



JOURNAL OF VALUATION AND PROPERTY SERVICES

VOLUME 11, NO. 1, 2011

Revisiting the Aftermath of the 1997 Asian Financial Crisis: An Examination of the Role of the Danaharta in Addressing the Non-Performing Loans in the Property Sector in Malaysia

• *Dr Rahah Ismail*

Affordable Housing Within The Middle Income Households in Malaysia: Challenge to Enter Homeownership

• *Dr Wan Nor Azriyati Wan Abd Aziz*

House Price Inflation and Affordability: Challenges and Issues

• *Zainal Abidin Hashim and Tamat Sarmidi*

Announcement

Notes to Contributors



National Institute of Valuation (INSPEN)
Valuation and Property Services Department (JPPH)
Ministry of Finance, Malaysia

Patron

YBhg. Datuk Abdul Hamid bin Abu Bakar
Director General
Valuation and Property Services Department
Ministry of Finance, Malaysia

Advisor

YBhg. Datin Sr Faridah binti Mohammed

Editor-in-Chief

Sr Hj Suhaimi Harun

Executive Secretary

Dr Rohana Abdul Rahman

Editors

Mashitoh Halim
Sr Mohd Arif Mat Hassan

Production Executives

Kamarudin Yusof

Publication / Printing

National Institute of Valuation (INSPEN)
Valuation and Property Services Department
Ministry of Finance
Persiaran INSPEN
43000 Kajang
Selangor Darul Ehsan
Malaysia

Tel: +603-8911 8888

Faks: +603-8925 0640

E-mail: research@inspen.gov.my

Website: www.inspen.gov.my

Subscription rate:

RM50.00 plus postage RM5.00 for each copy

© Copyright Reserved 2014

ISSN: 1511-3345

Objective

The Journal of Valuation and Property Services is a publication specifically intended for property professionals to keep abreast with the developments in the property industry as well as the real estate profession.

This journal serves as a platform for the exchange of information and ideas on property issues. It seeks to:

- i. address areas of major interest and practical relevance to the real estate profession.
- ii. create awareness of new theories, techniques and applications as well as related concepts relevant to the real estate profession.
- iii. discuss policy issues and regulations and their implications on the property market.

We therefore welcome articles with theoretical and practical relevance to the real estate industry and profession, property valuation, property management, property investment and market analysis.

Copyright Reserved

Copyright of this publication is held by National Institute of Valuation (INSPEN), Valuation & Property Services Department (JPPH), Ministry of Finance, Malaysia.

No parts of this publication may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher. No responsibility is accepted for accuracy of information contained in the text or illustrations. The opinions expressed in these articles are not necessarily those of the editor or the publisher.

1

2

REFEREE PANEL

Professor Dr Graeme Newell

School of Economics and Finance
University of Western Sydney
Australia

Dr Jasmine Lim Lay Cheng

University of Ulster
Jordanstown Campus
Northern Ireland
United Kingdom

Professor Dr Alastair Adair

Pro-Vice-Chancellor (Communication and
External Affairs)
University of Ulster
Northern Ireland
United Kingdom

Dr Norziha Md. Zain

Director
State of Wilayah Persekutuan
Valuation and Property Services
Department
Ministry of Finance, Malaysia

Professor Dr Chris Eves

School of Civil Engineering and Built
Environment
Queensland University of Technology
Australia

Dr Rahah Ismail

Director
State of Johor
Valuation and Property Services
Department
Ministry of Finance, Malaysia

Dr Goh Ban Lee

228, Jalan Pemancar
11700 Gelugur
Pulau Pinang
Malaysia

Dr Zailan Mohd. Isa

Director
State of Selangor
Valuation and Property Services
Department
Ministry of Finance, Malaysia

Associate Professor Dr Md. Nasir Daud

Department of Estate Management
Faculty of Built Environment
University Malaya, Kuala Lumpur
Malaysia

Professor Dr Ting Kien Hwa

Department of Estate Management
Faculty of Architecture, Planning &
Surveying
UiTM Shah Alam, Selangor
Malaysia

JOURNAL OF VALUATION AND PROPERTY SERVICES
Volume 11, No. 1, 2011

CONTENTS	PAGE
Revisiting the Aftermath of the 1997 Asian Financial Crisis: An Examination of the Role of the Danaharta in Addressing the Non-Performing Loans in the Property Sector in Malaysia . <i>Dr Rahah Ismail</i>	1 - 18
Affordable Housing Within Middle Income Households in Malaysia: Challenge to Enter Homeownership . <i>Dr Wan Nor Azriyati Wan Abd Aziz , Assoc. Prof. Dr Noor Rosly Hanif and Dr Kuppusamy Singaravelloo</i>	19 - 32
House Price Inflation and Affordability: Challenges and Issues . <i>Zainal Abidin Hashim and Tamat Sarmidi</i>	33 - 47
Announcement	
Notes to Contributors	

REVISITING THE AFTERMATH OF THE 1997 ASIAN FINANCIAL CRISIS: AN EXAMINATION OF THE ROLE OF THE DANAHARTA IN ADDRESSING THE NON-PERFORMING LOANS IN THE PROPERTY SECTOR IN MALAYSIA

Dr Rahah Ismail

Valuation and Property Services Department (JPPH)

Ministry of Finance Malaysia

rahah@jp-ph.gov.my

ABSTRACT

During the 1997 Asian Financial Crisis, non-performing loans in the property sector accounted for more than 30 percent. It was alarmingly high for one sector and was said to have had a crippling effect on the banking sector. Many properties were auctioned off with subsequent detrimental effects on the property industry.

This paper discusses the problem of non-performing loans in the property sector in Malaysia during the 1997 Asian Financial Crisis. It evaluates the role of the national asset management company, Danaharta, solely set up to stabilise the banking and the property industries. Evidence from the central bank will be used to assess the effectiveness of Danaharta in handling the non-performing loans. It also discusses how the non-performing loans were negotiated with the banks, how the loan was restructured, and the economics of such transactions. Finally, it evaluates the impact of Danaharta in managing the non-performing loans in the property sector in Malaysia.

Keywords: non-performing loans, asset management company, asset disposal, asset recovery

1. INTRODUCTION

The Malaysian property market was at its peak in the third quarter of 1997. Speculation was rife and the market players were capitalizing on the flourishing market situation. When the 1997 Asian Financial Crisis hit Malaysia in the third quarter of the year, many were taken by surprise and slow to respond accordingly. The reality sunk in the following year when unprecedented levels of NPLs plagued the financial system, followed by a credit crunch which almost crippled the property industry. The property market which was previously booming was hit badly with a high number of unsold housing units, falling prices and rents.

The financial crisis caused systemic distress in the Malaysian financial system. As most of the banks were heavily burdened with non-performing loans in the property sector, the Malaysian government quickly intervened with four measures to address the non-performing loans that threatened the stability of the economy. The measures taken were the formation of the National Asset Management Company, Danaharta, to address the NPL; the consolidation of financial institutions to increase the resilience of the banking industry; the establishment of the Corporate Debt Restructuring Committee to address deterioration of the corporate sector and a special purpose vehicle; and Danamodal to provide capital injection to the banking industry and address the capital erosion in the banking industry.

The focus of this paper is on Danaharta, the national asset management company. This paper attempts to evaluate the role of the national asset management company, Danaharta, solely set up to stabilise the banking and the property industry. Evidence from the central bank will be used to assess the effectiveness of Danaharta in handling the non-performing loans. It also discusses how the non-performing loans were negotiated with the banks, how the loans were restructured and the economics of such transactions. Lastly, the paper evaluates the impact that Danaharta addressing the non-performing loans (NPLs) had on the economy at large and in the property industry in Malaysia.

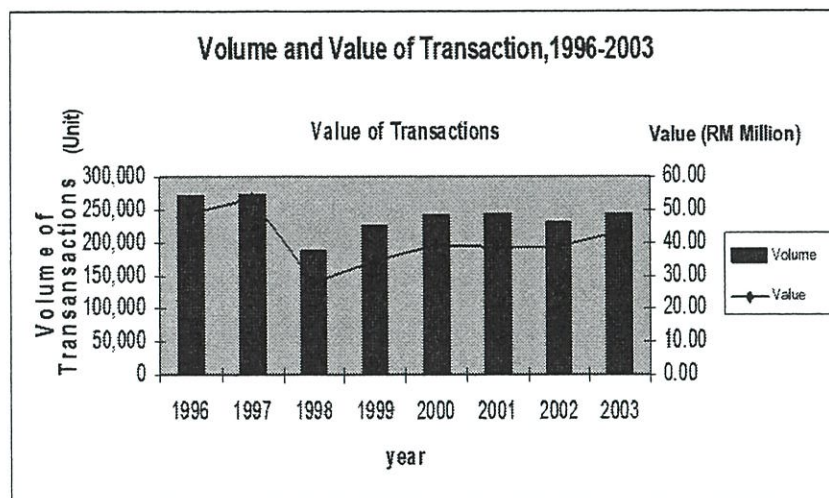
2. BACKGROUND

In the 1990s, Malaysia was categorised by the World Bank as one of the East Asian Economic Miracles, a reference made to high performing East Asian economies (World Bank, 1993). It showed an exceptional record of high and sustained economic growth for more than two decades. In 1990s, the real GDP grew at an average rate of over 8 percent. It achieved a remarkably high physical and human capital accumulation as well as rapid technological improvement. With a comparatively cheap and ready supply of skilled workers and up to date technology, Malaysia became a popular foreign investment destination. Foreign direct investment, in 1996 accounted for 59.60 percent (RM20,411.80 million) of the capital investments (MIDA, 1998). There were high inflows of foreign funds. In the banking sector a high interest rate was maintained to attract foreign investors looking for high rate of return. Against this background, Malaysia received a reasonably large inflow of foreign funds.

Unlike developed economies, the Malaysian economy has been highly dependent on the banking sector for financing most of its economic activities, while other avenues for raising funds like bonds and other financial derivatives are neglected (Mahani, 2000; Fung, 2004). It was also highly dependent on the property market in one form or another. Substantial amounts of bank loans were channelled to the property sector, causing property prices to spiral up. Noland (1999) argued that this was because alternative forms of investments were not well developed. In 1997 when the East Asian economies were hit by the financial crisis, it brought about panic and uncertainty. There were rapid reversals of capital inflows, property prices fell and the resulted in the crippling of the property market. In 1998, the GDP experienced a negative growth.

2.1 The Malaysian Property Market Before the Crisis

The year 1996 and 1997 was a boom period for the Malaysian property market. Against the backdrop of high economic growth, rising levels of income, market optimism and easy availability of credit, there were vigorous investments in certain property sub-sectors.



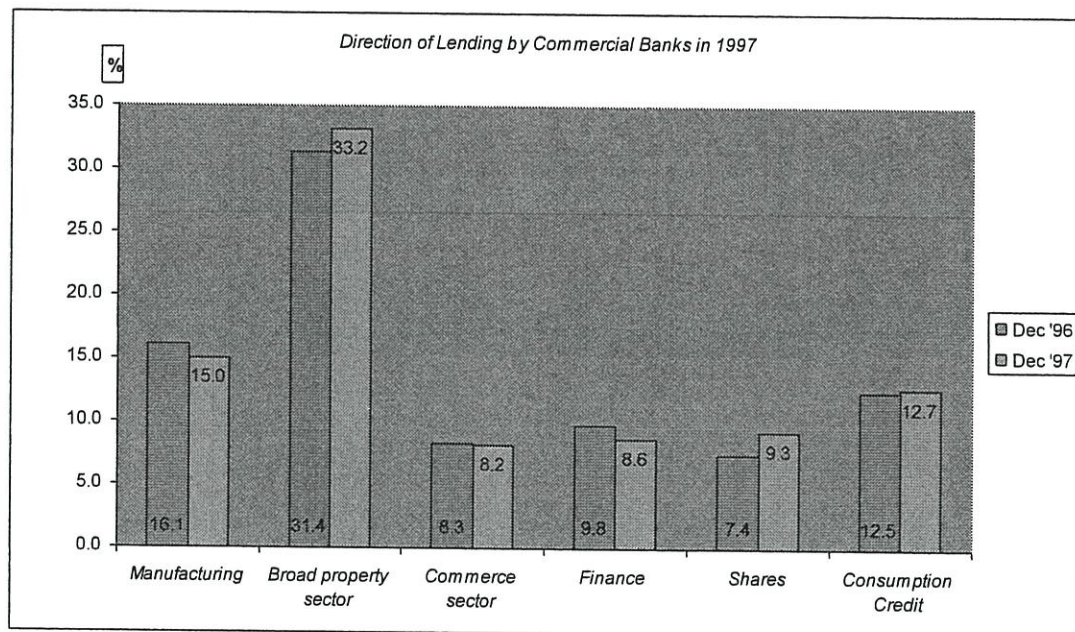
Source: Valuation and Property Services Department (VPSD),
Property Market Report, various years

Figure 1: Volume and Value of Property Transaction, 1996-2003

As can be seen from Figure 1, the property market peaked in 1997. The volume and value of transaction were the highest during this year. Speculative development and buying were widespread. The market optimism caused an oversupply in commercial, hotel and condominium sub-sectors. The incoming supply of retail space in shopping complexes in the Klang Valley for the following three years was one and a half times more than the existing supply during the year (VPSD, 1998). Overbuilding was also apparent in the residential sector. These speculative activities supported by the readily available credit fuelled the inflationary trend. The prices of residential property in major towns increased by 20 to 25 percent per annum in the 1994 to 1996 period, compared to only 4.5 to 6.4 percent during the 1992 to 1993 period.

2.2 Property Finance

Loans to the property sector comprise the largest slice of the commercial banks advances. As shown in Figure 2, in 1997 broad property sector housing consumed the most credit, while other sectors like the manufacturing and services that propelled the economy were not allocated as many funds as the property sector. This raised the question of whether the funds were properly allocated and channelled for macroeconomic growth and stability. Growth in such sectors contributes to job creation and ensures that the standard of living, employment and wages do not stagnate.



Source: Bank Negara Report, 1997

Figure 2: Direction of Lending

As at the end of 1997, loans to the broad property sector made up more than a third of their total loans. Such large flow of funds not only caused distortion to the economy but also distortion in the property prices.

2.3 Non Performing Loans in the Property Sector

This financial crisis triggered a deflationary impact on the property market. As these loans were collateralised with the real estate at over-inflated prices, the banks suffered significant erosion of value of their collateral. The over-exposure to the property sector caused the banks to be badly hit. During this time the ability to pay back the loan by the borrowers was also reduced. Borrowers could not easily trade off their properties to pay off the loan as banks had tightened up their lending policy. Subsequently, potential buyers had great difficulties financing their purchase. Incidence of arrears and non-performing loans were high.

By August 1998, the net NPL ratio for the banking system had reached 11.4 percent. This is above the normal tolerable level of NPLs that the banks can absorb. It was projected to reach 15 percent by the end of 1998. Given the worrying state of affairs, the government resolved that the net NPL ratio had to be brought down to a single digit as soon as possible.

Table 1 shows the level of NPLs in broad real estate sector. At the end of 1997, the total NPLs was RM24 billion, of which RM4.82 billion (36.5 percent) was from the property sector. The NPLs further increased in 1998 to RM59.2 billion and the portion channelled to the broad property sector increased to RM28.3 billion or 35.5 percent. The level of NPLs attributable to the broad property sector continued to move upward in relation to its proportion to total loans.

Table 1: Non-Performing Loans (NPLs) in the Broad Real Estate Sector 1997 to 2004

	1997	1998	1999	2000	2001	2002	2003	2004
Total Loan (RM Billion)	421,205	413,638	427,691	454,212	470,434	439,032	473,979	502,522
Total NPL (RM Billion)	24,044	59,263	53,740	52,714.9	66,616.6	62,315.8	56,894.8	52,057.1
% of NPL	5.70839	14.3273	12.5651	11.6058	14.1607	14.1939	12.0037	10.3592
NPL in BPS	8,767	20,831	18,949.8	20,874	27,347.5	26,817.5	25,775.7	30,773.3
% of NPL in BPS	36.4623	35.1501	35.262	39.5979	41.0521	43.0348	45.3041	59.1145

Source: Bank Negara Malaysia (1997)

^{*1} NPL: non performing loans

^{*2} BPS: broad real estate sector

3. LITERATURE REVIEW

Many studies have established the significant link between NPLs and the real economy. The increase in NPLs results in the malfunctioning of the banking sector. This affects a banks soundness, distorts actual economic performance, and threatens to impede economic development. At the pinnacle of high NPLs severity, banks are unwilling to give new loans, which creates a credit crunch that ultimately leads to a financial crisis.

The financial crises is also a confidence crises. As market confidence erodes, panic situations deepen. Deposits outflow and asset values decline. In the property market, studies have shown that the decline in confidence manifests by the decline in formerly robust real estate markets. This is evidenced by falling in occupancy of office and retail spaces, rents and values, foreclosures, and a growing inventory of unsold properties (Cooke & Foley, 2000). As a result, restoring confidence becomes a critical part of the solution (Mahani, 2002).

In many East Asian countries, the economy is highly dependent on the property industry. A substantial proportion of bank credit is channeled to the property sector. Thus, as property values dropped, much of the banks' capital eroded. It has been established in many studies that the deflation of asset values contributed to non-performing loans (NPLs).

Studies show (Fung, 2004, Klingebel, 2000) that many economies addressed the issue of NPLs by removing them from normal banking operations through the establishment of asset management companies (AMC). Hanohan and Klingebel (2000) identified two types of AMCs; the public asset management companies, and the private management companies, which are usually the banks own asset management unit managing their own non-performing assets. Studies have shown however that in comparison to other banks, public AMCs were able to more rapidly and efficiently recover assets and cash through legal actions, disposal of loans, and the sales of equity positions in exchange for NPLs.

The advocates of public AMCs argued that Governments can manage acquired NPLs effectively through their special powers and enabling them to maximise value. This is done by swapping debt for equity, playing an active role in managing and turning the borrowers' company around or foreclosing on non-performing collateral (Haggard, 2000). On the other hand, the opponents of public AMCs argued that they may succumb to political pressure especially in cases where they hold a large portion of the corporate claims and may lead to a bailout. This is costly to the taxpayers.

In bank based models, NPAs are transferred to a specialised bank departments or workout units or to a separate special purpose organisation affiliated with bad banks. The assets are no longer reflected in the bank's book. The creation of bank based AMCs may or may not involve some government financial assistance. The advocates of bank based AMCs argued that it gives the bank the incentives to workout the NPLs, and avoid future losses by lending prudently and strict monitoring. This type of AMC does not involve public funds.

The asset management companies manifest in many forms. The first model is the rapid asset disposition agency, where its role is to try to dispose of the banks' asset within a short time frame, usually at fire-sale losses. The advantage is that the assets are liquefied and the capital can be turned around. Second, is the ware-housing model, where the agency takes over NPLs and warehouses them until the market recovers before commencing asset disposal. The third is an asset management company, where the agency acquires and restructures viable NPLs and liquidate NPLs of non-viable borrowers, manages assets to make it financially viable and attractive to new investors, with the aim of maximising recovery value. According to Klingebiel (2000) for emerging markets, restructuring agencies offer a larger scope of political interference. A rapid asset disposition agency is better suited.

In the transfers of NPLs to the public AMCs there is always the issue of pricing. It is often argued that the purchase price and disposal price is depressed which is at substantial cost to the banking industry. Banks are concerned over the implications on the value management of their own assets. Thus many banks are likely to oppose the acquisition of NPLs by public AMCs. In most cases transfers of NPLs to an AMC government is intended to lower NPLs of banks rather than remove overall NPLs, which allows the bank to focus on its lending business.

4. RESEARCH METHODOLOGY

In order to assess the impact of NPLs carved out by Danaharta from the banking system, as well as its contribution to the property industry, the following analysis, measurements and indicators were used:

- i. Credit growth
Analysis on credit growth is carried out to detect any positive changes after the NPLs have been carved out by Danaharta.
- ii. Correlation analysis between credit growth and the NPLs carved out by Danaharta
A correlation analysis is carried out to establish the relationship between credit growth and the carved NPLs.
- iii. Restoration of confidence
Earlier studies establish that credit growth contributes to the regeneration of economic activities and ultimately restore confidence. There are two dimensions of confidence: the business confidence and consumer confidence. Having established the credit growth in the previous analysis, the following analysis is carried out to see whether business and consumers' confidence was restored.
 - a. Business confidence can be seen from the opening and the expansion of office spaces. Data on office space occupancy is studied to see any positive movements in the occupancy levels after the NPLs were carved out from the banking sectors. Correlation analysis is then carried on the credit growth and office space occupancy.
 - b. Consumers' confidence can be seen from the willingness of consumers to make major capital commitments. Data on residential purchase is taken as an indicator of consumers' confidence. Changes in residential transactions are analysed and correlation analysis is carried out to establish the relationship between consumers' confidence and credit growth.
- iv. Property Market Recovery
Data on volume and price of property transactions were analysed to detect movements in the property market and correlation analysis is carried out to establish relationships between credit growth and market recovery.

Interviews with the former Danaharta management personnel and its client banks were carried out to get an insight on the workings of the asset management companies, how prices were negotiated, loan restructured and the empowerment through the Danaharta Act.

5. DANAART, THE NATIONAL ASSET MANAGEMENT COMPANY

To address the alarmingly high NPLs in the banking sector, in June 1998, the Malaysian government incorporated an asset management company, Danaharta, under the companies Act, 1965 to relieve the banks of the pressure of NPLs and enable them to concentrate on their lending operations during the period of financial instability. Danaharta was given a mission to re-energise the banking sector by carving out NPLs and maximising the recovery values of acquired NPLs. The setting up of Danaharta was financed through the issuance of RM3.2 billion in government guaranteed bonds, RM2.0 billion in loans from government agencies and the issuance of RM8.22 billion in zero coupon bonds to selling financial institutions. The total sum was RM13.22 billion. Danaharta was operational up until 2005.

To ensure its effective execution of removing NPLs from the banking sector, Danaharta was given three special powers under the Pengurusan Danaharta Nasional Berhad Act 1998. First, is the statutory vesting, where Danaharta was allowed to take over from the selling banking institution, with the same right as the creditors, thus enabling Danaharta to acquire assets with the certainty of titles. The second power is pertaining the right to appoint special administrators to take over and manage the company without having to go through the court. The third power is pertaining to foreclosure of properties, where Danaharta do not have to go through court process.

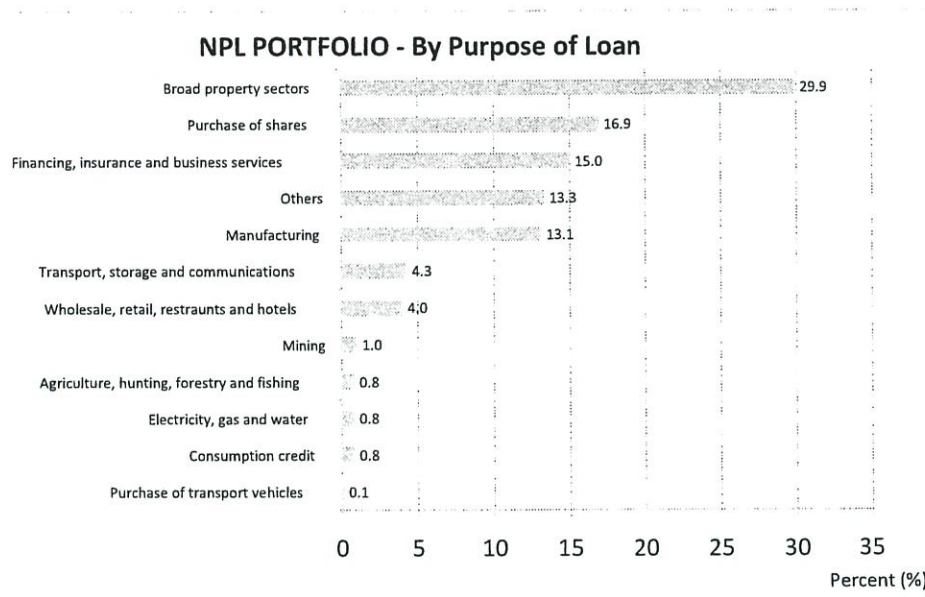
5.1 Acquisition of NPLs

Danaharta did not attempt to remove all NPLs from the banking sector. It merely relieved the banks of their NPLs to enable them to stabilise and continue their operations. The NPLs that remained in the banks were at a tolerable level. Danaharta's removal of NPLs comprised of acquiring and managing NPLs. Acquired NPLs refers to those NPLs which Danaharta purchased from the banks, while managed NPLs refers to those accounts belonging to banks, SIME bank and BBMB banks, where Danaharta managed the loans on behalf of the government and central banks.

Danaharta carried out two major exercises in carving out the NPLs. The primary carve out was from September 1998 to June 1999. In this first exercise, accounts worth RM5 million and above were acquired. The NPLs were both secured and non secured loans. All securities associated with the loans were transferred to Danaharta. By June 1999, Danaharta's NPLs portfolio was RM39.33 billion, out of which RM17.79 were acquired NPLs and a total of 21.54 billions were managed NPLs, taking out 34% of banking system NPL (Danaharta, 2000)

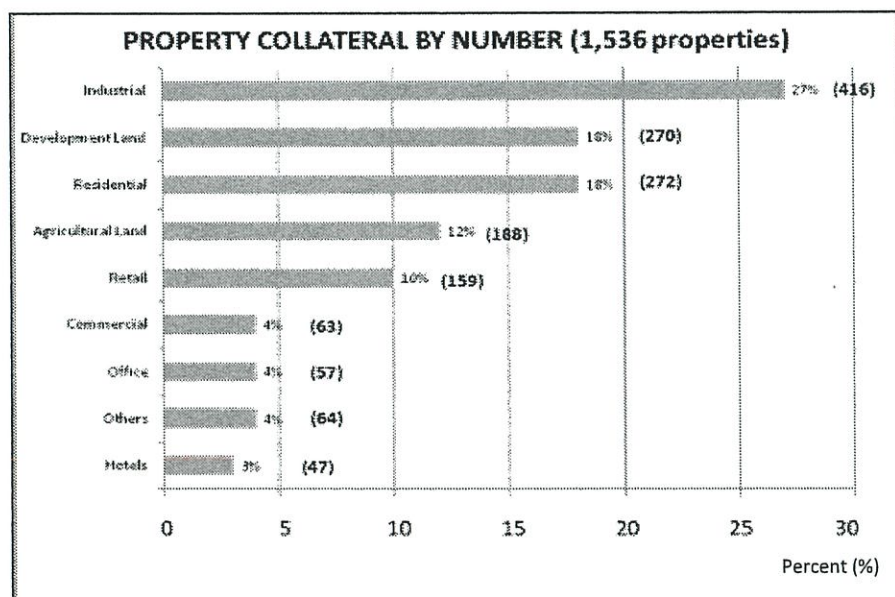
The secondary carve out was from 1 July 1999 to 31 March 2000. During this time Danaharta was very selective. It only acquired loans of borrowers with total value of RM50 millions and above. The secondary carve out raised Danaharta's NPLs portfolio to RM47.68 billion of which RM19.71 billion was acquired assets and RM27.97 billion was managed assets.

About 43% of Danaharta's RM47.49 billion NPLs portfolio was secured by property, comprising 1,536 properties with a total estimated value of RM17 billion. Of these, almost one third are property related loans. Figure 3 shows the NPL profile by purpose of loans. Most of the property related loans were a result of indiscriminate investment in the property market during the boom in the mid 1990s. Property developers and non property developers alike jumped onto the bandwagon to capitalise on the booming market. With the high composition of property in the NPL portfolio, there were concerns from many quarters on the likelihood of Danaharta ending owning and warehousing all of the property assets backing its NPLs.



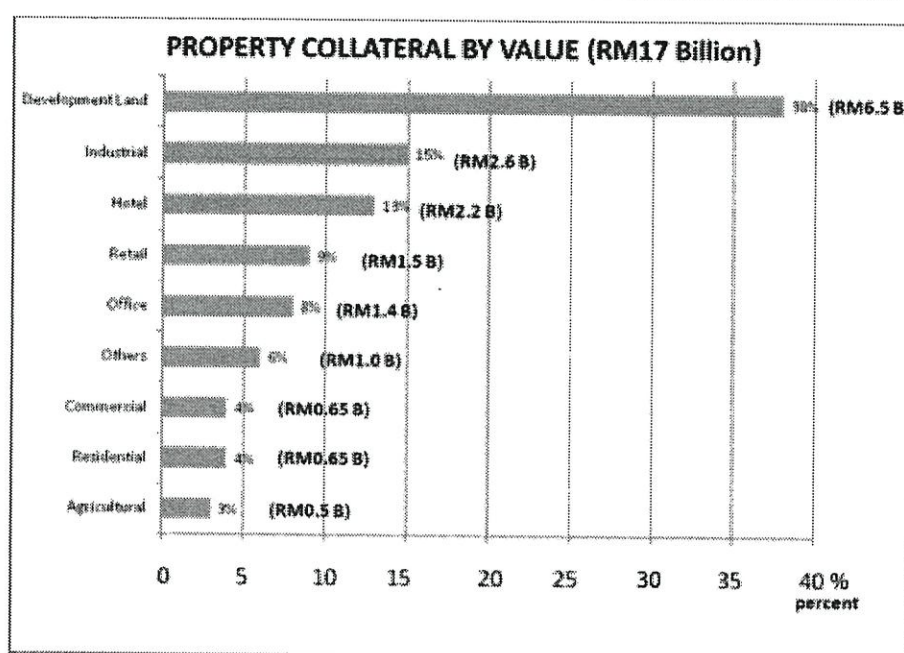
Source: Danaharta (1999)

Figure 3: NPL Portfolio –By Purpose of Loan



Source: Danaharta (1999)

Figure 4: Property Collateral by Number



Source: Danaharta (2000)

Figure 5: Property Collateral by Value

5.2 Acquisition Price

The financial institutions were encouraged to sell their NPLs to Danaharta. For loans that were backed by property collateral, the price paid was the fair value of the underlying property collateral. The fair market value was set at 95% of the market value of the property at the acquisition date, as determined by an independent licensed valuer. As at that time, it was a thin market and the banks were concerned of undervaluation. However, this did not appear to be so as the prices fetched through sales were within the range of the indicative value, i.e. the value set by the independent licensed valuer.

For NPLs backed by quoted shares, the price paid depended on size of the stake in the company that were pledged as collateral. The larger the stake, the higher the control and therefore the higher the price.

In all cases where the fair value was found to be higher than or equal to the loan amount outstanding, Danaharta's purchase price was equal to the full amount outstanding. Where the fair value was less than the loan amount outstanding, but higher than or equal to the principal amount outstanding, the purchase price was the fair market value. However, in cases where the fair value was lower than the principal amount outstanding, the purchase price would be equal to the principal amount outstanding. For unsecured loans, Danaharta's purchase price was equal to 10 percent of the principal amount outstanding. On average the NPLs were purchased at an average discounts of 54.6 percent. The total purchase price for all the acquired NPLs was RM8.94 billion. The acquisition was paid in cash and bonds.

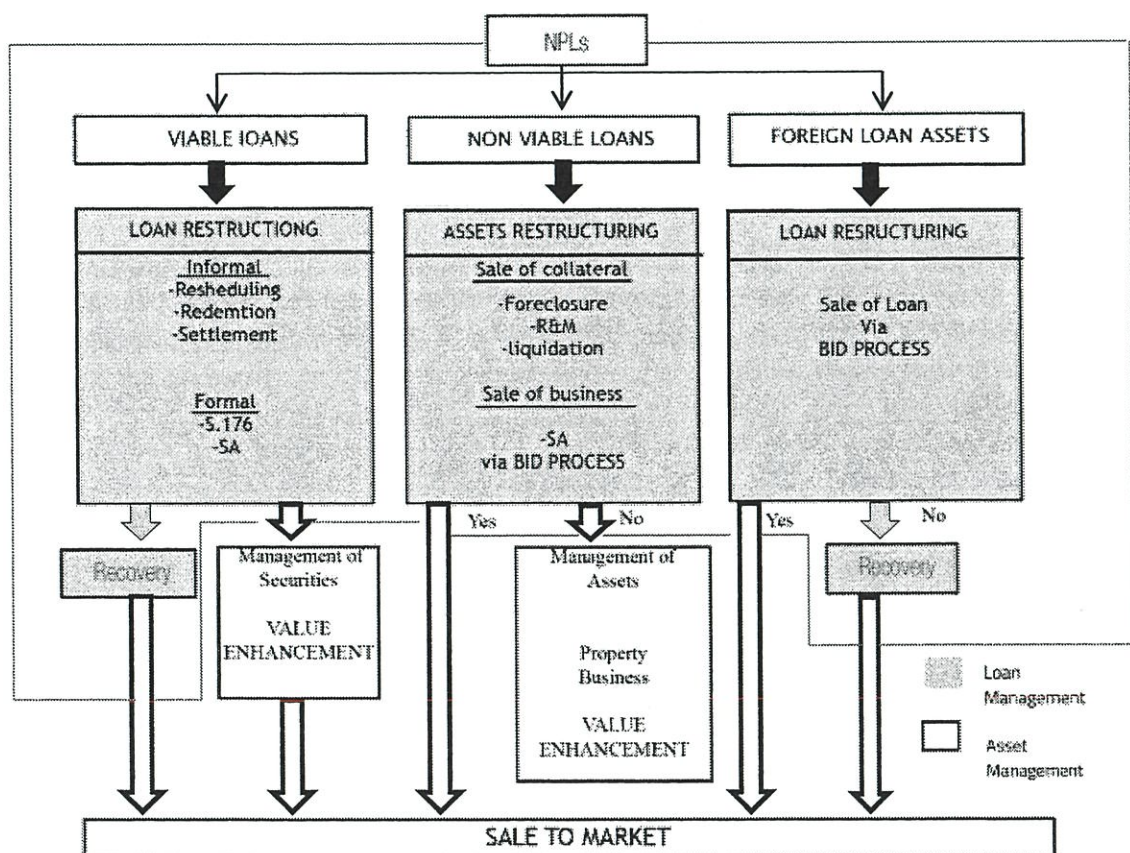
There was no compulsion for financial institutions to sell their NPLs to Danaharta. This is evidenced by the period up to December 1999 (Danaharta 2000). Offers from Danaharta to

purchase RM7.290 billion in book value of NPLs had been rejected by the selling banks. This represented 27.7% of the total NPL (acquired and rejected) of RM26.39 billion. The same happened in the corresponding period of 2001 where RM8.03 billion was rejected by banks representing 28.5% of the total NPL. Loans were bought only if the selling financial institutions felt that the price offered was fair and agreed to do so.

To encourage the financial institutions to sell their NPLs, incentives were offered which included offers to share profits earned from asset recoveries with the financial institution on an 80:20 (Bank:Danaharta) ratio, allowing financial institutions to amortise the shortfall arising from the sale of NPLs for a period of up to five years. Banks that chose not to sell their NPLs to Danaharta had to immediately write down 80% of Danaharta's valuation. This would impact negatively on the profit and loss account.

5.3 Recovery Strategy

As mentioned above it was Danaharta's mission to maximize the recovery value of the acquired NPL. Except for the foreign loans, where Danaharta's legislative bypasses did not work outside Malaysian jurisdiction, it did not dispose the NPLs outright. Danaharta resolve its non-performing assets/loans in a variety of methods. The recovery strategy is contingent upon the best recovery value that it can reap in each. Figure 6 describes the strategy adopted by Danaharta in the recovery of loans.



Source: Danaharta Final Report, 2005

Figure 6: Recovery Strategy

Danaharta tried to turn the assets around and dispose them after value enhancement efforts had been taken. This involved assessing the viability of each of the NPLs acquired and deciding on the appropriate strategy. The NPLs were categorised into viable loans, non-viable loans, and foreign loans. Viability was evaluated from two aspects, the company and industry viability.

If both the borrower's company and the industry in which it operated were deemed viable, Danaharta would adopt a soft approach. This involved the special administrator preparing a workout proposal which was then given to an Independent Advisor for evaluation, taking into account all creditors and shareholders. Upon approval from Danaharta, with the consent from secured creditors, the workout proposal was implemented. Loans were then restructured by either rescheduling the payments or additional working capital was given. In doing so, Danaharta enhanced the recovery value. The appointment of Special Administrators helped to preserve the value of the company's asset and allowed it to remain as an on-going concern, without which lenders might have to liquidate and weakened the companies and erased their value.

Under the soft approach, borrowers also had the option to choose quick settlements of loans, where they were given 12 months to do so, or borrowers and creditors could voluntarily formulate schemes to restructure loans. This was done under the purview of a special committee who acted as advisors, known as the Corporate Debt Restructuring Committee.

A hard approach would be adopted if the borrower's business was deemed non-viable. It involved the sale of borrower's business and assets. The borrower's business was put up for sale if it was no longer viable but the industry where it belonged remained so. However, in the case where both the company and the industry were not viable, the underlying assets were put up for sale.

As at 31 December 2004, 1298 properties were foreclosed with a total consideration of RM 2.2 billion. The Danaharta Act 1998 allowed Danaharta to sell underlying collateral which were either auction, tender or private contract via a private treaty. In comparison, the financial institutions which were only allowed to sell foreclosed properties via public auction. The flexibility for Danaharta enhanced the chances of selling the properties.

5.4 Recovery

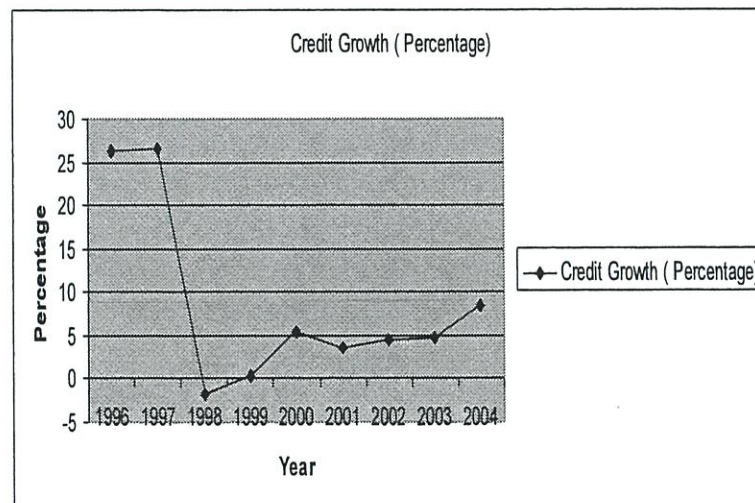
As at 30 September 2005, the total NPLs recovered was RM29.03 billion. This is equivalent to a 55 percent recovery rate. This recovery rate was considered an achievement when compared to similar agencies in the region which achieved between 20 to 50 percent. The total recovery proceeds were distributed to Government and 38 other financial institutions.

When Danaharta ceased operations on 31 December 2005 the residual recovery assets at that time was RM3.66 billion. It reverted to the control of Ministry of Finance Incorporated (MOF Inc.) who subsequently appointed a wholly owned subsidiary, PROKHAS Sdn. Bhd. to act as a collection agent for the residual recovery assets.

6. FINDINGS

By July 1998, the NPLs in the banking sector made up 14 percent of the outstanding loans which was far beyond the tolerable range of 2-3 percent. Credit growth contracted by 1.8 percent. Banks tightened their lending and switched their attention to rehabilitating the NPLs in their books. Danaharta's role was to remove the NPLs pressure from the banking sector and to allow them to concentrate on their lending operations. This was intended to ensure that the real sector of the economy continued to receive financing and generate economic activities. The question is did Danaharta make an impact in stabilising the economy?

By the end of the primary carve out in June 1999 about 34 percent of the total NPLs were removed from the banking sector. This meant that 66 percent was still in the banking system. Although only 34 percent was removed, as shown in Figure 7, credit growth of 0.3 percent was detected in 1999 and 5.4 in the following year 2000. From the year 2001 to 2004 the annual credit growth was between 3.6 to 8.5 percent. This indicates the 34 percent removal of NPLs from the banking system managed to relieve significant pressure from the banks, enabling them to continue their lending operations. Correlation analysis carried out between the carved loans and credit growth shows a strong correlation, with a coefficient of 0.86.



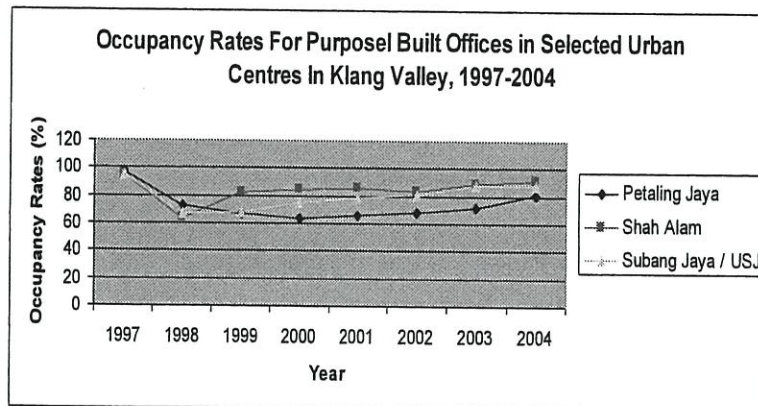
Source: Bank Negara Report, various years

Figure 7 Credit Growth 1996 - 2004

However, in spite of Danaharta's effort to remove from the banking sector, the share of NPLs in banking system and the broad property sector reduced marginally in 1999 until 2001, but went on the increase to a higher level than 1998. This can be explained by the fact that Malaysia like one East Asian Countries, its economy is highly dependent on the property industry. As can be seen from Table 1 above, by the year 2004, 43.9 per cent of total loans were directed to the property sector. As the property prices plunged in 1998 and did not recover quickly, many property loans become non-performing.

The property market was in turmoil in 1998. As shown in Figures 8, 9 and 10, occupancy rates for purpose built offices in selected urban centres in the Klang Valley dropped

dramatically. The volumes of residential transactions reduced substantially and the property prices plunged in 1998. However the situation improved in the year 1999 and subsequent years that followed. The improved occupancy rates for purpose built offices meant that new businesses were opening up or existing businesses were expanding. This can be translated into business confidence. Correlation analysis carried out between credit growth and occupancy rates in selected Klang Valley urban centres show a strong correlation with a coefficient correlation of 0.73.



Source: Property Market Report (1997-2004)

Figure 8: Occupancy Rates For Purposed Built Offices in Selected Urban Centres In Klang Valley, 1997-2004

Table 2 shows the result of correlation analysis in respect of carved out loan and credit growth; correlation of credit growth and the property industry performance.

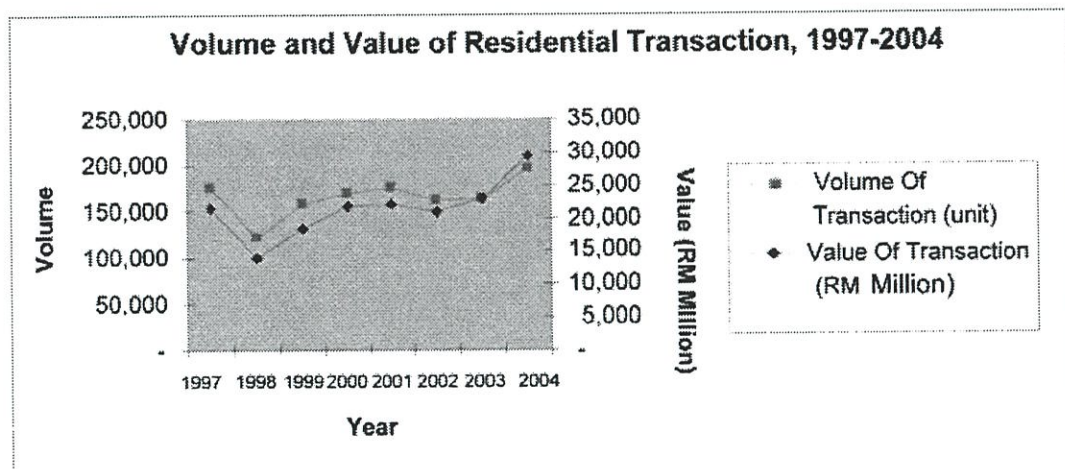
Table 2: Correlation Analysis, Carved out Loans, Credit Growth and Property Industry Performance

Carved out NPLs By Danaharta and Credit Growth		
Carved Out Loan Period	1998-2003	0.86
Credit Growth Period	1999-2004	
Credit Growth and Business Confidence		
Credit Growth	1998-2003	0.73
Occupancy Rates of Purpose Built Occupancy	1999-2004	
Credit Growth and Consumers Confidence		
Credit Growth	1998-2003	0.55
Volume of Residential Transaction	1999-2004	
Credit Growth	1998-	1.0
Value of Residential Transaction	1999-2004	
Credit Growth	1998-2003	0.88
House Price	1999-2004	

Note: Correlation between credit growth and volume of residential transactions is given a one year lag time to reflect the time taken for credit growth to impact on the property market activities.

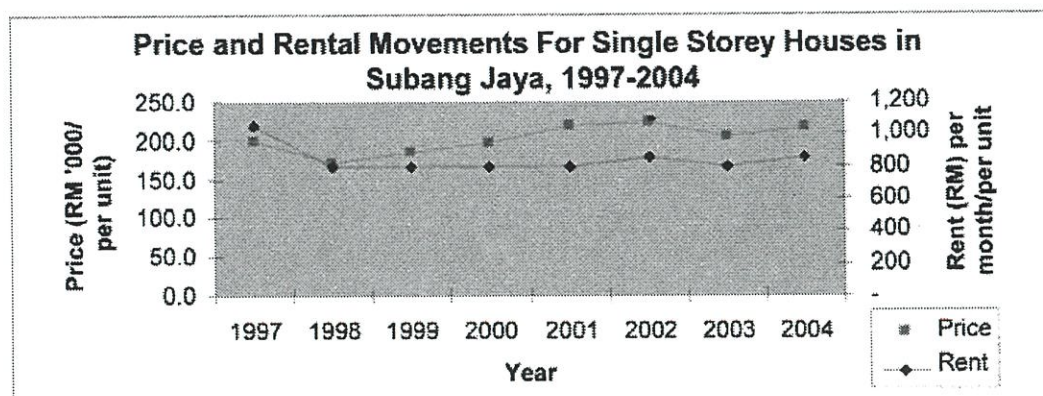
The credit growth not only restored business confidence but also consumers' confidence. This can be seen from the increased volume and value of residential transactions as well as increases in the house prices, shown in Figures 9, and 10. It meant consumers were confident to commit to big capital expenditure, a condition that exists only when there is job security. The correlation between credit growth and the volume and value of residential transactions shows a moderate correlation with volume of transaction (correlation coefficient of 55) and a perfect correlation with value of transaction (correlation coefficient of 1).

The house prices also increased. There is also a positive strong correlation between credit growth and house price. These findings, in line with previous studies that revealed credit growth and an increase in house prices, are somewhat related.



Source: Property Market Report, 1997-2004

Figure 9: Volume and Value of Residential Transactions, 1997-2004



Source: Property Market Report, 1997-2004

Figure 10: House Price and Rental Movements for Single Storey Houses In Subang Jaya

Danaharta's strategy in restructuring or rehabilitating viable loans was equally important. It averted large corporations from liquidation and loss of employment for its workers. In essence, big corporations were given the chance to get out of the red. Danaharta's approach in disposing the non-performing asset is to be commended. It had managed to prevent the property from being sold at fire-sale losses which would have created a panic situation in the industry. Finally, its recovery rate of 55 percent is above the recovery rates of NPLs in the other East Asian economies.

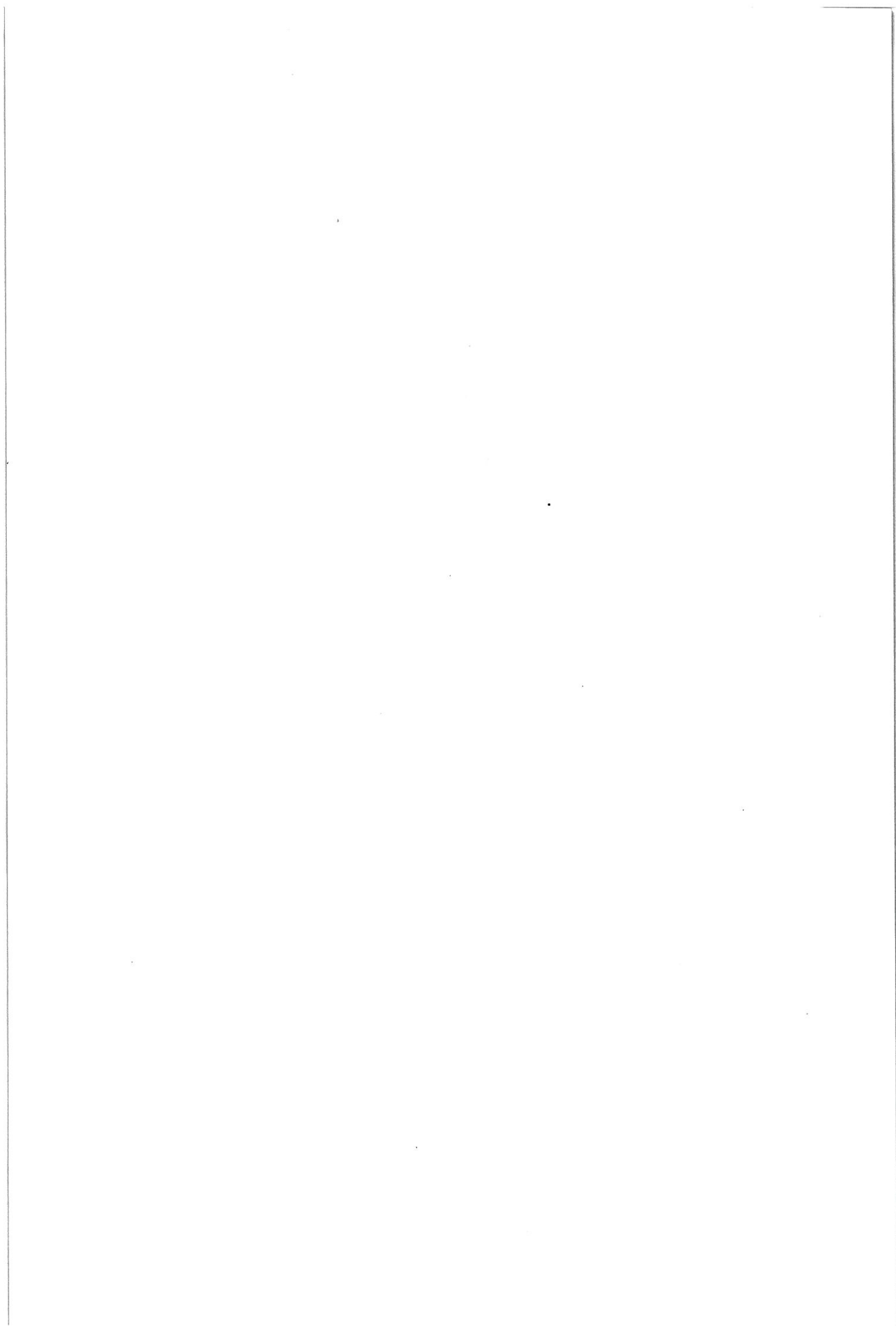
7. CONCLUSION

By 1999, the Malaysian economy was showing signs of recovery. The GDP grew by 5.4 percent. Other economic indicators also showed signs of recovery with inflation and unemployment rates low at 2.8 percent and 3 percent respectively. Even though the total NPLs initially removed from the banking system was only 34 percent, it was enough to help the banks continue their lending operations. Credit growth improved from 1999 onwards.

The most important contribution by Danaharta was the restoration of public confidence in the economy. The restructuring and rehabilitating of viable loans meant that defaulting corporations did not have to liquidate their businesses. Danaharta's move to not rapidly dispose its assets immediately, prevented a property market panic situation and the further falling of property prices. Danaharta was instrumental in the return of broader economic stability and growth in Malaysia.

REFERENCES

- BNM Report , Bank Negara Malaysia, Kuala Lumpur, year 1997-2004
- Cooke, D. & Foley, J. (2000), *The Role of Asset Management Entity: An East Asian Perspective* in A study of Financial Markets, Asian Development Banks.
- Danaharta Annual Report various years, Kuala Lumpur
- Danaharta Final Report, 1998-2005, Kuala Lumpur
- Fung, B., George, J., Hohl, Stefan., & Ma, G., (2004). *Public Asset Management East Asia: A Comparative Study*, Occasional Paper No.3, Financial Stability Institute
- Inaba, N. et al. *Non performing loans and the real economy*. Retrieved 4 May 2009 from <http://www.Bis.org/publ/bppdf/bispap22.g.pdf>
- Hanohan, P., & Klingebel, D (2000). Controlling Fiscal costs of Banking Crisis, Worldbank
- Haggard, S., (2000). The political Economy of Asian Financial Crisis, Person Institute of International Economics.
- Kliengebel, D.,(2000), *Asset Management Companies Lessons from Cross Country Experience* paper presented at Financial Sector Policy Global Dialogue Series, November 27, 2000.
- Mahani Z.IA (2002) *Rewriting the Rules: The Malaysian Crisis Management Model*, Prentice Hall: Petaling Jaya. Malaysia.
- Malaysian Industrial Development Authority (MIDA), Annual Report, 1982-1997
- Noland, M, (1999) Asian Financial Crisis Update, paper presented at Milken Institute Global Conference, March 1999, accessed on 10 October 2008 from www.milkeninstitute.org/pdf/nolandpdf
- Property Market Report (various years), Valuation and Property Services Department, Kuala Lumpur.
- World Bank Policy Research Bulletin. (1993), *The Making of The East Asia Miracle*, Volume 4, Number 4, accessed on 8 November 2008 from <http://www.Worldbank.org/html1/dec/Publications/Bulletins/PRBvol4no4.html>



AFFORDABLE HOUSING WITHIN THE MIDDLE INCOME HOUSEHOLDS IN MALAYSIA: CHALLENGE TO ENTER HOMEOWNERSHIP

**Dr Wan Nor Azriyati Wan Abd Aziz, Assoc. Prof. Dr Noor Rosly Hanif and
Dr Kuppusamy Singaravelloo**

Centre for Studies of Urban and Regional Real Estate (SURE)

Faculty of Built Environment

University of Malaya, Kuala Lumpur

ABSTRACT

The growth of the Malaysian housing sector has been underpinned by the correlation between three forces; growing population, high rates of urbanization, and growing economy. There are policies currently in place that assist to address housing for the needy, particularly low income households. However, little is done to attend to the needs of middle income households. This study seeks to examine the affordability profiles of middle-income earners in each major city to derive the level of house price they can afford. The study also evaluates accessibility to affordable housing amongst the middle income households. Based on the literature review and surveys on respondents from households in each of the chosen major towns and cities in Malaysia, the study establishes that middle income households can be categorised into three main sub-groups; Low-Middle Income, Middle-Middle Income, and Upper-Middle Income. Further insight into the type of house preferred and affordable prices by these middle income households revealed that there is an explicit mismatch between affordability and housing price throughout the case study areas in Malaysia. The study concluded that the current affordability challenge faced by this middle income household warrants a greater role by the Malaysian government in meeting the housing needs of this group.

Key words: Affordability, middle income households, affordable housing, affordable prices

1. INTRODUCTION

The issue of ensuring sufficient supply and distribution of affordable housing is becoming a major housing policy concern in most developed and developing countries. There is a policy imperative to address the need of the low income people and the practice of providing assistance for housing. This is well established in most developed countries and is used to improve housing affordability for lower income households, most of whom are on incomes well below median. The mechanisms adopted are through the provision of rent assistance to those in the private rental market, and through the provision of income geared subsidies to those in public housing. In the context of Malaysia, the provision of subsidised low-cost housing for home ownership and public housing for renting are examples of housing assistance provided by the state to improve housing affordability for the lower income households.

However, concerns have been expressed about affordability challenges faced by the middle-income households (MIH) who are finding it difficult to enter private sector homeownership near their place of work. Further, these households are excluded from current housing assistance programs in most developed and developing countries. The latest development for housing policies in Malaysia witnessed the role of the state in providing assistance to these households. The revival of interest among policymakers in Malaysia to explore the impact of escalating house prices on the position of low to medium paid workers is driven by the growing recognition of MIH failing to access their preferred home ownership locations. This trend on the growing failure of home ownership, once perceived as available to almost all working-age Malaysians in order to successfully accommodate those in the economic mainstream, has become a policy dilemma. The implication is that there may be a growing spatial divide between the locations in major cities and towns in Malaysia which MIH can afford to live. This will become increasingly apparent as jobs tend to be concentrated in areas of higher housing costs.

Drawing on case studies in major towns and cities of Malaysia, this study seeks to investigate the affordability profiles of middle-income earners in a few major cities of Malaysia, in order to determine affordable house price levels. The study also investigates the profiles of affordable housing supply (both existing and future supplies) in terms of the prices, the types of houses and the locations. Specifically, this research intends to address key issues with respect to middle income groups as follows:

- a. What is affordable housing in the local context?
- b. What are the affordable prices?
- c. What type of houses are affordable in the market?

2. CONCEPTUALISING THE MEANING OF AFFORDABILITY

Landt and Bray (1997) and Burke and Ralston (2003) suggested that whilst estimates of the number and composition of those with affordability problems are sensitive to the measures employed, there are many results that are robust to whatever measure is employed. At a microeconomic level, there is a significant amount of consistent information in the last decade about which groups are most vulnerable to housing affordability problems, which reinforces results from earlier decades.

Affordability can be thought of as being a problem of differing duration. It can be:

- a. A short term “threshold” problem for people having difficulty meeting the up-front costs of entering either home purchase or rental (due to deposits, transaction costs, high mortgage to income levels, etc).
- b. An “on-going” problem for households where, for example, high initial housing costs fail real terms in relation to household income over time (or may actually increase).
- c. An “episodic” problem resulting from an unplanned change in household circumstances (e.g. illness, family break-up) or from unpredicted external factors (e.g. periods of unemployment, change in lending rates, etc).

Policy options will be different for each type of affordability problem (Nguyen, 2005). However, most evidence to-date does not provide a means of distinguishing between these problems, nor does it provide a means of determining the extent to which affordability problems (or solutions to these) are spatially driven.

Several attempts have been made to understand how and why affordability problems are created. What is meant by affordable housing and who might be served by it is interpreted differently by different people. The practice of providing assistance for housing to improve housing affordability for lower income households, most of whom are recipients of social security payments and are on incomes well below median, is well established through the provision of rent assistance to those in the private rental market and through the provision of income geared subsidies to those in public housing (Turner et al. 2009). Concerns have been expressed about affordability outcomes for working households who are finding it difficult to rent or purchase private sector housing that is accessible to their place of work. As a result, they bear the burden of either significant housing costs or significant transport costs. In many countries these households may not be covered by housing assistance programs, leaving the middle income group to independently face the challenges of entering home ownership, a dream aspired by all. The spiralling of house prices, especially in major cities has aggravated inaccessibility to housing for this group. These households are concerned because affordability affects not only their ability to become homeowners, but also the size and type of the home they are able to purchase.

Thus, affordability problems can be viewed as operating at different levels, ranging from a more narrow direct experience of severe problems such as poverty and homelessness, through to an intermediate level of risk and a broader problem of access to the market. Many authors (Yates and Gabriel, 2006; Disney, 2006; Cairney and Boyle, 2004) argue that housing affordability is influenced by the levels and distributions of home prices, household incomes and the structure of financing costs. The affordability of housing has become a common way of summarising the nature of the housing problem in many market-based

housing systems. To a great extent, housing affordability is influenced by the levels and distributions of home prices, household incomes and the structure of financing costs (Bramley, 1994; Ludwig et al, 2002). In a similar tone, Wilcox (2003) mentioned that home ownership affordability has traditionally been defined by the rules of access to mortgage finance. Affordability in the owner-occupied market has been increased mainly as a result of interest rates (albeit there has been significant housing price inflation) and also perceived as related to incomes, housing costs, housing availability, employment, maintenance of the existing affordable housing stock, and patterns of new construction. Housing affordability is both a real issue and an issue manufactured by middle-class and affluent young adults with ever-growing expectations. Down payment constraints are binding for many younger lower- and middle-income households who find themselves postponing home ownership.

3. WHAT IS AFFORDABLE HOUSING?

The term 'affordable housing' has gained traction in housing policy and research circles as a way of distinguishing the supply of traditional forms of social housing from a range of privately initiated housing options that may be more widely targeted. Those traditional forms particularly include public housing; that is, a government centred system of provision with restricted access. Providers of the more diverse range of affordable housing products are generally not for profit organisations or private individuals and companies who, in return for government assistance in one or more forms (such as planning benefits, tax incentives or financial subsidies), invest in housing provided under government regulation, funding agreement or contract at a price considered affordable to the target groups of households they serve.

The meaning of 'affordable housing' depends on the income, the age, the geographic location, and the ethnic group or race of the people involved. At one extreme it translates into affordability for the first time homebuyer of a traditional single-family house with a traditional mortgage. At the other, it translates to having any kind of roof over one's head (Steve, 1992). In the United States, where the particular usage originated, the broad characteristics of 'affordable housing' include that it is privately owned, socially oriented and price restricted (Davis, 1994). Generally, when this conceptualisation of affordable housing has been applied, the term is used to distinguish new ways of financing and delivering housing that is affordable for low and MIH, from traditional forms of social (or public) housing.

Underpinning this, the term 'affordable housing' in this study refers to housing which generally meets the needs of households whose incomes are insufficient to allow access to appropriate housing in the market without assistance.

The primary determinants of the affordability of housing are household income, house price, and mortgage rates. Since affordability is greatly influenced by the levels and distributions of home prices, household incomes and the structure of financing costs, affordable housing for middle income households is therefore defined as a housing where house payment is no greater than 33 percent of gross household income.

The study also subscribes to the expression 'affordable housing' which is connected to the relationship between median incomes and market prices within a given community. Most fundamentally, affordable housing is an expression of the social and material experiences of people, constituted as households, in relation to their individual housing situations. Affordability expresses the challenge each household faces in balancing the cost of its actual or potential housing, on the one hand, and its non-housing expenditures, on the other, within the constraints of its income.

4. THE RESEARCH

This study is based on a research funded by the Real Estate Research and Development Grant Scheme (NAPREC) represented by National Institute of Valuation (INSPEN). The Centre for Studies of Urban and Regional Real Estate (SURE), Faculty of Built Environment, University of Malaya, Kuala Lumpur gratefully acknowledges the financial and other support it has received from the Government of Malaysia, without which this work would not have been possible. Fieldwork took place between April 2008 and July 2009 and additional data collections were carried out in April to May 2010. The sampling designs adopted random sampling for households' survey and non-random sampling for the interviews with relevant officers at the identified local authority offices. This quantitative technique of research by the questionnaire-based survey is considered the first level of primary data collection for this study.

Affordability problems for middle income households in Malaysia are widespread in most major cities and towns in Malaysia where many of them find it difficult to purchase a home. The increasing growth of new centres such as townships, commercial hubs, industrial parks and office complexes inevitably result in an increased working population. Along with the increasing population in urban centres, the shortage of affordable housing units is escalating. Continuous efforts are undertaken to ensure that Malaysians of all income levels will have access to adequate, quality and affordable homes, particularly the low-income group (Ninth Malaysia Plan, 2006-2010). However, to cite an example, the Kuala Lumpur Structure Plan 2020 (CHKL, 2004) does not include a low medium/medium cost housing category in the projection of house units to be built by 2020. Although the emphasis of Structure Plan is to provide more houses in medium cost range (including low medium cost), specific policies were not clearly stated.

In this study, the middle income households are identified on the basis of family income. It is based on both economic and cultural consideration. In addition, the cultural view of the middle income household seems to be one in which the family is the typical income unit. Significant structural changes have taken place among families in the last two decades, most importantly, due to large scale participation of married women into the labour force. This increase among family types gives added impetus to using the family unit in examining changes in the size of the middle income household.

5. THE FINDINGS AND DISCUSSIONS

This study divided the findings into two sections; the current home owners amongst the middle income households, and the prospective buyers amongst this group currently residing in rented units.

Total number of respondents from the current home owners amongst the middle income households according to the cities surveyed is shown in Table 1. A total number of 1,162 households were surveyed. With the exception of Kuala Lumpur, all other cities were each represented by at least 120 respondents. Reflecting the size of its population, Kuala Lumpur was represented by 171 respondents (14.7% of total respondents).

Table 1: Distribution of Survey Respondents by City

City	Frequency	Percentage
Kuantan	131	11.3
Kota Bharu	120	10.3
Kota Kinabalu	130	11.2
Kuching	120	10.3
Johor Bahru	120	10.3
Kuala Lumpur	171	14.7
Pulau Pinang	120	10.3
Melaka	120	10.3
Alor Setar & Kangar	130	11.2
Total	1162	100.0

The original set of respondents comprise of Malays, being the majority (57.3%), Chinese (29.8%), Indians (7.1%), Other Bumiputeras (5.2%) and Other citizenships make up the remaining 0.7 percent.

The average household size is 4.74 persons while the median is 5 persons (Table 2). This is relatively higher than the average national figures of 4.3 persons for private households in 2005 (Malaysia, 2006). Majority of the households had been between 3 and 6 persons.

Table 2: Distribution of Survey Respondents by Household Size

Household Size	Frequency	Percentage
1 – 2 persons	140	12.8
3 – 4 persons	366	33.6
5 – 6 persons	412	37.8
> 6 persons	172	15.8
Total	1090	100.0
Raw Mean (persons)	4.74	
Raw Median (persons)	5.00	

For the prospective buyers amongst this group currently residing in rented units, the new set of data of more tenants were specifically explored for tenanted houses in Kuantan, Kota Bharu, Kuala Lumpur, Pulau Pinang, Melaka, and Alor Setar and Kangar. In the additional

survey, a total 190 respondents were obtained, but reduced to 133 following the skimming process of including only the middle income households. Added with those from the first survey, the total number of tenants analysed is 284.

The findings in Table 3 illustrate that the distribution of respondents for the survey on MIH tenants is highest in Kota Bharu (57 respondents or 20.1%) followed by Kota Kinabalu (19%) and Kuala Lumpur (15.8%).

Table 3: Distribution of Survey Respondents by City

City	Frequency	Percentage
Kuantan	33	11.6
Kota Bharu	57	20.1
Kota Kinabalu	54	19.0
Kuala Lumpur	45	15.8
Pulau Pinang	34	12.0
Melaka	33	11.6
Alor Setar & Kangar	28	9.9
Total	284	100.0

The middle income tenant respondents selected is comprised of Malays, being the majority (77.3%), Chinese (12.8%), Indians (5.7%), Other Bumiputeras (3.5%) and 'Others' making up the remaining 0.7 percent. In terms of household size, these findings demonstrate that almost 45 percent of households had 3 or 4 persons. To a certain degree, this suggests a relatively smaller household size when compared to the first surveyed home owners group (see Table 4).

Table 4: Distribution of Middle Income Survey Respondents by Household Size

Household Size	Frequency	Percentage
1 – 2 persons	52	18.6
3 – 4 persons	125	44.6
5 – 6 persons	77	27.5
> 6 persons	26	9.3
Total	280	100.0
Raw Mean (persons)	4.12	
Raw Median (persons)	4.00	

Further analysis on the income distribution of the households from current home owners demonstrates that up to 13 percent of households declared their monthly income to be RM1500 or less. To a certain degree, this suggests a general feature of poor families. Nevertheless, almost 15 percent of the respondents had a total income between RM1501-2000, and a further 34 percent had a total income of between RM2001-4000. As such, this category formed the majority of households. A higher income category of RM4001-6000 represents about 21 percent of the respondents. The remaining 17.5 percent had household income above RM6000 per month (see Table 5).

Table 5: Distribution of Respondents Monthly Household Income by City (the current home owners)

Total Household Monthly Income (RM)	City									Total
	Kuantan	Kota Bharu	Kota Kinabalu	Kuching	Johor Bahru	Kuala Lumpur	Pulau Pinang	Melaka	Alor Setar & Kangar	
RM1000 or less	1.5	0.8	-	-	0.9	3.7	2.6	5.0	25.4	4.5
RM1001-1500	9.2	3.4	9.2	8.3	6.8	3.7	7.0	11.8	16.7	8.4
RM1501-2000	16.9	23.5	9.2	19.2	15.4	7.4	16.7	14.3	12.7	14.7
RM2001-4000	30.0	43.7	48.5	35.0	36.8	32.7	25.4	26.9	25.4	33.9
RM4001-6000	20.0	27.7	19.2	18.3	22.2	23.5	24.6	23.5	11.1	21.1
RM6001-8000	11.5	0.8	8.5	5.8	12.8	10.5	10.5	11.8	7.9	9.0
RM8001-10000	7.7	-	3.8	5.8	3.4	6.2	7.9	4.2	-	4.4
RM10001-15000	3.1	-	0.8	5.0	0.9	6.8	3.5	1.7	.8	2.6
More than RM15000	-	-	0.8	2.5	0.9	5.6	1.8	0.8	-	1.5
Total	130	119	130	120	117	162	114	119	126	1137
Raw Mean (RM)	4207.69	3216.39	3865.38	4414.58	4021.37	5473.77	4592.11	3981.09	2593.25	4083.77
Median Group (RM)	2001-4000	2001-4000	2001-4000	2000-4000	2001-4000	4001-6000	2001-4000	2001-4000	1501-2000	2001-4000

Note: This is not representative of actual population as a purposive sampling of potential middle-income households was surveyed.

Kuantan, Kota Bharu, Kota Kinabalu, Kuching, Melaka, Alor Setar and Kangar are deemed to share a lower income limit of RM1,500 per month. This would form the category termed as 'lower-middle income'. This is followed by the income category of RM2,001 – RM4,000 which forms the core income for the 'middle income' group. The category RM4,001 – RM6,000 forms the upper-middle income category for these cities. In Kelantan, the upper income limit for Kota Bharu is deemed to remain at RM2,001 – RM4,000. In other words for Kota Bharu, there will only be two sub-categorisations of the middle income group in Kelantan. Hence, RM1,501 – RM2,000 forms the lower-middle income category and RM2,001 – RM4,000 forms the middle-to-upper middle income category in Kota Bharu. The median household income remains between RM2,000 and RM4,000 for all cities except for Kuala Lumpur which records between RM4,000 and RM6,000, while Alor Setar and Kangar demonstrated a lower median income of between RM1,500 and RM2,000. The overall median income for all cities is at RM2,001 - 4,000.

The distribution of household income for respondents in renting sector (Table 6) illustrates that respondents from Kuala Lumpur have the highest total household income of RM4,022 per month. Respondents from Kota Kinabalu, Pulau Pinang, Melaka, and Alor Setar and Kangar have a lower mean household income between RM3,000 and RM4,000, while Kuantan and Kota Bharu tenants have below RM3,000 per month. The city on the east coast of the Malaysian peninsular, Kota Bharu, earned the lowest at RM2,517. Overall, the median household income remained at between RM2,001 and RM4,000 for all cities.

**Table 6: Distribution of Tenant's
Total Monthly Household Income by City**

Total Household Monthly Income (RM)	City							Total
	Kuantan	Kota Bharu	Kota Kinabalu	Kuala Lumpur	Pulau Pinang	Melaka	Alor Setar & Kangar	
RM1501-2000	39.4	38.6	9.3	-	-	30.3	25.0	20.1
RM2001-4000	45.5	61.4	72.2	60.0	76.5	48.5	50.0	60.6
RM4001-6000	15.2	-	18.5	28.9	20.6	21.2	25.0	17.3
RM6001-8000	-	-	-	11.1	2.9	-	-	2.1
Total	33	57	54	45	34	33	28	284
Raw Mean (RM)	2,810.1	2,517.4	3,254.3	4,022.2	3,529.1	3,045.5	3,044.4	3,161
Median Group (RM)	2001-4000	2001-4000	2001-4000	2001-4000	2001-4000	2001-4000	2001-4000	2001-4000

The distribution of household income for respondents who are deemed to represent the middle income households is shown in Table 6. The income categories that fit into this group appear to be between RM1,500 and RM6,000 for Kuantan, Kota Kinabalu, Kuching, Melaka and Alor Setar and Kangar. With special reference to Alor Setar and Kangar (the capital state cities of the northern state of Kedah and Perlis respectively), this category is fitting as a large proportion had income below RM1,500 per month. On the east coast of Malaysia, Kota Bharu, the capital city of the State of Kelantan recorded the highest proportion of households with an income below RM1,500 per month. Incomes of more than RM4,000 are deemed to represent the high income category and are thus excluded from the MIH category. Kuala Lumpur, Penang, and Johor Bahru had proportions in the higher income bracket, and thus the MIH category that befits these cities is deemed to be between RM2,000 and RM8,000 per month commensurate with the high level of urbanisation and high per capita income in these cities.

Table 7: Distribution of Middle Income Respondent's Monthly Household Income by City

Total Household Monthly Income (RM)	City									Total
	Kuantan	Kota Bharu	Kota Kinabalu	Kuching	Johor Bahru	Kuala Lumpur	Pulau Pinang	Melaka	Alor Setar & Kangar	
RM1501-2000	25.3	35.0	12.0	26.4	-	-	-	22.1	25.8	15.6
RM2001-4000	44.8	65.0	63.0	48.3	51.2	49.1	42.0	41.6	51.6	51.1
RM4001-6000	29.9	-	25.0	25.3	31.0	35.2	40.6	36.4	22.6	27.5
RM6001-8000	-	-	-	-	17.9	15.7	17.4	-	-	5.8
Total	87	80	100	87	84	108	69	77	62	754
Raw Mean (RM)	3281.6	2562.5	3350.0	3175.2	4306.5	4402.7	4507.2	3451.3	3129.0	3593.8
Median Group (RM)	1	0	0	9	5	8	5	0	3	3
	2001-4000	2001-4000	2001-4000	2001-4000	2001-4000	4001-6000	4001-6000	2001-4000	2001-4000	2001-4000

With these groupings of income, Table 8 shows the sub-categorisation by city and its representation in terms of income bracket. The sub-categorisation is performed as follows:

- Low-Middle Income
- Middle-Middle Income
- Upper-Middle Income

Table 8: Categorisation of Income for Middle-Income Groups for Selected Cities

City	Income Category		
	Lower-Middle	Middle	Upper-Middle
Kuantan	RM1501-2000	RM2001-4000	RM4001-6000
Kota Bharu	RM1501-2000	RM2001-4000	
Kota Kinabalu	RM1501-2000	RM2001-4000	RM4001-6000
Kuching	RM1501-2000	RM2001-4000	RM4001-6000
Johor Bahru	RM2001-4000	RM4001-6000	RM6001-8000
Kuala Lumpur	RM2001-4000	RM4001-6000	RM6001-8000
Pulau Pinang	RM2001-4000	RM4001-6000	RM6001-8000
Melaka	RM1501-2000	RM2001-4000	RM4001-6000
Alor Setar & Kangar	RM1501-2000	RM2001-4000	RM4001-6000

Against this scenario, the acceptable range of affordability for middle income home owners is between RM120,000 and RM150,000, except for Kuala Lumpur. In Kuala Lumpur the MIH reported a median of between RM180,000 and RM200,000 as the affordable price for their property. For Kota Bharu and Kuantan, the range for affordability is wider, between RM120,000 and RM180,000. For the prospective middle income buyers currently in the renting sector, the study established that tenants in Kuantan, Melaka and Alor Setar and Kangar could afford a property of RM100,000 or below. Those residing in Kuala Lumpur can afford more as the proportion of those who can afford property above RM120,000 is higher than in other cities.

The overall median affordability housing price is between RM120,001 and RM150,000. This is also the median affordability housing price in Kota Bharu and Kota Kinabalu. However, the median value of RM80,001-100,000 is lowest at Melaka, Alor Setar and Kangar. As for Kuantan and Pulau Pinang, the median affordability housing price is also a modest RM100,001-120,000. Kuala Lumpur lists the highest median value at RM150,001-180,000.

The above conclusions are summarised below in Table 9.

Table 9: Acceptable Range for Affordability According to State

State	Middle Income Home Owners	Prospective Middle Income Buyers (tenants)
Pahang	100,000 - 120,000	100,000 - 120,000
Kelantan	120,000 - 150,000	120,000 - 150,000
Sabah	120,000 - 150,000	120,000 - 150,000
Sarawak	120,000 - 150,000	-
Johor	120,000 - 150,000	-
Kuala Lumpur	180,000 - 200,000	150,000 - 180,000
Pulau Pinang	120,000 - 150,000	100,000 - 120,000
Melaka	100,000 - 120,000	80,000 - 100,000
Kedah & Perlis	120,000 - 150,000	80,000 - 100,000

Our findings demonstrate that single storey housing is perceived as the type of house most affordable in Kuantan, Kota Kinabalu and Melaka. This is evident from the preferred choice of housing in these cities. Double storey housing appeared to be the type of houses most affordable amongst the households in Kota Kinabalu, Johor Bahru, Kuala Lumpur, Penang and Melaka. Bungalows are preferred in the low cost-of-living cities such as Kuantan, Kota Bharu, Alor Setar and Kangar.

In addition, the study demonstrated that the mean monthly instalment payment deemed to be affordable by current middle income home owners is about RM800 per month. This forms about 20 to 25 percent of their total monthly income. Furthermore, the mean down payment the group is able to commit is about RM14,000.

It is also observed that the affordability of prospective buyers currently in the renting sector is lower than those currently residing in their own residence. The overall mean affordable

mortgage payment per month prevails at about RM650 for the men and RM680 for the female tenants. The overall mean deposit payment is about RM10,500. Further analysis on the affordable price by both current MIH home owners and prospective buyers compared to mean housing price according to state explicitly suggest a mismatch between affordability and housing price for the MIH (see Table 10 and Table 11).

Table 10: Affordability compared to mean housing price for current middle income home owners

State	Type of Perceived Affordable Housing	Affordable Price - Owner (RM)*	Mean Housing Price (RM) 2007**	Mean Housing Price (RM) 2008**	Mean Housing Price (RM) 2009**
Pahang	Single storey terrace house	100,000	-	118,967	134,672
		120,000	-		
Kelantan	Bungalow	120,000	-	216,412	257,750
		150,000	-		
Sabah	Single storey terrace house	120,000	-	161,065	166,373
		150,000	-		
Sarawak	Single-storey Semi-detached house	120,000	-	189,583	222,909
		150,000	-		
Johor	Double storey terrace house	120,000	-	190,101	177,880
		150,000	-		
Kuala Lumpur	Double storey terrace house	180,000	-	437,398	432,876
		200,000	-		
Pulau Pinang	Double storey terrace house	120,000	-	299,565	317,664
		150,000	-		
Melaka	Single Storey terrace House	100,000	-	102,763	106,418
		120,000	-		
Kedah	Bungalow	100,000	-	195,777	187,688
		120,000	-		
		120,000	-	234,966	326,800
		150,000	-		

Source: * Our Analysis

**Malaysia, Residential Property Stock Report (Q4- 2007; Q4- 2008; Q4- 2009)

Table 11: Affordability compared to mean housing price for prospective buyers currently in renting sector

State	Type of Perceived Affordable Housing	Affordable Price – Tenant (RM)*	Mean Housing Price (RM) 2007**	Mean Housing Price (RM) 2008**	Mean Housing Price (RM) 2009**
Pahang	Single storey terrace house	100,000 - 120,000	118,967	134,672	133,374
Kelantan	Bungalow	120,000 - 150,000	216,412	257,750	293,448
Kuala Lumpur	Double storey terrace house	150,000 - 180,000	437,398	432,876	518,628
Pulau Pinang	Double storey Semi-detached house	100,000 - 120,000	526,931	511,057	586,678
Melaka	Single storey terrace house	80,000 - 100,000	102,763	106,418	111,921
Kedah	Bungalow	80,000 - 100,000	234,966	326,800	609,450

Source: * Our Analysis

**Malaysia, Residential Property Stock Report (Q4- 2007; Q4- 2008; Q4- 2009)

5. CONCLUSIONS

Affordability expresses the challenge each household faces in balancing both the cost of its actual or potential housing, and its non-housing expenditures, within the constraints of its income. The study suggests that urban populations in major cities and towns enjoy a higher income compared to those living in smaller cities. Further analysis demonstrated that single storey housing is perceived as the type of house most preferred in smaller cities whilst double storey housing is most preferred amongst the households in bigger cities. A marked mismatched between house prices in the market and the affordable prices by the MIH appeared amongst both current home owners and prospective homeowners in big cities such as Kuala Lumpur and Penang. The study concluded that affordability expresses the challenge each household faces in balancing the cost of its actual or potential housing, on the one hand, and its non-housing expenditures, on the other, within the constraints of its income. Addressing this current situation warrants immediate attention by the state.

REFERENCES

- Berry, M. 2003. Why is it important to boost the supply of affordable housing in Australia—and how can we do it? *Urban Policy and Research*, 1476-7244, Volume 21, Issue 4, Pages 413 – 435
- Bramley, G. 1994. An affordability crisis in British housing: dimensions, causes and policy impact, *Housing Studies*. Vol. 9(1): 103-124.
- Bratt, R.G, Stone, M.E. and Hartman, C. 2006 .A right to housing, Temple University Press, USA.
- Gilmour, T. 2009. Network Power: An International Study of Strengthening Housing Association Capacity. Unpublished Thesis.
- Harloe, M. 1995. The people's home? Blackwell, UK
- Haworth, A., 2004. Social constructionism and international comparative housing research Aldershot: Ashgate
- Kajimo, K. and Evans, K. 2006. The role of the banks in the provision of low income housing in South Africa, *International Journal of Strategic Property Management*. Vol. 10(1): 23-38.
- King, P. 1996. The limits of housing policy: a philosophical investigation, Middlesex University Press.
- Ludwig, J., Johnson, M.P., Ladd. H.F. 2002. *The benefit and costs of residential; mobility programmes for the poor*. Housing Studies
- Malaysia, NAPIC, 2007. .Residential Property Stock Report Q4, Jabatan Penilaian dan Perkhidmatan Harta, Kuala Lumpur
- Malaysia, NAPIC 2008 .Residential Property Stock Report Q4, Jabatan Penilaian dan Perkhidmatan Harta, Kuala Lumpur
- Malaysia, NAPIC 2009. Residential Property Stock Report Q4, Jabatan Penilaian dan Perkhidmatan Harta, Kuala Lumpur
- Priemus, H. and Dieleman, F. 2002. Social housing policy in the European Union: past, present and perspectives, *Urban Studies*. Vol. 39(2): 191-200.
- Rodney, F. 2008. Social Constructionism and Housing Studies: A Critical Reflection, *Urban Policy and Research* Volume 26, Number 2, pp. 159-175(17)
- Thalmann, P. 2003. 'House poor' of simply 'poor'? *Journal of Housing Economics*. Vol. 12(4): 291.317.
- Turner, M. A, Popkin, S. J., Rawlings, L. 2009. Public housing and the legacy of segregation, The Urban Institute, USA.
- Van Weesep 2000. Housing policy: the link between welfare and economic development *Journal of Housing and the Built Environment*, Springer.
- Wilcox, S. 2003. Can work - can't buy: Local measures of the ability of working households to become home owners. Joseph Rowntree Foundation (United Kingdom).
- Yates, J., Randolph, B., Holloway, D., and Murray, D. 2005. Housing affordability, occupation and location in Australian cities and regions, AHURI Positioning Paper No. 84
- Yates, J. 2002. Housing Implications of Spatial Social and Structural Change. Melbourne, Australian Housing and Urban Research Institute.
- Yates, J., & Gabriel, M. 2006. Housing affordability in Australia. National research venture 3: Housing affordability for lower income Australians (Research Paper 3). Retrieved 19 May 2010, from http://www.ahuri.edu.au/nrv/nrv3/NRV3_Assoc_docs.html

HOUSE PRICE INFLATION AND AFFORDABILITY: CHALLENGES AND ISSUES

Zainal Abidin Hashim and Tamat Sarmidi

Faculty of Economics and Business

Malaysia National University

Selangor

ABSTRACT

The fundamental objectives of most macroeconomic policies is to sustain high economic growth with low inflation. However, economic theories reach a variety of conclusions pertaining to the responsiveness of output growth to inflation. Mundell (1963) cited that an increase in inflation or inflation expectation immediately reduces people's wealth. Fischer (1993) however, concluded that in line with past theories and studies, inflation impacted on growth by reducing investment and by reducing rate of productivity growth. Tsatsaronis and Zhu (2004) concluded that house prices generally depend on inflation, the yield curve, bank credit and also the difference in mortgage market. This paper intends to examine the inflation in housing prices between 1986 and 2009. It will do so by investigating whether this run-up in prices can be "explained" by increases in demand fundamentals such as population, income growth, movement in interest rates and several other economic variables pertaining to market demand and supply of housing in Malaysia. Concurrently, this paper also intends to analyse to what extent the inflation in house prices can affect the levels of housing affordability. Affordability encompasses both owning and renting and their correlation with price, where a high house price leads to higher rent, and vice versa. Households with higher levels of affordability will have the opportunity to enjoy higher levels of quality living. As housing plays a crucial part in daily life, it is pertinent to consider the social circumstances that are predominantly related to both the standard of living and the national economy.

Keywords: macroeconomic policy, inflation, sustainability, affordability

1. INTRODUCTION

Like most countries, industrialised and developing, one of the most fundamental objectives of macroeconomic policies is to sustain high economic growth together with low inflation. However, there has been considerable debate on the existence and nature of inflation and the growth relationship. Some suggest that macroeconomic stability specifically defined as low inflation is positively related to economic growth. During periods of high inflation, price variability increases and thus reduces the country's international competitiveness by making its exports relatively more expensive. This in turn impacts on the balance of payments. In this situation economic growth can be severely affected.

Economic theories reach a variety of conclusions about the responsiveness of output growth to inflation. Theories are useful as they account for some observed phenomenon. *Classical Growth Theory* illustrates the relationship between the two variables is implicitly suggested to be negative, as indicated by the reduction in a firm's profit levels through higher wage costs. Under the *Keynesian Theory*, there is a short-run trade-off between output and change in inflation, but no permanent trade-off between output and inflation. For inflation to be held steady at any level, output must equal the natural rate. Any level of inflation is sustainable, however, for inflation to fall there must be a period when output is below the natural rate. *Neo-classical Theory* as per Mundell's model (1963), states that an increase in inflation or inflation expectation immediately reduces people's wealth. This works on the premise that the rate of return on an individual's real money balance falls. To accumulate the desired wealth, people save more by switching to assets, increasing their price and thus driving down the real interest rate. Greater savings means greater capital accumulation and therefore faster output growth. A continuation of this theory by Cooley and Hansen (1989) extends the mechanism to consider capital accumulation as well. The key assumption is that the marginal product of capital is positively related to the quantity of labour. Thus, when the quantity of labour declines in response to a rise in inflation, the return to capital falls and the steady-state quantities of capital and output decline. Cooley and Hansen show that the level of output permanently falls as the inflation rate increases.

There have been several studies published that aimed to determine the relationship between economic growth and inflation. Faria and Carneiro (2001) estimated a short run time series model for changes in output against changes in inflation from January 1980 to July 1995. They found that the test statistics were significant where a negative impact of inflation on output exists. Bruno and Easterly (1995) confirmed the cost of inflation only becomes significant at relatively high rates of inflation. However, strong recovery of growth follows a successful reduction of high inflation. Inflation crises have a temporary effect on output but no permanent effect on output growth.

Barro (1995) concluded that an adverse influence of inflation on growth looks small, but long-term effects on standard of living can be substantial. For example, a shift in monetary policy that raises the long-term average inflation rate by 10% per year is estimated to lower the level of real GDP after 30 years by 4-7%. Fischer (1993) shows that in line with past theories and studies, inflation impacted on growth by reducing investment and by reducing the rate of productivity growth.

2. FACTORS AFFECTING HOUSE PRICE TREND

House prices are very sensitive to the economic climate. If there is a slight change in the monetary or fiscal policy of a nation, the housing price is among the first to respond either positively or negatively. This is mainly due to the huge amount of money involved in owning, investing or speculating in the housing market. During severe price movements, speculators will be affected greatest when either making profit or suffering severe losses. The owners-occupied housing, however, are least affected, except facing erosion in its intrinsic (user-cost) value.

2.1 House Prices and Economic Growth

There seems to be consensus among economists and policy makers that house prices have been playing an important role in fueling the growth of the economy. Many believe that the strong housing market, during the crash of the stock market in 2001, may have helped save the U.S economy from a more serious recession. However, the current crash in the housing market initiated from the subprime crisis has caused severe detrimental effects to the nation's economic growth. Indeed numerous economic theories have demonstrated that house price changes have real effects on the nation's economy.

Lustig and Nieuwerburg (2004) argue that house price increases, in most cases, help relax borrowing constraints and thus increase consumption. Thus changes in house prices can have powerful impacts on consumption through wealth effects. Benjamin, Chinloy & Jud (2004) show that the wealth effect of housing is not only statistically significant, but also probably larger than the wealth effect from the stock market. However, households planning to purchase their own house may tend to reduce their consumption in the wake of higher prices as they will have to save more for higher down-payments and repayments. Thus, the strength of the wealth effect is uncertain. As such, the wealth effect of house prices may partially contribute to the impact of house prices on economic growth and likely other mechanisms through which house prices directly affect economic growth. Firstly, increased house price may induce excess demand or strengthening of the housing market, which in turn can lead to more construction and more residential investment. Second, increases in house prices are often associated with increasing trading/business volume associated with more services provided in relation to the real estate sector. This includes real estate agencies, financial institutions, manufacturing of household goods and numerous other household consumption goods. Thirdly, decreases in house price can increase the default rate for mortgages, which in turn can disrupt the financial market, subsequently having a negative effect on economic growth.

2.2 House Price and Inflation

A steady rise in prices has been a major feature among developed and developing economies in the new millennium. While the economy has boomed with spectacular growth, the downside has been the accompanying inflation, which is raising concerns having reached such high levels for a sustained period of time. The subsequent rising cost of living is impacting the housing sector and making it less attractive for businesses to set up base.

In Malaysia there are three reasons for the inflation: Firstly, rapid growth of the major economic sectors, namely the manufacturing and services sectors. The rise in GDP, increasing government expenditures and the resulting increase in liquidity have contributed to inflation by fueling domestic demand; Secondly, some of the inflationary tendency is caused by rising import prices because of deteriorating value of the Malaysian Ringgit; Thirdly, the demand-supply imbalance – where demand has been rising due to a rising population – has not only increased public spending but also improved income. This in turn has propagated higher living standards. The supply side has been unable to keep pace with the rapid increases in demand, thus pushing house prices and rent upward. The supply-demand shortfall has triggered house price acceleration which leads to a higher cost of living.

Inflation is a corrosive disease that eats away the “purchasing power” of our money as time goes by. This leads to higher costs of living which has the potential to put downward pressure on living standards. Sustained inflation (shown by continuous price increases) makes every ringgit owned buys a smaller percentage of goods or services. Thus, the value of the ringgit, as observed in terms of purchasing power, declines. Under severe inflation, the more cash one carries, the more its purchasing power decreases. For example, if the inflation rate is 2% annually, theoretically a house selling RM100,000 will cost RM102,000 in a year. After inflation, our ringgit cannot purchase the same type of house it could beforehand.

In a demand-pull inflation, it is summarized as “too much money chasing too few goods”. The market is said to be very liquid, spurred on by a low interest rate which makes borrowing costs very low. As interest rates drop, consumer spending and investment increases and this in turn stimulates economic growth. During a financial crisis, Bank Negara have the tendency to ease interest rates to provide liquidity to the financial market, thus preventing a severe market meltdown. By changing these interest rates, Bank Negara aims to achieve stable prices, maintaining market confidence and attaining continued growth.

There is certainly a cause and effect relationship between inflation and housing price. Under conditions of high liquidity from low interest rates, buying a house becomes more affordable. This ultimately increases housing demand, and supply then needs time to respond to the accelerating demand. Constraints on supply include land availability, zoning restrictions, bureaucracy, speculation and culture tend to portray a more pronounced effect of inflation. High house prices reduce affordability of home ownership, stimulating rent to increase. Under this phenomenon, large cities may be confronted with labor shortages due to high a cost of living, prompted by expensive housing.

2.3 House Price and Affordability

Homeownership remains an essential part for the majority of society and plays a critical role in strengthening families, communities and the entire nation. Among the developed nations, initiatives have focused on increasing homeownership rates to higher levels, which is popular among citizens and policy makers. According to the OECD Report (2005), Spain topped all Industrial Countries in terms of homeownership rate, where 82.9% of their population were homeowners. Spain were followed by Ireland 76.9%, Australia 70.0% and United States 68.3%. Germany were at the bottom of the list with 43.6% of their population as homeowners. Housing observers and economists have a ready explanation for the trends in the homeownership rate among nations, namely growth in jobs, expansion of the economy, low mortgage interest rates, aging of the baby boomer generation, demographic trends and renewed public policy initiatives to provide homeownership opportunities to households. Besides the age and demographic factors, affordability seems to be the main element for homeownership. Monetary and fiscal policies have prominent effects on homeownership, where strategies consists of four elements; to make homeownership more affordable; eliminate barriers to homeownership; and to enable families to manage the responsibilities and rewards of homeownership and make it easier to buy a home.

Unfortunately, the steep increase in the average house price prior to the global financial crisis (beginning 3Q: 2007) has made homeownership very challenging. Many aspiring homeowners realise that their target home has become unaffordable and some have had to postpone their endeavors of obtaining a suitable house. As such, would-be homeowners can be prevented from buying a home for a variety of reasons, such as excessive debts, insufficient cash for a down payment, poor credit history, a high monthly mortgage and low income.

The affordability of housing has gained prominent footing among developed and developing nations. Access to shelter for families is considered among the basic necessities for living whether as an owner-occupied or as a renter. Affordability encompasses to own or to rent, where owning and renting are highly correlated with price. High house prices lead to higher rent and vice versa. The most common housing affordability index is that used by the National Association of Realtors® (NAR) where a housing affordability index for an area brings together the price and the income elements that contribute to housing affordability. In addition to median income and median house price, the index requires the current mortgage rate, amount of down payment for the purchase and maximum percentage of the income to spend on housing.

A study conducted in the United States looking at home affordability data from 1984 until 2004 shows that the percentage of families who could afford to buy a home during that time period decreased from 60.4% to 58.4%. This indicates that affordability was reduced for families to qualify for a mortgage for a modestly priced home in the area where they lived using 30-year conventional fixed-rate financing with a 5% down payment. However, for those who have qualified for the mortgage, proportion of household income required to pay the interest on that mortgage has been trending upward. This reflects the increased size of mortgages for which significant increases in house prices and interest rates have increased in tandem with the price hike.

There are several alternatives where affordability could be improved. Moderation in the interest rate, an increase in household income, a decline in unemployment, reduced excessive debt of households, improved credit history, increased financial assets or savings of households, and assistance on down payment or reduced amount of down payment required. A study done in the United States on owners and renters after several of the above measures were taken shows that 71% of the owners could afford to purchase a different modestly priced house in the same area. It also found the number of renters decreased by almost 2% between 2002 and 2004.

3. REVIEW OF LITERATURE

There were several studies done on the relationships between house price, inflation, affordability and consequently to homeownership. These four elements are said to be correlated directly or indirectly as to price movement and price volatility. Affordability and homeownership are positively related where increase in affordability will lead to increases in homeownership. However, affordability is very much affected by the price levels which correspond to the rate of inflation.

Homeownership is often thought to be one of the essential ingredients of the conception of a secure and successful life. A study by The National Homeownership Strategy (1995) conclude that homeownership is a commitment to strengthening of families, promoting good citizenship and helps to stabilise neighborhoods and thus strengthen communities. Its attributes are significant in a variety of social and economic benefits both to individuals and the society as a whole. In a national survey among residents in a major city in United States, 86% felt owning is better off than renting and 74% believe that people should purchase a home as soon as they can afford it. Of the renters surveyed, 67% said they rent because they are unable to afford to own, whilst only 26% said it was a matter of choice.

Homes are considered to be the largest private investment for a person, and among the developed economies well over half of all households are homeowners. In Europe, housing accounts for 40% - 60% of total household wealth and an average household holds six times as much wealth in residential property than in shares.

Lacoviello's (2000) study regarding the responsiveness of house price to macro-economic forces found that adverse monetary shocks generally have a significant negative impact on real house prices and that the magnitude of the response in house price can be partly justified by the different housing and financial housing institutions in those countries. Tsatsaronis and Zhu (2004) concluded that house prices generally depend on inflation, the yield curve and bank credit, where national differences in the mortgage market matters.

A study by the Royal Bank of Canada (RBC) in July 2009 revealed that aggressive policy action to shore up confidence in financial markets, jump starting the economy are behind much of the improvement in affordability for some major cities in Canada. The housing affordability measure is based on gross household income where an affordability measure of 50% means that home ownership cost, including mortgage payments, utilities, and property

taxes, takes up 50% of a typical household's pre-tax income. Normally, 25% to 30% of a borrower's gross annual income should go to "mortgage payment" – principal, interest, property taxes and maintenance fees. Bank's rate cutting campaign and the Fed's active support of the mortgage securities market brought a meaningful reduction to the cost of homeownerships and the decline was accelerated by the softening of house prices. Declining mortgage rates, sinking home prices and gains in family income in late 2008 and early 2009 had helped towards restoring homeownership affordability in Alberta. Significant improvement in affordability in Vancouver since mid-2008 seemed to revive their housing market and put the construction industry is back in business with indications of an upswing in the sales of existing homes and demand for new homes. Looking ahead, if this trend persists, it could help restore a healthy balance between supply and demand which should provide support for prices going forward and attain stability.

Another most commonly quoted housing affordability index is that used by the National Association of Realtors (NAR), Florida, United States. It measures the ability of the median income household in an area to purchase a median priced house in that area. Other than the median income and median house price, the index takes into account current mortgage rates, percentage of down payment and maximum percentage of household income that can be spent on housing. An index of 100 indicates the median-income household in the area has sufficient income to purchase a single-family home selling at the median price. The study, conducted in Florida from 2003 until 2006, found that the number of counties with an index value of below 100 totaled 49 in 2006, an increase from 15 in 2003. The numbers show a decline in housing affordability in Florida between 2003 and 2006. The remaining 18 counties had indexes above 100. The more affordable counties are generally rural counties located in the remote area of the state. It should be noted that counties with the highest affordability indexes had fewer than 300 transactions in 2006. The small number of transactions is not surprising in small counties and may be indicative of the level of competition in the market and therefore the lack of pressure on housing prices.

4. METHODOLOGY AND RESULTS

We applied the autoregressive distributed lag (ARDL) bounds testing suggested by Pesaran, Shin and Smith (2001) to analyse the effect of macroeconomic fundamental factors on housing prices. ARDL method of cointegration analysis has some advantages against the single equation cointegration analysis. First, ARDL method does not generally require knowledge of the order of integration of variables. Second, ARDL method can distinguish dependent and explanatory variables. Third, ARDL method also estimates the long- and short-run components of the model simultaneously.

ARDL procedures involves two-step estimations. First, we investigate the existence of a long-run relationship predicted by the theory among the variables under study. Secondly, we estimate the long- and short-run parameters of Equation 1 to determine whether a long-run relationship was established in the first step.

$$\text{Log } P_t = \sum \alpha_j \text{Log } P_{t-j} + \beta' \text{Log } X_t \quad (1)$$

The dependent variable is the house prices, and X are the macroeconomic fundamental factors; population, income, interest rate, inflation rate, rent and unemployment rate.

Estimates of Equation 1 show that the *F*-statistic denoted by $F_{PRI}(PRI|X)$ where X represent (POP, INC, INT, CPI and REN) were used to examine the existence of a 'stable and long run relationship'. The null hypothesis of the 'non existence of the long-run relationship', i.e. the coefficient of all level variable are jointly zero and can be written as: $H_0 : \phi_1 = \phi_2 = \phi_3 = \phi_4 = \phi_5 = \phi_6 = 0$ against the alternative hypothesis that the existence of long run stable relationship $H_1 : \phi_1 \neq \phi_2 \neq \phi_3 \neq \phi_4 \neq \phi_5 \neq \phi_6 \neq 0$.

The calculated F-statistic, $F_{PRI}(PRI|POP, INC, INT, CPI, REN) = 11.505$, is higher than the upper bound critical value at a 5% significant level¹. Therefore, we *reject the null* of no long-run relationship. Similarly, we have constructed another two housing price models where (INC, CPI and REN) and (POP, INT and UMP) are used as independent variables. The corresponding estimated F-statistic are as follows: $F_{PRI}(PRI|INC, CPI, REN) = 3.541$ and $F_{PRI}(PRI|POP, INT, UMP) = 3.952$. These *F*-statistics are higher than the lower critical value 2.86 but lower than upper critical value 4.01 at the 5% significance level. *No solid conclusion* can be made and we need to further examine in the error correction model.

Having found a long run relationship, we move to the second-step by estimating Equation 1 using the following ARDL(*a, b, c, d, e, f*) model. Using the Schwartz Bayesian Criterion (SBC) the following static long-run model of the corresponding ARDL(2, 1, 0, 0, 2, 2) were estimated and the results are shown in the Table 1. The result shows that *inflation (CPI) has a positive significant effect* on the long run housing price. Other variables are statistically not as important. The models are statistically satisfactory since the diagnostic test statistics are insignificant except for *serial autocorrelation problem* (Table 1: p-value =0.034).

Table 1: Long Run Estimates of House Price Full Model

Lag	Coefficient					Diagnostic Test			
	POP	INC	INT	CPI	REN	A: LM	B: RESET	C: JB	D: ARCH
(2,1,0,0,2,2)	-0.04 (1.49)	0.88 (0.25)	-18413.1 (-1.62)	2258.1* (1.80)	104.9 (0.58)	6.88* [0.03]	0.99 [0.35]	0.07 [0.96]	4.27 [0.53]

Note: Figures reported in bracket () and [] are t-ratio and p-value, respectively. The test statistics are: LM=Lagrange multiplier test for the autocorrelation; RESET=Ramsey's test for functional form misspecification, JB=Jarque-Bera test for normality of residuals; and ARCH=Engle's autoregressive conditional heteroscedasticity test. * and ** indicate 5% and 1% level of significant respectively.

¹ The critical value for lower bounds for 5% and 1% are 2.45 and 3.15 respectively, while the critical value for upper bounds for 5% and 1% are 3.61 and 4.43 respectively. The critical values are calculated by Pesaran, Shin and Smith (2001) pp300.

The analysis of short-run dynamic using error correction (EC) model can be further explored by the following equation.

$$\Delta PRI_t = \Delta \hat{\alpha}_0 - \sum_{j=2}^p \hat{\alpha}_j \Delta PRI_{t-j} + \sum_{i=1}^k \hat{\beta}_{i0} \Delta X_{it} - \sum_{i=1}^k \sum_{j=2}^q \hat{\beta}_{i,t-j} \Delta X_{i,t-j} - \alpha(1,p) ECM_{t-1} + u$$

where $ECM_t = PRI_t - \hat{\alpha} - \sum_{i=1}^k \hat{\beta}_i x_{it}$

The results of the EC representation of *ARDL* model are shown in the following Table 2.

Table 2: Short Run Estimates Full Model

	PRI	POP	INC	INT	CPI	REN
LAG(BIC)	(2,1,2,0,0,2)	(1,2,2,1,2,2)	(2,0,2,2,1,0)	(2,1,1,2,2,2)	(1,0,1,0,0,2)	(1,0,0,0,0,0)
PRI	-	-5.65 (-1.21)	0.53* (3.07)	0.55 (0.17)	0.87 (1.61)	-0.38 (-0.43)
PRI-1	-	9.95 (1.81)	-	-	-	-
POP	-0.01* (-2.29)	-	0.001 (1.74)	-0.59 (0.43)	0.16 (0.87)	0.29 (0.92)
INC	7.87* (2.87)	27.81 (0.80)	-0.60* (-2.63)	0.37 (1.06)	-0.35 (-1.06)	0.557 (0.09)
INC-1	7.49* (2.68)	-	-	-	-	-
INT	-1325.9 (-0.80)	-2025.7 (-0.07)	183.9 (1.20)	-	1.03* (2.27)	11.32 (1.78)
INT-1	-	-	-147.8 (-1.27)	-	-	-
CPI	964.0** (4.17)	12542.7* (2.62)	-45.4 (-1.75)	0.13 (1.22)	-	-0.18 (-0.15)
CPI-1	-	-	-	0.17 (1.93)	-	-
REN	84.83 (1.72)	868.1 (0.85)	-7.38 (-1.96)	0.01 (1.86)	0.001 (0.103)	-
REN-1	175.38* (3.11)	-	-11.34* (-2.58)	-	0.03* (2.46)	-
ECM _{t-1}	-0.42* (-2.28)	-0.31 (-1.50)	0.10 (0.91)	-1.01** (-3.799)	0.003 (0.051)	-0.29 (-1.20)

Note: Figures reported in bracket () are t-ratio. Δ means the first difference and ECM_{t-1} is the error correction term. * and ** indicate 5% and 1% level of significant respectively.

The first column of Table 2 shows that current income, income lag 1 year, inflation and rent lag 1 year are significant in affecting house prices. The error correction (EC) model shows that the EC term (ECM_{t-1}) is negative and statistically significant on the housing price model (PRI). The result indicates that there is an adjustment mechanism which forces the housing

prices towards its equilibrium, defined by the long run relationship at a relatively slower pace. However, the EC model does not support the inference of a unique cointegrated and stable long run housing price and macroeconomics fundamentals relationship. The EC for *interest rate (INT)* is statistically significant which show that there is an adjustment from macroeconomics fundamentals including house price to the interest rate.

Other models which include parts of the full models are reported as follows in Tables 3, 4, 5 and 6, in order to act as a comparison to the full model. The results show that *income (INC)*, *inflation (CPI)*, *population (POP)*, *unemployment (UMP)* and *interest rate (INT)* all significantly affect housing price.

Table 3: Long Run Estimates of House Price (INC CPI REN)

Lag	Coefficient			Diagnostic Test			
	INC	CPI	REN	A: LM	B: RESET	C: JB	D: ARCH
BIC(1,0,0,0)	2.51** (3.21)	891.78** (4.67)	-79.30 (-0.94)	0.134 [0.719]	1.60 [0.224]	0.847 [0.654]	0.009 [0.924]

Note: Figures reported in bracket () and [] are t-ratio and p-value, respectively. The test statistics are: LM=Lagrange multiplier test for the autocorrelation; RESET=Ramsey's test for functional form misspecification, JB=Jarque-Bera test for normality of residuals; and ARCH=Engle's autoregressive conditional heteroscedasticity test. * and ** indicate 5% and 1% level of significant respectively.

Table 4: Short Run Estimates (INC CPI REN)

	PRI	INC	CPI	REN
	(2,0,0,1)	(2,0,0,1)	(1,1,0,1)	(0,0,1,0)
PRI	-	0.033* (2.43)	0.28 (0.05)	-0.20 (-0.22)
INC	1.59 (2.68)*	-	0.99 (1.07)	-0.02* (-2.21)
CPI	565.8** (0.003)	16.68 (1.22)	-	2.29** (3.46)
REN	-50.31 (-1.00)	-4.29 (-1.15)	0.02 (1.37)	-
ECM _{t-1}	-0.63** (0.003)	0.13* (2.7)	0.083 (1.36)	-0.49** (-2.64)

Note: Figures reported in bracket () are t-ratio. Δ means the first difference and ECM_{t-1} is the error correction term. * and ** indicate 5% and 1% level of significant respectively.

Table 5: Long Run Estimates of house price (POP INT UMP)

Lag	Coefficient			Diagnostic Test			
	POP	UMP	INT	A: LM	B: RESET	C: JB	D: ARCH
BIC(0,0,0,0)	0.02** (24.13)	3635.1* (2.83)	4123.9** (5.04)	0.019 [0.89]	1.80 [0.19]	5.77 [0.056]	1.29 [0.26]

Note: Figures reported in bracket () and [] are t-ratio and p-value, respectively. The test statistics are: LM=Lagrange multiplier test for the autocorrelation; RESET=Ramsey's test for functional form misspecification, JB=Jarque-Bera test for normality of residuals; and ARCH=Engle's autoregressive conditional heteroscedasticity test. * and ** indicate 5% and 1% level of significant respectively.

Table 6: Short Run Estimates (POP INT UMP)

	PRI	POP	INT	UMP
	(1, 0, 0, 0)	(1, 1, 0, 0)	(2, 1, 0, 0)	(1, 1, 0, 0)
PRI	-	3.16 (0.76)	0.61* (2.40)	0.10 (0.09)
POP	0.016 (2.02)	-	0.144 (0.90)	0.68 (0.23)
INT	2945.7 (1.90)	-40291.4 (-1.48)	-	-0.13 (-1.47)
UMP	2158.4 (1.03)	-78184.8* (-2.58)	0.11 (0.55)	-
ECM _{t-1}	-0.68 (-1.92)	-0.344* (-2.73)	-0.49** (-3.16)	-0.18* (-2.82)

Note: Figures reported in bracket () are t-ratio. Δ means the first difference and ECM_{t-1} is the error correction term. * and ** indicate 5% and 1% level of significant respectively.

5. HOUSING AFFORDABILITY

The affordability of housing is an important issue among the majority of the population. Households are concerned because affordability affects their ability to become or remain a homeowner, as well as the size and amenities they are able to purchase and maintain for the home. Real estate professionals and other industry participants also are concerned because the number of households able to afford the purchase of a home is an important determinant of residential sales activity in their local markets. Housing affordability also has become an important public policy issue, as home ownership is viewed as being an important goal for both individual and societal reasons. Household income, housing prices and mortgage rates are the primary determinants of housing affordability. For a household considering homeownership, an additional factor is the rate of appreciation in house prices.

Thus to increase homeownership among households is to improve affordability. The term "affordability" refers to various measures of homeownership costs relative to income. Other than house price, mortgage interest rate and other components of the cash costs of owning a house are considered in the calculation of housing affordability.

Whether house prices are high or low and rising rapidly or slowly can only be properly assessed by comparing price developments to other relevant variables, particularly household income, the common measure of purchasing power. High growth in house prices relative to income for an extended period would cause affordability problems.

Based on criteria set by mortgage lenders and agreed by most policy makers, the U.S Department of Housing and Urban Development (HUD) concludes that no more than 30% of household income should be allocated to housing principal, interest, taxes and insurance (PITI). These are considered as housing cost and out-of-pocket costs both to owners and renters. Conventional mortgage lenders typically allow 28% of household income for PITI in calculating loan amounts. Typically, pricing calculations that define "*workforce housing*" use 30% of household income as the maximum threshold of affordability.

The essence of an affordability index is a comparison between the cost of housing and the income of a household. A simple way to represent affordability is to divide house prices by annual income. Naturally this format does not adjust for taxes, capital gains or inflation. This index implicitly assume that owners do not make decisions based on all available information. The main reason for keeping it simple is because transparency promotes credibility.

For the purpose of this paper, we will utilise the most common housing affordability index used by the USA's National Association of Realtors (NAR). As mentioned earlier, the NAR index measures the ability of the median income household in an area to purchase a median income house in that area. The index requires the current mortgage rate and assumption about the down payment required for the purchase and the maximum percentage of household income that can be spent on housing. Qualifying income is defined as the income needed to qualify for a mortgage to finance an existing median-price home. An index value of 100 indicates that the family making that income can afford to buy a home, a value less than 100 indicates less affordability, and a value greater than 100 indicates better and higher affordability.

As evidence of Table 7, at the national level, income per capita has improved tremendously. This has increased the purchasing power of Malaysian people over the past 23 years. Concurrently, since 1999, monetary policy has been very accommodating as interest rates have been on a downward trend, where Base Lending Rate (BLR) has been reduced from 6.8 (1999) to 5.5 (2009), which increased liquidity in the local market. Subsequently, demand in the housing market was stimulated. House prices continued its upward trend, after a severe setback following the Asian Financial Crisis in 1997/98, establishing a new high approaching the end of 2009. With inflation lessening and interest rate stabilising, home ownership begin to accelerate due to low and encouraging monthly mortgages imposed by local financial institutions.

Table 7: Housing Affordability For Malaysia 1986 - 2009

Year	Income (RM) (per capita)	Monthly Mortgage (RM)	Mortgage % of Income	Qualifying Income (RM)	Affordability Index
1986	4341	985	22.7	47,280	110.2
1988	5364	666	12.4	31,968	201.1
1990	6578	750	11.5	36,000	219.3
1992	7913	912	11.5	43,776	217.0
1994	9719	940	9.7	45,120	258.5
1996	11986	1190	10.0	57,120	251.8
1998	12770	1400	11.0	67,200	228.0
2000	14608	1100	7.5	52,800	332.0
2002	14760	1015	6.9	48,720	363.5
2004	17576	895	5.1	42,960	491.0
2006	20841	1120	5.4	53,760	465.2
2008	22560	1110	5.0	53,280	508.1
2009	23000	1120	4.9	53,760	513.4

Source: Economic Reports and calculations based on secondary data.

Table 7 also depicts the percentage of income spent on housing shows marked improvement from 22.7% (1986) to as low as 4.9% (2009). This is mainly due to low interest rates and increases in household income between the years 1986 through to 2009. Qualifying income to purchase homes has been fairly stable, with a slight increment beginning from 2000 onward. Nevertheless, it is still considered low and very affordable.

Under such a favourable and growing economic climate, housing affordability has shown outstanding improvement from the index level of 110.2 (1986) to 513.4 (2009). However, this data represent the national level, and may vary to some extent at the state level. We expect it to show some deviations compared to the national level, but would most likely trend upwards on a slower and smaller scale.

6. CONCLUSION

Despite the generally favourable picture of homeownership affordability at the national level, it is important to recognise that some areas and some income groups are struggling with high house prices and low income. These are evidenced from the increasing number of squatters in major cities of Malaysia which constitute the low to moderate income working families (owners and renters) who spent more than half of their income on housing or lived in physically deficient units (critical housing needs). However, the government are making every effort to supply affordable housing to these critical masses.

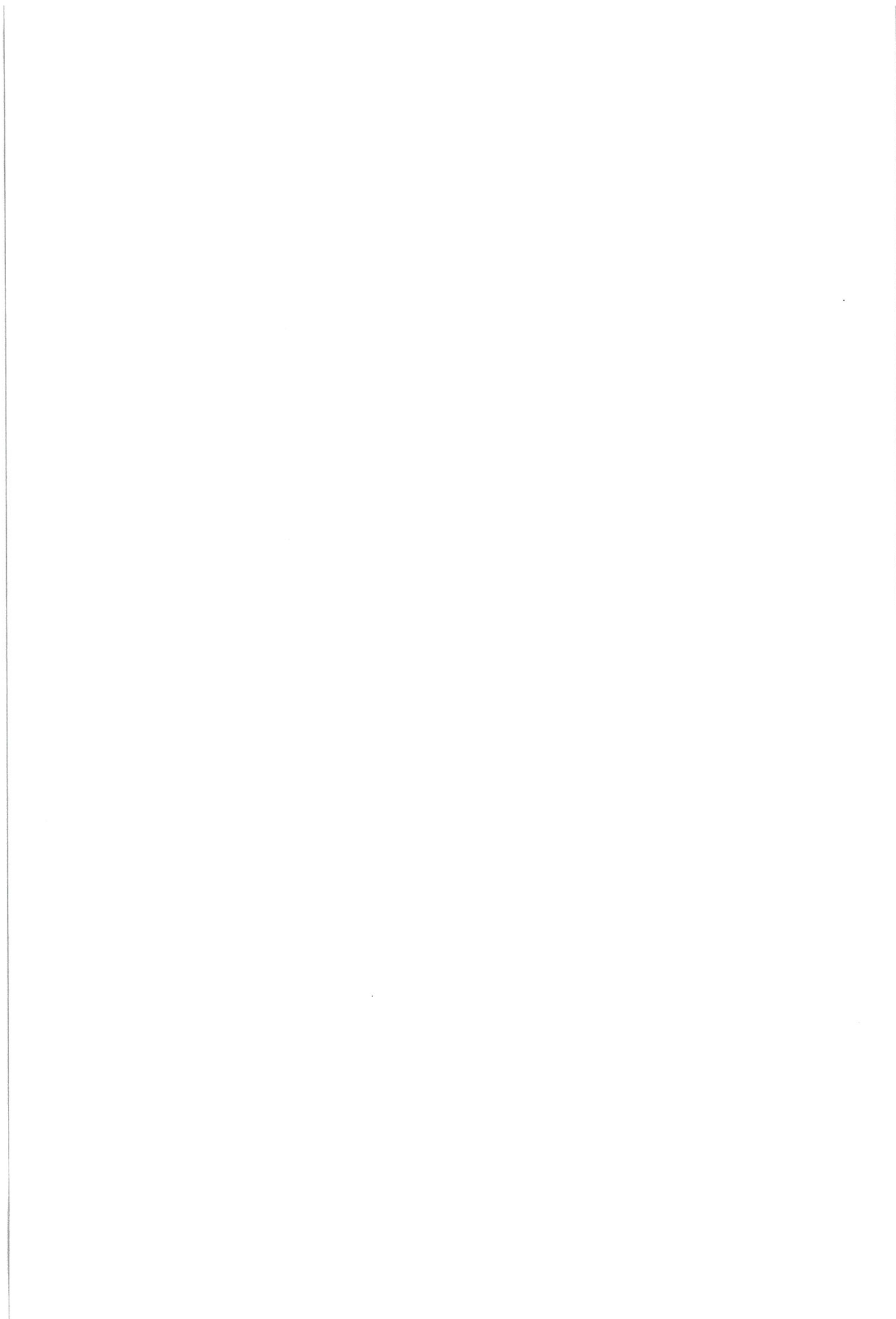
Econometrics results obtained from the ARDL estimation were consistent with the results obtained from the non-econometrics procedure, as reported in Table 7. Both clearly demonstrate that interest rate, income level and inflation simultaneously affect house price and the affordability of households to own a house. Lower interest rates and an increase in income create house demand, and moderate inflation cause housing prices to increase to some extent.

Increased house prices makes housing more expensive for potential owners and less expensive for existing owners. The appreciation in house value increases the equity and wealth of the homeowner, so that a forward-looking, rational owner would recognise the capital gain as a reduction in the cost of housing. Our tax law permits tax-free capital gains for any residential property that has been owned more than 5 years. Additionally, property taxes and mortgage interest rates deductible from current income further encourage homeownership.

In conclusion, house price trends have continued strong since 1986, only suffering a setback during the 1997/98 Asian Financial crisis. All major cities recovered, with the highest increments among the west coast states of Kuala Lumpur, Selangor, Penang and Johor. In these states, house prices have been gradually increasing relative to income. Interest rates have been very accommodating since 1999 and lead to improvement in homeownerships among the urban Malaysian working class. The low rate keeps monthly payments affordable for most whilst also helping to lift house prices. This trend in ownership is also affected by an increase in population of those aged between 35 to 54 years, the demographic considered to be the most active housing market participants. Efforts of lenders to serve low-income, minority households by reducing the amount of down payment and other related costs upon signing a purchase agreement have also helped to enhance homeownership. The tendency of strong house price growth poses the largest challenge to prospective homebuyers in the future.

REFERENCES

- Bruno, M. and Easterly. (1995). Inflation Crises and Long Run Growth, *Inflation and Economic Growth*, Reserve Bank of Fiji, 2002.
- Cooley, T.F and G.D Hansen. (1989). The Inflation Tax in a Real Business Cycle Model, *American Economic Review*, Vol. 79, pp. 733-48.
- DiPasquale, D. and W. Wheaton. (1994). Housing Market Dynamics and the Future of House Prices. *Journal of Urban Economics*, 35:2.
- Hulchanski, J.D. (1996). The Concept of Housing Affordability: Six Contemporary Uses of Housing-to-Income Ratio, *Housing Studies*, Vol. 10, pp. 471-91.
- Dougherty, A and R. Order. (1992). Inflation, Housing Costs and Consumer Price Index. *American Economic Review* 72: 154-164.
- Fama, E.F. and G.W. Schwert. (1997). Asset Return and Inflation. *Journal of Financial Economics* 5: 115-146.
- Faria, J.R. and F.G. Carneiro. (2001). Does High Inflation Affect Growth in the Long and Short Run? *Journal of Applied Economics Vol. IV, No1*.
- Fischer, S. (1993). The Role of Macroeconomic Factors in Growth, *NBER Working Paper*, 1235
- Merlo, Antonio and Francois Ortalo. (2004). Bargaining over Residential Properties. *Journal of Urban Economics* 56, Sept. 192-216.
- Spellman, L.J. (1981). Inflation and House Prices. *Journal of American Real Estate and Urban Economics Assoc.* 9: 205-221.



ANNOUNCEMENT

Do You Have A Paper You Would Like To Share With Other Real Estate Professionals?

The Journal of Valuation and Property Services (JVPS) is a major publication by the Valuation and Property Services Department (JPPH), Ministry of Finance Malaysia. JVPS is an international journal that provides a forum for critical appraisals of fundamental issues affecting the real estate industry. It is specially intended for real estate professionals to keep abreast with developments in the real estate industry as well as the real estate profession.

The Publication Board of this journal invites original papers from real estate professionals on any of the following areas:-

- Areas of major interest and practical relevance to the real estate profession;
- New techniques, applications, theories as well as related concept relevant to the real estate profession;
- Policy issues and regulations and their impact on the real estate market.

The journal focuses on Asia, with particular emphasis on Malaysia, but papers that promote cross-national learning on the real estate industry worldwide are welcomed. Each issue will also present practice notes relevant to the practice of valuation and property services written by senior professionals.

Further details on the journal are available from:-

The Editor

Journal of Valuation and Property Services (JVPS)

National Institute of Valuation (INSPEN)

Persiaran INSPEN

43000 Kajang

Selangor Darul Ehsan

Malaysia

Telephone : +603-8911 8888

Telefax : +603-8925 0640

Email : research@inspen.gov.my

Website : <http://www.inspen.gov.my>

NOTES TO CONTRIBUTORS

Editorial Policy and Submission Guidelines

1. Submission

Contributors can submit their papers before the 31st July of each year to :-

The Editor

Journal of Valuation and Property Services (JVPS)
National Institute of Valuation (INSPEN)
Persiaran INSPEN
43000 Kajang
Selangor Darul Ehsan
Malaysia
Telephone : +603-8911 8888
Telefax : +603-8925 0640
Email : research@inspen.gov.my

A prospective contributor may submit a summary of a proposed paper to the Editor for preliminary consideration as to its suitability for publication in the journal. The receipt of each paper submitted will be acknowledged. The Editor reserves the right to accept, modify or decline any paper.

2. Reviewing Process

All papers will be reviewed by one or more referees. Contributors will be informed about the acceptance (or otherwise) of their papers after the comments of referees have been received. The entire reviewing process will be conducted in complete confidentiality. For this purpose, the name, address and affiliation of the contributor should not be on the first page of the paper, but only on the accompanying letter.

3. Style

Papers should be the original, unpublished work of the contributors. They should not be under consideration for publication elsewhere. Papers should be written in a clear and simple style, and should have a carefully considered structure. Contributors are encouraged to adopt the most effective way of communicating their information to the reader. Illustrations may be used to elucidate the issues raised.

4. Language

Language used in all papers submitted shall be in English.

5. Contents

Papers should preferably be in the range of 4,000 to 6,000 words, excluding illustrations. A brief (maxima 60 words) profile of the contributor should accompany each article.

All manuscripts for publishing are to be typed in Arial font size 11 with 1.15-spacing on a A4 size document with normal margin of 1 inch on each side. The pages should be numbered consecutively.

a) First Page

The full title of the paper must be shown on the first page of the manuscript. Also to be included on the first page is an abstract of not more than 300 words and up to 5 keywords to facilitate indexing. The abstract should summaries the objectives, main finding and conclusions of the paper.

b) References

Only references that are cited in the text should be included in the reference list. The Harvard reference system is adopted in the Journal. References within the text will be shown in bracket, by quoting first, the author's name followed by a comma and year of publication all in round brackets, e.g. (Agus, 1994).

References should appear at the end of the article, arranged in alphabetical order by the first author's surname as follows:-

For books: surname, initials, (year) "title", publisher, place of publication.
For journal: surname, initials, (year) "title", journal, volume, number, pages.

Example:-

Book: Lim, K.K.(1990), *Valuation Methods*, Pelandok, Kuala Lumpur.
Journal: Zaharudin A. (1994), "The New Economic Policy and the Integrated Housing Model", *Ilmu Alam*, Vol. 2 No. 7, pp 23-35.

c) Illustrations

Illustrations such as diagrams, tables, graphs, photos and similar materials should be part of the text.

Table of values used to generate graphs must be included to ensure accurate representation. All illustrations should be identified correctly in the order in which they are referred to in the text, e.g. "Figure or Table 1., etc".

Acknowledgements, footnotes and endnotes (if necessary) are to be listed at the end of the article.

6. Editorial Scope

The editor reserves the right to edit /format the manuscript to maintain a consistent style.

7. Copyrights

Contributors shall undertake to ensure that articles submitted for publication do not infringe any copyright law. Relevant acknowledgements should be included in tables, figures or wherever necessary.

All contributions become the legal copyright of the publisher unless otherwise agreed. This covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproduction, microfilm or any reproduction of a similar nature and translation.

8. Disclaimer

Although the Valuation and Property Services Department (JPPH) is the publisher of the Journal of Valuation and Property Services (JVPS), the views presented in the Journal are entirely those of the contributors and do not reflect the official stand of the department. JPPH does not hold itself responsible for the accuracy of any article published. The role of the publisher is merely to provide a platform for discussion and exchange of ideas.

9. Honorarium

Every article published in the Journal of Valuation and Property Services shall be paid an honorarium of an amount approved by Treasury of Malaysia.

ISSN 1511-3345



9 771511 334007