Fund balances.

If the ratio of payments to savings is more than 1, then that type of housing is 'not accessible' to the home buyer. If it is less than 1, then it is accessible.

The study found that for young buyers of HDB resale flats in the age group of 20 to 29, the main problem right now - with current property prices - is accessibility, not long-term affordability.

For example, a four-room HDB resale flat in established areas like Bukit Timah is currently inaccessible to the bottom 30 per cent of income earners.

Even two- or three-room HDB resale flats in suburban towns like Yishun and Woodlands are inaccessible to the bottom 20 per cent of income earners.

The findings, however, come with certain caveats. The authors acknowledge that their study, which took three years to complete, does not take into account grants given by HDB to low-income families and first-timers, which can range from $30,000 to $80,000, depending on income. They said comprehensive data on how much housing subsidy is disbursed to which income groups was unavailable.

Asked to comment on the findings, a Ministry of National Development (MND) spokesman also noted this was a flaw. MND also pointed out other shortcomings: for example, the study does not account for capital gains from an HDB upgrader selling a flat to buy a new one.

Also, the analysis covers only HDB resale flats. MND said most first-timers buy new HDB flats, which are typically cheaper than resale. And there are also HDB grants available for such flats for the lower-income. 'Taking these into account will further increase the Housing Affordability Index,' said the spokesman.

MND also maintained that, as far as indicators of affordability go, the HDB's DSR 'is simpler and more conservative'.

'The DSR is a simpler measure, because it makes use of available data and takes into account housing grants, the housing loan amount, loan tenure, subsidised mortgage loan interest rate at point of flat purchase. It does not require projections,' it said. The DSR calculation is also more conservative since it does not take into consideration buyers' savings and future increases in buyers' incomes.

More data to help the debate

DESPITE these imperfections, Prof Tilak told The Straits Times that the main objective of the study was to simply provide another way of assessing housing affordability. Individual buyers can use the data to project their total lifetime income and get a rough feel of whether a home they are considering is affordable. 'The calculations in our table will also be useful for general policymaking purpose.'

Indeed, the study throws up other interesting trends. Private condominium homes, for example, now have a median price of $1.15 million. This puts them beyond the reach of the households below the 70th income percentile.

The study also shows that in the 1970s, the lifetime income of a median- income household could buy five private homes. By 2007, this had dipped below two - although, interestingly, the bulk of the erosion in affordability occurred in the late 1970s to the early 1980s.

In fact, the study asserts that past property booms have always led to some erosion of housing affordability.

Citing previous academic studies, Prof Tilak said the wealth effect - where increase in household values translates to higher consumption of non-housing goods - is minimal in Singapore.

In the absence of cheaper suburbs which offer quality living, the only way for Singapore residents to unlock property values is, apart from emigrating, to downgrade to smaller units. This does not seem to be happening extensively and explains why the 'housing wealth effect' on consumption is insignificantly small.

Analysts that The Straits Times spoke to said the study findings were interesting and useful for studying the issue of affordability. One measure of affordability may not be better than the other, but both are crucial in determining whether homes are affordable, said Mr Nicholas Mak, head of research at SLP International.

Chesterton Suntec International's head of research and consultancy Colin Tan said the new approach of defining affordability is 'all the more important today' with Singapore's open economy where job security is unpredictable. Being able to project total lifetime income as a comparison to current home prices will be a useful tool for home buyers, and might encourage buyers to be more prudent.

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How affordable are homes today?

Excerpts from the NUS study at http://www.fas.nus.edu.sg/ecs/scape/index.html

Long-run housing affordability

This table shows that in the long term, resale HDB flats are largely affordable to most income groups above the 20th percentile. But affordability dramatically decreases when mortgage interest rates go up from 3% to 7%.

Housing affordability < 0.3 means affordable

Income group	Reference monthly household income level 2011 ($)	Savings over age 20-29 ($)	Mortgage rates	3-room $311,000	5-room $470,000	Condo $1,150,000
1st - 10th	2,036	13,608	3%	0.41	0.63	1.53
			5%	0.52	0.79	1.94
			7%	0.64	0.97	2.38
11th - 20th	2,822	44,965	3%	0.24	0.36	0.88
			5%	0.31	0.47	1.15
			7%	0.39	0.59	1.45
21st - 30th	4,252	74,664	3%	0.16	0.24	0.59
			5%	0.21	0.31	0.77
			7%	0.26	0.39	0.96
31st- 40th	5,250	109,129	3%	0.13	0.19	0.46
			5%	0.16	0.25	0.60
			7%	0.20	0.31	0.75
41st - 50th	6,204	146,378	3%	0.10	0.15	0.36
			5%	0.13	0.19	0.47
			7%	0.16	0.24	0.59
51st - 60th	7,185	173,950	3%	0.08	0.12	0.28
			5%	0.10	0.15	0.38
			7%	0.13	0.20	0.48
61st - 70th	8,633	223,808	3%	0.06	0.09	0.22
			5%	0.08	0.12	0.30
			7%	0.10	0.16	0.38
71st - 80th	9,938	258,317	3%	0.05	0.07	0.18
			5%	0.07	0.10	0.24
			7%	0.09	0.13	0.32
81st - 90th	13,169	329,815	3%	0.03	0.05	0.13
			5%	0.05	0.07	0.17
			7%	0.06	0.09	0.23

Short-term accessibility

Housing accessibility is defined as having enough savings (including CPF monies) to pay the upfront down-payment (including cash over valuation or COV for resale HDB flats) needed to buy a home. Housing accessibility > 1 means that savings are insufficient to buy a home.

At today's median HDB resale flat prices and COV, three-room flats are inaccessible to income groups below the 20th percentile. But this finding does not take into consideration HDB's current housing subsidies for lower-income groups.

The data also shows private condo homes are inaccessible for the majority of Singaporeans – households below the 70th percentile.

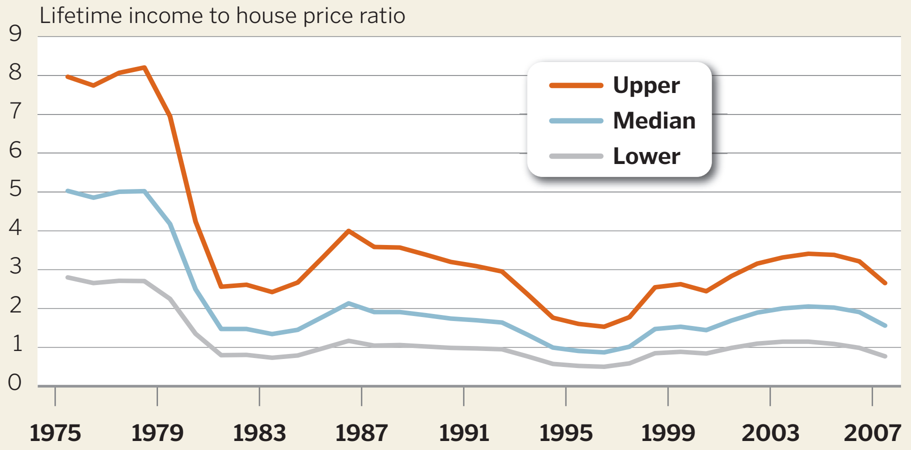
Housing accessibility > 1 means not accessible

Income group	Reference monthly household income level 2011 ($)	Savings over age 20-29 ($)	Median house price 2011 Quarter 2 and median COV for HDB in 2011 Quarter 1	3-room	5-room	Condo
			Median price	$311,000	$470,000	$1,150,000
			COV	$19,000	$22,000	
1st - 10th	2,036	13,608		4.2	5.9	19.4
11th - 20th	2,822	44,965		1.3	1.8	5.9
21st - 30th	4,252	74,664		0.8	1.1	3.5
31st- 40th	5,250	109,129		0.5	0.7	2.4
41st - 50th	6,204	146,378		0.4	0.6	1.8
51st - 60th	7,185	173,950		0.3	0.5	1.5
61st - 70th	8,633	223,808		0.3	0.4	1.2
71st - 80th	9,938	258,317		0.2	0.3	1.0
81st - 90th	13,169	329,815		0.2	0.2	0.8

Housing affordability over the decades for the 30-year age group

In the 1970s, the total lifetime income of a median-income household could buy five private homes. By 2007, this had dipped below two.

House prices post-70s went up driven by factors such as the liberalisation of CPF, slower growth of housing stock, and better per capita incomes.



Source: SINGAPORE CENTRE FOR APPLIED AND POLICY ECONOMICS (SCAPE), DEPARTMENT OF ECONOMICS, NATIONAL UNIVERSITY OF SINGAPORE

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