

# INSURING AN UNCERTAIN LIFE: NATURES OF HOME PURCHASE DEMAND AND FINANCIAL MARKETS

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## 1. Introduction

This chapter will briefly discuss the current development of the public housing policy in Hong Kong, which is one of the most contentious issues in Hong Kong society. Simultaneously, we will talk about how imperfect financial markets have influenced home ownership behaviour in Hong Kong, in spite of her renowned status as an international financial center. The public housing policy, one of the remarkable legacies of the British colonial government in Hong Kong entered into a new stage along with the handover of the Colony to China. First, we are going to give a brief description about the development on the housing policy set out by the Special Administrative Region (SAR) government. We will then argue possible impacts of the policy change on household behaviour, particularly on their consumption-saving decisions. Their behaviour reveals an influence from the financial markets which is imperfect or less developed compared to an ideally perfect markets. A strong demand for home purchase exists in Hong Kong. This is not only due to cultural reasons, as is often pointed out, but there is also a certain economic rationale under the peculiar nature of the financial markets in Hong Kong, which is also widely recognised in society. We will focus on the latter point when exploring the economic rationale, then we will argue that the recent development in financial market, bond market and insurance industry, might induce a substantial change in the nature of demand for housing and the property market.

## 2. The housing policy by the SAR government: residualisation of government role

In the celebration ceremony speech on July 1st 1997, the Chief Executive Tung Chee-Hwa announced his intention to set out the housing issue as one of the major policy targets of the newly established government, with a target of 85,000 homes supply on annual basis (Tung,

1997a). During the post-war period, the main provider of housing in Hong Kong was consistently the government, at least in terms of quantity. At this moment, the Housing Authority is still the largest owner and provider of housing in Hong Kong. However, the government changed her policy principle in the mid 1980s towards narrowing down her role in the housing provision, namely, the residualisation. The housing policy by the SAR government also basically follows this principle.

### *Long Term Housing Strategy Review*

1997 was the tenth year since the Long Term Housing Strategy (LTHS) was promulgated in 1987 as being the backbone of the current housing policy by the year 2001. A consultative document for the second mid-term review, whose edition started in 1995, was published in January 1997. The LTHS has substantially changed the direction of the policy, to promote home ownership instead of provision of low-rent rented housing with a purpose to adapt to a rising standard of living of Hong Kong residents. The methods originally proposed in the LTHS were; (1) redevelopment of the older public housing estates, (2) promotion of home purchasing, (3) introduction of the Home Purchase Loan Scheme. In the process of implementing this strategy, some problems and difficulties were discovered. Ironically, in the first Mid-Term Review, it became obvious that a strong preference for the public rental housing still existed (Hong Kong Housing Authority, 1993: pr.2.19, Table3) . Moreover, there was a shortfall in the housing supply, mostly for rented housing. This was due to the limited supply of land (op. cit.: pr. 2.11 ) which resulted in growing households in the inadequate private housing (op. cit.: pr. 2.5). Another reason was that the Home Purchase Loan Scheme also fell short of the expectations (op. cit.: pr. 2.32). The home ownership policy encountered problems such as a lack of interest from people, who were mostly tenants from the public rented housing.

The 1997 Consultative Document, conducted at the second review after the 1993 version, emphasised (1) an increase in the supply of flats, (2) further participation of the private sector in the supply of housing, (3) promotion of home ownership, again, and (4) narrowing down the target of the public housing policy limited only those who are in genuine need. The report set out the target of housing supply to meet the requirement of 80,000 as average between 1995 to 2001. However, the policy was geared as more favourable to home ownership or residualisation of the government role on the establishment of the SAR government.

### *Policy Address by Chief Executive*

On the celebration ceremony on July 1st 1997, the Chief Executive Tung Chee-Hwa announced a raise in the target of annual supply from 78,000 to 85,000 flats, as well as a raise in the targeted home ownership rates from the current level of 45 per cent to 70 per cent. This figure was set out in order to meet the maximum demand in the volume from government estimates (Working Group on Housing Demand, 1997: 6). In order to accomplish this target, the government had no other way than to increase her own planned commitment in the review in January. The Chief Executive again emphasised the target of 85,000 flats in the Policy Address on October 8th 1997. The main thrusts of the policy are on home ownership, which is represented by the Tenants Purchase Scheme, which is a scheme to sell off public rental flats to sitting tenants, and another new "Home Starter" loan scheme.

### *Tenant Purchase Scheme*

In order to accomplish the target of 70 per cent of home ownership rate, the Housing Authority announced the Tenant Purchase Scheme in December 1997, which is the third trial in the history of Hong Kong. The scheme at this time is featured by the exceptionally low price compared to the previous schemes in 1991 and 1993.

The Housing Authority set a "strikingly" low price in order to charm the tenants by no means and to avoid any objection from the political parties (Hong Kong Economic Times, 8 December 1997: A23). They offered a 70 percent discount from the prevailing market price. Furthermore, the applicants in the first year of the scheme will acquire another additional discount of 60 per cent. Thanks to this double discount, the applicants in the first year will be able to buy their flats only at 12 per cent of the market price. The applicants in the second year will be offered a 21 per cent discount of the market price, with 30 per cent of the additional discount. The government showed a firm will by the setting of this Scheme to residualise her own role in the supply of housing in society, by tempting people to fulfill the dream of home ownership. The media also reported this news describing "the government prepared Christmas gifts to the people." "The public housing tenants finally escaped from a raise in rent in every two years." (Ming Pao, 10 December 1997).

The next question is; does really home ownership benefit the owner in an economic sense?

### 3. The motives of home ownership

#### *i) Aspiration for home ownership*

The main target of the current housing policy is focused on home ownership, and privatisation of housing. To argue the legitimacy of this policy, people's aspirations for home ownership are always emphasised. For example;

"Owning one's home is an aspiration shared by the people of Hong Kong. It is crucial for nurturing a sense of belonging and maintaining social stability." (Tung, 1997a)

"Home Ownership is not a dream for the many and a privilege for the few.

Rather it is something to which the majority of our community can aspire." (Housing Branch, 1997:p.ii)

"The desire to own our home is deeply rooted in the Chinese culture. Besides its obvious connections with the need for shelter, it is a potent symbol of material success and, therefore, is one of the strongest motivational forces." (Consumer Council, 1996:1-1)

Here we notice the existence of a prevailing special preference to home ownership, which is mostly emphasised from a social and cultural perspective. It is true that the people in Hong Kong currently have a strong demand for home purchase. You can also see this zeal in the media or in ordinary conversations with the people. Among chats or on the bills in the property agents shop, home ownership is metaphorically described as "getting on the train (sheung che)." This word is tempting people, implying that home ownership is the ticket to get on the track of success in life. Other than this, owner-occupiers are also often referred to in a respectful way as "gentleman with property." Why is the aspiration of home ownership so strong?

By primary nature, housing is a commodity producing a service to accommodate people. Ownership should be indifferent to the utility that the housing produces itself. In other words, the accommodating service that housing produces and the gains or loss from the ownership are independent from each other, as long as all the markets, including related financial markets, rented and sales market of housing, are perfect. Therefore, when you claim the existence of preference of ownership to rented housing, more explanations are necessary. Imperfections of certain markets are presumably an answer to explain this phenomenon. Before considering these factors, we look into more characteristics of the

aspirations for home ownership in Hong Kong.

In actual fact, it is fair to say that aspirations for home ownership was not a cultural attitude in history, but a relatively new behaviour based more on economic calculations and motive. The drive to invest in housing appeared in the 1960s, when the Hong Kong had started its industrialisation. Marjorie Topley, an anthropologist who conducted a fieldwork on saving and wealth accumulation behaviours in this period, described clearly different degrees of eagerness on housing consumption and housing investment in Hong Kong. She pointed out that the people showed a relatively small interest on activities in the home, that is, housing consumption. This is demonstrated by the following description:

“We noted that the demand for housing does not usually come as high on the list of preference goods for the Chinese as on that of the Westerner. The Chinese home does not provide the same opportunities for prestige as does that of the Westerner and in Hong Kong this fact can be of importance. Chinese entertainment for guests is usually in the form of costly and elaborate banquets which need complicated preparation and organisation. For this reason, Chinese social life is carried on largely in restaurants.” (Topley, 1969:195)

This description reveals that social activity in privately owned housing did not appeal to people in Hong Kong at that time. They did not have a zeal to endorse in housing consumption itself. On the contrary, they were very eager to make use of housing as an asset that produced profits. Topley raised several examples, then pointed out that real estate became an important investment object in this industrial period in Hong Kong. Similar incidents are still observable even now:

“On looking over a new block of flats in which he desired to live, my friend found that they were all occupied. The owner himself lived on the top floor. My friend indicated his regret that the owner was unable to accommodate him as he was willing to pay a good rent for a flat in the block. After a moment’s consideration, the owner offered his own flat at a rent higher than the others in the block and moved out. He is now living in a wooden shack on the hillside .” (Topley, 1969:195)

This example clearly describes that the master was less interested in housing consumption and was more eager to profit from housing investment. The next example gives an explanation of a motive behind this profit seeking attitude.

“Unattached working women invest in flats and small houses. They rent them out while they are working This is particularly

true of servants in living-in jobs and live in them in their old age.  
 Many people now save for their old age in Hong Kong.”  
 (Topley, 1969:196)

With the progress of industrialisation, more people earn their income on a monetary basis and more people become isolated from the community network. Under this environment, they find it necessary to save a part of their income for their future life, and to invest these savings into something in order to store its value. Real estate was the most popular object for fulfilling this purpose then, and still is even now. Currently, this economic principle of the home ownership is perceived more clearly and in a more sophisticated way:

“Home ownership is a traditional investment instrument in Hong Kong, as its value has kept on appreciating over inflation, and it has played as a substitute to a pension fund” (Hong Kong Economic Times, 2 December 1997: D1)

Home ownership has been aspired because housing was expected to store its value of wealth, which people gained in exchange for a their lifetime's work. Housing is believed to have carried out its duty so far. Demand for home ownership comprises of a demand for assets that store value as well as a service providing accomodation.

## *ii) Demand for home purchase*

A strong demand for home purchase in Hong Kong is probably attributable to this twofold nature. Furthermore, this might have expanded the sized demand. As a consequence, the amount of affordable expenditure for home purchase was lifted up and was sustained at a high level. The affordable expenditure means an effective demand for home purchase in monetary terms, which will eventually affect property prices. This phenomenon is a possible explanation of the strong demand for home purchase, which contradictorily co-exists with another peculiar housing condition in Hong Kong: the government provided nearly half the population with low rent accomodations which should have fulfilled the accommodation requirements to a large extent.

A peculiarly strong demand for home purchase is represented by high property price-income ratio and affordability ratio, which is the ratio between monthly income and monthly mortgage payment. Figure 1 shows the data since the early 1980s for a case of 40 square feetunit. The table also has the affordability index of the US from 1970 to 1989. A comparison between Hong Kong and US affordability indices indicates the level of burden of households in home purchase is fairly heavy in

Hong Kong: The US index fluctuates between 0.2 and 0.4, and the average level during the period we studied is 0.27, whereas the Hong Kong index fluctuates between 0.4 to 1 and its average is 0.61, which is more than two times that of the US.

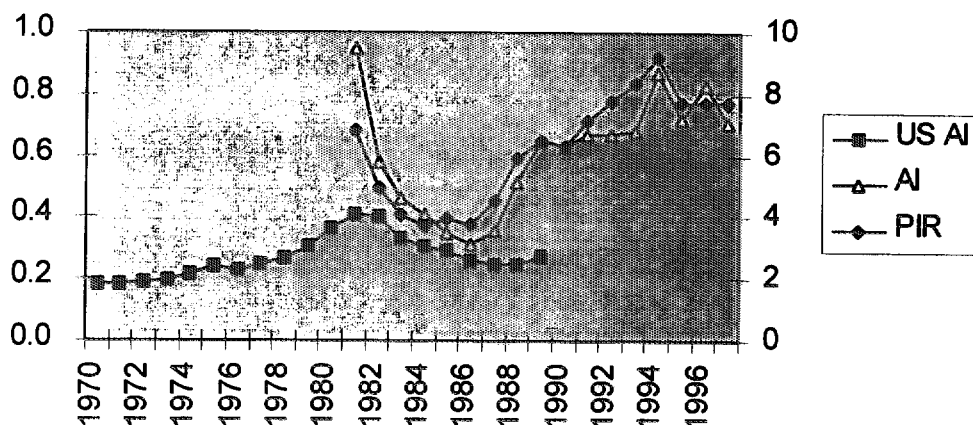
In a historical comparison, we can find a large fluctuation of the index. The property market saw a boom in 1981, when the affordability index reached almost one, which means that almost all of the monthly income is dedicated to mortgage payments. This was the period of asset price appreciation, which was incurred by a chaotic management of one newly emerged developer, the Carrion Group, which eventually went bankrupt. Afterwards, the government and banking system in Hong Kong become more cautious towards mortgage lending. In combination with their prudent attitude and a sluggish economy in 1982 and 1983, this also helped to lower the index, which was sustained during the 1980s. In the 1990s, the affordability index rose over 0.6 points and reached 0.87, the highest level, in 1994. This period featured the phenomenon that the price-income ratio increased faster than the affordability ratio, which implies that mortgage payment costs did not increase as fast as housing price. As a result, the final burden by the mortgagee was not so heavy as in the early 1980s, when the asset prices seemed to have contained the bubble. However, it has already reached a higher level than average in 1996 and 1997, which might reach the maximum level of affordability.

In this way, Hong Kong households show a surprisingly high ability to afford housing. These characteristics may be attributed to the twofold nature of home ownership, as argued above. Housing has played a part in storing the value of a lifetime income, by absorbing a large portion of this income. This is a "demand side" characteristics in monetary terms. Moreover, a peculiar nature of asset structures, which is the "supply side" of an investment measure, is presumed to be related to this high level of affordability index. We will look into this point in the next section.

#### 4. The role of housing as financial goods

In the aggregate level of the economy, the size of demand for assets is represented by aggregate savings, which is equivalent to gross domestic products minus consumption. Referring to this point, the Hong Kong economy enjoyed a saving surplus for most of the post-war period. Table 1 shows a comparison on savings and investments of Asian economies. The saving rate of Hong Kong is more or less at similar level with Indonesia, Korea and Thailand, which turned to saving deficits in the last two consecutive years.

Figure 1: Affordability index and price-income ratio



Note: Hong Kong index's income is the level of maximum limit of HOS applicant. Calculation for 40 square feet domestic flats. Sample period is 1981-97. US: income is median income. Sample period is 1970-1989.

Source: Hong Kong; Calculation by Dr. Rebecca Chiu, Hong Kong Economic Times, 2 December 1997, D1. US; Table 5 in Renaud (1989).

Table 1

## Domestic savings and capital formation of selected Asian economies

(% to GDP)

Economy/year	Gross domestic savings			Gross capital formation		
	1993	1994	1995	1993	1994	1995
Hong Kong	34.5	33.7	31.0	27.6	31.9	34.6
China	41.5	41.4	42.2	43.5	40.0	39.5
Indonesia	35.3	35.3	36.0	33.2	34.0	38.3
Malaysia	35.4	37.6	37.2	35.1	38.7	40.6
Philippines	13.8	14.9	14.7	24.0	24.0	22.3
Singapore	48.5	51.3	55.6	38.4	32.2	33.9
South Korea	35.4	35.5	37.0	35.1	35.9	36.6
Taiwan	27.0	25.8	26.3	25.2	23.9	24.5
Thailand	35.0	35.2	34.2	40.4	41.0	40.0

Source: Hong Kong Bank, Hong Kong Economic Report, April/May 1997



When we look into the nature of savers, a contribution of the private sector is significant in Hong Kong. Though there is a discrepancy in definition with the other economies referred to here. A large portion of the savings in Hong Kong is devised by households, decisions on saving and investment affects to the whole economy's monetary balance.

Table 2

## Public and Private Savings in selected Asian economies

Economy/year		Total Savings	Public Savings	Private Savings
(% to GDP)				
Hong Kong	1973-82	32.3	2.1	30.2
	1983-96	33.5	3.3	30.2
Singapore	1974-80	28.1	5.5	22.6
	1981-90	42.5	18.5	24.0
Japan	1945-54	17.3	5.3	12.0
	1955-70	23.4	5.1	17.2
	1971-80	24.7	4.6	20.1
	1981-88	20.8	6.2	15.8
Thailand	1980-85	19.0	14.3	4.7
	1986-87	23.2	8.6	14.6
Philippine	1980-83	21.9	10.4	11.5
	1984-87	15.5	1.4	14.1

(World Bank, *The East Asian Miracle*, Table 5.6. The data for Hong Kong are compiled by the author. The public sector saving represents the total revenue minus actual expenditure by a calendar year basis. This does not contain the information on semi-governmental sectors, which produces a difference in the definition of public savings from other economies. Private savings is the difference between domestic savings and public savings)

*i) Pension demand and investment portfolio*

Motive of savings is considered as follows: under the perfect market conditions, saving would be motivated for the purpose of storing a part of their current income for a retired life in the future, when no labour income is expected. This motive under perfect market is called a saving motive based on a life-cycle permanent income hypothesis. We may call it the pension demand in a common way. People will save a portion of their income from the pension demand, thereafter they will invest the savings into various kinds of assets such as cash, deposits, equity, bond and property. Table 3 shows a total asset structure, which represents a investment portfolio in the macro-level of the economy, which is the exits

of savings. Moreover, we can find in the table some hints on the following question: why the property has fulfilled a role of storing the value of people's lifetime income so far in Hong Kong?

**Table 3**

**Asset structure (Relative size to nominal GDP)**

	<b>M1</b>	<b>M2</b>	<b>Land Value</b>	<b>Equity</b>	<b>Bond</b>
1981	15%	68%	90%	136%	n.a.
1982	14%	107%	85%	68%	n.a.
1983	15%	121%	84%	67%	n.a.
1984	14%	122%	267%	72%	n.a.
1985	11%	144%	260%	99%	n.a.
1986	18%	166%	240%	134%	n.a.
1987	21%	176%	209%	109%	n.a.
1988	20%	181%	215%	128%	6%
1989	18%	189%	197%	115%	7%
1990	18%	208%	188%	112%	6%
1991	19%	205%	316%	142%	7%
1992	20%	195%	285%	171%	10%
1993	21%	196%	261%	332%	17%
1994	18%	197%	318%	206%	20%
1995	18%	209%	302%	217%	21%

Notes: Land Value: Total Rateable Value denominated by capitalisation rate 0.08./ Rating and Valuation Department, Annual Summary, various issues  
 Equity: Total Market Capitalisation / The Stock Exchange of Hong Kong, Fact Book, various issues  
 Bond: Hong Kong Monetary Authority, Annual Report 1995, 1994.

This table shows the peculiar structure of assets in Hong Kong; that is, a less developed bond market and a large size of property relative to other assets. Here, let's imagine an economy with an equity market and a government bond market. In this economy, the bonds will play as a benchmark of portfolio selection in the security market, it is presumed to be the safest security in the markets as the government promised to redeem it on the fixed date. When the economy is prospected to boom,

the fund will flow into the equity market seeking high profits. When the opposite occurs, the fund will start to escape from the equity market, seeking more stable or fixed profit. In this economy, the bond market would be opted by investors. Bonds, i.e. the debt of the government, paradoxically, transforms into a representative form of the credibility toward the state and the economy, facilitating to minimise the risk and the fluctuation of investments in the economy. In general, less risky and stable return of investment is desired from the nature of pension demand. In order to fulfil the requirement, increase of investment options is desirable, in particular, a safe asset like the bonds.

However, Hong Kong lacked the option. Under these circumstances, we may infer that property absorbed the fund, as a substitute for the bonds as long as its profit is comparable to the equity from the investor's view. In a passage from the Hong Kong Economic Times, cited in section 2, also describes the function of real estate that the investors has expected: storing the value of savings against inflation. We need to take into account the existence of the pension demand in the property holding behaviour in Hong Kong among the demand for assets we saw in section 3.2. A strong demand for property becomes realistic in terms of economic rationale when the property fulfils the pensions demand.

Theoretically, asset is held by people for two main advantages: profit and liquidity. The more profitable and the larger liquidity is, people would opt to hold the asset. Liquidity of the property is not as high as the securities. Recent institutional development of financial markets are improving the liquidity of the property. The Hong Kong Monetary Authority established the Mortgage Corporation in 1997, which facilitates a securitisation of mortgage lending. In order to raise the liquidity of property. This means the improvement of safety and quality as an asset. Another change has started in the late 1980s : a development of bond markets in Hong Kong. The government started to promote bond market development in order to give more profundity to the financial markets in Hong Kong: issues of the Exchange Fund bills and notes. This development might facilitate long-term investment in Hong Kong, that will induce an expansion of the pension fund, which lacks in society so far. Moreover, the government are about to start the Mandatory Provident Fund (MPF) in 1998. These developments will affect people's saving and investment behaviour, and their relationship in the asset market. The possible consequences will be argued later.

## *ii) Insurance demand*

So far, we have focused on the pension demands for saving. In this section we will look into another motive for saving, which is the precautionary motive under uncertainties, getting out of the perfect market assumption. In this context, we can think that the demand for home ownership as an asset also contains a motive to insure the uncertainty they are faced with.

The insurance industry is, in spite of its long history, another less developed field among financial markets in Hong Kong. Two indicators on the development of the insurance industry; density (direct gross premium per capita) and penetration ratio (direct gross premium over GDP) tell the current situation of the industry. The Hong Kong insurance industry shows low density (597 USD), i.e., per capita payment on insurance, and penetration ratio (3.07%), i.e., investment size on insurance relative to GDP, compared to the OECD economies (Yu, 1997: 35). The share of life insurances in Hong Kong are as large as the OECD economies in contrast. These indicators reveal that the size of investments in insurance policies are still very small, moreover, most of them are investment in those whose characteristics are close to saving.

As is often pointed out in Hong Kong, life insurance is regarded as a form of saving, rather than a pure insurance. According to a public poll survey in Yu (1997), however, 66.2 per cent of respondents who bought life insurance do not rely on life insurance as a form of the retirement income, and 25.3 per cent totally or partially rely on their life insurance policy for the retirement income. In contrast to these facts, 83 per cent of the respondents bought a life insurance policy with saving components, and only 14.3 per cent bought only term insurance, which pure purpose is an insurance. Moreover, among the respondents who had not bought life insurance, 41 per cent regarded regular saving as a better substitute for life insurance, 23.4 per cent regarded that real estate is a better substitute (Yu, 1997:120-121).

## *iii) "Insuring an uncertain life"*

If home ownership was used as a basis for insurance purpose, and if the property fulfils the expected function, the owner-occupiers would show indifferent behaviour against uncertainties they are face with. Moreover, in Hong Kong's context, the public rental housing tenants and the subsidised owner-occupiers share half of the existing housing stock. Subsidies in these forms is presumed to have affected saving behaviour as

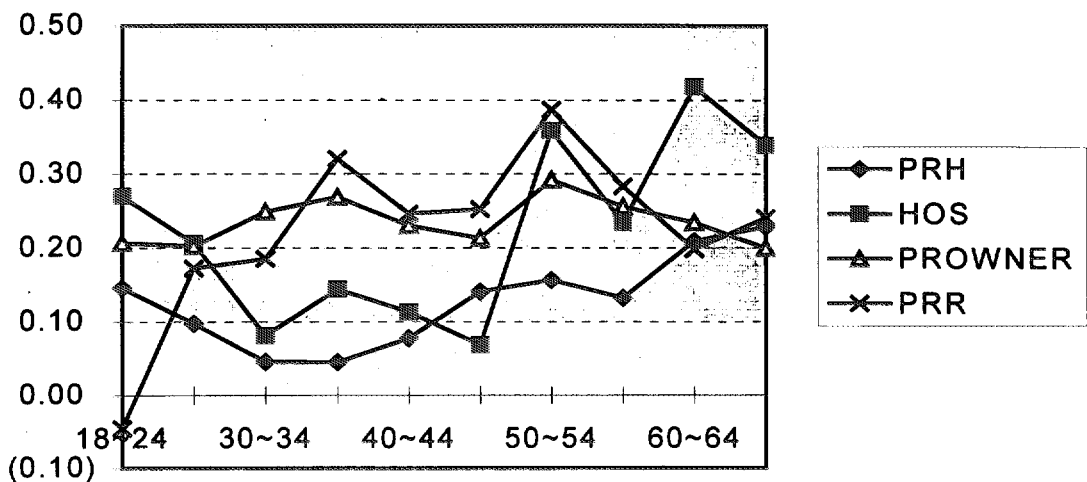
'safety net' in society. Figure 2 shows an age-saving rate profile for 1989/90. This shows that public rental housing tenants draw a relatively constant saving rate profile through the ages, the HOS residents increased their saving rate with age. On the contrary, the private housing residents draw a 'humped shaped' saving-rate profile; i.e., save more in youth and less in the old age. Likewise, differences in housing tenure seems to induce different saving behaviours.

**Table 4**  
**Indicators of insurance industry**

	Density(US\$)	Penetration ratio(%)	Life insurance share (%)
Hong Kong	597.32	3.07	48.3
OECD	1621	8.16	48.99
UK	2103	12.92	58.66
US	2496	10.28	38.23
Japan	2921	8.64	73.32
New Zealand	391	3.11	46.94

Source: Yu (1997) Table 3.2.

**Figure 2 Saving rate profile for 1989/90**



In order to test the hypothesis on existence of different saving behaviour by different housing types, the author estimated the consumption function which accommodated the terms on income uncertainty. The significance of the uncertainty terms is the key to this test. In the context of housing conditions in Hong Kong, there may be two types of insurance function related to housing: One comes from home ownership, which is expected to work as an asset to insure the risk. The other comes from benefits provided to the public rental housing tenants; a large subsidy from low rents and a secured entitlement of accommodation. The residents in the Home Ownership Scheme are considered to benefit from both two functions: a profit from asset holding and a benefit from the government. Table 5 shows a summary of our estimates<sup>1</sup>.

**Table 5-1**  
**Estimates of the uncertainty terms by housing type for 1989/90**

	Constant prudence		General specification		Decreasing prudence	
	Coefficient	tRatio	Coefficient	tRatio	Coefficient	tRatio
<b>Public Rental Housing tenants</b>						
UC2	7.56E-06	3.387	1.07776E-0	3.651		
UC2*HW			-3.17E-11	-1.66		
UC2/HW					0.000899883	0.529
<b>HOS residents</b>						
UC2	-0.000013527	-0.97	5.44E-06	0.257		
UC2*HW			-9.52E-11	-1.19		
UC2/HW					0.038782346	0.947
<b>Private Rental Housing tenants</b>						
UC2	-1.24E-06	-6.91	-1.72E-06	-4.11		
UC2*HW			9.84E-13	1.249		
UC2/HW					-0.029875214	-1.85
<b>Private Owner-Residents</b>						
UC2	-2.25E-06	-2.22	-4.24E-06	-2.19		
UC2*HW			6.74E-12	1.201		
UC2/HW					-0.014255914	-0.42

Here, we were able to confirm our hypothesis that the difference in housing type induced different behaviour against their income uncertainty. Our findings are summarised as follows: First, the private rental housing tenants clearly shows a precautionary saving motive in 1989/90. It implies that they will decrease their consumption against their expectations on income uncertainty, as a result, they increased savings. Interestingly, their response against the income shock changed to

insensitive in 1994/95 with a low t-value for uncertainty terms. This may imply different responses to their income certainty prospect from the stages of the business cycle; a boom period in 1994/95 and sluggish period in 1989/1990.

**Table 5-2**  
**Estimates of the uncertainty terms by housing type for 1994/95**

	Constant prudence		General Specification		Decreasing prudence	
	Coefficient	tRatio	Coefficient	tRatio	Coefficient	tRatio
<b>Public Rental Housing tenants</b>						
UC2	1.66E-06	2.637	1.90E-06	2.949		
UC2*HW			-1.68E-11	-2.25		
UC2/HW					0.003907279	0.79
<b>HOS residents</b>						
UC2	-1.75E-06	-1.39	4.18E-06	2.075		
UC2*HW			-1.42E-11	-3.13		
UC2/HW					-0.02145896	-0.79
<b>Private Rental Housing tenants</b>						
UC2	5.39E-07	1.714	5.13E-07	1.649		
UC2*HW			-1.22E-12	-2.02		
UC2/HW					0.120215425	4.487
<b>Private Owner Residents</b>						
UC2	-1.45E-06	-4.52	-1.34E-06	-3.07		
UC2*HW			2.74E-13	0.408		
UC2/HW					-0.020133111	-0.55

Notes: Estimates here are those of uncertainty terms in consumption function estimated on the household with one earner, following the method in Note (2). Details are presented in Appendix in Chapter 6 of the thesis by author.

In contrast, the Home Ownership Scheme residents were insensitive to income uncertainty, which was represented in low t-ratio value for uncertainty terms. This implies that HOS residents are well insured somehow against the shock of income uncertainty. This is fairly consistent with our presumption. Interestingly, Private Ownership Residents demonstrate a precautionary saving for both periods of 1989/90 and 1994/95, which is against our presumption that home ownership may work to insure income uncertainty. The results say that home ownership through private market reduce their consumption, which implies a loss of

the utility of this group.

The results here suggested us two possible explanations of their behaviour: (1) home ownership through private market does not work sufficiently as a quasi insurance market, as we presumed in the previous section, at least, the two periods we tested here. Or, (2) Home ownership adds sensitivity to income shock. It is difficult to differentiate the factors on the question which is the cause that brought about precautionary saving behaviour. At least, we may assert the home ownership decreased consumption by increasing sensitivity towards income uncertainty. Thus, we may also argue that it was not rational to own the home intending to insure their life, which is different from saving motive as the former assumed imperfection of insurance market. Home ownership did not work as an instrument to insuring the life at least. However, our estimation have not denied that the property played as a vehicle for storing the value of savings, which is a different function from that of insurance.

The consumption function was estimated with following independent variables: income and human wealth term and uncertainty terms. Uncertainty terms has three specifications here; (1) constant prudence, (2) general specification, (3) decreasing prudence with human wealth. We omit estimates for incomes and human wealth terms because of limited space.

The name of variables: UC2 is squared deviations between the expected income and the individual current income. HW is human wealth, which represents accumulation of future income.

Estimation is derived by auto-regressive ordinary least squared regression.

Regarding a problem of rental payment expenditure by home owner (HOS and private owner occupier ), HES employed "imputed rental payment" in their estimation. This method calculate a proxy rental payment which is assumed to pay themselves. Thanks to this procedure, we can make a comparison the consumption patterns of rental housing tenants and ownership occupiers under the same criteria.

From the observations above, it may be necessary to evaluate a role of public housing towards household behaviours. Under the condition that private home ownership does not work sufficiently as an insurance against income shock, and that public housing seems to have worked as a



social net against income shock. We also need to consider the housing policy from its impact on consumption ability of the household and business cycle.

The public housing tenants, especially tenants in the older estates, are often criticised for their receipt of a heavy subsidy from the government. However, their income level is not necessarily high compared to others in society, nor are most of their job is secured. Table 6 shows distribution of income sources by housing types in 1994/95. Here, we can see that the public rental housing tenants mostly rely on their wage income, whereas the private ownership occupiers earn a substantial part of their income from financial assets, such as pensions or interest income. Therefore, it is worth noting that our estimated confirmed that the public housing provides them with a "social safety net" against their income uncertainty, which contributed to sustain their consumption expenditure level in the aggregate level. This 'social safe net' function needs to be evaluated and considered more, when we will consider the residualisation or privatisation of the public rental housing. As it not only gives them shelters, but also eventually contributes to sustain the level of effective aggregate demand of the economy. The home ownership policy by the government does affect the macro economy as well, though this point is often neglected in Hong Kong due to its openness of the economy, which means a substantial size of the aggregate demand comes from external sector. However, on the ground that consumption has already becomes the largest part of the aggregate demand and the housing type may influence consumption-saving decisions as well, the housing policy may not neutral to the business cycle.

Table 6

Income source by income group and housing type

Table 6-1

Public Rental Housing

	Salary and wages		Self employment		Outwork		Ownership		Pensions etc.		Total income	N
< = 25%	4,061	94%	139	3%	2	0%	31	1%	67	2%	4,301	1407
> 25-50%	7,556	96%	257	3%	0	0%	43	1%	21	0%	7,876	1340
> 50-75%	10,509	92%	690	6%	10	0%	224	2%	6	0%	11,438	987
> 75-90%	15,745	84%	663	4%	0	0%	2,151	11%	183	1%	18,742	161
> 90-100%	24,972	63%	2,176	5%	0	0%	12,552	32%	61	0%	39,761	19

Table 6-2

## HOS residents

	Salary and wages		Self employment		Outwork		Ownership		Pensions etc.		Total income	N
< =25%	3,614	91%	9	0%	11	0%	32	1%	303	8%	3,970	214
> 25-50%	7,125	85%	195	2%	0	0%	158	2%	887	11%	8,364	202
> 50-75%	9,584	68%	463	3%	0	0%	169	1%	3,950	28%	14,167	361
> 75-90%	12,517	52%	886	4%	0	0%	873	4%	9,807	41%	24,084	371
> 90-100%	23,605	62%	516	1%	0	0%	3,951	10%	9,991	26%	38,064	80

Table 6-3

## Private Rental Housing tenants

	Salary and wages		Self employment		Outwork		Ownership		Pensions etc.		Total income	N
< =25%	3,005	92%	96	3%	0	0%	47	1%	110	3%	3,258	320
> 25-50%	7,546	95%	277	3%	0	0%	0	0%	121	2%	7,944	197
> 50-75%	10,363	85%	516	4%	0	0%	735	6%	515	4%	12,128	271
> 75-90%	17,556	86%	607	3%	0	0%	1,465	7%	873	4%	20,501	185
> 90-100%	43,304	82%	993	2%	0	0%	7,124	14%	1,300	2%	52,721	212

Table 6-4

## Private Owner-Occupier

	Salary and wages		Self employment		Outwork		Ownership		Pensions etc.		Total income	N
< =25%	2,758	85%	102	3%	0	0%	18	1%	365	11%	3,243	713
> 25-50%	7,026	83%	169	2%	3	0%	169	2%	1,113	13%	8,480	539
> 50-75%	9,541	69%	514	4%	0	0%	417	3%	3,412	25%	13,884	864
> 75-90%	12,821	53%	846	4%	0	0%	1,828	8%	8,521	35%	24,016	748
> 90-100%	24,400	42%	1,985	3%	0	0%	8,673	15%	22,857	39%	57,914	639

Source: Household Expenditure Survey, 1994/95, Census and Statistics Department.

## 5. Home ownership and the business cycle

### *i) The possible impact of home ownership policy on the household economy*

Observations in the last section gave us hints when analysing the nature of housing demand and the impact of current housing policy in Hong Kong. They suggest that the following possible impacts on the home ownership promotion policy towards the economy. First, private housing residents, both tenants and owner-occupiers, have a tendency to increase their saving taking precautions against income uncertainty. In contrast the private dwellings, both rental and HOS worked to insure their income uncertainty, and sustained consumption demand. In particular, HOS residents consumption clearly shows indifference to income uncertainty. We can guess that the advantageous characteristics of HOS, relatively low prices and better quality of property, contributed to work sufficiently as an asset to insure their life.

Based on these, we may infer the following possibilities:

(1) The impact of the Tenants Purchase Scheme in the business cycle also depends on the quality of property. If its quality can offer a good prospects of asset profitability as the HOS dwellings does, it would be neutral to business cycle. In the Tenants Purchase Scheme, the government stressed to help to improve the quality of property for their resale. In order to raise profitability of investments in public rental housing, they established very low prices. In this setting, the first buyer may get a relatively high profit if the property may be sold at current prices. However, we can easily imagine that its profit has limitation when we take into low quality of public rental housing dwellings. In all, the government policy, consciously or unconsciously, urged the people to save more instead of consuming more. If a prospect of the resale is not good, which means their income uncertainty is not fully insured, at least compared to a case as the rental housing tenants, residents may take a future precaution by decreasing consumption. This will suppress the consumption demand in the economy.

(2) The other implications are on consumption-saving behaviour of private owner-occupiers. Contrary to a common belief, estimates in section 4.3 showed that private property does not fully insure against income uncertainty. The government target, 70 per cent ownership rate also includes this groups. If the other condition does not change, this trend may decrease the consumption demand in the whole economy.

### *Impact of development of pensions fund*

The second implications in the previous section is related to another trend in the financial markets. That is an introduction of a Mandatory Provident Fund (MPF) and the development of pension funds in the same course. In 1995, the government enacted the Mandatory Provident Fund, which is a form of forced saving. It is due to start its operation to collect funds after completing the formulation of its extensive program, a guideline note, probably in 1998<sup>2</sup>. The Fund requires both employees and employers to contribute an amount equal to 5 per cent of the employee's earnings. The earnings level subject to the Fund are from 4,000 HKD to 20,000 HKD on a monthly basis. It covers employees of aged from 18 to 64, including self-employed persons. The benefits are supposed to be fully vested, to be portable, and to be paid in a lump sum at the age of 65 (Yu, 1997: note 39). However, the benefits are estimated to be far from sufficient to afford the whole period of their retired life. For example, for a worker with a monthly income of 10,000 HKD, the amount accumulated in MPF after his ten years work will last only for one or two years after his retirement (Yu, 1997:102). This is apparently a disincentive to pay for the MPF. Yu pointed out that insurance companies or pension funds may offer better insurance policies or funds (Yu, 1997:103). In this sense, though the MPF itself will provide an insufficient amount of savings, it may induce the development of pension funds, which channels savings of households to the financial market, presumably out of property investments. At least, a fund flow into property market might be reduced to the extent of sized fund which will be forced to flow into MPF.

Prospective development of pension funds might be reinforced by institutional developments in Hong Kong financial markets, such as expanding bond markets which facilitated more effectively long term investment. At the moment, existing pension funds performed poorly (Yu, 1997:101-102). This inferiority of pension fund investment might have accelerated concentration of funds into real estate so far. The institutional development in financial markets contributed to reduce the risk of long term investment, which might induce a change in relative superiority of real estate investment to pension fund in its return.

## **6. Concluding remarks**

Demand for housing consists of two main factors on the whole: One is the accommodation demand, which is determined by demographic factors such as population, family structure etc., and which might be called the fundamentals of the demand. The other is the investment

demand, which we have considered so far.

Demographic factors has been studied precisely in the demand forecast by the government. A figure of 85,000 for flat supply target by the government is also based on this estimates that mainly were taken into account of demographic factors (Hosing Branch, 1997). In this sense, the government target reflects a demand for housing in terms of quantity. Demand for housing in monetary terms, however, needs to take investment demand into consideration as well.

Regarding investment demand, considerations in the previous sections focusing on factors that affects the consumption-saving decision by household; pension demand and insurance demand of savings. In this framework, our consideration also suggested possible developments in the future: (1) The promotion of home ownership might incur an increase in macro-savings, which at the same time impies a shrink of consumption demand in the economy, (2) Development of financial market, in particular, long term investment mesures might induce a change in a fund flow into property market. Diversification to financial goods like pension funds or transfer of fund from property market.

It is, of course, impossible to perfectly predict whether the nature of the demand for home purchasing will change or not. However, it is worthnoting that the housing policy will affect the macro economy via the consumption and saving decision by the household. The home ownership promotion policy needs to take this factor into account. It is often emphasised that an increase of supply, both in housing and land is the only way to resolve the high property price problem in Hong Kong. However, there is a clear evidence that we need take more care about natures of demand for home purchases: that is, the fact that property demand had shrink suddenly and the property price had fell down just after the stock market turmoil in October 1997. Adjustment of demand is more effective and much faster to curb the property price than the "supply side policy" via increase of land and property, which takes more than 6 to 7 years on average. Reducing the extent of the asset demand fund from the property market, and transferring into appropriate financial goods is a desirable and sound situation for households who rarely has a strong political representative in society, and for the whole economy eventually. This is because housing is originally made to accommodate people.

## Notes

1. This is a part of results in the author's thesis preparing for submission to the University of Hong Kong. Other than the results of Table 2, the study also conducted the estimation for 1989/90 and 1994/95 on several kind of samples. Results reveal that presence of family insurance function as well as insurance function form the public housing or home ownership.
2. Press release on "the role of government of financial sector development in Hong Kong" on 24 June 1997.

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