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# The Singapore Model of Housing and the Welfare State

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Chapter 2

# The Singapore Model of Housing and the Welfare State

**Sock-Yong Phang**

## Introduction

While Singapore is not generally regarded as a welfare state, the provision of housing welfare on a large scale has been a defining feature of its welfare system. The extensive housing system has played a useful role in raising savings and homeownership rates as well as contributing to sustained economic growth in general and development of the housing sector in particular. Few would dispute the description of Singapore's housing policies as `phenomenally successful' (Ramesh, 2003). Singapore's economic growth record in the past four decades has brought it from third world to first world status (Lee, 2000), with homeownership widespread at more than 90 percent for the resident population

Singapore is a densely populated high-income city-state with 4.2 million people and a land area of only 697 square kilometers. Of the 4.2 million people in 2004, 3.5 million were residents (citizens and permanent residents) and 0.7 million were foreigners.[1] Its Gross Domestic Product in 2004 was S$181 billion or US$109 billion.[2] The World Development Report 2004 estimated Singapore's 2002 GNI per capita at US$29,610 (using purchasing power parity GNI and exchange rates), ranking it 19th highest in its PPP GNI per capita list.

A British colony from 1819, Singapore attained self-government in 1959, joined the Federation of Malaysia in 1963 and became an independent city-state in 1965. The People's Action Party that was elected in 1959 has been returned to power at every election since. During the politically traumatic 1960s, the government concentrated on issues of employment creation and housing provision, adopting a strategy of export oriented growth through attracting foreign investment. Today, there are more than 5,000 foreign companies located in Singapore and many multinational corporations have established regional operating and manufacturing bases on the island.

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1 In the 1990s, the growth rate for foreigners was 9.3% compared to 1.8% for local residents. Department of Statistics, *Census of Population 2000.*

2 Ministry of Trade and Industry, *Economic Survey of Singapore 2004.* The nominal exchange rate in February 2005 approximates S$1.65 to US$1.

Table 2.1 shows the Gross Domestic Product for 1970, 1980, 1990 and 2000 -- real GDP more than doubled in each decade. Singapore's economic growth record and ability to attract foreign investments stem from effective public sector planning and management of its economy and society. A network of competent and reliable institutions and government linked companies provides rich public sector capacity. The Singapore government plays an extensive and multi-dimensional developmental role in the economy. The state owns four-fifths of the land and determines the deployment of substantial domestic savings. The scope of public enterprises in Singapore encompasses manufacturing, trading, financial, transport and other services. This reliance on the public sector as the catalyst for change, with private initiative to fill the gaps, is most visible in the areas of urban housing and infrastructure development.

Despite the very visible presence of the state and government-linked companies, provision of welfare as is generally understood in Europe has not been a feature of the economic system. For much of its history since independence, Singapore enjoyed high economic growth rates accompanied by full employment, with a tight labour market necessitating the importation of foreign workers (see Figure 2.1). In the period after independence and prior to the 1997 Asian Financial Crisis, 1985 stood out as the only year when the city-state experienced negative GDP growth; pre-Asian financial crisis unemployment rates were generally frictional in nature and below four percent. Economic growth rates since 1997 has however been more volatile with growing concern over structural unemployment (above five percent for 2002 to 2004) associated with the restructuring of the economy.

Given the long record of full employment (until recently), the absence of unemployment safety nets is not surprising. Government policy has focused instead on managing income inequality through spreading the benefits of growth through ad-hoc measures that would not reduce incentives to work and save. The government's budget has been described as bias towards large and persistent structural surpluses (Asher, 2004). Special transfers announced in the Minister for Finance's annual budget speech since 1994 have included utility and rental rebates, top-ups to Central Provident Fund accounts, New Singapore Shares, Economic Restructuring Shares, as well as grants, scholarships and bursaries made through an Edusave Scheme to the accounts of each student. Needy Singaporeans including those who are unemployed, are helped through a slew of financial assistance schemes offered by a range of government and non-government organizations, aimed at providing short-term relief and retraining without creating a dependency culture (Yap, 2002).

**Table 2.1 Key indicators of Singapore's housing sector**

| | 1970 | 1980 | 1990 | 2000 |
|---|---|---|---|---|
| **Total Population (millions)** | 2.075 | 2.414 | 3.047 | 4.017 |
| Resident population (millions) | 2.014 | 2.282 | 2.736 | 3.263 |
| Non-resident population (000s) | 61 | 132 | 311 | 755 |
| Resident homeownership rate | 29% | 59% | 88% | 92% |
| Resident population in HDB dwellings | 36% | 73% | 87% | 86% |
| **Macroeconomic data** | | | | |
| GDP (S$m, 1995 market prices) | $16,207 | $37,959 | $77,299 | $162,162 |
| GNP per capita (S$ current) | $2,825 | $9,941 | $22,645 | $42,212 |
| Unemployment rate | 6% | 3.5% | 1.4% | 3.5% |
| Exchange rate (S$/ US$) | S$3.09 | S$2.14 | S$1.81 | S$1.73 |
| Gross National Saving/GNP | 19.3% | 34.2% | 43.9% | 51.5% |
| Gross Capital Formation/GNP | 32.2% | 42.2% | 31.6% | 27.6% |
| Residential Construction/GNP | 6.2% | 5.9% | 5.2% | 6.18% |
| **Housing Loans** | | | | |
| Total Housing Loans (S$m) | $215 | $2,421 | $19,151 | $101,384 |
| Housing Loans/GDP | 4% | 10% | 29% | 64% |
| HDB Mortgage Loans/Housing Loans | 58% | 60% | 54% | 59% |
| Banks' housing loans*/Housing Loans | 42% | 40% | 46% | 41% |
| **Central Provident Fund** | | | | |
| Balance Due Members (S$m current) | $777 | $9,551 | $40,646 | $90,298 |
| Employee Contribution Rate | 8.0% | 18.0% | 23.0% | 20.0% |
| Employer Contribution Rate | 8.0% | 20.5% | 16.5% | 12.0% |
| **Prices** | | | | |
| CPI (Nov 97–Oct 98=100) | 36.5 | 68.2 | 85.2 | 101.1 |
| Private House Price Index (1998=100) | - | 27.3 | 57.7 | 130.3 |
| HDB Resale Price Index (1998=100) | - | - | 34.1 | 104.9 |
| Price of new 4-room HDB flat in new town location (≈ 100 sq m in S$) | $12,500 | $24,200 | $76,100 | $98,000 |
| **Housing Price Affordability** (4-rm HDB flat price to GNP per capita) | 4.42 | 2.43 | 3.36 | 2.32 |
| **Housing Stock (HS)** | 305,833 | 467,142 | 690,561 | 1,039,677 |
| Public sector built | 120,138 | 337,198 | 574,443 | 846,649 |
| Private sector built | 185,695 | 129,944 | 116,118 | 193,028 |
| 4-room and larger HDB flats/HS (%) | 1% | 13% | 40% | 51% |
| **Persons per dwelling unit** | 6.7 | 5.1 | 4.4 | 4.2 |

Note: * includes Finance Houses & Credit POSB
Sources: Various Singapore government publications and websites.

The government relies almost exclusively on the Central Provident Fund (CPF) scheme, a mandatory savings scheme to finance a range of different welfare services: housing, healthcare, insurance, tertiary education and retirement (Asher, 2004). On the supply side, the government is also directly involved in the provision of subsidized education and healthcare; the Housing and Development Board (HDB) has been the largest housing developer for the past three decades. That more than 85 percent of the resident population lives in HDB housing has been described by Pugh (1985) as a `symbol of pride, of nationhood, of the political achievement of the People's Action Party, and of government benevolence towards the public interest'.

Prime Minister Lee Hsien Loong's 2005 budget speech provides a precise description of the government's approach toward welfare:

> We must not breed a culture of entitlement, encouraging Singaporeans to seek Government support as a matter of right, whether or not they need it. .. . The better-off must help the poor and the disadvantaged – the sick, the elderly, the disabled and the unemployed. In many developed countries, the state takes on this responsibility, but his is invariably financed by high taxes and levies on businesses and those who are working. Our social compact is rather different. It is based on personal responsibility, with the family and community playing key roles in supporting peopled through difficulties. The state will provide a safety net, but it should be a last resort, not a first resort, and should focus on the minority who need help the most. We thus avoid state welfare, which will erode our incentive to achieve and sap our will to strive. Our social compact enables us to keep taxes low, and lets people keep the fruits of their labour and businesses the rewards of their enterprise. And when we do well and have budget surpluses, we can distribute some of them back to Singaporean (*The Straits Times*, 19 February 2005).

The 2005 budget reduced the top marginal personal income tax rate from 22 to 20 percent, introduced incentives to develop Singapore further as a financial, logistics and tourism centre, and provided resources for worker re-training and skills upgrading through a S$500 million transfer to the Lifelong Learning Fund. Targeted special transfers to individuals included utility rebates that varied from S$60 (5-room HDB flats) to S$200 (1- and 2-room HDB flats); Medisave account top-ups ranging from S$50 (ages 21-39) to S$350 (60 years and above); and CPF top-ups of S$100 for those aged 50 and above. Special transfers to funds that provide the social safety nets for the poor included S$100 million for the Medifund and S$250 million for the recently announced Com-Care Fund to support needy Singaporeans, including children from disadvantaged backgrounds.

The next section describes the phases of housing policy in the post-war period. This is followed by a brief description of housing tenure forms in Singapore. We then evaluate the socio-economic benefits from such comprehensive attention to housing sector development. Inevitably, the long term bias of directing credit and resources to the housing sector has resulted in other economic problems which are also analyzed. We conclude with a discussion of policy lessons from Singapore approach to the welfare state, and evaluate the transferability of the Singapore experience.

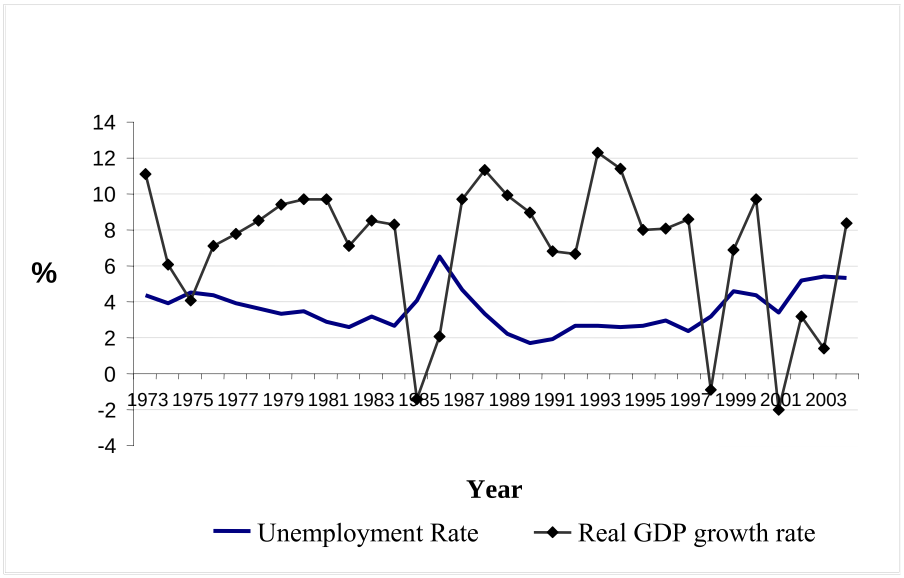


**Figure 2.1 Real GDP growth and unemployment rate, 1973-2004**

**Phases of housing policy in the post-war period**

Housing policy in Singapore has gone through a number of distinct phases as summarized in Table 2.2.

*Phase I: Building shortages*

The immediate postwar period in Singapore was characterized by chronic housing shortages. In 1947, the British colonial government implemented rent control to protect tenants – premises built on or after 7 September 1947 had rents pegged to rates which existed on 1 August 1939. The Singapore Improvement Trust (SIT), the then town planning authority, stepped up public housing construction, building an estimated 20,907 units between 1947 and 1959. At the time of self-government in 1959, deplorable housing conditions and housing shortages exacerbated by rapid post-war population growth prevailed. The then newly elected People's Action Party government made housing a priority area of policy concern. Housing institutions and policies were developed systematically and comprehensively to advance social development and economic growth. There exists a vast literature on various aspects of the housing sector in Singapore (see for example books by Castells et al. (1990) for comparison with Hong Kong; Chua (1997); Low and Aw (1997); Phang (1992); Wong and Yeh (1985); and the sample of articles referenced here). Here we provide a brief overview of the institutions and policies that have shaped the housing sector: the Housing and Development Board and the Central Provident Fund.

**Table 2.2 Phases of housing policy in the post-war period**

| Year | Housing developments | | Phase |
|---|---|---|---|
| | What happened? | Why? | |
| 1947 | Rent control at 1939 rents | To protect tenants at a time of severe housing shortages | I. Developing housing policies and institutions to cope with building shortages |
| 1955 | Central Provident Fund (CPF) | To provide social security for the working population | |
| 1959 | Self governing colony | | |
| 1960 | Housing & Development Board (HDB) | To provide housing for all those who needed them | |
| 1963 | Merger with Malaysia | | |
| 1964 | HDB's Home Ownership Scheme (HOS) | To enable the lower income group to own their own homes | |
| 1965 | Independence: Separation from Malaysia | | |
| 1966 | Land Acquisition Act | To facilitate land acquisition by the state | |
| 1968 | CPF Approved Housing Scheme | To allow CPF savings to be used to support the HDB's HOS | |
| 1971 | Resale market for HOS | To allow owners of HOS flats to exit the sector | |
| 1979 | Easing of restrictions on resale of HOS flats | To facilitate upgrading to a second new HDB flat as well as residential mobility within the sector | II. Deregulation as shortages eased |
| 1981 | CPF Approved Residential Properties Scheme | To allow CPF savings to be used for private housing mortgage payments | |
| 1985 | First economic recession since independence | | |
| 1988 | Phasing out of rent control | To facilitate private sector participation in the conservation of historical areas. | |
| 1989 | Citizenship requirement and income ceilings for resale flats lifted | To allow permanent residents access to resale HOS flats. To facilitate residential mobility | |
| 1993 | More housing loans for HDB resale flats | To bring HDB housing loans policy for resale flats closer to market practices | III. Financial liberalization and housing price inflation |
| 1994 | CPF housing grants | To facilitate demand side housing subsidies for resale HOS flats | |
| 1995 | Executive Condominiums | To provide private housing at affordable prices to the upper-middle income group | |
| 1996 | Anti-speculation measures | To curb speculative activities and rapid rise in housing prices | |
| 1997 | Asian financial crisis | | IV. Excess housing stock |
| 2002 | Caps on CPF withdrawals for housing | To reduce risk of over concentration of household assets in housing | |
| 2003 | HDB downsizes | In view of fall in demand for new flats and 17500 unsold HDB flats in 2002 | |

*The Housing and Development Board* The Housing and Development Board (HDB) was set up as a statutory board in 1960, replacing the SIT, to provide `decent homes equipped with modern amenities for all those who needed them'. A target of 110,000 dwelling units was set for 1960 to 1970. From 1964, the HDB began offering housing units for sale at below market prices, on 99-year leasehold basis, under its Home Ownership Scheme (HOS). The HDB was able to price its units below market prices mainly because HDB flats are built on state owned land, much of which had been compulsorily acquired from private landowners at below market prices (Phang, 1996). This was made possible by the Land Acquisition Act, enacted in 1966, which abolished *eminent domain* provisions.

The political and economic motivations for the HOS are perhaps best understood in the words of the then Prime Minister, Mr Lee Kuan Yew:

> My primary preoccupation was to give every citizen a stake in the country and its future. I wanted a home-owning society. I had seen the contrast between the blocks of low-cost rental flats, badly misused and poorly maintained, and those of house-proud owners, and was convinced that if every family owned its home, the country would be more stable (page 116)…I had seen how voters in capital cities always tended to vote against the government of the day and was determined that our householders should become homeowners, otherwise we would not have political stability. My other important motive was to give all parents whose sons would have to do national service a stake in the Singapore their sons had to defend. If the soldier's family did not own their home, he would soon conclude he would be fighting to protect the properties of the wealthy. I believed this sense of ownership was vital for our new society which had no deep roots in a common historical experience (Lee, 2000, p. 117).

Policies were introduced to achieve the goal of a home-owning society. Table 2.1 shows the rapid increase in the HDB housing stock: from 120,138 units in 1970 to 846,649 units in 2000. The homeownership rate for the resident population increased from 29 percent in 1970 to 92 percent by 2000. Singapore's large public housing sector is therefore in ownership terms, a largely privatized sector. However, ownership tenure of a HDB dwelling differs in many aspects from ownership of a private dwelling. Ownership rights are limited by numerous regulations concerning eligibility conditions for purchase, resale, subletting and housing loans.

*The Central Provident Fund* While HDB and related construction finance and land policy brought about a transformation of the housing supply side, demand for homeownership was `created' by directing savings in the Central Provident Fund (CPF) towards housing. The CPF had been in existence before the HDB, having been established as a pension plan in 1955 by the colonial government to provide social security for the working population in Singapore. The scheme required contributions by both employers and employees, respectively, of a certain percentage of the individual employee's monthly salary toward the employee's personal and portable account in the fund. All employers are required to contribute monthly to the fund. The bulk of contributions can only be withdrawn for specific purposes (of which housing dominates), on retirement at age 55, or on permanent incapacitation of the contributor concerned. The interest rate on CPF Ordinary Account savings is based on a weighted average of 1-year fixed deposit and month-end savings rates of the local banks, subject to a minimum of 2.5 percent. Savings in the Special and Medisave accounts earn additional interest of 1.5 percentage points above the normal CPF interest rate.

The CPF became an important institution for financing housing purchases from September 1968 when legislation was enacted to allow withdrawals from the fund to finance the purchase of housing sold by the HDB and subsequently sold by other public sector agencies as well. The contribution rates at the inception of the CPF in 1955 were five percent of the monthly salary for employees and five percent for employers. From 1968, the rates were adjusted upward and peaked at 25 percent of wages for both employers and employees from 1984 to 1986. Contribution rates are currently 20 percent of wages for employees and 13 percent of wages for employers, up to a salary ceiling of $5,000. Contribution rates are lower for workers above 55 years of age, and proportion of contributions allocated for investments, retirement, and healthcare (in the Ordinary, Special and Medisave accounts) also varies with age (Asher, 2004). Rates have varied depending on economic conditions and changes to contribution rates have been used as a macroeconomic stabilization instrument to limit inflation or to reduce wage cost.

The HDB provides mortgage loans and mortgage insurance to purchasers of its leasehold flats (both new and used). The typical loan quantum is 80 percent of the price of the new flat and the maximum repayment period is 25 years. The mortgage interest rate charged by the HDB is pegged at 0.1 percentage points above the CPF ordinary account savings interest rate, which in term is based on savings rates offered by the commercial banks, subject to a minimum of 2.5 percent. The HDB is a recipient of government loans to finance its mortgage lending, interest of which is pegged to the prevailing CPF savings rate. The mortgage lending rate charged by the HDB to homeowners is 0.1 percentage point higher than the rate that it borrows from the government, thus ensuring the sustainability of the financing arrangement. Housing loans for private housing are provided by commercial banks and finance houses. A schematic view of how housing is financed in Singapore is shown in Figure 2.2.

*Phase II (1979 - early 1990s): Deregulation and creation of resale market as shortages eased*

The desirability of any asset is determined to a large extent by its liquidity. Ease of trade determines the efficiency of a market. The promotion of ownership of subsidized new HDB dwellings therefore had to be accompanied by policies concerning the secondary market for that housing. However, from the perspective of public policy, there was early concern that given the then general housing shortage, HDB dwellings should not become a vehicle for speculation by allowing the price subsidies to be capitalized on a secondary market. Resale regulations were therefore extremely onerous in the early days of the housing program. These regulations were eased as the housing stock increased over time and the housing market became more mature (Phang, 1992, pages 92-4).

Prior to 1971, there was no resale market for owner-occupied HDB dwellings. HDB required owners who wished to sell their flats to return them to the HDB at the original purchase price plus the depreciated cost of improvements. In 1971, a resale market was created when the HDB allowed owners who had resided in their flats for a minimum of three years to sell their flats at market prices to buyers of their choice who satisfied the HDB eligibility requirements for homeownership. However, these households were debarred from applying for public housing for a year. The debarment period was increased to two and a half years in 1975. The minimum occupancy period before resale was increased to five years in 1973 and has remained in place since.

The debarment period, a great deterrent for any household considering sale of its dwelling, was abolished in 1979 thereby greatly facilitating exchanges within the public housing sector. This was replaced by a five percent levy on the transacted price of the dwelling to `reduce windfall profits'. A system of graded resale levy based on flat type was introduced in 1982, and rules regarding circumstances under which levies could be waived were fine-tuned in the 1980s (Phang, 1992, page 93). The resale levy system ensures that the subsidy on the second new flat purchased by the household from the HDB is smaller than that for the first flat.

Between 1968 and 1981, CPF savings could only be withdrawn for purposes of down payment, stamp duties, mortgage, and interest payments incurred for the purchase of public-sector-built housing.[3] In 1981, the scheme was extended to allow for withdrawals for mortgage payments for the purchase of private housing. From 1984, rules governing the use of CPF savings have been gradually liberalized to allow for withdrawals for medical and education expenses, insurance, and investments in various financial assets (Asher, 2004).

Only citizens, non-owners of any other residential property, households with a minimum size of two persons with household incomes below the income ceiling set by the HDB were eligible to purchase new or resale HDB flats prior to 1989. In 1989, residential mobility was enhanced when the income ceiling restriction was removed for HDB resale flats; the resale market was opened to permanent residents as well as private property owners who had to owner-occupy their HDB flat. HDB flat-owners who could not own any other residential property before, could also invest in private sector built dwellings. From 1991, single citizens above the age of 35 have been allowed to purchase HDB resale flats for owner-occupancy.

[3] A relatively minor scheme introduced in 1978 allowed withdrawals to be made for the purchase of shares in Singapore Bus Services, the then monopoly provider of public bus services.

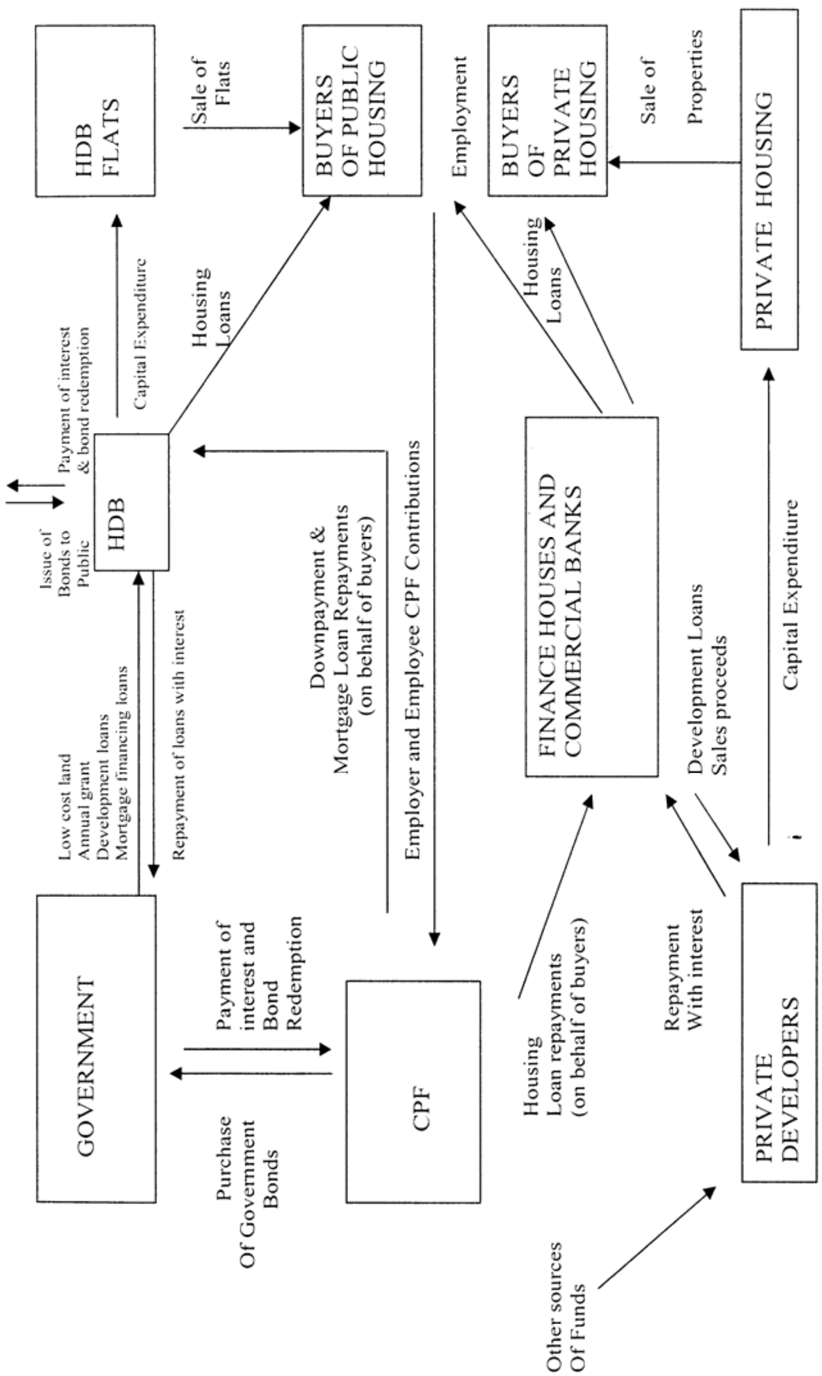


**Figure 2** **A schematic view of the housing finance process in Singapore**

*Phase III (early 1990s – 1997): Financial liberalization and housing price inflation*

The HDB also provides loans to buyers of resale HDB flats. Loan financing prior to 1993 was based on 80 percent of 1984 HDB new flat (posted) prices. As both new and resale prices rose (see Figure 2.3), households purchasing resale flats had to pay an increasing larger proportion of the price in cash. In 1993 HDB moved its mortgage financing terms closer to market practice by granting loan financing of up to 80 percent of current valuation or the declared resale price of the flat, whichever is lower. In 1993, the CPF Board also began to allow withdrawals of CPF savings to be used to meet interest payments on mortgage loans for resale HDB and private housing purchases. Before this, CPF members were allowed to withdraw only up to 100 percent of the value of these properties at the time of purchase.

Deregulation of the HDB resale market has been accompanied by an increase in the number of transactions. The transaction volume of resale HDB flats increased from fewer than 800 units in 1979, to 13000 units in 1987, 60000 units in 1999, and 31000 in 2004 (HDB Annual Reports). Resale transactions as a proportion of total (new and resale) owner-occupied public housing transactions, were three percent, 37 percent, 64 percent and 68 percent in 1979, 1987, 1999, and 2004 respectively. The increase in the demand for resale flats in the latter half of the 1990s is in part due to the introduction of demand side housing grants.

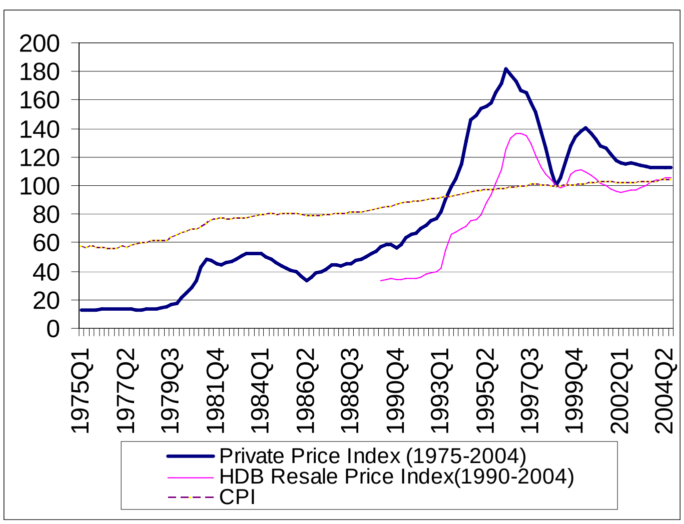


**Figure 2.3 Singapore's CPI and nominal house price indices**

Notes: CPI, 1975 - 2004 (Nov 1997 – Oct 98 = 100); Private house price index, 1975 – 2004 (1998 Q4=100); HDB resale price index, 1990 – 2004 (1998 Q4 = 100).
Sources: Singapore Ministry of Trade and Industry, Economic Survey of Singapore; Singapore Urban Redevelopment Authority, Real Estate Information System; Singapore Housing and Development Board website.

In 1994, demand-side subsidies in the form of CPF housing grants for the purchase of resale HDB flats were introduced. This represents a shift from total reliance on subsidies tied to new flats to a system of partial reliance on subsidies tied to resale flats. The subsidy is deposited into the CPF account of the eligible household when it applies to purchase a resale HDB flat. Under the scheme, the government provides the first time applicant household with a grant of $30000 to purchase a HDB resale flat close to either parents' or married child's residence. In 1995, the grant was increased to $50000. The government also introduced a more general grant of $40 000 for eligible households that purchase a resale flat which does not need to satisfy the criterion of being close to parents/married child's residence.

The shift towards constrained housing grants for the purchase of housing on the secondary market was necessary for the following reasons. In the first three decades of the HDB's existence, annual supply of new public housing added substantially to the housing stock particularly in the early 1980s. It was a rapid rate that was consistent with high income and population growth combined with a situation of grave housing shortage. The supply policies of the HDB that were suitable under the above circumstances had to be reviewed as population growth stabilized and as basic housing needs were generally met.

In cities of developed countries, new construction of housing is a small percentage of existing stock and comprises mostly high quality housing. Even as the construction of the basic 1 to 3-room HDB flats have been phased out, the construction of 4-room HDB flats may eventually meet with the same fate. The housing board's ongoing modernization of older estates and its selective en-bloc redevelopment scheme (under which old apartment blocks are repurchased, demolished, and new estates built) will be even more important then. Owner-occupier subsidies (which almost all new households and a large proportion of existing households have come to expect as a right of citizenship[4]) will, as a matter of economic efficiency if not political efficacy, has to be increasingly in the form housing grants for the purchase of existing housing rather than subsidized prices for the purchase of a new unit.

Financial liberalization as well as the positive macroeconomic factors resulted in rapidly rising housing prices in the early 1990s. Figure 2.3 shows the trends for private and resale public housing price indices as well as the Consumer Price Index.[5] In response to the growing concern over the affordability of private

[4] The HDB has been described as `a ticket to an easier life for the average Singaporean' and `a cash cow for the milking of housing subsidies' (*The Straits Times*, 19 April 1997).

[5] The price indices are compiled by the Urban Redevelopment Authority and the Housing and Development Board and are not quality-controlled. While it would be more appropriate to use hedonic price indices for housing, these are not available. It is likely that the quality of housing transacted (both in the public and private sectors) has been improving over time.

housing, the government introduced the Executive Condominium (EC) scheme, a hybrid public-private house type in 1995. The EC scheme also facilitated the HDB's withdrawal from the upper-middle-income housing market, allowing it to close the queue for its Executive Flats. Its similarity with 99-year leasehold private condominiums provides the government with another instrument on the supply side to impact private housing prices. The government auctions land for the development of EC units to housing developers (private as well as government-linked companies) who are responsible for design, construction, pricing, arrangements for financing and estate management. Applicant households have to satisfy eligibility conditions and abide by resale and other regulations governing these units.

Despite an increase in HDB supply of new housing, the introduction of the EC scheme as well as increase in government land sales for private housing development, housing prices continued to soar (with the private housing price index more than tripling between 1990 and 1996). On 15 May 1996, the government introduced a package of anti-speculation measures to curb real estate speculation. These include capital gains taxes on the sale of any property within three years of purchase, stamp duty on every sale and sub-sale of property, limitation of housing loans to 80 percent of property value, as well as limiting foreigners to non S$ denominated housing loans. The immediate effect of these measures was to cool the property market which however entered a slump with the onset of the Asian economic crisis in 1997 (see Figure 2.3).

*Phase IV (1998 - present): Excess housing stock*

In response to the fall in demand for housing during the Asian crisis, that was particularly pronounced in 1998, the government halted land sales and also ended its long standing policy of not providing housing subsidies for singles by introducing a $15000 CPF housing grant for eligible single persons to purchase resale 3-room or smaller flats. As housing prices declined further, the CPF housing grants was reduced in stages over ten months from January to October 1999 -- $500 per month for the Single Citizen housing grant, and $1,000 per month for the other housing grants. (In FY 2003/2004, 7,260 households purchased a resale flat under the CPF housing grant scheme.)

Both the private and public housing sectors were faced with a situation of declining prices and unsold units. A study in 2001 estimated unsold housing stock of about 19,800 units for the private sector (Monetary Authority of Singapore, 2001). With more than 17,500 unsold new flats in early 2002, the HDB suspended its Registration for Flat or queuing system, diverting remaining and new applicants to its Built-To-Order programme under which flats are built only when there is sufficient demand for them. In July 2003, in a major restructuring exercise, the HDB’s 3000 strong Building and Development Division[6] was re-organized and the

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[6] At the time of restructuring HDB’s staff strength was 8,000, including 3,000 in the Building and Development Division. The new HDB Corp took in about 800 to 1,000 staff.

HDB Corporation Private Limited (HDB Corp) set up as a fully-owned subsidiary of HDB. In November 2004, HDB divested its 100 percent shareholding in HDB Corp to the government's investment holding company, Temasek Holdings. HDB Corp has been assigned responsibility for the design and development of all HDB projects until June 2006. The subsidiaries of HDB Corp now include the Surbana group of companies which have also ventured into housing development projects overseas.

The HDB provides loans to purchasers of both new and resale flats, with the CPF having first claim on a property if a borrower defaults on his loan, thus protecting the CPF savings of the purchaser. Interest rate is at the CPF savings rate plus 0.1 percentage point. The recent low interest rate environment has however given rise to the anomaly where interest rates for commercial bank housing loans have been lower than HDB's `subsidised' loans (as there is a 2.5 percent floor on the CPF ordinary account savings rate). From September 2002, commercial banks have been given the go-ahead to compete for a slice of the $63 billion HDB loans market pie. However, as is the case for private housing, banks instead of the CPF would be given first claim for such housing loans.

### Housing tenure forms in Singapore

Given the large number of foreigners living, working or studying in Singapore, population and housing statistics in Singapore make a distinction between resident and non-resident population (see Table 2.1). Resident population comprises Singapore citizens and permanent residents. Non-resident population comprised 19 percent of the total population in 2000. However, official government statistics, including census data on housing and household often refers only to characteristics of the resident population. The housing market however caters to both groups and there is often confusion when statistics on the resident population are misinterpreted as referring to the total population or housing stock (see Table 2.3). Housing tenure forms in Singapore are also incredibly complex, with public-private hybrids defined by ownership or rental as well as HDB or private. Land ownership is also further defined by freehold, state-owned leasehold (and number of years of remaining leasehold), fully owned or part owned (strata-title) status. This section serves to clarify some of these issues as well as explain housing tenure forms in Singapore.

We infer from census data (see Table 2.3) that 40,813 or 4.2 percent of households in 2000 were non-resident households. While 88 percent of 923,325 resident households reside in HDB flats, 79 percent of the 964,138 occupied dwellings were HDB flats, with 21 percent of occupied dwellings being private sector housing. The total housing stock in 2000 was 1,039,677 units, of which 81percent were HDB housing (see Table 2.1). The housing vacancy rate in 2000 (occupied dwellings to housing stock) was about 7 percent. Within the private

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Ministry of National Development, Housing and Development Board Press Release, 26 February 2003.

housing sector, 15,367 of the 40,813 foreign households were owner-occupiers in 2000 (data from URA REALIS) – a homeownership rate of 38 percent. As such, the homeownership rate based on occupied dwellings rather than resident households would have been 90 percent. With regard to the housing stock, 83 percent were owner-occupied, 10 percent were tenanted, and 7 percent were vacant units. The private housing and rental sectors are therefore larger than reference to statistics on the resident population alone would suggest.

**Table 2.3 Occupied houses and resident households, 2000**

| | Occupied houses by type of dwelling | Resident household distribution by type of dwelling | Resident Home Ownership rate by dwelling type |
|---|---|---|---|
| Total | 964,138 | 923,325 | |
| Total % | 100.0% | 100.0% | 92.3% |
| HDB flats | 79.1% | 88.0% | 93.2% |
| 1- & 2-room | 4.8% | 5.0% | 19.2% |
| 3-room | 22.9% | 25.7% | 96.4% |
| 4-room | 29.5% | 33.2% | 98.3% |
| 5-room & Executive | 21.4% | 23.7% | 98.7% |
| Others | 0.5% | 0.4% | 60.4% |
| Condominiums & Private Flats | 7.9% | 6.0% | 82.8% |
| Private houses | 6.3% | 5.1% | 90.3% |
| Others | 6.7% | 0.9% | 83.8% |

Source: Singapore Department of Statistics (2001), *Singapore Population*.

*Owner-occupied public housing sector*

As can be seen from the data, the dominant housing sector is the HDB owner-occupied sector. New flats are sold by the HDB at what were considered subsidized prices in the past as there were long waiting lists of up to 140,000 households in the mid 1990s. Demand is regulated by eligibility rules such as household income (income ceiling of S$3,000 for those purchasing 3-room flats and S$8,000 for those purchasing 4-room or larger HDB flats), non-ownership of private properties at the time of application and citizenship status. The owners of a new HDB flat purchase a 99-year leasehold title on the flat. The government retains ownership of the land and common areas within the estate. Subletting of rooms within a flat (but not renting out the entire unit) is permissible. The sector may be considered a publicly-managed private sector as homeowners usually finance their purchase with a HDB mortgage loan, and administration and maintenance of the estate is the responsibility of the town council which is chaired by the Member of Parliament for the constituency. As such, the state remains very involved even after the HDB flats are sold, albeit not in a direct controlling way.

A mature resale (secondary) market for these flats allow transactions at prices determined by market forces (see Figure 2.3 for the HDB resale price index), although the HDB continues to regulate eligibility and credit conditions. Various rules such as a minimum occupation period of five years before resale on the market are in place to curb speculative activity. There is significant mobility within the housing sector, with 58 percent of households in 2000 having changed residences during 1991-2000 (Singapore Census of Population, 2000).

Since 1994, CPF Housing Grants (of up to S$50,000 per flat) have been introduced for the purchase of resale flats provided the household meets eligibility conditions. In recent years, a combination of factors – economic recession, overbuilding, demand side subsidies and administered prices that were not adjusted downwards have led to a situation of excess supply of new HDB flats (17,500 in early 2002).

Prices for new HDB flats are administered prices and are relatively more stable than resale prices. Prices for 3- and 4-room flats are pegged to average household income levels to ensure that at least 90 percent of all households can afford a 3-room repurchased flat[7] and 70 percent a new 4-room flat (HDB Annual Report 1996/97, p.17). The ratio of the average price of a 5-room flat to per capita GNP has been below 6.5. This is comparable to the range of housing price affordability ratios for the OECD countries.[8] In the first quarter of 2005, the price range for 4-room flats purchased directly from the HDB was between $85,000 and $297,000, while the range for 5-room flats was between $161,000 and $450,000, with prices varying with location and design.

*Rental public housing*

The public housing rental sector represents the social housing sector in Singapore, especially since rent control in the private housing sector has been phased out. It is completely regulated by the HDB and provides minimum standard housing (1 or 2-room flats) for families whose household income must not exceed S$1,500 per month at the time of application. Households in the income ceiling range of between S$801 to S$1,500 pay monthly rentals pegged at 30 percent of the market rent. For households with incomes not exceeding S$800, the monthly rentals are around ten percent of the market rate. A proportion of rental units also cater to `transitional' families waiting for their Home Ownership flat as well as to foreign workers in Singapore.

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[7] The HDB purchases 3-room flats in the resale market and sells them to eligible households at a price discount.

[8] Miles (1994, p.98) presents estimates of the average price of a new house as proportion of per capita GDP in 1990: UK (6.6), US (5.4), France (5.3), Germany (10.6), Netherlands (4.8), Sweden (4.1), Japan (9.2), Italy (5.7) and Canada (5.9).

*Private home ownership sector*

The private housing sector caters largely to the upper echelons of Singapore society, expatriates, and foreign investors. Over time, dwindling private land supply (freehold and 999 year leaseholds) has increased the importance of government land sales (99 year leaseholds) for residential development in determining the level of new supply. On the supply side, planning regulations on density, land use and redevelopment of private properties affect the responsiveness of private supply to market conditions. Government regulations affect the sector in other important ways. Foreigners are prohibited from owning private landed properties and private flats in buildings of less than six storeys without government approval. Foreign demand for housing assets in Singapore is thus effectively confined to the private flats and condominiums.

*Hybrid regulated private housing*

Executive Condominiums are classified as private housing, but purchasers face many of the restrictions that apply to HDB homeowners. As mentioned earlier, the government auctions state land on 99 year leasehold basis for the development of EC units to housing developers (private as well as government-linked companies) who are responsible for design, construction, pricing, arrangements for financing and estate management. Applicant households have to satisfy eligibility conditions and abide by resale and other regulations governing these units. (household income below S$10,000 per month) and have to abide by the resale and other regulations governing these units. The units can be sold only after five years to Singaporeans and permanent residents, and can be sold after ten years to foreigners. Buyers of EC cannot buy a HDB flat directly from the government again, although first time home-owners are eligible for the CPF housing grant which can be used toward the down payment.

*Rental private housing*

Rent control has been completely phased out and rents in the non-controlled private housing sector are market determined, with the sector catering mainly to the expatriate population in Singapore.

## The socio-economic benefits of Singapore’s housing welfare model

Improvements in the urban environment and the standards of housing in Singapore over the past three decades provide very tangible and visible evidence of the success of the economic development and housing strategy adopted by the Singapore government. This overwhelming success has been well documented in the existing literature (see references in previous section). Table 2.1 provides an overview of the macroeconomic and housing sector indicators for 1970, 1980, 1990 and 2000.

As described in the previous section, Singapore's housing sector is a rather unique hybrid of public-private elements that has worked for the city-state. Faced with a largely immigrant population, a grave housing shortage as well as insufficient private sector resources and capacity to provide an adequate solution, the government took upon itself the task of building a home-owning society. That a large public housing program could deliver satisfactory housing for the majority in a relatively affluent city testifies to the production efficiency and responsiveness to changes of the Singapore government. This public provision of a private good on a large scale was accompanied by numerous regulations on eligibility, resale and financing, which in the earlier decades resulted in some consumption inefficiencies (Phang, 1992). The public-private hybrid has however allowed the government to regulate, deregulate and re-regulate the sector with changes in socio-economic as well as market conditions. This section highlights the following favorable socio-economic effects of the housing welfare approach:

*Increase in savings rate*

At the inception of the CPF home ownership scheme in 1968, the Gross National Saving to GNP ratio was less than 20 percent (see Table 2.1) and insufficient to fund the country's investment needs (32 percent of GNP). The increase in CPF mandatory contribution rates to a peak of 25 percent of wages for employees and 25 percent for employers by the mid 1980s contributed to a significant leap in the savings rate to more than 50 percent of GNP by 2000 – certainly the highest savings rate in the world and more than sufficient to meet the country's investment needs.

*Increase in quantity and quality of housing stock*

The housing welfare approach enabled Singapore to mobilize long term resources on the demand side to finance the rapid supply of housing by the public sector with minimal involvement of government expenditure. Krugman (1994) has critically described the overall process as `a mobilization of resources that would have done Stalin proud'. Within three decades of its existence, the HDB had solved the housing shortage problem and had progressed to providing larger and better quality flats for upper-middle income households (comparable in quality to and competing with private sector built apartments), redevelopment of older estates, and retrofitting existing flats. By 2004, the HDB had 876,000 flats under its management, 94 percent of which were owner-occupied, and 68 percent of which were 4-room or larger units (see Table 2.1 for comparison with earlier years). Upgrading within the HDB sector has been facilitated by the development of an active secondary market and a system that allowed an eligible household to apply for a second (usually larger) subsidized flat after a minimum occupation period.

*Increase in homeownership rate*

The development of well functioning mortgage markets though desirable in itself, is often viewed as a means to achieving a higher homeownership rate. Homeownership is considered a merit good deserving of policy attention by most societies and various policies and institutional arrangements exist to provide incentives for homeownership by reducing its costs relative to renting. In addition to government provision of affordable subsidized HDB housing and HDB mortgage loans, the policy of allowing high mandatory savings to be used for home purchase and not rental made homeownership the dominant option for almost all Singaporean households. Not surprising, and given sustained income increases and low unemployment rates, the homeownership rate for the resident population increased from 29 percent in 1970 to 88 percent by 1990 (see Table 2.1), and was 93 percent for 2004.

*Development of mortgage market*

Housing policy has contributed in a major way to the development of the mortgage sector in Singapore. In 1970, shortly after the implementation of the CPF Approved Housing Scheme, outstanding housing loans were a mere S$215 million (see Table 2.1). This constituted only four percent of GNP, a figure within the range presently prevailing in Central Europe and Russia (Renaud, 2004). Even at that early stage, HDB loans had already exceeded banks and finance houses loans, comprising 58 percent of the total. With increases in homeownership rates and housing prices (see Figure 2.3), housing loans grew rapidly from S$215 million in 1970 to S$113,081 million by 2003. The 2003 ratio of outstanding housing loans to GDP at 71 percent is certainly the highest in Asia (compare Hong Kong at 39 percent, Japan 35 percent, Taiwan 26 percent, Malaysia 22 percent, Thailand 16 percent, Korea 14 percent, Philippines 12 percent and China eight percent).[9]

Despite the increase in the population residing in HDB flats over time and hence increases in HDB mortgage loans, commercial banks[10] have maintained their share of the housing loans market (at more than 40 percent). Since January 2003, the HDB has stopped providing market rate loans to buyers who are not eligible for its concessionary rate loans. This constituted a deliberate policy to increase the market share for commercial banks. Within the year, bank origination of HDB mortgage loans and refinancing of existing HDB loans grew to S$3.5 billion by the end of 2003 (Monetary Authority of Singapore, 2003/2004). This has increased commercial banks' share of housing loans from 41 percent in 2000 to 47 percent in 2003, with the proportion set to increase further in the future.

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[9] Figures for other Asian countries are from Renaud (2004) and are for 2001-2002.

[10] Commercial banks here include Credit POSB and finance houses. See Phang (2001) for details of financial institutions involved in housing loans origination in Singapore.

*Social policy*

The large public-built-private-owned housing sector plays an extremely important role in the shaping of Singapore society. The physical plans of HDB new towns have been designed to integrate the various income and racial groups within the public housing program, and this has prevented the development of low-income or ethnic ghettos. Singapore is a multi-racial society[11] where racial issues are considered potentially explosive and therefore carefully managed. The colonial administration had in its early days of town planning, followed a policy of racial segregation. Together with the communist threat, the management of racial tensions (there were racial riots on a number of occasions) were major political challenges in the 1960s. Beginning in the 1970s, the HDB allocated new flats in a manner that would give a `good distribution of races' to different new towns. The public housing program provided the government with a potent tool to break up ghettos and through such dispersion to contribute to social integration and nation-building. However, by 1988, a trend of ethnic regrouping through the resale market, was highlighted as a housing problem which would lead to the re-emergence of ethnic enclaves. In 1989, the HDB implemented a Ethnic Integration Policy under which racial limits were set for HDB neighbourhoods. When the set racial limits for a neighbourhood is reached, those wishing to sell their HDB flats in the particular neighbourhood had to sell it to another household of the same ethnic group. The government had emphasised that `our multiracial policies must continue if we are to develop a more cohesive, better integrated society. Singapore's racial harmony, long term stability, and even viability as a nation depend on it' (Ooi, et.al., 1993, p.14).

Housing policy have also been tailored to support the family institution, and to discourage individuals whether young or old, to live on their own. Singles, until today, remain ineligible to apply directly to the HDB for subsidized housing, although they have since 1991, been allowed to purchase resale flats. Unmarried mothers are also similarly disqualified from applying directly to the HDB for subsidized housing. To promote closer family relations, a variety of housing priority schemes allowed applicants residing with or close to their parents/children a shorter waiting period before being allocated flats. Households applying for the CPF Housing Grant also enjoy an additional premium if the resale flat purchased is within the same town/estate or within two km for adjacent town of parents'/married child's residence.

In 1987, as part of a bevy of measures to encourage couples to have more children, a Third Child Priority Scheme allows families with at least three children priority in obtaining larger HDB flats. The lower income group were however to be discouraged from having large families. Under the Small Families Improvement Scheme introduced in 1994, the poor were encouraged to limit their family size to no more than two children. In return, the children enjoy education bursaries, and a

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[11] The resident population is 76.8 percent Chinese, 13.9 percent Malay, 7.9 percent Indian, and 1.4 percent others (Census 2000).

housing grant of $16,000 is paid to the CPF account of the wife which can be used to buy a 3- or 4-room HDB flat.

The HDB is also empowered to fine errant residents, cancel applications, and evict families for various offences such as late payment of bills, illegal renting out of entire flat, breaking immigration laws by harboring illegal immigrants, or being convicted for a ‘killer-litter’ offence. Motorists who do not pay their parking fines are also not given the keys to their flats until they pay their fines.

*Impact on economic distribution*

The vast majority of households in Singapore have benefited from access to ownership of affordable public housing. The active resale market allows for mobility within and out of the market and for the benefits of price discounts to be capitalized after a minimum occupancy period. Each household is allowed to apply twice for a `housing subsidy' (a price discounted flat or a CPF grant) that has been described as `a ticket to an easier life for the HDB heartlander' (*The Straits Times*, 19 April 1997). A study on housing wealth by Phang (2001) indicates that the 86 percent of households residing in HDB flats owned at least 48 percent of the gross housing wealth (HDB households are also allowed to own other private residential properties provided they satisfy various requirements). Housing policy and housing asset inflation have over time increased both gross and net housing wealth significantly. This has however contributed to a situation where housing price appreciation and depreciation (see Figure 2.3), with their attendant wealth and distributive consequences, have become politicized issues.

Another related measure has been the retrofitting (upgrading) of older public housing estates at considerable public expense since 1989. This multi-billion dollar exercise is part of the government's `Asset Enhancement' programme and represents yet another round of subsidies for households that benefit from the substantial improvements made to their homes and housing estates. House type as a proxy for household wealth has also become a means of facilitating redistribution via the budget. The regressivity of the Goods and Services Tax implemented in 1994 was offset by annual rebates (announced as part of the fiscal budget and *varying with flat type*) to households residing in public housing in the form of waivers on rents and service and conservancy charges (S&CC). In 2001, S&CC rebates were implemented to help lower income Singaporeans cope with the recession. In the 2002 budget, rent and S&CC rebates for HDB flats were extended to 2008. Since 2000, transfers to individuals in the form of CPF Top Ups, New Singapore Shares and Economic Restructuring Shares used house type and/or house value as one of the factors in determining allotment.

*Contributions to macroeconomic growth and stabilization*

Sandilands (1992) describes the construction sector as a leading sector as its growth rates were above the rate of growth of overall GDP, and also because its fluctuations were a leading indicator of fluctuations (down as well as up) in GDP.

Between 1965 and 1998, the real growth rate of the construction sector averaged 9.4 percent per annum while average real GDP growth was 8.8 percent. Despite the various inefficiencies associated with the regulated nature of the housing sector, the priority accorded to housing has not had an adverse effect on overall economic growth.

The impact of housing policy on macroeconomic stability in the short term is less clear. For the earlier period when a serious housing shortage existed, Wong and Wong (1975) estimated an impact multiplier for HDB construction activity at 1.277 for 1960 to 1969. Low and Aw (1995, p.42) mention the use of public housing activities as a macroeconomic stabilizer to create income and employment whenever a recession loomed during the 1960s and early 1970s. However with increases in income and a tight labour market since the mid 1970s, the construction industry has become highly dependent on non-resident workers and has long ceased to be regarded as a venue through which domestic employment can be generated.

Krause et.al. (1987) have suggested that public sector construction (especially by the HDB) has been used as a pump-priming device in times of economic slowdown in 1975-76 and 1982-83. The acceleration in public housing construction in 1982-83 was considered by Krause to have been excessive in that it contributed towards 'over-heating' of the economy and the property slump and recession which followed in 1985-87 (Krause, p.161). 189,000 HDB flats were constructed during the Fifth Five-Year Building Programme when the original target set in 1980 was for the construction of 85,000 to 100,000 flats. It was hypothesized by Krause et.al. that the acceleration in public housing construction served other than a growth objective - 1984 being an election year as well as a year for celebrating 25 years of achievement as an independent nation. As acknowledged by then Prime Minister Lee, `We made one of our more grievous mistakes in 1982-84 by more than doubling the number of flats we had previously built (Lee, 2000, page 120).' The subsequent deceleration in public sector construction, although necessary, was also ill-timed from a macroeconomic stabilization perspective as it coincided with a decline in private sector construction as well as a slow down in general economic activity.

Besides HDB construction activity, government policy impacts on housing asset prices in other important ways. A study by Phang and Wong (1997) shows that policies on the availability of HDB and CPF finance for housing had the most significant impacts on housing prices. These policies include extending the use of CPF savings for private housing in 1981, liberalizing the terms of HDB mortgage loans for resale flats in 1993, and the introduction of CPF grants for purchasing HDB resale flats in 1994. Such `shocks' on the demand side needed to be offset by government policies to generate the requisite supply, although these have not always been well synchronized. Citing then Senior Minister Lee:

> I should have known that it does not pay to yield to popular pressure beyond our capacity to deliver. Yet I was party to a similar mistake in the early 1990s. As property prices rose, everybody wanted to make a profit on the sale of their old flat and then upgrade to a new one, the biggest they could afford. Instead of choking off demand by charging a levy to reduce their windfall profits, I agreed that we accommodate the voters by

> increasing the number of flats built. That aggravated the real estate bubble and made it more painful when the currency crisis struck in 1997. Had we choked off the demand earlier, in 1995, we would have been immensely better off (Lee, 2000, p. 121).

The asset bubble that developed in the early half of the 1990s was choked off when anti-speculation measures, in the form of capital gains taxation, were implemented in May 1996 (ahead of the 1997 Asian economic crisis). The HDB also tightened various regulations: in April 1997, HDB flat buyers were limited to two subsidized loans, where there had been no limit before. In May 1997, the HDB implemented various measures to curb housing demand of upgraders (households applying for a second new subsidized flat from the HDB). These measures include lengthening the time period before flat lessees are eligible to purchase a second new flat from the HDB from five to ten years, and revising the graded resale levy system.

The increasing integration of the private and public housing markets as evidenced by their increased substitutability and correlation in price trends (see Figure 2.3) provided policymakers with more housing market instruments to affect the housing market in other defined ways. First, the Executive Condominium scheme represents a private-public hybrid development that has allowed HDB to `privatize' the construction and financing of its Executive flats. These flats are close substitutes for 99 year leasehold private condominiums that are open to foreign investors and therefore have seen the highest price volatility in the past. The supply of ECs thus provides the government with a direct instrument to affect prices in the sector and to ensure that housing for the upper middle group remains affordable.

Secondly, the government has also developed the capacity of government- linked companies (such as Capital Land and Keppel Land) to compete in the housing developers market, thus reducing the oligopolistic power of a few large private developers in the small private housing market.

Thirdly, HDB pricing policy together with the CPF housing grant, introduced in 1994, has served a useful function of supporting prices in the HDB resale market amidst the recent economic downturn. Prices for HDB new flats have declined only marginally and these prices effectively set the floor for the housing market. With the recent decline in HDB resale flat prices, an increasing number of applicants on the queue for new flats opted out of waiting for their flat to purchasing one on the resale market with the CPF grant. The rate of application for the CPF Housing Grant increased from 500 per month in 1997 to 2,200 per month by the end of 1998. In 1999, the HDB adjusted the S$40,000 grant downwards by S$10,000. The variability of the grant with market conditions provides the government with yet another policy to affect housing demand.

Finally, the extreme openness of the Singapore economy has meant that economic growth has been largely foreign investment and export driven, both of which are affected significantly by external factors. Pump-priming in the traditional Keynesian sense of increased government expenditure has limited effectiveness due to high leakages - an estimated 54 cents of every dollar spent leaks abroad through imports (Lee, H.L. 1999) so that the multiplier effect of government spending is small. In both the 1985 and 1998 recessions, the Singapore government utilized a cut in the employer's mandatory CPF contribution rate as a means of reducing wage costs and restoring competitiveness (from 25 to ten percent in 1986 and 20 to ten percent in 1999). In the absence of other measures, and given the prevalence of the use of the CPF contributions for housing mortgage payments, the CPF cuts would have increased the mortgage default rate and possibly affected the stability of lending institutions.[12] However, adjustments were concurrently made by the CPF to allow automatic withdrawal of funds from a member's CPF Special Account (meant for old age) to service mortgage payments, should there be a shortfall. The CPF Board also made bridging loans available for those who had depleted savings in both their Ordinary and Special Accounts.

The HDB as the largest player in the housing loans market made available various help schemes for those affected by the recession and/or CPF cut. These included a five-year reduction in monthly mortgage payments (payments to be reassessed from the sixth year), payment of mortgage loan arrears by installments over six months to a year, deferment of payment, extension of loan repayment period, and including more family members as joint owners. Such measures undoubtedly reduced the default rate on mortgage loans, thus contributing to the overall stability of the financial sector in the midst of the Asian crisis.

The extreme openness of the Singapore economy limits the macroeconomic tools available to the government for short run stabilization purposes to the exchange rate and measures that directly affect business costs. The structure of the housing market has allowed the CPF contribution rate to be more effectively used as a discretionary instrument to affect labor cost. The integral comprehensiveness of economic, housing, and housing finance policies thus also serves a useful purpose of providing policy makers with the flexibility to steer housing policy to achieve desired (short as well as longer term) economic objectives.

### Problems associated with Singapore’s housing welfare model

The housing approach adopted in Singapore has undoubtedly increased the savings and homeownership rates, mobilize resources for the housing sector and contributed to increase in housing loans and the development of the primary mortgage market. However, the approach is not without its detractors. Singapore’s housing strategy is

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[12] Low and Aw (1997) provides a description of how an increase in the CPF contribution rate is used as an anti-inflationary tool in mopping up excess liquidity and spending during times of rapid wage growth. However Low and Aw suggested (before the 1998 recession) that the CPF as a macroeconomic stabilization tool has probably reached its limits as `it would be too disruptive economically and politically to change the rules with so many people committed to large housing mortgages and repayments. This lock-in effect of many CPF schemes must also be noted as they effectively reduce the degree of flexibility the next time CPF adjustments are considered in any macroeconomic stabilization exercise' (p. 101).

inherently policy driven and centrally controlled, with major decisions on savings rate, savings allocation, land use, housing production, and housing prices being largely determined by the government. It is, in other words, a neo-classical economist's nightmare. Pugh (1985), in the context of providing a set of operating guidelines for a good housing system, and advocating Singapore's strategy as a good model, writes:

> … do not be too perturbed if some orthodox (neo-classical) economists argue that housing is over-allocated by subsidy. Show them that `subsidy' is a concept which cannot be fitted easily to housing, and produce counter arguments, which are respectable in economics, and which are readily available.

However, two decades and 35 years later, it may no longer be `respectable' to continue to argue for the continuation of a system that has outlived certain aspects of its usefulness. While the CPF-HDB housing scheme had its merits in the past, the objectives that the scheme set out to achieve have been surpassed and the policy problem has become one of how to reduce its dominance with minimal upsets to asset values, household wealth and lenders' balance sheets. This section reviews a number of problems that have become associated with the large scale directed credit to the housing sector, and may serve as guidance for other countries with, or contemplating the adoption of similar schemes.

*Crowding out*

Singapore's housing strategy has been criticized for over-allocation of resources to housing, resulting in crowding out of consumption, as well as human capital and corporate investments. Despite widespread homeownership and rapid increase in housing wealth, Phang (2004) found no evidence that house price increases have produced wealth or collateral enhancement effects on aggregate consumption. Instead, due to the mandatory nature of the CPF as well as households' inability to withdraw housing equity to finance consumption, households in Singapore face strong liquidity constraints. In addition to the welfare loss from consumption denied, Bhaskaran (2003) is of the view that the low percentage of disposable income spent has hurt the development of the retail sector in Singapore.

The CPF has also been blamed for a weak domestic corporate sector (since potential entrepreneurs are unable to access their savings for start-ups), and the crowding out of domestic private sector investments. The corporate sector in Singapore is dominated by MNCs and government-linked companies -- a recent study by Bhaskaran (2003) confirms that indigenous firms earn lower returns than foreign-owned firms within Singapore, and lower returns as compared to listed companies in Hong Kong, Japan Korea, Taiwan the US. Krugman (1994) and Young (1992, 1995), for example, have questioned the basis and sustainability of Singapore's economic growth in a series of studies as far back as the early 1990s. Pointing to the low contribution of total factor productivity (TFP) growth, Krugman referred to the Singapore miracle as having been based on 'perspiration rather than inspiration' – 'All of Singapore's growth can be explained by increases in measured inputs. There is no sign of increased efficiency.'

*Housing sector impacts*

Given the nature of the real estate industry, the tilt of resources to the housing sector is not easily matched by corresponding increases in supply. *Ceteris paribus*, one can infer that housing and land price levels in Singapore are higher with the CPF housing scheme than without. In the first decade (1968 – 1981) when the CPF savings was directed only toward public housing, administered prices, stringent eligibility criteria, and long waiting lists were used to allocate the HDB's supply of new flats. Moreover, in the absence of a secondary market for HDB flats during that period, the inflationary impacts on a tightly regulated housing sector were not immediately apparent.

However, such mechanisms could not be used when savings were similarly directed to private housing beginning in 1981. The 1981 liberalization as well as the 1993 liberalization of HDB and CPF regulations for HDB resale flat housing loans had significant impacts on housing prices, contributing to the development of speculative bubbles that subsequently burst (Phang and Wong, 1997).

When the CPF contribution rates were used for macroeconomic stabilization, increased to mitigate inflationary pressures from higher wages (1978 – 1984) or cut to reduce wage costs and preserve jobs (1985 and 1998), the effect was to exacerbate the housing price boom and bust (see Figure 2.3 for housing price index) by channeling resources into real estate during an inflationary period and reducing resources to the sector during a recession.

*Consumption inefficiencies*

Singapore's mandatory savings and housing policies have very substantial impacts on household's consumption and investment patterns. Savers' and consumers' rights in decision making are constrained by numerous CPF and HDB restrictions and regulations. Consumption inefficiencies arise when households value the in-kind transfers/subsidies at less than the costs of providing them, or alternatively, at less than an equivalent cost but unrestricted cash grant. Moreover, numerous regulations to prevent profiteering and speculation as well as restrictions in housing location choice resulted in inefficient location and commute patterns for households (Phang, 1992).

Over the years, both the CPF and HDB have found it necessary to become more saver/consumer responsive and have liberalized regulations in order to reduce distortions and provide more investment as well as housing options. There is now a wider range of investment and merit good related consumption (education and health) options for CPF members. The shift toward demand-side subsidies in the form of CPF housing grants to subsidize the purchase of resale HDB housing since

1994 has been very well received. This has improved households' ability to optimize with regard to their housing options.

*Retirement financing*

The typical household in Singapore has the bulk of its wealth invested in housing (Phang, 2001). Despite the high savings rate, overinvestment in housing and over exposure to the risk of a decline in housing price affecting the retirement (and healthcare) financing of an aging population has become issues of policy concern, especially since the bursting of the real estate bubble in 1997 (see Figure 2.3). Lim (2001) projects that 60 to 70 percent of the 50-55 years age group will not have sufficient funds in their account to meet the government stipulated minimum sum needed for retirement of S$80,000 in 2003.[13] Analyzing CPF data for 2000, Asher (2004) finds the average balance for active CPF contributors was $53,000, equivalent to 1.27 times the per capita GNP – inadequate to finance retirement of more than 20 years duration on the average.

McCarthy et.al. (2002) show through simulations that the average worker in Singapore is likely to be `asset-rich and cash-poor' upon retirement with 75 percent of his retirement wealth in housing asset, provided housing values continue to rise in real terms. In contrast, an American elderly household would have only 20 percent of their retirement wealth in housing asset. If the housing market were to take a downturn and remain depressed for years (as in Japan), this could reduce retirement asset accumulation for the Singapore worker substantially. This raises the problematic issue of over concentration of household assets in housing resulting in a risky under-diversified portfolio at retirement.

A report by the government appointed Economic Review Committee in 2002 arrived at a similar conclusion that CPF members were `asset rich and cash-poor' and made recommendations to limit CPF withdrawals for housing, and for the government to explore ways for homeowners to monetize their property.[14] However, the committee was also cognizant of the need to implement changes gradually, in order not to further destabilize the fragile post Asian-crisis real estate sector. Agreeing with the committee's recommendations, the government moved to cap CPF withdrawals for housing at 150 percent of the value of the property, with

[13] At age 55, a CPF member may withdraw his CPF savings, but is required to leave a minimum sum in the CPF of S$80,000, of which at least half must be in cash and the other S$40,000 may be in property. The cash amount is released in installments from the age of 62 years until it is exhausted. The member may also choose to buy a life annuity with an insurance company or deposit it in a bank.

[14] Economic Review Committee: Sub-committee on policies related to taxation, the CPF system, wages and land (2002). 'Refocusing the CPF system for enhanced security in retirement and economic flexibility.' Reverse mortgages in Singapore are available only for owners of fully-paid up private properties aged 55 or above. Between 1997 and 2004, only 215 homeowners have taken up loans worth S$100 million (channelnewsasia.com). Asher (2004) views the reverse mortgage as suffering from severe technical problems and high transactions costs.

the cap moving down gradually to 120 percent over five years for new private housing loans.

*Lack of unemployment insurance*

With recent changes in the macroeconomic environment, unemployment rates above five percent for 2002-2004, and greater volatility in economic growth, there is growing concern over structural unemployment associated with the restructuring of the economy. Various programmes exist to help the unemployed find jobs, upgrade their skills or retrain for employment, so that they can become economically independent again. These programmes may be considered *short term* unemployment benefits under a different name. However, the lack of unemployment insurance and limited public social assistance available when structural unemployment is expected to be long term has led some to question the viability of the current welfare system. Yap (2002) has proposed that an employment insurance scheme be introduced as another component of the CPF. Asher (2004) makes a strong case for the introduction of tax financed schemes to address the needs of the *lifetime* poor, and social risk pooling to address longevity and inflation risks. According to him:

> This case has become stronger due to the unilateral alteration of the implicit social contract by the government. This contract provided for acceptance of government's socio-economic engineering and political control in return for job security and full employment. The government is not able to fulfill the latter element, but still wants to continue to undertake socio-engineering and maintain political control. This is a disequilibrium situation which will need to be resolved.

However, Asher acknowledges that the prospects for the required mind-set change by policymakers are not encouraging.

*Financial Sector development*

As required by the CPF Act, the CPF channels members' deposits to the purchase of government bonds. The government through the Government of Singapore Investment Corporation invests the bulk of the funds directly abroad, thus bypassing Singapore's financial markets. Bhaskaran (2003) contrasts the `remarkably poorly developed' status of Singapore's savings industry against its high savings rate. `Financial planners, unit trusts, stock brokers, pension funds, pension advisors, wealth management associated with middle-class households, financial journals, etc are all under-represented in Singapore compared to say Hong Kong.' It has also been observed that the debt market in Singapore has remained relatively unsophisticated and illiquid due primarily to the cash rich public sector and the dominance of MNCs that typically do not depend on domestic sources of capital (Committee on Singapore's Competitiveness, 1998).

A similar observation can be made with regard to the mortgage sector. While the housing loans to GDP ratio has exceeded 70 percent, more than half of outstanding housing loans are originated by the HDB whUBirminghamich in turn obtains mortgage funding loans from the government. The HDB is not a financial institution while the CPF is described as a non-bank financial institution. The size of the mortgage *market* as such is smaller than one would expect, given the high loan to GDP ratio. The mortgage sector's linkages with capital markets are weak and mortgage instruments relatively unsophisticated – there is no secondary mortgage market.

In recent years, efforts to improve the mortgage sector's linkages with capital markets have taken a number of forms. (a) Though the government traditionally runs a budget surplus each year and has no need to borrow, the issue of bonds by the government and statutory boards to create a bond market has been undertaken with the objective of establishing a S$ yield curve for the debt market. In line with the objective, the HDB has started issuing bonds from 1999 to fund its building programs. (b) From 2002, instead of the CPF having first claim on a property if a borrower defaults on his housing loans (which protects his retirement savings), banks have been given first claim for private housing loans, thus paving the way for standardizing mortgages for securitization. (c) From 2003, banks have also been allowed to make loans to those buying HDB flats with unsubsidized housing loans and to offer refinancing for these loans; banks would also enjoy first charge over the CPF for these HDB properties (Phang, 2003). These efforts to enlarge the role of commercial banks in the mortgage market will help to improve the integration of the mortgage sector with the rest of the financial sector.

*Governance issues*

Pension fund governance issues relating to the responsibilities of trustees, accountability, and transparency are important areas of concerns for all stakeholders. In the US for example, the principles and procedures required of pension fund fiduciaries are legislated under the Employee Retirement Income Security Act. In the Singapore context, the CPF balances due to members at S$110 billion (in September 2004) are considerable. Their ultimate investment by the Government Investment Corporation of Singapore has however been described by Asher (2002) as `by law non-transparent and non-accountable, leading to a highly regressive large tax on provident fund wealth and to low replacement rates'. These concerns as well as that of ensuring the core administrative tasks are performed satisfactorily are major challenges for any mandatory pension scheme.

## Transferability of Singapore's housing welfare experience

The success of the Singapore's housing welfare model demonstrates what can be achieved with strategic planning to mobilize resources and guide key investments. Complemented by close attention to the supply part of the equation as well as policies which created markets over time and accommodated private initiatives to fill the gaps, the process has helped Singapore to avoid the worst outcomes of the extremes of central planning and unplanned growth. Numerous city governments in former socialist countries and in Asia are also major landowners, yet the absence of markets often makes these cities inefficient. Those cities can learn much from Singapore's planning process and its active role in creating markets.

However, while similar approaches have been adopted by governments elsewhere, it is in this day and age, difficult to find strong advocates for government-centered housing welfare systems. The transferability of Singapore's experience need to be juxtaposed with the local political and social context, in particular, the city-state's ability to control the entry of migrants who can impose a strain on the housing service sector. Moreover, the tactics on which Singapore relies – compulsory savings, state land ownership, and state provision of housing, complemented with an extensive public sector – could easily have spawned widespread inefficiency and corruption.

Singapore's effective implementation of such planning and regulation is attributable to a network of competent and reliable organizations that together provide rich public sector capacity. The quality of public administration in Singapore is a result of recruitment based on merit, competitive pay benchmarked against private-sector salaries, extensive computerization and a civil service culture of zero tolerance for corruption (Phang, 2000). Where governments and public sector leadership are weak and/or corrupt, such extensive intervention and government control over resource allocation can be potentially abused and may carry a higher cost than inaction. The need for strong legislation and a proper fund governance structure to ensure that the interests of provident fund members are adequately protected cannot be overemphasized.

The housing welfare strategy is itself a legacy of the post-World War II years, when `only governments could marshal the resources necessary to rebuild devastated and dislocated nations' (Yergin and Stanislaw, 2002). In the last two decades, the focus of attention has shifted from market failure to government failure – with privatization and deregulation as the preferred strategy generally, as well as in the development the housing sector. The present concerns faced by Singaporeans, in particular the lack of unemployment safety nets and the possible inadequacy of personal resources for retirement and healthcare in the future, serve to highlight the risks of overemphasizing housing in the welfare system for too long. Policymakers now have to grapple with tradeoffs and difficult decisions in trying to reduce the dominance of housing welfare without adversely effecting housing asset markets.

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