The Impact of Land Supply and Public Housing Provision on the Private Housing Market in Singapore

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Summary

The Singapore private housing market has experienced dramatic price movements over the past 5 years. Traditionally, public housing production and the release of state-owned sites for private housing have been important policy levers for mitigating house price inflation. However, imbalances in the housing sector after the Asian Financial Crisis led to cutbacks in the supply of new public housing units and development land by the state. At about the same time, Singapore began the liberalization of its financial system and adopted progressively accommodative immigration policies which increased its attractiveness to capital and immigrant inflows. As fundamentals improved amid ample liquidity and as its foreign population grew, consumption and asset demand for housing expanded rapidly. However, new flat production and land sales remained curtailed despite revisions to the public housing allocation mechanism and the state land sale system in 2001 that were intended to improve their responsiveness to demand shocks. Without a commensurate supply-side response, house price appreciation in Singapore was among the highest worldwide, both before and after the Global Financial Crisis. This triggered four consecutive rounds of prudential and fiscal measures since September 2009 to moderate house price volatility. Their impact has been muted, attenuated by other drivers of market activity and by a shortage of public and private housing. Beginning in 2010, the state has aggressively ramped up its supply of public housing and the quantum of state land sales. While this would reduce the housing deficit in the medium term, there is an urgent need to address weaknesses in the design and implementation of the state’s supply levers given the limited effectiveness of prudential measures in an open economy like Singapore’s.

Yet another source of house price volatility was the lack of co-ordination among several governmental agencies that implemented diverse growth strategies and actively promoted infrastructural and iconic developments to position Singapore as a global city. The strategies boosted housing demand at various levels but also imposed severe capacity constraints on the local construction industry that accentuated house price inflation. To ensure greater stability and a more sustainable housing market going forward, policy makers would need to develop a more coherent policy stance that holistically identifies and manages the impacts of seemingly unrelated policy developments within and beyond the housing and housing finance sectors.
1 Introduction

Over the past five years, economic expansion, ample onshore funds and large capital inflows have made the Singapore private housing market an attractive investment proposition. In fact, it has been identified as one of the “frothiest” in the world both before and after the Global Financial Crisis (GFC)\(^1\). Figure 1 shows that from July 2005 to November 2007, nominal house prices as measured by the NUS Singapore Residential Price Index (SRPI)\(^2\) appreciated 73% (26.5% CAGR). They subsequently declined 22% (-17.3% CAGR) and hit a post-GFC low in March 2009 before rebounding about 45% (20.4% CAGR) by March 2011. These movements are also broadly reflected by the URA Private Residential Price Index\(^3\). In the secondary public housing market, capital appreciation was equally impressive: the HDB Resale Price Index\(^4\) rose 50% between mid-2007 and end-2010 with only a 1% fall in Q1:2009.

![Figure 1: The HDB Resale Price Index (Q4:2001=100), the NUS SRPI (Dec 2001=100) and the URA Private Residential Price Index (Q4:2001=100)](image)

As with many other countries, investment and speculation in residential property have been implicated in the economic vicissitudes of Singapore during the recent GFC. This paper provides a perspective on various developments that have led to its recent dramatic house price trajectory. Section 2 provides some stylized facts about the housing sector and land supply in Singapore. Section 3 describes the housing demand-supply imbalances before the Asian Financial Crisis (AFC) as well as the interventions undertaken to stabilize the residential market, including the introduction of the first prudential measures in Singapore. Section 4 presents the various policies implemented before the GFC that provide the institutional context for understanding the run-up in the
Singapore housing sector before the Lehman collapse and its sharp recovery since early 2009. Section 5 examines the ongoing efforts by the government to moderate house price inflation. While it is still premature to assess how well the latest market cooling measures would work, the paper concludes with some thoughts on the policy levers available to the state and potential issues for the Singapore housing sector.

2 Stylized facts about the Singapore housing sector and land supply

Since attaining self-governance in 1959, Singapore policy makers have promoted owner-occupation and supported housing asset inflation, particularly in the public housing sector, to achieve various socio-economic and political goals. Through deliberate and pervasive state intervention in the housing sector as well as monopolistic control of both housing and land supply, a vertically segmented housing market has developed. It is characterized by the coexistence of a dominant public housing sector where dwellings are developed by public agencies and a small, growing private segment with relatively higher quality housing built by private firms. Except for a minor social housing component, 95 per cent of public housing in Singapore has been privatized through home ownership.

The demand for new public housing units, which are called Housing and Development Board (HDB) flats, is regulated using various eligibility rules such as citizenship status, non-ownership of private properties, a minimum household size of two persons and household income. Eligible households can purchase directly from the state a 99-year leasehold interest in a HDB flat, but not in the land or common areas. The prices of new leases are fixed by the government, having regard to the general state of the economy and affordability levels for the different flat types, at subsidized rates that reflect a discount to comparable secondary market prices. After fulfilling a stipulated minimum occupation period, the residual leasehold in the flat can be sold at open market prices in the HDB resale market to eligible buyers subject to rules that circumscribe ownership rights and that prevent excess profiteering.

With more than 82% of the resident population being housed in HDB flats at present, private housing developers play a limited role of supplying expensive dwellings. In the past, private housing was built on land of predominantly freehold or long-leasehold (999-year) tenure. From the mid-1960s to the early 1980s, the state embarked on a massive exercise of land reclamation and compulsory acquisition that raised its ownership of the total land mass in Singapore from around 40% in 1960 to more than 80% currently.

As the limited amount of privately-held land was insufficient to accommodate the demand for private housing, the state began to auction state-owned land on shorter leaseholds of 99 years via its Government Land Sales (GLS) program for these developments. Besides house price stabilization, the GLS sought to facilitate housing provision based on the long-run planning goals in the national development blueprint. As in Hong Kong, the GLS program has become an important revenue generator for the
state as well as the key source of private land supply. Unlike public housing leases however, buyers of private units built on these state-owned land parcels own an undivided share of the rights in the land as well.

Table 1 shows the structure of the Singapore housing sector. The smallest HDB flats that are rented to disadvantaged households represent the social housing component. Next are the smaller owner-occupied flats, the larger and newer public housing units, entry level private housing, medium level private housing and finally private luxury properties. Over time, the proportion of the total stock in private housing has been edging up and the planning intent is to have it rise to 25% in the long term.

<table>
<thead>
<tr>
<th>Table 1 The Stock of Residential Units</th>
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<tr>
<td>Number of Units as at end 1997 2004 2009</td>
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<tr>
<td>Public Sector Housing</td>
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<tr>
<td>1-room</td>
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<td>5-room</td>
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<tr>
<td>Executive</td>
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<tr>
<td>Studio Apartments</td>
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<td>HUDC Apartments</td>
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<tr>
<td>Total</td>
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<tr>
<td>Executive Condominiums</td>
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<tr>
<td>Private Residential Properties</td>
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<tr>
<td>Apartments</td>
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<tr>
<td>Condominiums</td>
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<tr>
<td>Terraced houses</td>
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<td>Semi-detached houses</td>
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<tr>
<td>Detached houses</td>
</tr>
<tr>
<td>Total</td>
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<td>Total Stock</td>
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Notes: The public sector stock refers to units under HDB management, including apartments built by the Housing and Urban Development Company (HUDC) that were transferred to the HDB for management in 1982.
*The percentages are computed for 2009 only.
Sources: Department of Statistics, Singapore, Singapore in Figures, 2010; and Urban Redevelopment Authority, REALIS
House buyers can withdraw their forced tax-exempt savings in their Central Provident Fund (CPF) accounts to pay the downpayment, stamp duties and debt service for housing. In addition, the state provides concessionary loans to qualifying households for the purchase of new and resale flats. Depending on prevailing economic conditions, the loan-to-value (LTV) ratio could reach 90% while the maximum loan repayment period was 32 years or when the borrower reached 65 years of age, whichever was earlier. To facilitate social mobility, flat owners could obtain more than one concessionary loan. For the most part, HDB concessionary loans were subsidized in that the mortgage contract rate, which was tied to the CPF savings rate, was below the commercial housing loan rate. Households that were ineligible for HDB concessionary loans and buyers of private housing could obtain market rate loans from private lenders for tenors of up to 40 years. Until prudential measures were first introduced in 1996, the LTV could be as large as 103%.

3 Housing market imbalances pre-Asian Financial Crisis

In the decade prior to the AFC, robust economic growth, rapid household formation and a conducive housing finance environment underpinned strong demand for both public and private housing. Sentiment was further heightened by a spectacular bull run in the Singapore stock market and from hot money flowing into the region. Over the same period, the government raised the income ceiling for new HDB flats four times and the withdrawal limit for CPF funds to buy private housing twice. From 1988, market-based instead of cost-based pricing of new HDB flats; from 1989, allowing HDB owners who had stayed in their units for at least five years to invest their excess CPF savings in private residential properties; in 1989 and 1991, the relaxation of eligibility criteria for owning HDB resale flats; and from 1993, extending larger loans for resale flat buyers with LTVs pegged to market values rather than historical prices.

This confluence of fundamental and policy demand drivers supported strong resale price inflation. As new HDB flats were subsidized but could be re-sold at higher open market prices, ownership of public housing became a source of tax-free “fortuitous” wealth (Lum, 1996). Through the resale mechanism, public housing served as a launching pad for upward social mobility and was seen as an investment good to build up equity. Figure 2 shows the HDB Resale Price Index in relation to an index of seasonally adjusted real GDP, the demand for new flats and HDB flat completions. Until 2001, new flats were allocated using a first-come first-served registration system where demand was measured by the number of applications in the new flat queue. As no downpayment was required, the number of new applications would likely overstate the demand for new HDB units. By end 1993, long queues had developed. Despite various attempts to pare down new flat demand, resale prices for HDB flats continued to outpace GDP growth and the queue for new flats lengthened.
Given the hierarchical structure of the Singapore housing market, excess demand for public housing spilled over into the lower-end private residential segment. However, land for private housing development was in short supply as the state had suspended its GLS program since 1982 and private land banks were increasingly becoming depleted. Concerned with the steep run-up in house prices, the government resumed selling state-owned sites in 1991.

Figure 3 shows that annual increments in the land supplied failed to cool down the overheated housing market. Instead, benchmark prices for state land continued to be set at each successive sale due to intense market competition and the government came under criticism for exacerbating the real estate price cycle. Despite the imposition in 1994 of a 5% booking fee for the option-to-purchase that was raised to 10% of the property price a year later, demand grew unabated as capital gains were untaxed and mortgage financing was readily available: some loans were geared at an LTV ratio of 103% to cover not just the purchase price of the property but the stamp duty as well. Between 1986 and 1996, the private residential market experienced a nominal price growth of 540% that far outpaced rental increases (see Figure 4) and the conventional wisdom was that prices could only continue to appreciate in a land-scarce booming city-state.
To dampen speculation, the government implemented a market cooling package in May 1996 that included for the first time, prudential and fiscal measures. For every sale of residential property within three years of purchase, the capital gains would be taxed as income and stamp duty would be levied on the vendor (in addition to the buyer). Financing was limited to 80% of the purchase price or valuation, whichever was lower, and the 20% downpayment must be cash-funded. Non-residents and non-Singapore companies were prohibited from Singapore-dollar housing loans while a permanent resident was limited to one such loan to purchase a property for owner-occupancy. The anti-speculation measures decreased both the transaction volume and prices in the private residential market while the prudential limits on housing loans moderated credit growth from 20% per annum before the curbs to 14% in 1997.

Investor confidence was further eroded with the onset of the AFC and funds flowed out from the region. As an oversupply situation began to build up in the private housing segment, the government attempted to resuscitate the market. It reduced the supply of state land for 1997, allowed developers who had bought state-owned sites to defer housing completion and exempted sellers of private dwellings from payment of stamp duty. Under a Deferred Payment Scheme (DPS) introduced in October 1997, developers were also allowed to offer purchasers of uncompleted properties the option to defer progress payments till completion. In practice, buyers need not prove that they had sufficient funds or were able to secure adequate loans from banks before they...
bought a property. As this presented adverse selection problems, default risk would be more concentrated in developers and in turn, their lenders, if prices were to collapse.

As part of the cooling measures in 1996, the government also reduced the flexibility of public housing owners to upgrade. The time-bar to reapply for another new flat was doubled\(^{13}\) and access to HDB concessionary loans was tightened to prevent abuse: a borrower was limited to two subsidized loans and was subject to credit assessment for the first time\(^{14}\). Unlike in the private housing market however, these measures had no appreciable impact on new HDB flat demand or resale prices in the short term.

As the AFC propagated through the region, Singapore faced the full brunt of its spillover effects in 1998. To avert a precipitous drop in private housing values from negative GDP growth and rising unemployment, the government instituted various off-budget measures and reversed many of its earlier policies including deferring stamp duty payments and suspending the GLS program.

4 The 2006-2007 housing boom and the GFC

The period leading up to the GFC can be characterized as one of financial liberalization amidst wider economic restructuring efforts to diversify and grow Singapore’s economic base. At the same time, the openness of its trade-oriented economy and capital markets meant that Singapore was particularly exposed to the vagaries of a very fluid global economy. In particular, loose American monetary policy was transmitted to Singapore through financial market linkages and an exchange rate that is managed in part against the US dollar. As a result, the housing sector became increasingly volatile and saw frequent policy interventions. The key ones are described below.

From end 1998 to mid-2000, private housing prices rebounded by 40% and prompted the state to resume its GLS program\(^{15}\). Over the same period, the resale flat market also recovered but to a lesser extent due to reductions in the quantum of CPF housing grants and a ruling that restricted the second HDB concessionary loan to only borrowers who upgraded to larger flats. However, the primary HDB market suffered the greatest impact from the AFC: demand fell sharply in 1998 as applicants dropped out of the new flat queue or opted to buy resale flats instead of waiting. New demand was also weak as the prices of new flats saw only marginal corrections compared to the price declines in the private and resale markets. Figure 2 shows that while the demand for new flats did increase in late 1999, it was substantially lower than pre-crisis demand levels and could not absorb the completions from a pipeline that had been ramped up in the mid-1990s. By end 1999, there was an overhang of about 31,000 unsold flats that not only curtailed new construction but would take another 7 years to whittle down.
In 2001, a global electronics slump and a sharp slowdown in the US economy following the dot.com bust precipitated a synchronized downturn across most countries. The Singapore housing sector was hit by one of the worst recessions on record. This triggered a revamp of the GLS program in June: in addition to a confirmed list of sites that have been earmarked for periodic sale based on medium term projections, standby parcels would be placed on a reserve list to cater to demand shocks. A reserve site would only be triggered for sale if the state received a bid that exceeded its (undisclosed) reserve price. With a reserve supply, the quantum of land released under the confirmed list was reduced. The state also changed the way new flats were sold from a first-come first-served queue system to a build-to-order (BTO) system under which building would commence only if most of the flats to be built on proposed sites had been booked with a downpayment. While the earlier registration system would overstate actual demand, the BTO system was likely to err on the conservative side as demand was measured by the number of committed sales. Following September 11, the government attempted to boost demand by lifting the capital gains tax on private housing and allowing foreigners access to Singapore dollar loans for buying private residential properties. In addition, the sale of sites under the confirmed list was suspended in October.
Between 2003 and mid-2005, the sale of confirmed land sites remained suspended and stamp duty rates were reduced by 30%. The state further relaxed its restrictions on both the subletting and resale of flats with the most notable being the reduction of the minimum occupation period for buyers who had not received any form of subsidy: they could resell their units after a year rather than 2.5 years. This would have important consequences later since shortening the holding period reinforced the attractiveness of public housing as a low-risk investment and even speculative vehicle, particularly for those without credit constraints.

In 2005, a resilient US lifted the world economy and Asian bourses were boosted by foreign capital flows into emerging markets in search of higher yields. This and an announcement in April that two mega integrated resorts would be built in Singapore renewed investor interest in properties. However, private housing prices were still declining, albeit slowly, and the downtrend was arrested only when a package of measures to inflate the market was announced in July that included:

- raising the maximum LTV ratio of housing loans from 80% to 90% and reducing the cash downpayment from 10% to 5%;
- lowering the minimum lease period of properties that could be purchased with CPF savings from 60 to 30 years;
- allowing non-related CPF members to use their CPF savings to jointly purchase private housing units;
- relaxing restrictions on foreign ownership of units in low-rise apartments; and
- reinstating private residential properties as allowable investments under the state’s Global Investor Program for a foreigner seeking to qualify for permanent residence.

Based on the SRPI, private house prices bottomed in July and appreciated 4% by year end. With strong growth of the global economy in 2006, Singapore experienced robust economic expansion and the highest rate of private house price appreciation of 11% in Asia. In late 2006, the government withdrew an earlier concession to defer payment of stamp duty and announced the resumption of confirmed land sales for 2007, six years after it had been suspended.

By early 2007, Asian economies with strong fiscal positions were seeing large speculative capital inflows. This stemmed from 3 factors: bullish sentiment on the back of sustained growth and low inflation expectations; abundant liquidity in the global financial system; and increasing concerns about the sustainability of US economic growth given its cooling housing market. The capital inflows kept domestic interest rates and risk premia low and encouraged more risk-taking in property markets. Record job creation and the rapid influx of foreigners as a direct consequence of Singapore’s liberalized immigration policies also drove demand. Particularly after 2006, the pace of immigration picked up as the government made it easier for foreign workers to gain PR status and for permanent residents to become citizens. Table 2 shows the substantial growth in the non-resident population from 2006 to 2008. Non-citizens accounted for 25% of the total residential sales in 2007, the highest level in 13 years. Finally, urban development policies and the sale of state-land for iconic projects aimed at branding Singapore as a culturally vibrant global city have also boosted the housing market.
Table 2  Singapore Population Size and Growth by Residential Status

<table>
<thead>
<tr>
<th>Year</th>
<th>Number ('000)</th>
<th>Average Annual Growth (%)</th>
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<tbody>
<tr>
<td></td>
<td>Total Singapore Residents</td>
<td>Non-Residents</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Citizens</td>
</tr>
<tr>
<td>1990</td>
<td>3,047.1</td>
<td>2,735.9</td>
</tr>
<tr>
<td>2000</td>
<td>4,027.9</td>
<td>3,273.4</td>
</tr>
<tr>
<td>2005</td>
<td>4,265.8</td>
<td>3,467.8</td>
</tr>
<tr>
<td>2006</td>
<td>4,401.4</td>
<td>3,525.9</td>
</tr>
<tr>
<td>2007</td>
<td>4,588.6</td>
<td>3,583.1</td>
</tr>
<tr>
<td>2008</td>
<td>4,839.4</td>
<td>3,642.7</td>
</tr>
<tr>
<td>2009</td>
<td>4,987.6</td>
<td>3,733.9</td>
</tr>
<tr>
<td>2010</td>
<td>5,076.7</td>
<td>3,771.7</td>
</tr>
</tbody>
</table>

Notes: For 1990 and 2000, growth rate refers to the annualized change over the last ten years. “Total” refers to the total population comprising Singapore residents and non-residents. Resident population comprises Singapore citizens and permanent residents. Non-resident population comprises foreigners who were working, studying or living in Singapore but not granted permanent residence, excluding tourists and short-term visitors.

Source: Singapore Department of Statistics, Population Trends 2010

In the 12 months to end November 2007, private house prices increased a massive 53% according to the SRPI. Hence, it was somewhat surprising that only two measures were implemented to keep private house prices in check and that these came in October when there were already signs of an incipient economic slowdown. The first was the withdrawal of the deferred payment scheme, which immediately depressed builder stocks but boosted bank equities. The second was the enactment of more stringent rules governing collective or en bloc sales of housing developments owned by multiple parties. Escalating house prices, particularly of high-end properties, had created strong demand for prime land. This triggered a wave of collective sales in the first half of 2007 of older, centrally located residential projects for redevelopment. En bloc sales not only set increasingly higher benchmark prices for land but, by removing existing stock from the market amidst a fast growing immigrant demographic, created excess demand for accommodation. As a result, rents increased by 41% in 2007 and led many to buy rather than lease. However, the new rules to moderate en bloc sales activity had limited efficacy as they had been generally anticipated and an unexpected increase in betterment tax earlier in July had already reduced expected profits.

The short supply situation was exacerbated by the suspension of sales of confirmed state-owned land since 2001. When the program was resumed in 2007, the key sites released were intended to advance the prevailing planning intent of developing new non-CBD commercial regions. Unlike the prime land sold through collective sales, most of the state-owned residential sites offered for sale were not centrally located and were placed on the reserve list. Triggering a reserve site for auction was onerous as a developer needed to submit a minimum bid above the state’s reservation price and if
accepted, place a deposit of 5% of the bid amount. This focused attention and intense competition on a few select plots that set record prices for suburban land, which in turn fuelled expectations of higher future selling prices. Although the amount of residential land was increased in October, the reception was dampened by the removal of the DPS and increased uncertainty about profit margins given escalating building costs amidst a global commodity boom. Further, there were resource constraints due to the synchronized construction of various landmark projects that had been deferred to the mid-2000s when economic recovery was expected to be on a firmer footing.

The public resale market had been languishing for several years but began to pick up in Q2:2007. Indeed, a key impetus for the capital appreciation came from the state itself when it substantially relaxed its flat subletting policy in March. By reducing the minimum occupation period before a flat could be rented out to 5 years (3 years) for subsidized (non-subsidized) units and by delinking the eligibility to rent from the loan status, the government directly fuelled investment demand for its flats. The excess demand from expatriates and middle income families who had been priced out of the private market filtered down to the HDB sector in the second half of 2007. Given the tight housing market conditions then, HDB flat rentals rose (by as much as 21.2% for five-room flats in the third quarter) but their lower prices meant higher rental yields compared to those for private housing, making HDB flats an attractive play. As a result of the high resale prices and a public housing supply program that had been substantially scaled down, much of the remaining unsold public housing stock was cleared in 2007. By year end, resale prices had risen 17% while applications for new flats had increased about 50%. Increasing concerns about housing affordability led the government to announce that more new HDB flats with a larger proportion of smaller units would be released for sale over the next six months.

Just as the government stepped up its GLS and HDB building program for 2008, the US subprime mortgage crisis precipitated a credit squeeze that marked the onset of the GFC. Given its strong external orientation, the impact of the crisis on Singapore was severe and its economy contracted 10.1% during the year to Q1:2009. Over the same period, no state-land sales were concluded and the private housing market fell 20% to hit a post-GFC low in March 2009. As mitigation, the state suspended the confirmed list for its 2009 GLS program and allowed various concessions for residential developers to phase the construction and sale of their private sector projects.

In contrast, the public housing sector remained firm with demand for new-build units overwhelming the limited supply. According to brokerage reports, market rents of HDB flats continued to rise while the official HDB Resale Price Index gained 10% in the year to end March 2009, buoyed by relatively stronger demand for larger units. The main concern among policy-makers then was on providing assistance to targeted groups affected by the recession. The measures include implementing a lease buyback scheme for low-income elderly lessees that would pay them an annuity stream, providing rental rebates and enhancing grants that now reached the middle income group and that boosted demand for the smaller flats.
Following concerted fiscal, monetary and other stimulus measures by governments across the world, the GFC began to ease in early 2009. Given the sound macroeconomic and financial fundamentals of Asian economies, the region was expected to outperform the global economy and attracted capital flight to quality. Singapore was a beneficiary of these developments, having built up its wealth management capabilities in line with its ambition to be a financial hub. This, coupled with an earlier move by the Monetary Authority of Singapore (MAS) that raised the pace of Singapore dollar appreciation to counter imported inflation, helped attract foreign funds to flow back into the local market and kept interest rates and borrowing costs low. Indeed, the excess liquidity helped to fuel an even stronger bull run in the Singapore property market post-GFC.

Rebounds of the Singapore private housing sector had always lagged wider economic recovery in the past. However, the prospect of a V-shaped economic upturn combined with ample liquidity and expectations of continued low interest rates set off a sharp increase in private house prices in April 2009 ahead of positive GDP growth. By then, escalating resale flat prices had narrowed the price gap between the largest HDB units and entry-level private housing. This, coupled with developer discounts, boosted transaction volumes of private units that were perceived to be reasonably priced. The sector also benefitted from credit tightening measures in China and Hong Kong that diverted some buying attention to Singapore. Unlike the pre-GFC boom when luxury units dominated transactions, the majority of the new private sector units sold comprised either small or mid-market homes for middle income buyers, many of whom capitalized on high resale flat prices to upgrade. Such entry-level private housing are often built on state land parcels in suburban areas but the state elected to suspend the confirmed list of the GLS program for the rest of the year as there were ample reserve sites. However, only two reserve sites had been triggered for sale in mid-2009 and indicated that either the reserve list system was not well primed to respond to demand shocks or that reservation prices may have been too high relative to bids.

Only after private house prices had surged 19% from March to August 2009 did the government intervene to cool the housing market in mid-September. It announced that the confirmed list would be reinstated for the 2010 GLS program, a move that did not immediately change the status quo in terms of land supply. Further, the MAS banned financial institutions from offering interest-only housing loans to buyers of uncompleted private housing units. As the loans either entirely eliminated or substantially lowered regular installment payments for private housing buyers in the first few years before the properties were completed, they could encourage speculation. Their removal was intended to encourage prospective buyers to consider carefully their long term affordability.

Despite these measures, the speculative momentum in the property market continued to escalate and necessitated a new round of measures in February 2010. First, sellers of residential properties or land bought on or after 20 February and sold within one year
from the date of purchase were required to pay stamp duty. Second, the MAS lowered the LTV limit for housing loans from 90% to 80% but HDB concessionary loans were exempted to promote home ownership amongst first-time flat buyers and upgraders. Third, a record quantum of state land was made available for sale in the GLS program for the first half of 2010 although the bulk was in the reserve list. To facilitate triggering reserve sites for sale, the government reduced the deposit payable by a successful applicant. It would also auction a site if it attracted sufficient market interest which meant that at least two bids were received that were within the ballpark of the state’s reservation price. By end May, only four of 34 reserve sites had been sold and this prompted the government to increase the supply of land for the rest of the year and to raise the proportion of land offered under its confirmed list.

In March, new measures to curb speculation in the HDB resale market were also announced. Most notable was the reversal of a long-standing policy of granting a second HDB concessionary loan to those who bought a larger unit only: due to concerns that this had encouraged leveraged overconsumption of housing, a second subsidized loan would be extended to all eligible buyers regardless of flat size but a requirement to use the sale proceeds from the first flat translated into lower loan quantums. To reduce the incidence of flipping resale flats, buyers must now occupy their flats for at least 3 years rather than a year (for unsubsidized units) or 2.5 years (for unsubsidized units bought with a concessionary loan).

While Singapore had enjoyed strong economic growth in the first half of 2010, growth was expected to moderate in the second half of the year. However, property price inflation continued and it became clear that the market cooling measures in February and March had failed again: private house prices rose 6% while HDB resale flat prices grew 4% - its eighth straight quarter of growth – to achieve record levels in Q2:2010. To quell increasing disquiet about housing affordability, a slew of new policies were announced a day after the Prime Minister assured Singaporeans in a National Day Rally speech that the government would prevent housing prices from rising beyond their reach. The measures introduced on 30 August include:

- extending the holding period for the imposition of stamp duty on sellers of residential land and houses from a year to three years;25
- raising the minimum cash payment from 5% to 10% of the lower of property value or property price and lowering the LTV cap for housing loans from 80% to 70% for buyers with at least one outstanding housing loan at the time of the new housing purchase;
- barring HDB flat owners from owning both private property and an HDB flat at the same time during the minimum occupation period (MOP); and
- increasing the MOP for non-subsidized flats from 3 to 5 years.

The immediate impact of the policies was uncertainty about the ambit of the measures pertaining to ownership of public and private housing. Apparently, private residential property owners who buy resale HDB flats must now dispose their house(s), in or outside Singapore, within 6 months of purchase of the HDB flat - a rule that had not existed before but that would apply for locals and foreigners alike. This effectively bans
private property owners from buying HDB resale flats for investment purposes. Those who had bought a non-subsidized HDB flat were required to sell off their private property, wherever it was located, within six months from 30 August. Similarly, buyers of non-subsidized HDB flats would not be allowed to invest in any private property before the MOP is up although they were previously allowed to do so. The new rules were meant to 'ensure equitable treatment' of all flat owners during the stipulated occupancy period although the rationale for prohibiting ownership of overseas properties, even when the houses were bequests, was inscrutable to many.

Continued strength in the housing market in late 2010 necessitated a fourth installment of prudential and fiscal measures on 13 January 2011 that would:
• increase the holding period for the imposition of stamp duty on sellers from three years to four years;
• raise the stamp duty rates to 16%, 12%, 8% and 4% for residential properties bought on or after 14 January 2011 and sold within the first, second, third and fourth year of purchase respectively;
• lower the LTV to 50% on housing loans for property purchasers who are not individuals; and
• lower the LTV limit on housing loans from 70% to 60% for property purchasers who are individuals with one or more outstanding housing loans at the time of the new housing purchase.

Figure 5  Monthly changes in the SRPI, transaction volume and policy dates of market cooling measures
Figure 5 above shows the percentage change in private house price as measured by the SRPI, total transaction volume of non-landed residential units and the policy dates of the four market cooling interventions. Other than the February 2010 package, the rate of house price appreciation and the sales volume have declined following each policy date. However, these declines have been temporary and suggest that other drivers of house price and transaction activity may have overwhelmed the prudential measures.

Besides dampening speculative and investment demand for housing, the government has promised more help for first-time home buyers and significantly raised the supply of new HDB flats and state land for premium public housing units. Indeed, record private housing and resale flat prices have obliged the state to continue affordable housing provision and even expand housing concessions in the interest of securing continued political support. However, there is a practical limit to how much the government can afford to give producer and demand subsidies, particularly when the capital subsidies that were originally intended to benefit select groups have been transferred (eventually) to private housing and other assets. In order to comply with various affordability benchmarks and yet keep subsidy levels manageable, the state may build marginally smaller units in future. This would mirror the recent trend in the private housing market where developers have been selling shoebox dwellings of less than 600 square feet to ensure that the absolute price remains affordable to buyers.

6 Concluding remarks

The government’s objective is to ensure a stable and sustainable property market where prices move in line with economic fundamentals. How well it can achieve this would depend on its ability to conduct timely surveillance and the effectiveness of its policy levers. Curtailing demand has proven to be difficult given the openness of the Singapore economy and property market to foreign capital inflows. Further quantitative easing by the Fed could potentially be transmitted to Singapore directly through property funds and via a cheaper real cost of finance that would stimulate more property buying. In this regard, policy makers have expressed confidence that the Singapore financial system is capable of handling the capital flows. The government has also perceptibly tightened its immigration policies but although total population growth has slowed, residential rents have not materially softened due to construction bottlenecks from projects to pump-prime the economy when the crisis hit.

On the supply side, the state has expanded public housing production but it may need to re-examine the effectiveness of the BTO system at measuring demand. Land supply has also been increased but the GLS program should be re-evaluated. Although it is a market-driven instrument for housing market stabilization, policymakers enjoy unfettered latitude in determining the quantum and location of land to be sold and the timing of the sale. Each year, the land sales program is planned based on national development imperatives and an assessment of the mid- to long-term demand for the various types of properties. This being the case, the assumptions about market conditions that prevailed
when the plan was initially conceived and which justified its provision may have materially changed by the time the land was actually released. Given the lag in actual housing delivery, the GLS may need to be re-calibrated to improve its responsiveness to demand shocks.

The state also decides on the selling price of each parcel but without a transparent land sales rule, discretionary land supply may be problematic in a manner raised in Kydland and Prescott (1977). Ostensibly, the state favors gradual house price appreciation and will combat any surprise inflation by releasing more land for housing. However, land sales provide a substantial source of revenue and in the absence of a rule, there may be a temptation to generate a little more price inflation to boost public coffers. In setting bid prices for land, developers may build in inflationary expectations, as would other market participants in their decisions. In the past, the timing of public land sales often coincided with boom episodes in the property market when record prices for residential land have been set by keen market contests for state land releases. As private land banks in Singapore become more depleted and housing supply becomes more dependent on state-owned land, policy makers must guard against supply-side rationing in the land market that could amplify price pressures on the housing sector.

The demand-supply imbalances in the housing sector have also been partly due to the uncoordinated policies of different governmental agencies pursuing their separate agenda. It is clear that the rapid expansion of Singapore’s population base beyond the absorption capability of its housing market (and other infrastructure) has contributed to the appreciation of housing rentals and capital values. At the same time, the synchronized construction of mega-projects imposed cost pressures and construction bottlenecks that limit supply elasticity. There is still a lack of consumer protection for house buyers and home loan borrowers, particularly for pre-completion sales where units are sold off-plan and where underwriting standards may be compromised. Finally, the liberalization of public housing resale and sublease rules through shortened occupation periods and the perception that the state would ensure continual enhancement of HDB flat values promoted a speculative mindset towards public housing that is unsustainable.

Housing has appreciated faster than GDP expansion since the GFC with house price levels as at end March 2011 exceeding their historical maxima in the second quarter of 1996 as well as their pre-GFC peaks. Such rapid price growth has significantly eroded affordability levels. Despite four sets of cooling measures, the Singapore housing market remains buoyant, supported in part by record-low housing finance costs. In a country where the homeownership rate of resident households is close to 89% and in which housing purchases are often leveraged, many households are potentially vulnerable to house price corrections and/or increases in the cost of debt. Negotiating these risks would require continued vigilance from as well as more effective policy coordination among state agencies.
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2 The Singapore Residential Price Index is a quality-controlled transaction price index produced by the National University of Singapore (NUS) that tracks price movements in the Singapore private residential market on a monthly basis using a basket-based approach. For details, see http://www.ires.nus.edu.sg/srpi.aspx.
3 The URA Private Residential Price Index is a median transactions price index that tracks the overall price movement of the private residential market using Q4:1998 as the base period.
4 The HDB Resale Price Index is a median transactions price index that tracks the overall price movement of the secondary or resale HDB market from Q1:1990 with Q4:1998 as the base period.
5 As a matter of government policy, 3-room flats are priced such that at least 90% of new Singaporean households would be able to pay their HDB mortgage repayments using only their CPF contributions without having to use cash. Four-room flats would be similarly priced to be affordable to 70% of Singaporean households.
6 A flat is named according to the number of rooms it has. The sitting-dining room and bedrooms are counted but not the kitchen and washrooms. The executive apartment has 5 rooms but is larger than the 5-room flat.
7 The CPF is essentially a national state-managed social security savings scheme set up in 1955 to ensure the financial security of all workers. It requires mandatory contributions from both the employer and employee of a
defined percentage of the employee’s monthly contractual salary into his/her personal account with the Fund. For details, see [http://www.cpf.gov.sg](http://www.cpf.gov.sg).

8 In 1988, CPF members could withdraw up to 100% of the lower of the purchase price or valuation of the dwelling instead of 80% previously. The withdrawal amount was raised to cover mortgage interest payments in 1993. 100%, 66% and 33% of the capital gains were taxable if a property was sold within 1 year, 2 years and 3 years of its purchase respectively.

9 This was payable on signing the Sales & Purchase Agreement instead of at completion.

10 In November 1997, the stipulated completion time for projects where units had not been launched for sale was extended to 8 years (up from 30 months imposed in May 1996) subject to a premium of 5% of the land price payable per year of extension.

11 Under a normal progress payment scheme, buyers normally secure a housing loan early as they are billed by the developer in stages, according to the progress of the project’s construction. With the DPS, buyers paid only 10%, or more typically 20%, of the house price with the next payment due on completion, a few years down the road. The time bar was increased from 5 to 10 years to shorten the HDB queue. The resale levy was simplified to only the graded resale levy scheme with buyers of new flats and ECs having to pay higher levies.

12 The credit assessment imposed a 40% ceiling on the debt service to income ratio. In September 1997, HDB owners could book a private unit only after a 5-year occupation period in their flats.

13 In June 2000, land was released for 9000 units of private housing.

14 Under the Reserve List system, the government would only release a site for sale if an interested party submits an application to release the site with an offer of a minimum purchase price that is acceptable to the state. The successful applicant must undertake to subsequently bid for the land in the tender at or above the minimum price offered in the application.

15 Under this system, buyers ballot for the chance to select a flat and pay a downpayment to secure a booking. The HDB proceeds to build when the majority of flats are booked.

16 Since October 2003, flat owners could sublet their whole flat after a 15-year MOP or after 10 years if they had paid off their home loan. In March 2005, these time bars were reduced to 10 years and 5 years respectively. The MOP before buying another subsidized flat was decreased from 10 to 5 years.

17 Foreigners could buy any non-landed property but all other properties such as vacant residential land, landed homes and whole buildings or condominiums are restricted and require state approval.

18 In an en bloc sale, owners of fragmented interests in land would amalgamate their combined interests in either strata-titled units or adjoining single-family units for sale and eventual redevelopment (Lum et al., 2000).

19 Construction costs increased by 20% to 30% in Q4:2007 (year-on-year) and by early 2008, had overtaken the land cost for some 99-year leasehold sites. To ease inflationary pressure on the construction sector, the government shelved $54.7 billion of public sector projects until 2010 and beyond.

20 This was a major change from the HDB’s prevailing policy and was intended to help home owners monetize their homes as well as to enlarge the rental market.

21 The measures in the 2009 Budget included: allowing developers who bought GLS sites and foreign developers who owned private residential land a one-year extension to commence development; allowing developers to resell the land or dispose of their interest in it before 21 Jan 2010; and giving foreign developers 2 more years to dispose of the units or up to 4 years to rent out unsold apartments. (In the past, they were required to sell all the units in their project within two years of completion and were not allowed to rent out unsold units.)


23 This applies to any transfer or disposal of interest (including sale and gifts) on or after 30 August 2010 within three years of purchase. Specifically, the full stamp duty rate (1% for the first $180,000 of the consideration, 2% for the next $180,000, and 3% for the balance) will be levied if the properties are sold within the first year of purchase. This goes down to 2/3 (1/3) of the full rate for a sale within the second (third) year of purchase.

24 The HDB sets new flat price at between 5 to 6 times household income. The proportion of income and the CPF savings utilized to pay for both the downpayment and mortgage installments should be around 25% to 30% of household income. A third indicator if affordability is the application pattern.