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Aims and Scope

The Journal of Valuation and Property Services is a publication specially intended for property professionals to keep abreast with 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:

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

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

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REFEREE PANEL

UNDERSTANDING THE BARRIERS TO REAL ESTATE INVESTMENT IN DEVELOPING ECONOMICS

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Abstract

The investor's appetite for global investment has accelerated since the mid 1990s. International or cross border property investment has boomed, and indirect property investment (investing through securities such as REITs, and through unlisted funds) has become commonplace. International real estate investment through unlisted funds has become the approach of choice, and has included 'core' strategies, through which capital has been allocated largely to developed markets, and 'opportunity funds', which have also allocated capital to developing and emerging markets.

In a previous paper presented at IRERS 2008, Baum (2008a) related the number of unlisted real estate funds investing in developing economies to simple economic and demographic variables. Using all markets outside north America and Europe as an imperfect proxy for the developing world, we showed that the popularity of markets was explained largely by population and GDP per capita, but that there were interesting outlier observations - countries receiving much more, or much less, investment than the model predicted.

In this second paper in a series of three, we show that academic literature suggests that distortions in international capital flows may be explained by a combination of formal and informal barriers. Through a limited survey of investors, we have further refined our understanding of these barriers in the real estate context. This is the first such examination of the inhibitions to a free flow of cross-border real estate capital.

In a third paper we will use a more extensive survey of investors and fund managers to examine how these theories explain current practice, and will suggest specific reasons for certain countries receiving more, or less, investment than their fair share. The implications of this third paper will be relevant for investors in their choice of target markets and for governments wishing to attract more cross-border capital.

1.0 Introduction: globalisation and investment

Financial globalization has enabled investors worldwide to diversify assets and therefore to distribute risk and to direct capital to places where productivity and expected returns are high (Quinn, 1997). During the late 80s and early 90s, new technologies facilitated the transfer of funds from country to country and improved the internationalisation of assets (Garrett, 2000, Talalay, 2000, Sassen, 2006). An increased investor appetite for global investment in equities and bonds, and later property, has fuelled this global boom in international institutional investing and has helped to push down barriers to foreign direct investment (FDI).

In, 2009 the flow of global FDI capital was 21% of global GDP (Lahiri, 2009), and FDI and loans are the dominant types of investment received by many emerging markets (Daude and Fratzscher 2008). For example, Daude and Fratzscher's 2008 survey of 77 countries found that: " in our sample the average share of FDI in total foreign investment is 46% for developing countries, but only 22% for developed countries".

In the case of real estate, financial globalisation helped to create new investment vehicles that solved many problems that are characteristic of this asset class (Baum, 2008). International or cross-border property investment has boomed, and indirect property investment (investing through securities such as REITs, and through unlisted funds) has become commonplace. International real estate investment through unlisted funds has included 'core' strategies, through which capital has been allocated largely to developed markets, and 'opportunity funds', which have also allocated capital to developing and emerging markets (Baum, 2009).

As a result, cross-border property investment grew more quickly than domestic investment over the period 2000-2007, as evidenced by various publications by INREV (the Association of Investors in Non-Listed Real Estate Vehicles) and private research company Feri Property Funds Research (Property Funds Research, various) and publications by most firms of leading real estate brokers (for example, CB Richard Ellis and Jones Lang LaSalle).

Running in parallel with this development has been a boom in listed real estate markets, especially in the Real Estate Investment Trust (REIT) format, and in the number and value of unlisted property funds. The 3 growth of the listed REIT market is largely a matter of public record, while investing in unlisted real estate vehicles has become an increasingly standard route to attaining international real estate exposure. In the context of this paper, the change has had two main impacts: first, international property investment has boomed; second, indirect property investment (investing through securities and funds) has become the standard.

The globalisation of business activity was, prior to 2007-8, a continuing process, driven both by the conversion of ownership of successful companies from domestic to multi-national concerns, and by the increasing opportunities offered to corporations and institutional investors and banks to own overseas assets through globally-traded stock markets. The result has been a surge in foreign direct investment, with Asia-Pacific a particular beneficiary. In this region real estate investment (the construction of manufacturing facilities, for example) accounted for more than 40% of all foreign direct investment in the decade to 2001. Both occupier demand and the ownership of corporate real estate facilities have become increasingly driven by the needs of the multi-national enterprise.

European and global cross-border investment also increased in popularity throughout the 1990s. In the City of London, for example, foreign ownership rose from around 4% in the mid 1980s to 45% at 2006 (Lizieri and Kutsch, 2006). Diversification by institutional investors is a powerful driver of this activity, while other investor groups seek higher returns by playing the global property cycle. If returns going forward in the US property market are perceived to be disappointing, US money will look abroad (Moshirian and Pham, 2000). The rise of international benchmarks and improvements in data provision, coupled with globalisation in general and the growth of the international investment house in particular, have added to the appeal of international investment. Sheer weight of money drives some funds such as the Abu Dhabi Investment Authority (estimated assets: around $1tr) to place its investments abroad.

The world's top investors have gone global. According to Property Funds Research data, of the top ten global investors seven have global real estate portfolios and the other three have announced plans to invest in global real estate for the first time. It is now unusual among large investors not to have a global property strategy. Currency hedging is, however, expensive and difficult to achieve efficiently (Lizieri, Worzala and Johnson, 1998) and vehicles are rarely fully hedged. This problem leaves investors at the mercy of currency movements. Other perceived difficulties, including the dangers of operating from a distance with no local representation, increases the attraction of investing internationally through liquid securitised vehicles and unlisted funds.

Two dominant styles of international real estate investment vehicle have emerged since the 1990s, driving much of the recent international activity. These are distinguished by the objective being pursued. The key drivers for investing outside the domestic property market and buying global property are the increased opportunities for either or both of (i) diversification and (ii) enhanced return. These potential benefits come at a cost of increased complexity of execution. The diversification drive has been characterised by core and core-plus property funds, and the search for return by value-added and opportunity funds. This latter property fund type has commonly explored emerging markets. While some researchers argue the importance of locality amidst the globalisation theories (Leyshon and Thrift, 1997, Daniels, 1996, Talalay, 2000, Sassen, 2006), and others argue that investment in Western Europe, North America and the Pacific Rim still represent the majority in terms of volume of activity (Lizieri, 2009), it is clear from Baum (2008) that property investment in emerging markets had become very common prior to the credit crunch of 2007-8.

Investors and fund managers typically allocate capital to regions and countries before selecting buildings or funds (Baum, 2009). The main argument for country relevance is that social interaction, provided by spatial proximity, helps to build trustworthiness and rapport, which are important factors that help to obtain market information (Leyshon and Thrift, 1997, Agnes, 2000). For this reason, geography still matters for portfolio choice, savings and investment, and can have a great influence on investor's decisions and returns (Stulz, 2005). In this context, some countries attract less capital than others as a result of barriers, both actual and perceived.

In the literature of international trade, gravity equations are widely used to explain bilateral trade flows in terms of GDP, distance and other factors that can be considered as barriers. These factors include language, technology and available information between countries (Garmaise and Moskowitz, 2004; Portes

and Rey 2005, Daude and Fratzscher 2008). However, gravity formulas have their shortfalls, mainly to do with omitted variables in the model (Anderson and Van Wincoop, 2003), and they do not seem to fully explain asymmetries found in cross-border investment particularly regarding developing economies. Geographers argue the relevance of locality and the existence of barriers, but this argument is also supported by economics, as markets, costs, competition and government regulation are seen as the four pillars of globalisation, and foreign direct investment is usually attracted to large local markets with good local labour (Daniels, 1996, Case et al., 1999, Hoesli et al., 2004) and with low entry costs. Barriers to international investment create costs, both direct and indirect.

The production of high quality real estate needs to be financed through large scale equity and debt capital. This is especially required in emerging and developing markets which are short of such real estate capital. This requires entrepreneurship represented by equity capital or foreign direct investment (FDI). If actual and perceived barriers to investment influence investor behaviour, then large and more advanced economies will always dominate in real estate investment, and a levelling-out of economic prosperity may be inhibited.

Surprisingly, the investor's perspective is rarely reported in academic literature. (For a review, see Henneberry and Rowley, 2002, and from a sociological perspective see Knorr Cetina and Preda, 2006. For the particular case of real estate see Crane and Hartzell (2008)). By enquiring about investors' behaviour, the research set out in this and the following paper will examine those economic and socio-cultural issues underpinning decisions and the role of barriers to investment in the new globalised society and economy.

This paper is divided into four parts. In the first part we discuss the background to global real estate investment and summarise paper 1. In the second part we summarise the research methods we use. In the third part we discuss formal and informal barriers to international investment, and modify these findings for the real estate market by reference to a set of interviews with investors. In the last section we present our conclusions.

2.0 Research objectives and method

Our research intends to add to previous studies of investment barriers at both economic and sociological levels by conducting an empirical study of foreign direct investment in real estate in relation to country's GDP and population, and also by looking at investor's attitudes towards these developing economies.

The main objective of this work is to confront quantitative data and qualitative responses from investors, in order to have a more accurate picture of the formal and informal barriers affecting the countries under study. Our aim is to address those barriers and find the reasons behind investor's decisions in relation to developing economies; why some countries receive real estate capital and others do not; how investors make their decisions; how much they know about barriers, and in particular which barriers they consider more important.

We will set out a classification of the formal barriers that are embedded in the country's laws and regulations and the informal barriers related to political and cultural issues.

Paper one (Baum, 2008)

Through a simple model, we relate the number of funds targeting particular countries to population and GDP per

capita. (This work was more fully described in Baum, 2008). Data was collected from Property Funds Research (PFR) from 1990 to 2007. We defined the developing or emerging markets as the regions outside Europe, Australasia and North America, and focused on the largest 55 countries in these regions by population. The investors in the funds we identified as targeting emerging markets are concentrated in the non-developing and non-Asian markets. The most common domiciles include the U.S., Australia, Canada, the UK, the Netherlands, South Africa, Germany and Switzerland. We found that both GDP per capita and population explain the number of unlisted funds targeting emerging markets. Population is a stronger driver. There are several interesting outliers, meaning countries whose observed investment does not fit well with predicted investment.

Countries with high population and low investment include Indonesia, Pakistan, Bangladesh, Nigeria, Ethiopia, Egypt, Iran, Congo, Myanmar and Colombia. This list includes 7 of the world's 20 most populous countries. Countries with high GDP per capita and low investment include Taiwan, Saudi Arabia and Venezuela. Several explanatory hypotheses are possible, but these are reserved until the further analysis to be described in paper 3 has been completed. Countries with a low population but with high investment include Argentina and South Africa. Countries with low GDP per capita but with high investment include Vietnam, India, Philippines and China.

Paper two (Baum and Murray, 2010a)

In this second paper, we undertake a literature review to identify the barriers which inhabit the general world of international investment. We summarise and report academic work that explains barriers to investment. We also undertook a group of interviews with property investment professionals in order to develop a classification of barriers to international real estate investment. We set out to explain the extent to which the general barriers are likely to affect real estate investors, which are most likely to be important, and whether there are any real estate-specific variables that create barriers.

Paper three (Baum and Murray, 2010b)

In paper three our aim is to confront practitioners with academic theories, thus following Bourdieu's and Foucault's methodology of connecting and bouncing from theory to practice and from practice to theory for the development of new findings and paradigms. We will conduct semi-structured interviews with key investors and fund managers, and following completion of this we plan to hold a round table discussion. The questions for the semi-structured interviews have been drawn from the outputs of this paper.

3.0 Formal and informal barriers to foreign investment: a review

Some countries try to eliminate or lessen the impact of those barriers that are most likely to segment the local market from the global capital market. These barriers have been classified by academic work into formal and informal or direct and indirect barriers. The formal or direct are those that affect the *ability* of foreign investors to invest in emerging markets, for example in the form of taxes and laws; the informal or indirect barriers are those that affect investor's *willingness* to invest, mainly due to reservations regarding cultural or political issues (Nishiotis, 2004). In an investment context, we offer the view that formal barriers are *known variables* which will affect either the ability to invest or the net return delivered; informal barriers represent risks which may affect the ability to invest or the net return delivered.

Previous studies have listed barriers affecting the trading of goods, the setting up of companies, the openness of the stock markets or a mix of all. The most important barriers to global equity-market integration are said to be: poor credit ratings, high and variable inflation, exchange rate controls, the lack of a high-quality regulatory and accounting framework, the lack of sufficient country funds or cross-listed securities, and the limited size of some stock markets (Bekaert, 1995).

While the academic work addressing formal and informal barriers is rich, Eichengreen (2001) provides the only overview we have located, although this paper is not intended as a comprehensive literature review on the subject. Furthermore only some barriers listed by Eichengreen (2001) or Bekaert (1995) affect real estate, which by definition tends to be less liquid than other investments.

Lahiri, for example, defines FDI as "a long-term investment by a non-resident, but with control (a 10% or greater share)" (2009, p. 1). This author also explains that there are different types of FDI, ranging from the development of new buildings, the expansion of existing ones, acquisitions and (in case of multinationals), mergers. It can be deduced from this that the barriers to investment between the parent and host country will be different depending on the type of investment. For example, tax incentives that a multinational receives for relocating its manufacturing plant to a host country have been known to be more substantial than those received by an insurance company investing in commercial property in the same country (Lahiri, 2009). On the other hand, other costs such as skills levels of the working population may not be considered a barrier to real estate but will be for producers.

For the purpose of our study, we have concentrated on those papers that address the barriers most likely to affect real estate investments. In this context, one of the contributions of this research will be a critical and comprehensive literature review on barriers to real estate investment. As stated above, there is very little literature on this topic which is directly addressed at the real estate asset class. However, Jones Lang LaSalle, a leading advisory firm, produces a Real Estate Transparency Index, first published in 1999, latest version 2008. In classifying market transparency, this survey-based measure uses judgements about the following:

a) the availability of investment performance indexes;
b) market fundamentals data;
c) listed vehicle financial disclosure and governance;
d) regulatory and legal factors; and
e) professional and ethical standards.

This information is used to arrive at a single index measure, with the highest transparency score in 2008 awarded to Australia and the US. The opaque markets included Algeria, Belarus and Cambodia. The JLL transparency survey looked at 11 countries in the Americas, with Canada and the United States the most transparent; semi-transparent markets included Brazil, Chile, Mexico and Columbia; Costa Rica, Panama, Peru, Uruguay, Venezuela and the Dominican Republic remained as markets marked by low real estate transparency.

The Middle East and North Africa region had the lowest average transparency when compared to other surveyed regions. Asia Pacific contains high transparency markets such as Australia and New Zealand, but also houses Cambodia, which is classified as having an opaque real estate market. India, China and Vietnam were 2008's most improved markets in the region while Indonesia, Malaysia and South Korea

showed little improvement. We suggest that this index is a measure of informal barriers to investment, to be further discussed later.

3.1 Formal barriers

There are different types of formal barriers, which include restrictions to capital accounts and legal barriers which relate to taxes and to ownership of foreign assets. For the purpose of our initial survey we presented a list of all formal barriers drawn from our academic literature review that are likely to occur in real estate investments, and asked interviewees to rank them according to their importance and how likely they were to deter them from investing in that country. We also asked them to justify their view.

'Push and pull factors' are terms used in economics to explain international capital flows. Push factors can be related to the lack of lending in the investors' country, while pull factors are related to the risk-return relationship in the host country (Montiel and Reinhart, 1999). While push factors explain external reasons why investors choose to go abroad, pull factors can help to explain geographical asymmetries in capital flows. Pull factors include some countercyclical policies that some countries apply when faced with a surge in the inflow of capital, for example capital controls.

Restriction to capital accounts

Capital controls affect the ability of investors to repatriate their investment. If domestic savings are scarce in the host country, it is likely that capital account transactions will be restricted. A common direct restriction could be the imposition of a minimum period of investment (Bekaert, 1995). It follows from this that restrictions on international financial flows are less prevalent in high-income countries with large domestic savings (Eichengreen, 2001). Although recent research has shown that capital controls do not affect the inflow of FDI (Montiel and Reinhart, 1999) our preliminary survey shows that real estate investors are likely to consider restriction to capital accounts a high barrier.

Among those who gave a high rank to the issue was an experienced global fund manager who used to work for a large insurance company and is now founding partner of an investment firm. He explained that some years ago his firm invested in China and decided later to double the investment in that country. Sudden political and legal changes meant that it took two years to get the money out. Another interviewee, a global advisor to a large American firm of commercial property researchers, agreed. In respect of China *"..if the thing goes wrong, don't ever expect to get your money out"*. In general and in our preliminary survey, there were no low ranks suggested for this issue and restrictions to capital accounts appears as a medium to high barrier to investment.

Legal barriers

Legal barriers arise from the different legal status of foreign and domestic investors. This could be in the form of ownership restrictions and/or the imposition of higher taxes (Bekaert, 1995). For example, governments in both developed and developing countries often impose ownership restrictions as a means of ensuring domestic control of local firms, especially those firms that are regarded as strategically important to national interests (Eun and Janakiramanan, 1986).

By analysing data from 16 different countries including developed and developing ones, these authors explain that even within the same country the fraction of equity that can be held by foreigners can be uniform across all firms, can vary across different industries with some industries closed to investment by foreigners, or it could be the case that foreign investment is banned from the country completely.

The degree to which this restriction applies varies greatly, and research in this area is usually done case by case. As explained by one of our interviewees, a lawyer from a prominent international firm with experience in the Latin American real estate markets, there are restrictions on ownership around coastal areas in Brazil which usually force foreign investors to find a local partner. Not surprisingly, most participants in our preliminary survey considered this an important barrier, giving it the maximum score. One of the participants and head of research of a large investment firm stated that a good legal framework *"is probably the most underrated and important thing in a modern economy"*. Others expressed a view that *"countries will not attract investment if they have problems with their land, legal system, contracts"*. China was mentioned as an example of a country with a complicated legal system, and also the place where foreign lawyers are not accepted and local ones cannot be trusted. When interviewees were questioned specifically about ownership restrictions, the general view in our preliminary survey was that this was not a great barrier. As the majority stated, these problems are usually solved by using a local partner.

Taxes and costs

The residence principle means that incomes from foreign and domestic sources of residents are taxed at equal rates, while incomes of non-residents are tax exempt (Razin et al. 1998). However, as this author explains, this is not always the case and this ideal tax structure is often altered, thus affecting capital flows. Countercyclical policies mentioned above in the context of pull factors can also include tax benefits, for example in cases when countries need to increase FDI.

The costs associated with holding foreign securities in a portfolio include transaction costs, information costs and differential taxation. Academic studies concentrate on differences in the taxation of capital gains and repatriation of capital (Demirguc-Kunt and Huizinga, 1992). After analysing 18 developing countries, these authors conclude that developing countries should acquire a policy of lighter taxation on capital gains than on repatriation of capital in order to avoid discouraging physical investment.

Researchers have typically single out these barriers and created models that consider their impact on investment. Black (1974) and Stulz (1981) built their analysis based on a two-country (domestic/foreign) single period model, taking into account transaction costs, information costs, or differential taxation. Both assume that this cost can be represented as proportional taxation, and both models show that the world market portfolio will not be efficient for any investor in either country. Stulz also shows that some foreign securities may not be held at all in the domestic investor's portfolio. The academic view is therefore that high costs and taxation are deterrents to investing in a foreign country. Real estate is no exception to this rule.

In our preliminary survey opinions were divided among those who considered that costs had little importance because they were compensated in returns, those who consider costs as a high barrier but only in cases where the investor could not find a local partner, and those who simply consider high costs as a barrier.

Survey participants were asked specifically about capital gains taxes. Some considered this to be a medium to low barrier, stating that these were operating costs that can be compensated for in expected returns. Those who considered this an important barrier also mentioned tax transparency, without which the target market could be a hostile environment to investment.

3.2 Informal barriers

Informal barriers to international investment arise because of differences in available information, accounting standards and investor protection. There are also risks that are especially important in emerging markets (Emerging-Market-Specific Risks or EMSRS) such as currency risk, political risk, liquidity risk, economic policy risk and macroeconomic instability (Bekaert and Harvey, 2002, Nishiotis, 2004). Legal and title risk is a real estate issue that we can add to this group.

Political risk

Politics can influence economic decisions and the country's degree of openness to foreign investment. For example, some authors argue that democratic governments are less likely to impose capital controls (Brune et al., 2001, Quinn et al., 2001). This is explained by the fact that democracy comes with increased rights and citizens' ability to press for the removal of restrictions on their investment options (Eichengreen, 2001). From these authors it can be inferred that investors will be deterred from investing in non-democracies.

However, most interviewees considered political regimes to be a medium to low strength barrier to real estate investment. Among those who gave a medium to low rank to this issue was the managing director of a large UK bank with experience in international lending. He pointed out that dictatorships have the ability to change all the rules completely, and it was supposedly much harder for Western government types *"to renege on a certain set of rules that everybody understands"*. However, he did not consider political regimes a high barrier, as he believed that that some regimes can be even clearer in their policies than democracies: *"It is black and white with states like Qatar, where there are two people that control everything"*.

A fund manager agreed: *"There have been some authoritarian places that can be stable and the other way round. Egypt is quite stable but not a complete democracy, while Greece is a democracy but not very stable. I suppose that authoritarian regimes tend to be quite traumatic in periods of change"*. However, he agreed with the academic view that if all things are equal *"you will go for the more stable democratic regime, simply because you are more likely to get a reliable legal framework and because democracies by their very nature tend to have less changes in direction"*.

Others considered that the risk comes with the territory and *"If you're going to a non-developed country the chances are that you are going to have a political system that doesn't operate openly"*.

Among those who regarded this as a a medium rank issue was a fund manager who stated that the barriers were not so much related to the political regime as to the legal structure, and the main question should be *"is it a regime that is pro business or pro taking the money and then won't let you take the money out?"*. Another investor considered politics a barrier based on his previous experience, stating that he had experienced changes of government where new restrictions were imposed that affected property, but still invests in non-democracies like Russia and China. This position seems to reinforce our view that population, wealth (and growth) are strong drivers for investment and that informal barriers have little effect in such cases.

Academic research also highlights the importance of pressure from powerful groups within countries. The relationship between politics (for example. the degree of democratization), financial reforms

and future economic growth have been widely studied by Dennis Quinn (Quinn, 1997, Quinn et al., 2001), whose ideas were summarised in the previous section. In addition, it should be pointed out that the most important difference between emerging and developed markets is the much more prominent role of politics in emerging markets and their larger public sectors, which can act as pressure groups (Bekaert and Harvey, 2002). Pressure groups are at the heart of political instability and can add substantial risk premiums to returns and therefore deter foreign investment.

North (1990) distinguishes between formal institutions (laws, rules) and informal behaviour. The state is the third party enforcing the laws while at the same time confronting the trade-offs between disorder, control and constitutional liberalism. The author's main argument is that if political efficiency is guaranteed, property rights are respected and economic efficiency can be achieved (North, 1990). The way in which these institutions are constructed vary greatly from country to country (Fukuyama, 2004) and the main aim of comparative economics is to study these differences and their effect on investment.

The tendency for those regimes that represent the interests of workers seems to be to apply controls while capitalist governments are unlikely to do so, which add extra risks to non-democracies (Alesina and Tabellini, 1989). Some of our interviewees disagree with this, stating that pressure groups also act in democracies: *"In the case of Marbella, where the local government just stopped all new developments, this was a populist idea".*

By contrast, the stock of FDI has been suggested to be less sensitive to corruption.

"We present evidence that the share of inward FDI and also foreign loans is highest for countries with weak institutions and poorly developed or badly functioning capital markets. Therefore, although FDI may have beneficial effects on the economy, a composition of foreign investment that is heavily tilted towards FDI is likely to be a signal of some fundamental weaknesses of the host country economy, thus providing support for the argument of Hausmann and Fernandez-Arias (2000) and Albuquerque (2003)" (Daude and Stein 2004).

In capitalist economies, public and private institutions can change or establish new economic rules. In other words, they can shape the characteristics of a country (laws, culture, history, politics, economics, and so on), how the institutions are shaped and how much the state intervenes affects the country's economic performance, risk and investment. Even though it seems that economic stability is an important factor for investments, some interviewees expressed different views: *"we cannot control what happens in the market, interest rates and all that, so we tend to focus I would say 80% of our efforts on the analysis of the individual asset and not what is going to happen to the city of x, y, z".* But this interviewee also added that economic stability matters and that *"people have forgotten that until recently. It is interesting to see how capital is flowing to those safe havens because they have that stability. I think is a difficult one because there are certain places where if you are making opportunistic investments you may not worry about it all because it is a high risk anyway".*

Currency risk

Currency movements can have a dramatic impact on equity returns for foreign investors. A possible irony of international investment is that many developing economies manage to keep exchange rate volatility lower than that which is typical in industrial economies. This is not surprising as many developing economies try to peg their exchange rates to the U.S. dollar or

to a basket of currencies (Bekaert, 1995). (A critical literature review on currency risk and international real estate investment can be found in Sirmans and Worzala, 2003.)

Our preliminary survey indicated that this is an important risk and the main question that an investor poses before investing is whether or not is possible to hedge the currency: *"If you are somewhere like China you can't really hedge, so, you end up with horrible debates, and this is an important matter, you can't ignore it. If you are thinking of investing where the currency is going down the pan, it doesn't matter at what time you get out, because it is not worth anything. There are hours and hours of debate about what to do with the currencies if you cannot hedge".* Another commented: *"This is something that is a key part of the business. You should hedge if you can, because we are property investors and not currency specialists. That will add to your costs, and this is a major concern when hedging costs are very high or hedging is impossible".*

Liquidity risk

Liquidity also presents a problem for direct investment in private real estate. This type of risk not only captures the time it takes to execute the trade, but other factors such as direct and indirect costs of trading and the risk and uncertainty concerning the timing of selling and the achievement of the expected sale price (IPF, 2004).

Replies to our survey regarding liquidity were diverse, although the majority stated that this was a high barrier. Among those was a fund manager who stated that liquidity issues were once more a high barrier since the 2008 collapse of the economy: *"One of the massive things about the crash was liquidity. This time last year everybody was running for liquidity".* For this reason he stated that in the near future *"investing institutions will up their proportion of cash, bonds and listed equities, because of liquidity issues".* This suggests a withdrawal from less liquid emerging markets.

Among those who rated liquidity as a medium to low barrier was a head of research of a large firm of investors who stated that the answer was different if you were a property developer than if you were an investor. For the former, lack of liquidity was a problem, but for an investor, illiquidity can turn into an advantage because *"if you're buying the only office building in a small town, that will be reflected in the price".* For others who also gave a low score to this question, liquidity was part of the business: *"if you go into somewhere because you think other people will follow, the trend will create liquidity".*

Crucial in the issue of liquidity for emerging property markets, especially for opportunity funds which try to buy and sell in a short space of tie to maximise return and performance fees or carried interest payments, is the prospective 'take-out'. Who will buy the property when the investor sells it? Emerging markets are likely to have less well developed local institutions and investment funds, and international owners are less likely to be represented. In addition to potential shortages of equity players ready to buy, there may also be a shortage of bank debt. Local investors may find it hard to raise the cash to buy a property if there is no local debt available, and international buyers will often use local debt to lay off some currency risk (Baum, 2009) - so if debt is unavailable liquidity can disappear. This is a critical problem for a closed ended, limited life unlisted property fund.

Cultural barriers

Despite the empirical research which attempts to price different type of risks, there is some evidence that investment

decisions are also based on sentiment (Lizieri, 2009). As stated before, investors' behavioral attitudes have been the subject of recent research (Bailey, Kumar, and Ng, 2004, Graham, Harvey, and Huang, 2004) but further analysis is needed in order to disentangle economic bias based on GDP and population from the influence of formal and informal barriers when it comes to making real estate investment decisions at an international level.

Interviewees in our preliminary survey all agreed that there were cultural barriers, exemplified when dealing with countries with certain religious beliefs. Even in those cases, however, the general view was that there were solutions available such as using specialised lawyers that could make the deal compliant to the religious beliefs of the locals. Sometimes the cultural barrier can be subtle: one of the interviewees was involved in the foreign development of a research laboratory which included facilities for animal testing, and said: *"in the UK we would have never got involved in that but in [X] they didn't even understand why we were so worried about it".*

While investors say that cultural barriers do not affect their decisions, they do state that precedence has an influence in their country of choice: *"I think in my business you look at precedence. Historical deal and track records can have an influence on people. Some people went to France in the 70's and that went horribly wrong and that stopped other English people from coming here for 20 years. The history of deals, what happened to those deals and why they went wrong are influential".*

An important cultural factor that was mentioned in the survey and has not been studied by academics was related to communications, and in particular the language barrier, which was related to the level of education in the targeted country and familiarity with a culture and language by westerners, especially American and British. This is important in the property world because real estate is not a screen-based, centralised market.

Others mentioned the imperative necessity of building a relationship of trust when a local partner is needed: *"People don't see things the same way, and you are often not sure what it is that your money goes into, because of cultural misunderstanding, corruption or fraud. I think the human nature side of this is terribly important [...] I as an Englishman travel abroad as a tourist and all I can use are my normal senses, and I depend heavily on finding somebody that I can relate to and understand".*

It could be the case that the targeted country has all the conditions for investment but a failure to find the right local partner could jeopardise the business. Others are willing to take those risks: *"Somebody told me that the key in India is to find somebody and build up that trust and then don't trust them, be prepared for something to go wrong, and to be let down".* Others commented on the ethical issues of a deal that can upset and affect lots of people: *"We have ethical guidelines about what types of tenants we can have, what we can do and what we can't do".*

Geographical barriers

As we explained in the introduction to this paper, there are theories that contest the inevitability of financial globalisation, claiming that geographical barriers still exist (Goldberg et al). The general view in our preliminary survey was that the ability to visit the country of investment (especially if no visa is required, and time differences are minimal) was a definite advantage. It was also considered an advantage for decision-making. One interviewee stated that people underestimate how exhausting it can be to travel and hold meetings: *"you have to manage the distance so you can*

go and spend a week somewhere do the negotiations and come back, because as soon as someone knows that you have a plane to catch, negotiations slow down, and then you give things away".

The view of this interviewee was that even when operations are run from a central office in the home country of the investor, people still need to visit the target market, as real estate is a *"global market, local asset"*. Others considered that geographical proximity is an important factor mainly because people now do not buy on trust: *"today people like to know more, and every piece of real estate is different so you need to go there [...] people don't rush to buy things without local due diligence, and that slows things down".*

Legal and title risk

A critical real estate issue is the risk of defective or unenforceable title. This is an issue in newly democratised markets such as the Baltic region and central, eastern and south-eastern Europe, where prior claims preceding communist state ownership can complicate acquisitions. This can be insured in many cases, but remains a risk in some. In Buenos Aires, methods of piecemeal or tiered development can lead to multiple ownership and a scarcity of institutionally acceptable single title assets. The issue of state title 'resumption' has been problematic in Zimbabwe, and adds to the conception of title and legal risk associated with political risk. *"Why take this risk or pay excessive costs of due diligence or insurance, especially when currency risk is also present, unless prospective returns are huge?"*

4.0 Conclusions

Formal and informal barriers to international investment are important in determining cross-border real estate capital flows. Formal barriers are prevalent in real estate markets because real estate ownership is easily regulated, real property is easily taxed and capital controls can be applied to real estate assets as easily they can to any asset type. This may act to leave domestic investors in a better relative position and exclude foreign buyers.

Informal barriers are equally challenging. The large lot sizes involved in real estate means that diversification is less easily achieved (Baum, 2007) and this leaves systematic country risks with investors. Currency and title risks in particular are likely to loom large in investor thinking. In an equity portfolio, emerging market currency risk can be diversified; for a real estate investor, this may be impossible, meaning that hedging is required, but this can be very costly or even impossible to achieve.

The different formal and informal barriers we find to be of likely significance in international real estate are listed in Table 1.

In paper three our aim is to confront practitioners with these theories through semi-structured interviews with key investors and fund managers. Through this we aim to relate the real estate under-investment and over-investment in emerging markets we identified in paper 1 to the different formal and informal barriers listed in Table 1, and to reveal the implications of this for investors in their choice of target markets and for governments wishing to attract more cross-border capital.

Table 1: Formal and Informal Barriers to Real Estate Investment

Formal barriers	**Informal barriers**
Ability to invest	*Willingness to invest*
Restriction to capital accounts	Legal and title risk
Legal barriers	Politic risk
Taxes and costs	Economic stability
	Currency risk
	Liquidity risk
	Cultural barriers
	Geographical barriers

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THE SIGNIFICANCE OF REAL ESTATE IN SOVEREIGN WEALTH FUNDS IN ASIA

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Abstract

Sovereign wealth funds have taken on increased importance in global investment markets in recent years. Real estate has recently taken on increased importance as an asset class for many sovereign wealth funds, with several sovereign wealth funds having significant global real estate portfolios. This paper assesses the stature of sovereign wealth funds and highlights the significance of real estate in sovereign wealth funds. It particularly highlights the significance of real estate in sovereign wealth funds in Asia and the real estate investment strategies used by sovereign wealth funds in the current global financial crisis.

Keywords: *Sovereign wealth funds, real estate, Asia, disclosure, transparency, real estate activity.*

INTRODUCTION

Sovereign wealth funds (SWFs) are government investment vehicles funded from government reserves, which are managed separately to the country's central bank. They operate as long-term investors. The funding sources for these government reserves come from either natural resource reserves (eg: oil, gas), goods and services foreign exchange reserves or pension fund reserves where there is no explicit liability. The strategic objectives of these SWFs include the management of government holdings, wealth optimisation of risk-adjusted returns, diversification and offsetting of future declines in the country's natural resources and supporting the development of the local economy. This sees SWFs behaving in a similar manner to either endowment funds or economic development funds. Examples of these SWFs include Abu Dhabi Investment Authority (ADIA), Singapore's Government Investment Corporation (GIC), Norway's Government Pension Fund (GPF), China Investment Corporation (CIC) , Singapore's Temasek Holdings and Malaysia's Khazanah Nasional.

SWFs have operated for over 50 years, with the Kuwait Investment Authority (KIA) established in 1953. The 1970s/1980s ,with the increase in oil prices and the growth in the Asian economies saw further SWFs established (eg:ADIA, GIC), with the 1990s seeing smaller SWFs established in Asia (eg: Khazanah Nasional). Since 2000, with the increasing oil prices and significant trade surpluses, a large number of SWFs were also established (eg: CIC, Qatar Investment Authority (QIA) and Korea Investment Corporation (KIC)). Over 50% of SWFs have been established since 2000. The Middle East and Asia dominate the SWF market, with several countries having more than one SWF (eg: Singapore, Abu Dhabi).

SWF GROWTH

Figure 1 shows the growth in SWFs since 1999, with current estimates seeing total SWF assets of $3.8 trillion. A lack of transparency for SWFs sees only estimates of SWF total assets being available. Figure 1 shows the significant growth over 2006-2008 and the impact of the global financial crisis (GFC). Commodities-based SWFs account for 60% of SWF assets, while non-commodities-based SWFs account for 40%. The contribution by non-commodities-based SWFs has increased significantly in recent years, reflecting significant transfers from foreign exchange reserves. Global foreign exchange reserves are currently $7.5 trillion; for example, China has $2.1 trillion in foreign exchange reserves.

Figures 2 and 3 show the leading SWFs, including assets under management and year of establishment. These SWFs reflect a diverse range of economies, with the top 2 SWFs having over $1 trillion in assets in total, while 11% of SWFs have less than $1 billion in assets. The SWFs in Asia include CIC, GIC, Temasek, KIC, Khazanah Nasional and Brunei Investment Agency. The SWFs in Malaysia are Khazanah Nasional and 1Malaysia Development. Japan and India do not have a SWF. Figures 4-6 show the regional diversity of SWFs, with the Middle East and Asia accounting for 75% of SWF total assets.

Figure 7 shows the year of establishment of the SWFs. While 27% are well-established with over 20 years of activity (eg: ADIA, GIC), 56% of SWFs have been established for less than 10 years. In particular, 50% of SWFs in Asia have been established for less than 5 years. This clearly presented operational and risk management issues during the GFC. Typically, the older SWFs were cautious, discreet and conservative investors, while the newer SWFs were less cautious, confident in an environment of increasing oil reserves and economic growth, adopted active management approaches similar to private equity funds and often used gearing . Figure 8 puts SWFs in the perspective of global assets under management. This sees SWFs accounting for $3.8 trillion ; only 5% of global assets under management and only 12% of the asset value of pension funds globally.

SWF FEATURES

The management of SWFs sees them as independent operational entities, long-term investors and users of external managers (45% of assets). SWFs have increasingly adopted an active management strategy, which sees them including property and private equity amongst their mandated asset classes.

Transparency and disclosure remain as key concerns for SWFs. This has improved recently following the Santiago Principles in 2008, which has resulted in a code of conduct/regulations and the establishment of the International Forum of SWFs. This has resulted in many SWFs now producing an annual report and having an informative website. However, full details are often not provided regarding their total assets, asset allocation and detailed investment strategy. This lack of transparency, as well as the size and potential geopolitical conflict issues has previously raised concerns over SWF activities. However, the SWFs were seen to play a major positive role during the GFC in terms of the survival of the financial services sector in several Western economies (eg: US).

Importantly, there are major differences between the various SWFs, including size, objectives, motivation, investment horizon, organisational structure, risk appetite, asset allocation, experience and transparency. This sees the more established SWFs such as ADIA and GIC as being experienced

and sophisticated investors, with institutional maturity, performance-focused, professional investment standards and extensive risk management procedures.

Figure 9 highlights the different levels of transparency for the SWFs using the Linaburg-Maduell SWF transparency index. Typically, the SWFs in Asia are more transparent than the Middle East SWFs. Temasek is the most transparent of the SWFs in Asia, with CIC and GIC being mid-range in transparency. While some SWFs have only recently produced annual reports (eg: ADIA), Khazanah Nasional has produced an annual report for the last six years; see Figure 10.

Figures 11 and 12 provide further evidence of the significant differences in SWFs regarding their financial risk (regarding their asset allocation) versus sovereign ownership risk, as well as their level of transparency versus investment approach (conventional through to strategic). This clearly positions the SWFs in Asia relative to the Middle East SWFs.

SWF ACTIVITY AND TRENDS

To assess SWF activity over the last 10 years, a range of excellent SWF information sources were used; namely from the Sovereign Wealth Fund Institute, Monitor and Preqin; see references. In particular, Monitor records the public transactions by SWFs, resulting in a database of over 1,200 SWF transactions worth $285 billion over 2000-2009. Real Capital Analytics was also used to source 68,000 global property transactions worth $2.1 trillion over 2007-2009 to strip out SWF property transactions activity. SWF websites were also used to identify specific SWF activity.

Figure 13 details SWF activity (by number and value of transactions) over 2000-2009. The earlier years saw a large number of small $ value transactions, with 2007-2008 seeing a significant increase in the value of the SWF transactions. 2009 clearly sees the impact of the GFC, with transaction value reducing from 175 transactions at $128 billion in 2008 to only 63 transactions at $36 billion in 2009(Q1-Q3).

To highlight the impact of the GFC, Figure 14 breaks this transaction activity into quarters for 2008-2009 to highlight the impact of Q1 on 2008 activity. Caution should be taken regarding the potential upturn at Q3:2009; particularly given recent events in Dubai regarding debt deferral.

Importantly, Figures 15-16 show the significant activity by SWFs in Asia in recent years (to 2008) and the significant contribution that property makes to SWF activity; accounting for approximately 20% by both number and value of transactions. This sees property as the #2 transaction sector, only exceeded by financials. Figure 16 also highlights the role of SWFs in the traditional energy, financial services, property and industrial sectors, as well as the emerging sectors of IT, telecommunications and healthcare. The emerging sectors clearly reflect the strong economic developmental role by SWFs in recent years, reflecting a search for comparative advantage in key areas of advanced technology. Figures 17-19 further reinforce the significant and consistent contribution by property to SWF activity over 2000-2009.

The recent investment flows from the Middle East SWFs and Asia SWFs are given in Figures 20-21; highlighting the OECD focus for Middle East SWFs and the increasing OECD focus by SWFs in Asia over 2000-2008. However, the dynamic of the OECD focus has changed with the impact of the GFC; as seen in Figures 22-23. This saw a

major retreat from the OECD markets to the emerging markets focus in 2008; reflected in OECD investment reducing from 94% in Q1:2008 to only 27% in Q4:2008. A major return to the OECD markets was evident in 2009, increasing from 27% in Q4:2008 to 88% in Q3:2009; reflecting some degree of investment confidence by SWFs and distressed sale opportunities (including property).

Figure 24 also highlights this shift between a domestic market focus in 2008 and a return to a foreign market focus in 2009; increasing from 31% international in Q4:2008 to 92% in Q3:2009. This clearly illustrates the three operational phases for SWFs regarding the GFC as supporting the Western financial institutions in 2007-2008, stabilising of domestic markets in the 2nd half of 2008 , and increasing international appetite in 2009.

Figure 25 shows the acquired stakes in investments over 1995-2008. Importantly, 39% were majority stakes of at least 50%. These controlling interests were often in emerging markets (eg: Temasek), with controlling interests in OECD countries typically in non-sensitive areas such as healthcare or retail. JVs were often used to avoid political concerns, as well as a non-board of directors role being typical.

In summary, Figures 26-28 highlight the dynamics of SWF activity over 2000-2009. This clearly highlights the impact of the GFC and falling commodity prices, as well as the significant investment by SWFs such as GIC, CIC, ADIA, KIA, QIA and Temasek into the financial services sector (eg: Citibank, UBS, Merrill Lynch, Carlyle and Blackstone). Often , this resulted in significant paper losses by the SWFs. Figures 27-28 clearly highlight the significant role of property in SWFs over these timeframes.

SWF PROPERTY ACTIVITY

While 51% of SWFs invest in property, this is dominated by the larger SWFs (80% of those SWFs with > $100 billion) compared to the smaller SWFs (30% of those SWFs with < $10 billion) . Of those not investing in property, they tend to be the more recent SWFs which are still formulating their investment strategy for alternate assets, as well as conservative SWFs focused on stocks and bonds only.

Importantly, Figure 16 shows property accounting for approximately 20% of SWF transactions in recent years. SWFs with significant property portfolios (both $ and %) include GIC (12%), ADIA (10%), Temasek (7%) and Mubadala (13%). This property focus in a SWF is often achieved by using sovereign wealth enterprises (SWEs) or holding companies within the SWF, with 40% of SWFs having separate property arms. In several cases (eg: ADIA, KIA, QIA) , several SWEs are used to achieve this property exposure both locally and internationally. Strategies for property investment are sophisticated, covering all aspects of the property space. This includes direct property , separate accounts, REITs, JVs, co-investment with other SWFs or pension funds, private equity funds, equity stakes in property companies/REITs, debt financing and capital commitments for property development.

In particular, 2007-2009 have seen SWFs as amongst the major property investors globally. For example, 2007 saw Dubai World (#14), GIC (#21) and Istithmar World (#44) amongst the top 50 property investors globally, as well as Dubai World (#1) and GIC (#18, #21, #34) involved in several of the top 50 global property transactions. Whilst 2008 saw less activity, Dubai World (#26), QIC (#31), GIC (#39), Temasek (#41), ADIA (#74) and KIA (#98) were in the top 100 global property investors, with KIA/QIA (#1), QIA (#4),

KIA (#26), ADIA (#28), Dubai World (#34, #48) and GIC (#35) involved in several of the top 50 global property transactions. 2009 has seen less property activity, with ADIA participating in the 2nd largest global property transaction (via JV).

The significance of property amongst SWFs in Asia over 2000-2008 is shown in Figure 29. Property was the second largest sector by $ value and the third largest sector by number of transactions. The following sections will highlight the significance of property in a number of the SWFs in Asia; including the SWFs in Malaysia.

PROPERTY IN SWFs IN ASIA

GIC

GIC was established in 1981, with a global mandate (ex-Singapore) , with the property section established in 1982 as a long-term property investor. This sees GIC Real Estate as one of the three asset management companies within GIC. Within the overall GIC asset allocation of stocks (38%), fixed income (24%), alternates (30%) and cash (8%), property accounts for 12% of the GIC portfolio and resides in the alternate asset allocation. The total GIC portfolio is estimated to be $248 billion. GIC produces an annual report , with an informative website.

GIC is a sophisticated property investor, being in the top 10 property investors globally. The property portfolio comprises over 200 major properties in over 30 countries, with over 150 property staff in seven offices globally. Figure 30 shows some of the major commercial properties in GIC's international property portfolio.

GIC's property investments have covered all aspects of the property space, including direct property, indirect property, JVs, debt financing and private equity. GIC has significant stakes in leading property companies/REITs globally, including British Land, Brixton, Great Portland, GPT and Liberty International. Recent activities have included acquiring the Prologis Japan/ China industrial property platform ($1.3 billion), as well as significant property acquisitions recently in Tokyo, Stockholm, London, Finland and Italy. Often these acquisitions are via JVs with local players or pension funds (eg: Canada PPIB).

TEMASEK

Temasek was established in 1974 with a focus on Singapore and Asia; particularly the emerging economies. With assets of $120 billion, Temasek is a long-term investor , largely operating as an economic development fund. Its four investment "themes" are transforming economies, growing middle income populations, deepening comparative advantage and emerging champions. Assets comprise listed entities (79%) and unlisted entities (21%) . Temasek is one of the most transparent SWFs, producing an informative annual report.

Property accounts for 7% of the Temasek portfolio; being the 4th largest sector in the Temasek portfolio. In comparison, financial services accounts for 40% and telecommunications accounts for 24% of the Temasek portfolio. Via indirect property, Temasek has major stakes in CapitaLand (40%) and Mappletree (100%).

CHINA INVESTMENT CORPORATION (CIC)

CIC was established in September 2007 with $200 billion from China's foreign exchange reserves, with the objective to maximise risk-adjusted returns and to diversify China's foreign exchange holdings. CIC comprises CIC with a global mandate and Central Huijin Investment for the local RMB investments . To provide diversification, CIC reorganised their investment departments in April 2009 into four markets; namely

public markets, tactical investments, private markets and special investments. Property is included in the private markets mandate. CIC is expected to receive an additional $200 billion in 2010 to further enhance its portfolio. CIC is a member of the International Forum of SWFs and has an informative website.

Property activities have accounted for 10% of recent CIC activities, comprising direct property (85%) and listed property (15%). A mixed investment strategy is used for property investment comprising direct, separate accounts, funds and debt financing; with an opportunistic distressed property focus. Specific property investments (7 at $3.6 billion) have included Morgan Stanley REF VII ($800 million), separate accounts (4 at $1.2 billion) and debt finance for Goodman and Songbird ($1.6 billion).

KOREA INVESTMENT CORPORATION (KIC)

KIC was established in July 2005. The current portfolio comprises stocks (28%) and bonds (72%). Plans to extend into property were to be developed in 2009. KIC has recently established MOUs with other SWFs including KIA, ADIA and Khazanah Nasional.

KHAZANAH NASIONAL

Khazanah Nasional (KN) was established in Malaysia in 1993 as an economic development fund for the strategic investment in new industries and markets and to promote economic growth via strategic industries. Its investment strategy involves the three "themes" of creating sustainable value, raising national competitiveness and creating a culture of high performance. KN has produced an annual report for the last six years.

With assets of $25 billion, KN invests in 50 companies largely in Malaysia across 15 sectors. This includes Telekon Malaysia, CIMB, MAS and PLUS Expressways. Property activities have included investments in Iskandar, Putrajaya and STLR; as well as investments in companies in infrastructure, logistics and utilities.

Recent developments include an MOU with KIC in June 2009 , as well as establishing a Beijing office in October 2008.

1 MALAYSIA DEVELOPMENT(1MD)

1Malaysia Development was established in early 2009; previously being the Terengganu Investment Authority. Its activities are the long-term sustainable development of Malaysia in the energy , property, tourism and agribusiness sectors. Limited specific details are available on the 1MD website concerning its activities in these sectors.

Recent developments include MOUs with QIA and KIA, as well as a joint venture with Mubadala (Abu Dhabi SWF) in January 2010 for joint clean technology projects ,with possibilities of establishing a carbon-neutral city in Malaysia.

FUTURE DEVELOPMENT OF SWFs

SWFs are an important part of the global financial and investment markets, using a range of sophisticated investment strategies in developing their portfolios. This includes property investment in its various forms across the property space. Whilst SWFs were impacted by the GFC, it has provided the opportunity for SWFs to reflect on their operations and undergo reorganisation and realignment in moving forward. This has been particularly true for the newer SWFs with regard to their ongoing risk management strategies.

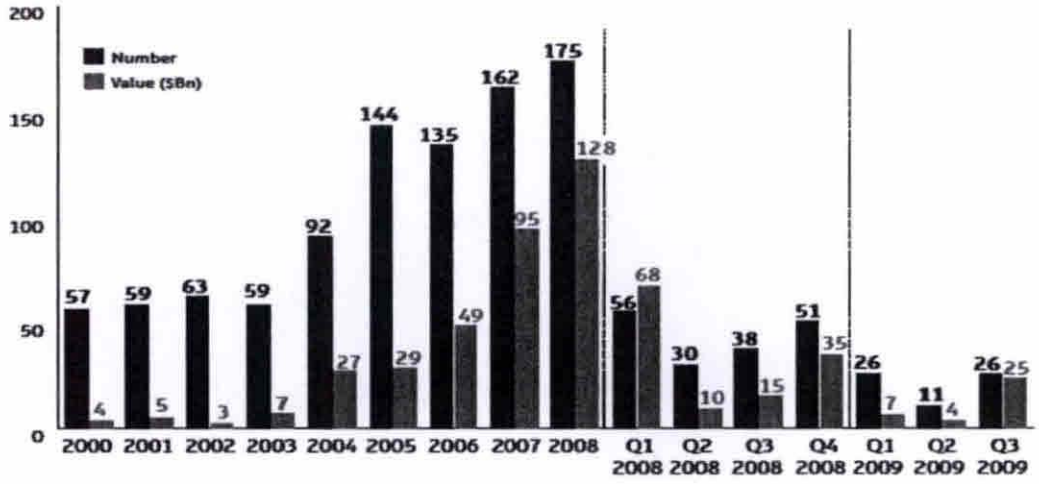
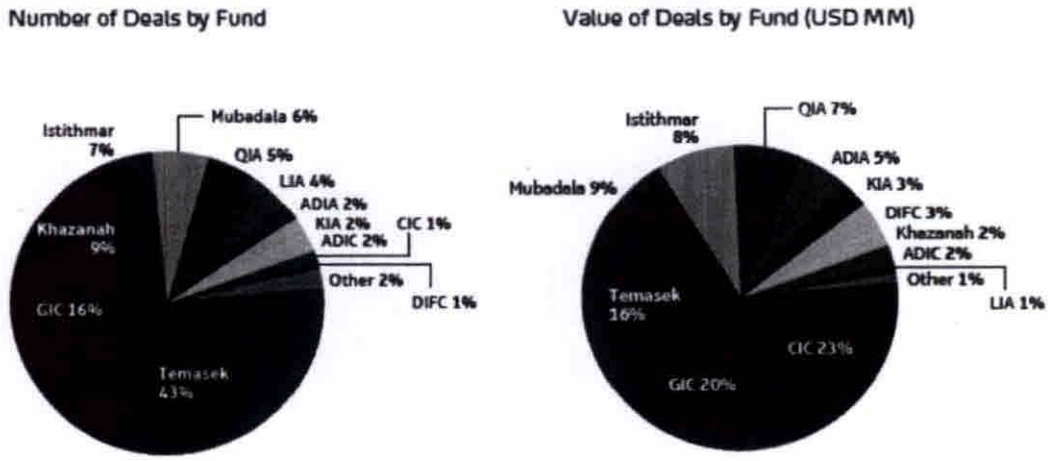


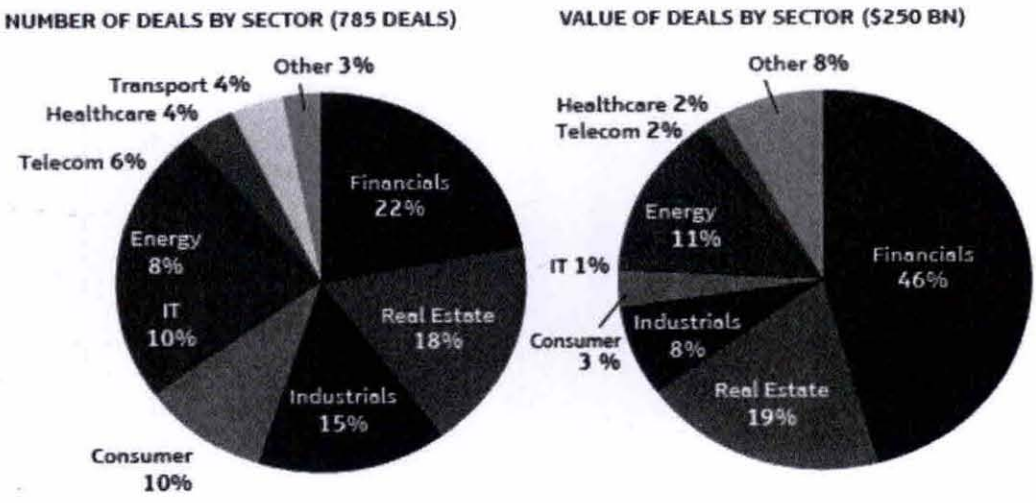
Figure 14: SWF Investment Trends: 2009
Source: Monitor (2009b)

value of $73 billion and Temasek has $56 billion. Among the MENA-based funds, Istithmar, Mubadala, and QIA are the leading investors by number and value.



Note: Publicly available data for SWF equity, real estate, and joint venture deals
Source: Monitor-FEEM SWF Transaction Database

Figure 15: SWF Transaction Leaders
Source: Monitor (2009a)



Source: Monitor SWF Transaction Database

Figure 16: SWF Transaction By Sector
Source: IFSL (2009a)

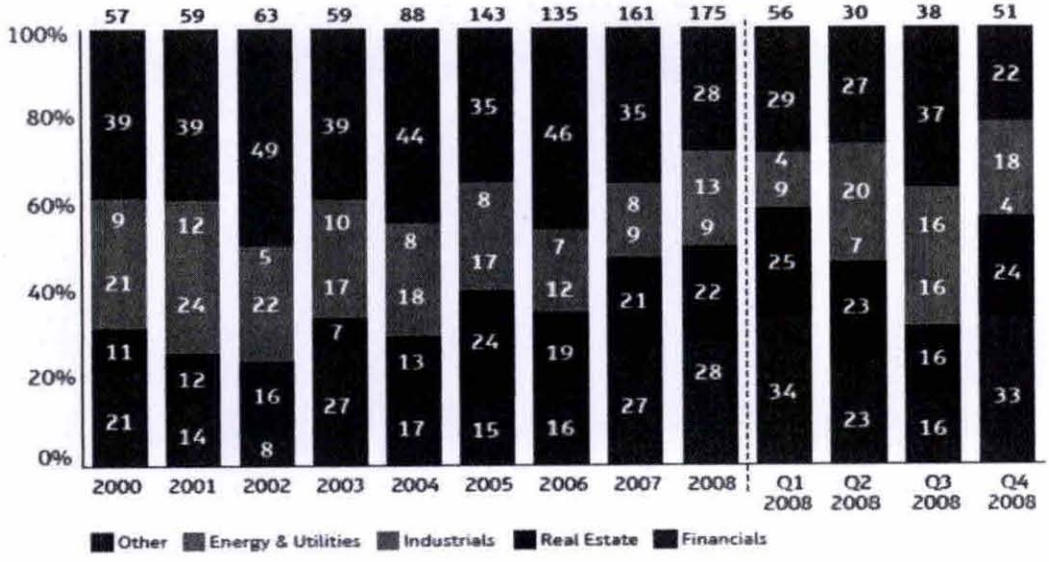


Figure 17: SWF Transaction By Sector: Annual
Source: IFSL (2009a)

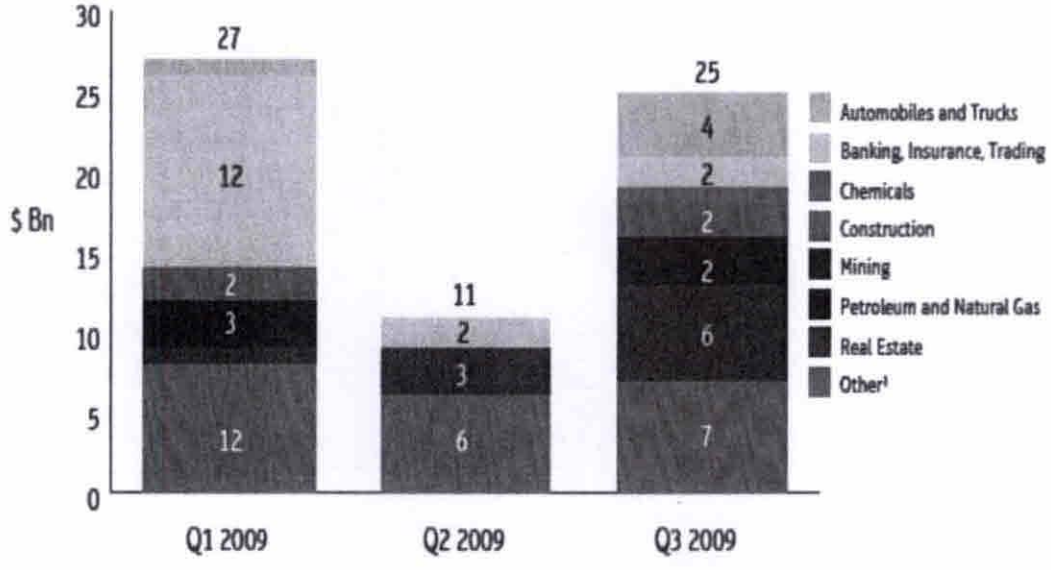


Figure 18: Number of SWF Transaction By Sector: 2009
Source: Monitor (2009b)

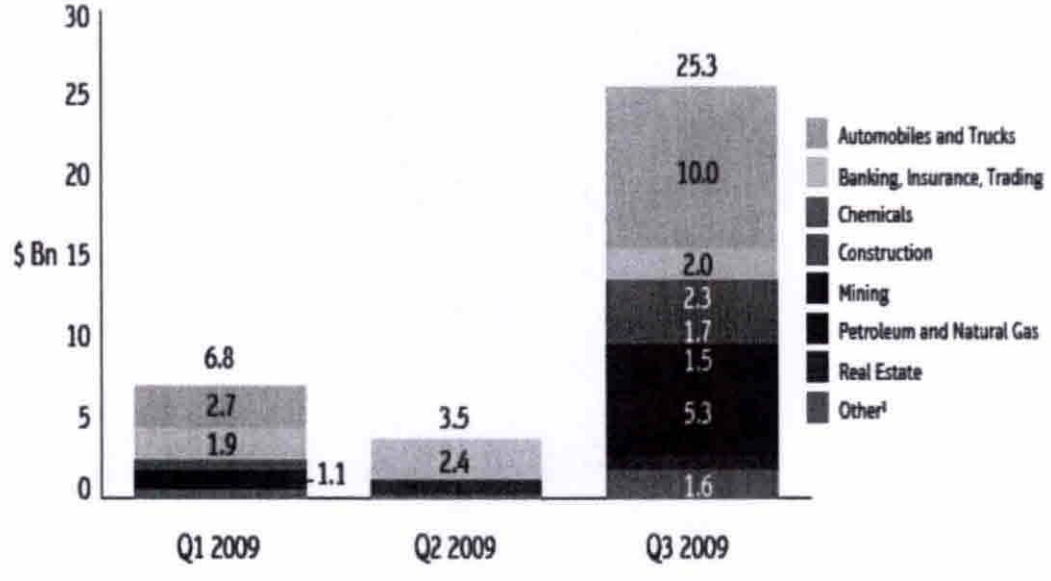


Figure 19: Value of SWF Transaction By Sector: 2009
Source: Monitor (2009b)

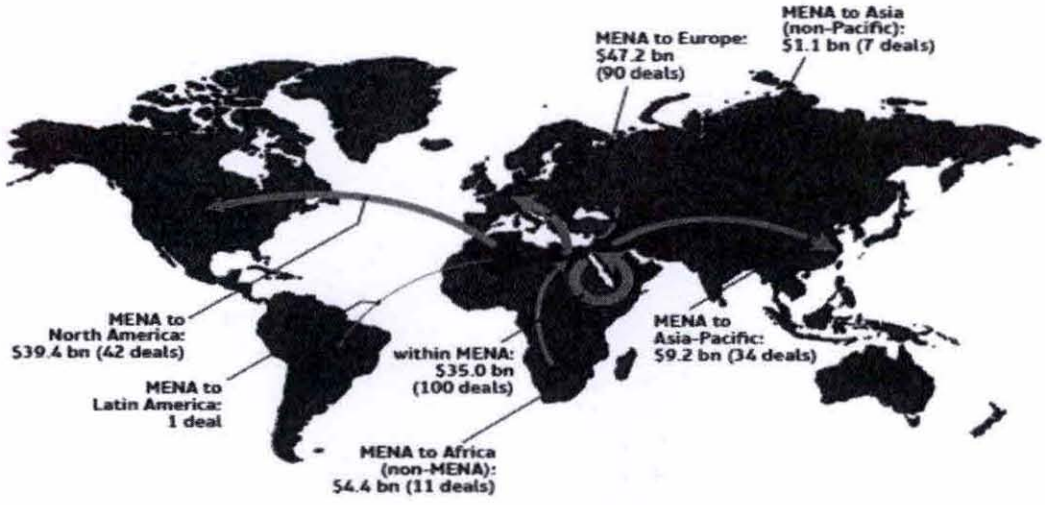


Figure 20: Investment Flows: MENA Swfs
Source: Monitor (2009a)

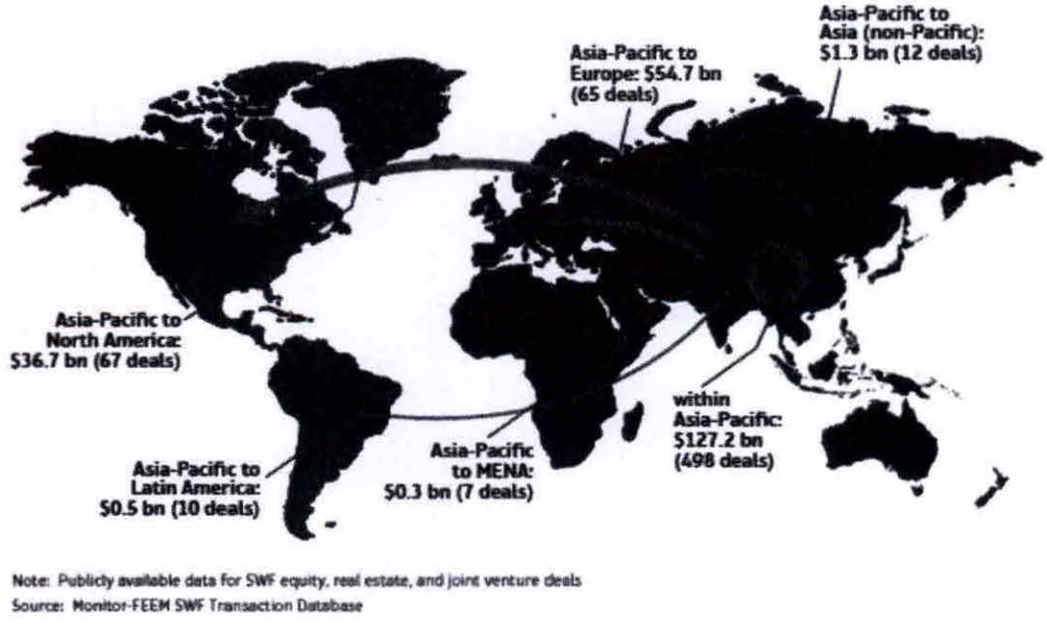


Figure 21: Investment Flows: Asia Swfs
Source: Monitor (2009a)

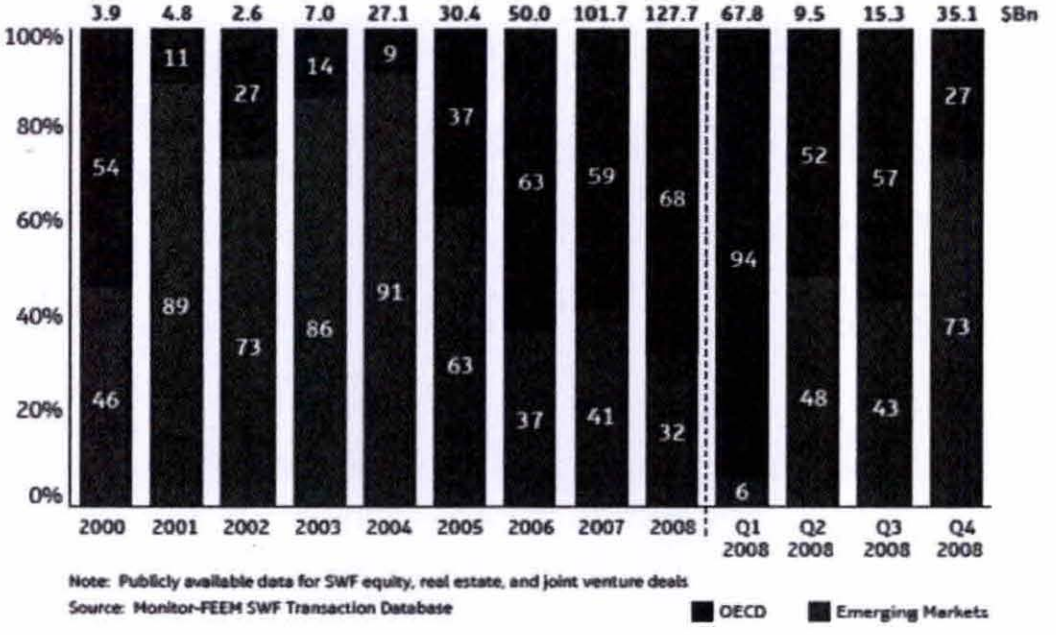


Figure 22: SWF Transaction: OECD vs. Emerging: 2000 - 2008
Source: Monitor (2009a)

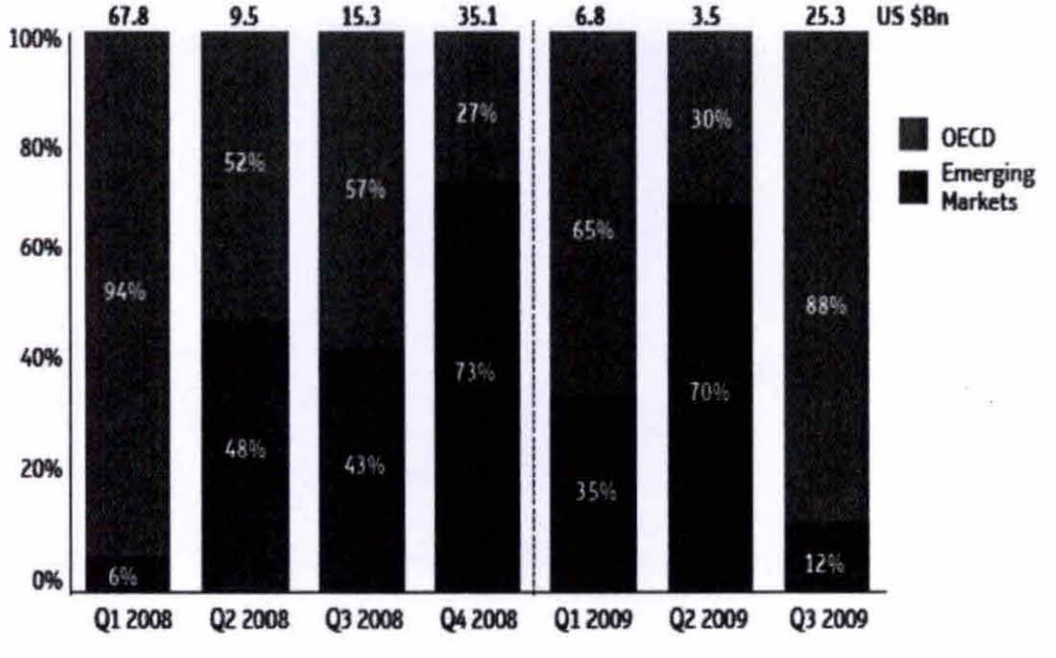


Figure 23: SWF Transaction: OECD vs. Emerging: 2009
Source: Monitor (2009b)

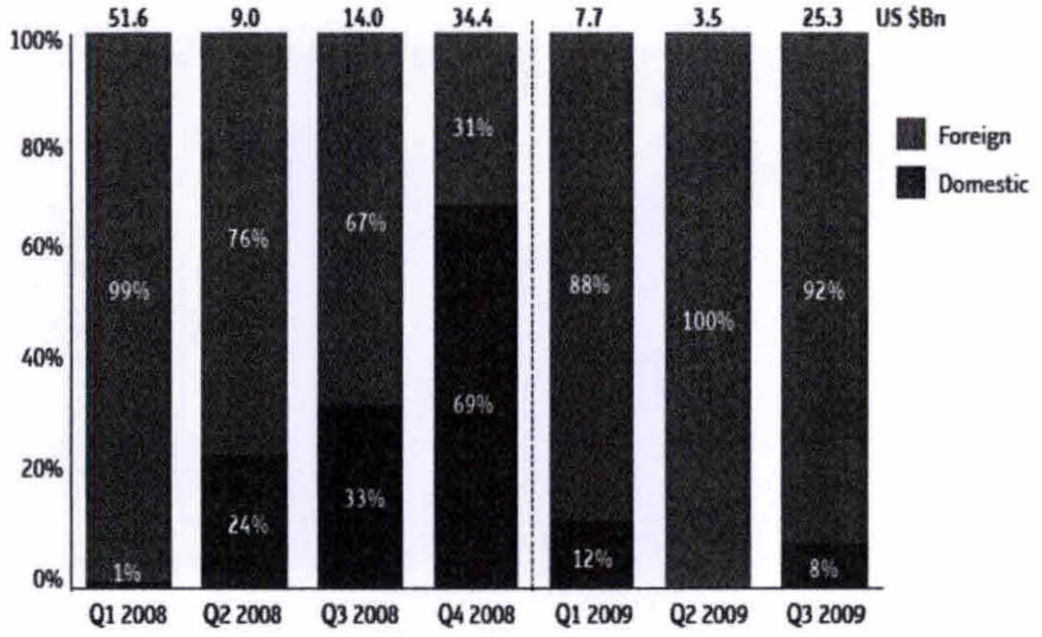


Figure 24: SWF Transaction: Domestic Vs. Foreign: 2009
Source: Monitor (2009b)

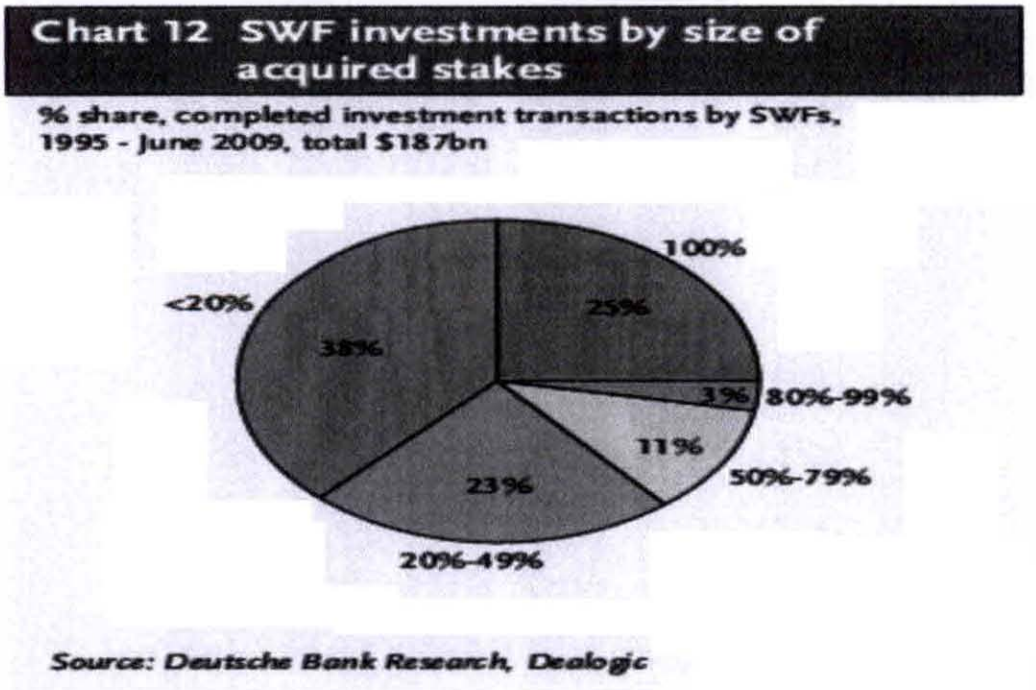


Figure 25: SWF Stakes
Source: IFSL (2010)

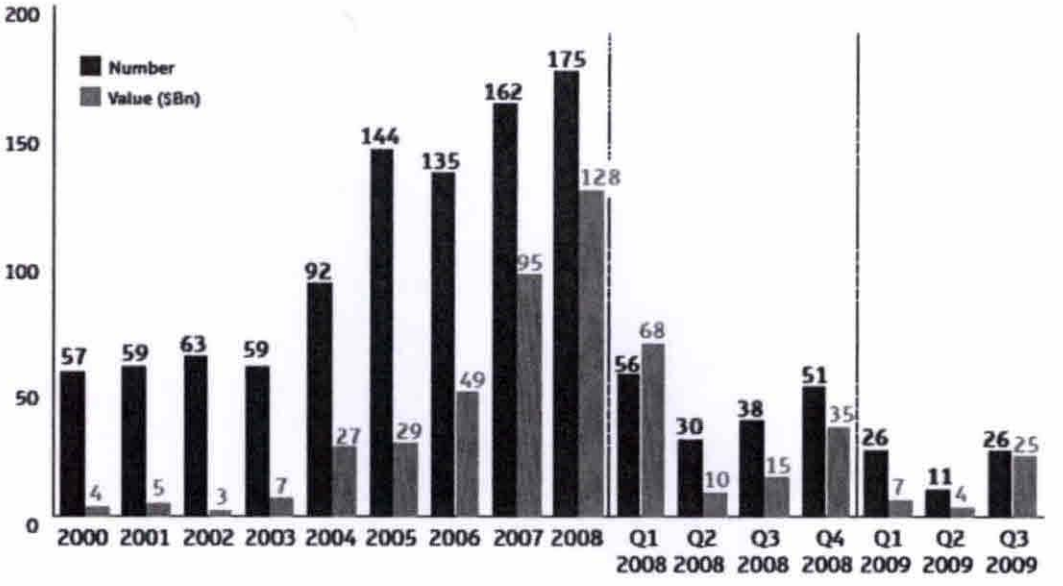


Figure 26: SWF Transaction: 2008 - 2009
Source: Monitor (2009b)

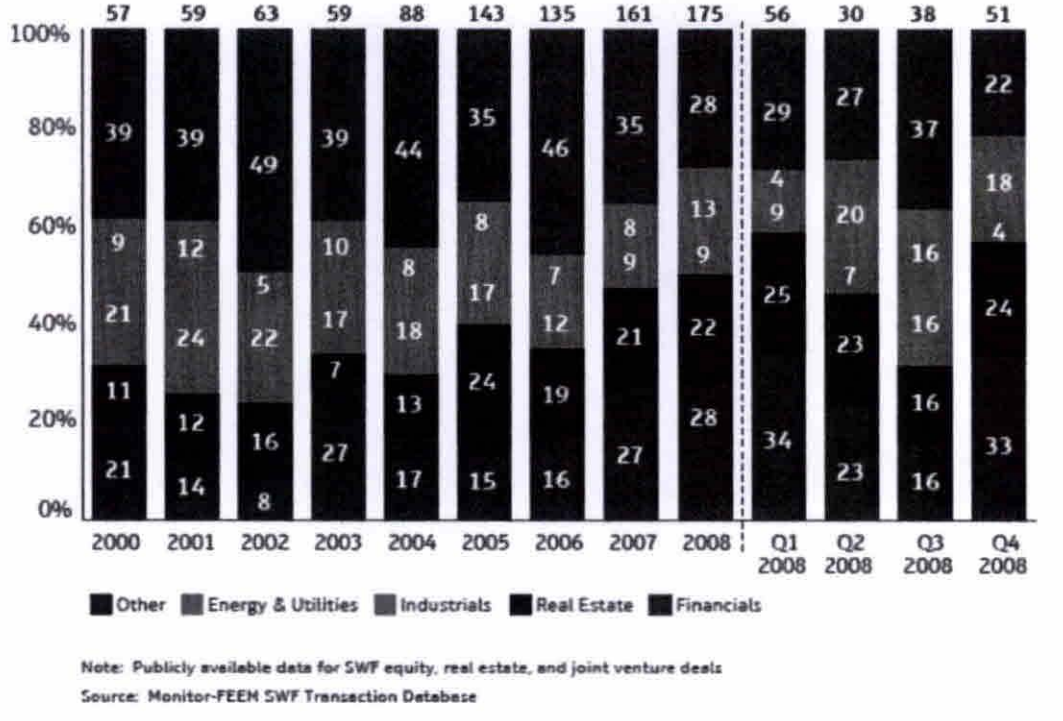


Figure 27: SWF Transactions By Sector: 2000 - 2008
Source: Monitor (2009c)

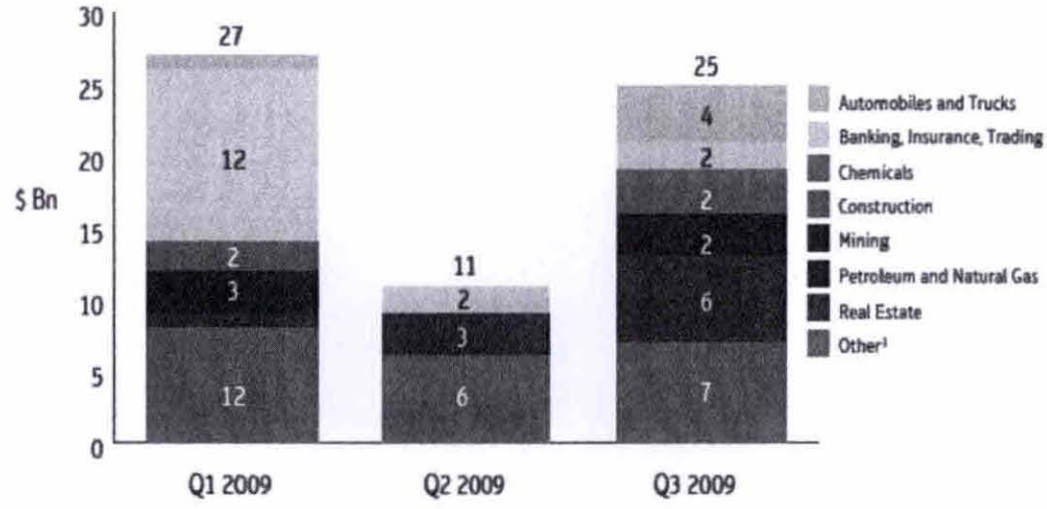


Figure 28: SWF Transactions By Sector: 2009
Source: Monitor (2009b)

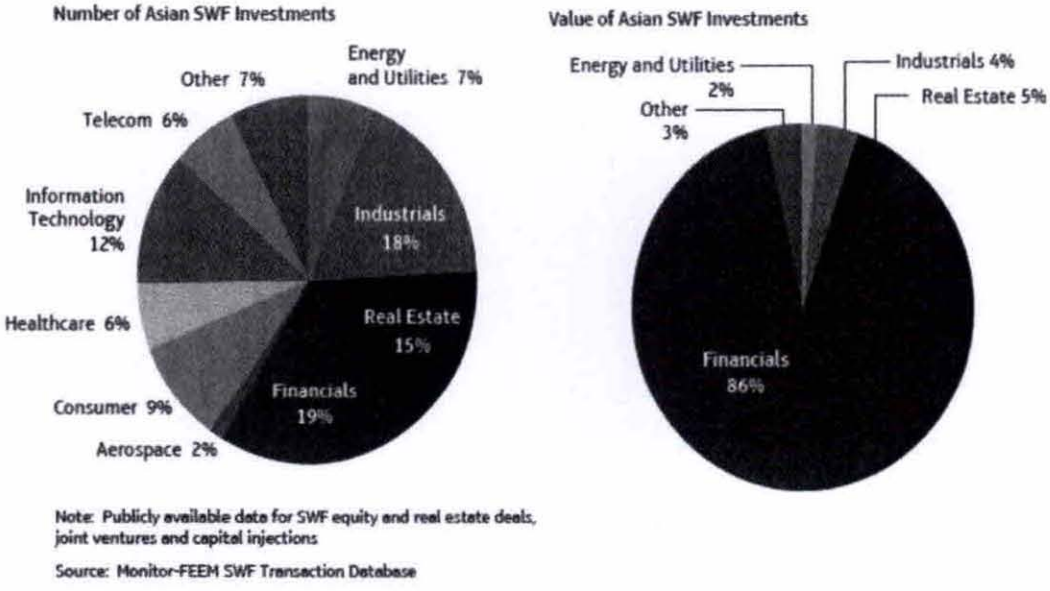
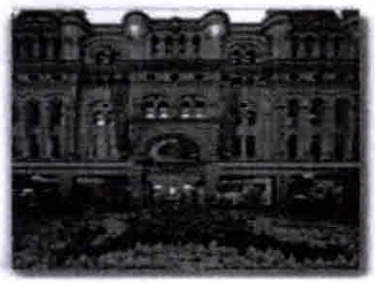


Figure 29: Asia SWF Transactions By Sector
Source: Monitor (2009c)

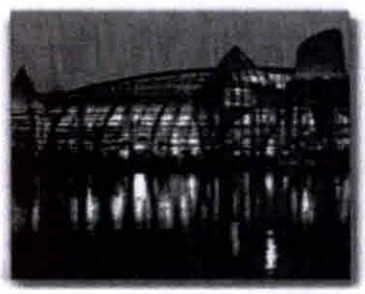
- Azia Centre, Shanghai, China

- Shiodome City Centre, Tokyo, Japan

- Seoul Finance Centre, Seoul, South Korea

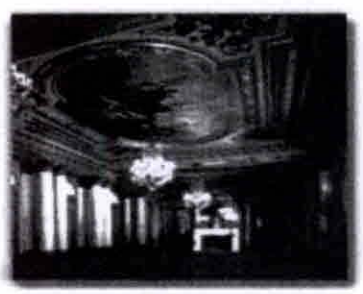


- Queen Victoria Building, Sydney, Australia



- Bluewater Shopping Centre, Kent, UK

- Uptown Munich Tower, Munich, Germany



- Westin Paris, Paris, France

- Franklin Centre, Chicago, US

Figure 30: GIC Properties
Source: GIC website

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THE ASIAN REAL ESTATE TSUNAMI AND THE TECTONIC AFTERSHOCKS: A CASE FOR ASIAN MACRO REAL ESTATE POLICIES TO ERECT ECONOMIC BREAKWATERS BASED ON THE CHINA PROMETHEAN MODEL

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Abstract

Yiu et al (2009) seminal study undertook a historical analysis comparing the previous three asset bubble implosions namely (1) the "Lost Decade" of Japan in the 1980s; (2) the Asian Financial Crisis in Hong Kong in 1997; and (3) the Financial Tsunami in the USA in 2008, which found that the three bubble bursts coincided with periods of negative interest rates and argued that there is a strong and negative relationship between housing return and real interest rate in the three economies examined. The emergence of China post the Western Financial Crisis provided a bulwark defence against the Western Financial Tsunami that hit the shore of the Asian Pacific economies in 2009. Whilst China was affected to some degree, her economic breakwaters provided some degree of protection for the other East Asian economies. This paper will focus on systemic Western financial crises leading to cascading financial aftershocks across the Asian Real Estate markets from 2008 – 2009 with the intention to shed light where the Tectonic plates diverged and gave rise to an Asian Real Estate Tsunami. A case is made for Macro-economic policies to erect Economic breakwaters to mitigate future financial tremors based from the lessons of the Yiu study and the Promethean China model.

1.0 Introduction

An overwhelming tide of financial tsunamis are flooding the whole world, resulting in substantial drop of real estate asset prices and liquidity crunches. Bankruptcies, bailouts, defaults, foreclosures, etc. have become daily news headlines from USA to Europe to Asia Pacific. Dozens of research papers and commentaries have rushed to be published to provide explanations on this 21st century crisis. Some of the research blamed weak government regulatory systems, while others on Globalisation of funds; some put the blame on human greediness, whereas others on deficient risk management and excessive usage of financial derivatives with high leverage; some consider it a normal reversion to the mean expectation, and others would regard it as a dire consequence of the Sub-prime mortgage crisis in the USA.

Every financial crisis would have its own uniqueness, and every bubble burst could be attributed to different reasons. Yiu et al (2009) seminal study investigated the common symptom of the previous three bubble implosions in Japan in the 1980s, in Hong Kong in the 1990s, and in the US in the 2000s and discovered that the three bubble bursts coincided with periods of negative interest rates and argued that there is a strong and negative relationship between housing return and real interest rate in the three economies examined.

Common symptom does not necessarily imply that future bubbles can be prevented. Similar to the studies of earthquakes, prediction does not imply prevention. The reasons for choosing three bubbles are several folds. Firstly, they happened in three different countries, in three different decades and in three different scales of economy. A common symptom of these three bubble implosions would be a very good contribution to the literature on Economic Bubbles. Secondly, all of them were highly related to a real estate price drop. Thirdly, each of them had its own uniqueness, for example, the Japan bubble was related to the Yen currency strength (1980-1985), the Hong Kong bubble was said to suffer a contagion effect from the Asian Financial Crisis (1997-1998), and the US Financial Tsunami was told to be the result of Sub-prime mortgages and CDO debacle (2008-2009).

This paper will review literature which examines Globalisation as a precursor to asset bubble leading up to systemic financial crises leading to cascading financial aftershocks across the Asian real estate markets from 1997 – 2009. This paper will focus on systemic financial crises engulfing the Asian real estate markets from 1997 – 2009 with the intention to shed light where the Tectonic plates diverged and gave rise to an Asian real estate tsunami. A case is made for Macro-economic policies to erect economic breakwaters to mitigate future financial tremors based on the China Promethean Model.

2.0 Globalisation and direct real estate

Since the early 1980s, globalisation has been a common buzz word in Economics and Business. Countless articles and books have been published claiming to shed light on the interconnectedness that national economies have had on the ways people live and work, not only in developing countries like China and India but also in the West. Real estate has not been immune from this buzz. In fact, for many years, the international dimension of real estate investing has generated a very prolific branch of academic literature (Hamelink, Hoesli, 1994).Urban economists who have been at the forefront of globalization research customarily study the internationalization of urban landscapes (Kresl and Frey, 2005). The existing literature is interested in three related issues:

1. The nature of the flows that define globalization of real estate markets,
2. The relative importance of domestic and international factors in real estate returns,
3. The identification of global drivers in real estate cycles.

In 1988, James Graaskamp gave a speech in Boston on the topic of 'Globalization of Real Estate' (Graaskamp, 1988). In that speech, he provides an interesting assessment of the globalization of US real estate markets in the late 1980s. He identifies two mechanisms favouring globalization of real estate: trade and foreign investments, either in individual properties (direct) or in real estate securities such as REIT stocks (indirect). Graaskamp's speech is devoted to the impact of US and international interest rates on the USA domestic real estate, especially with respect to Japanese investors and their landmark transactions which were grabbing front-page headlines at the time. Graaskamp points out the impact of globalization driven phenomena such as outsourcing of manufacturing jobs (through labour cost) and ballooning imports of consumer goods (through chronic foreign deficit) on US real estate.

Renaud (1998) emphasizes the role of capital flows from Japanese foreign investments, and the closer links between capital markets and the real estate industry as catalysts to the global 1990 crash.

is the cause. Shiller (2007) also attributed the asset booms in the mid 1990s to the falling long-term interest rates queried the rapid expansion of bank credit into the real estate sector in the USA.

The positive feedback spiral of credit expansion is also well received, especially after Minsky's (1992) "Financial Instability Hypothesis". It is because credit expansion leads to an increased value of assets prices, which in turn increases the perceived collateral value of these assets to banks and, thus decreasing the perceived risk exposure of these loans to banks, which are then motivated to lend more to the market at even greater risk to the borrowers. In other words, it is a bubble-credit spiral, as the bigger a bubble, the more the credit is expanded, which in turn makes the bubble even bigger, until it bursts. However, there are at least three new changes on money and credit expansion in the recent decades that make them almost unchecked. First, huge global fund flows are swiftly sweeping across cities. Second, there are now fiat money (money supply not restricted by gold reserves) and bank money (credit supply unchecked by deposits) artificially created by central banks and merchant banks respectively. Third, a new "credit derivatives" has been established to package and distribute the money and credit created.

With the forces of financial globalization and the swift movement of huge global funds, Smick (2008) contended that asset price can be totally out of the local country's control. Before 1971, money expansion was restricted by gold reserves or a fixed exchange rate. However, along with the abolition of the gold standards and the Bretton Woods system, money become fiat money, and its expansion is uncontrollable (Cooper, 2008). Similarly, credit expansion was originally checked by savings and total deposits, but since the invention of bank money, credit can be created from vacuum. The controls on its expansion, such as the Basel II Accord, is now unleashed (Pettifor, 2006). But why investors cannot spot the risk of these unchecked credits? Zandi (2009) and Tett (2009) attributed it to the invention of credit derivatives, which makes risk assessment extremely difficult, if not impossible.

3.2 Money and Credit Demand

When excessive money is chasing scarce resources, the result is a general increase of price. Friedman's (1956) "Studies in the Quantity Theory of Money" has highlighted the equivalence between money supply and inflation. Bernanke (2002) said, "the US government can increase the prices in dollars of goods and services by increasing the number of US dollars in circulation." Worse the current demand of fossil fuels, precious metals, timbers, etc. are unprecedented. The heightened aspiration of living standards and the change of living style in recent decades further exacerbate the scarcity of natural resources. It has become more and more inelastic to increase the supply of assets and commodities, which Glaeson et al. (2008) and Goodman and Thibadeau (2008) considered it a reason for the housing real estate bubble in USA.

Wheaton and Nechayev (2008) contended that the demand of second homes caused the sub-prime crisis. Exchange rate between currencies is originally a checking force on trade surplus or deficit, which should be reflected in interest rate and inflation rate of an economy. However, almost all of the trade surpluses earned by other countries from the US consumptions flows back to the US by buying the Treasury Bonds of the US Government. The exchange rate does not actually reflect the trade surplus or deficit. Furthermore, many economies heavily rely on export for their GDP growth, any increase in their currencies would severely hinder their export markets, and

thus many governments do not hesitate to intervene and mitigate the strength of their currencies.

3.3 Risk Assessment

Bubble can be regarded as a result of an underestimation of risk exposure of investment. Various reasons can result in an underestimation of risk exposure, such as (1) irrational exuberance; (2) preemptive policy; (3) moral hazard; (4) information asymmetry or information not available; and (5) bubble-credit spiral. Behavioural economists, including Shiller (2005, 2008), considered irrational exuberance or herd behaviour as one of the reasons of the bubbles. But it sounds strange that investors do not learn from the past experience and keep on underestimating their risk exposure again and again. Garber (1990) also disagreed with the logic of irrationality and he found that there were rational fundamentals for the oldest three bubbles. Cooper (2008), on the other hand, regarded pre-emptive policy and moral hazard as the causes of risk underestimation.

Alan Greenspan's (2003) risk-management paradigm attempted to pre-empt economic weakness by guaranteeing lender-of-last-resort as well as launching rescue packages, which Trichet (2003) worried about moral hazard to be resulted. When potential recessions are repeatedly prevented and failed institutions are repeatedly bailed out, borrowers would become more confident and demand an even greater stock of debt. Lenders would also be more aggressive and risk-preferred. Osborne (2001) even found it becomes a globalized moral hazard. Zandi (2009) found that more and more "predatory loans" i.e. granting loans without regard to the borrowers' ability to make timely payments were granted, including sub-prime mortgages, in the US in 2006, was one of the fundamental causes of the crises. "Almost half of all mortgage-linked bonds in America [in 2005] were based on subprime loans" quoted Tett, (2009) and risk assessment has long been a difficult for investors (Bernstein, 1998).

For example, Bucks and Pence (2008) found that many borrowers even did not know their mortgage terms. But the difficulty of risk assessment has become insurmountable, even to bankers and regulators, when the Credit Derivatives system was established. With the invention of asset-backed securities (ABS and MBS), collateralised derivatives (CDO and CDS), and their indices (ABX, TABX, CMBX, CDX, LCDX)1, where default risk of mortgages and loans can be transferred or insured, suddenly it sharply reduces credit risk. However, the actual risk level of the various tranches of the pooled loans in the derivative is not easily comprehensible, and credit rating becomes the sole indicator for the risk exposed. Yet, even the credit rating agencies have difficulties in assessing the risk level of these derivatives because of the lack of past record of a national-wide credit default (Tett, 2009). Selling these derivatives through SIVs (Structured Investment Vehicles) can further avoid the capital requirements set by the Basel II Accord and regulations on banking industry.

3.4 Expected Growth

The unchecked credit expansion, unlimited asset demand growth, and the underestimation of risk strengthen the expectation of income growth in the future. New technologies and innovations of investment tools make people believe that unprecedented and unlimited growth in the future is promising. The world is so flat that manufacturing and operating costs are ever decreasing. The dotcom-bubble told an interesting story about the effects of expected income growth in the future on asset pricing. Asset price can be

excessively high even when the current income is rather low. Bansal and Yaron (2004), Lettau and Ludvigson (2005) found significant and positive impact of expected income growth on asset pricing. Dufwenberg et al. (2005) and Sutter et al. (2008) also found by experiments that experience and information of future dividend helps abate bubbles. Although the expected income growth of individual investors cannot be directly observed from the markets, they would be partially reflected in the spread of interest rate, i.e. the difference between long-term and short-term interest rates (Xu and Yiu, 2009).

4.0 The Three Asset Bubbles

A bubble is defined as "an upward price movement over an extended period of 15 to 40 months that then implodes." and "in the 20th and 21st Century, most of the manias and bubbles have centred on real estate and stocks." (Kindleberger and Aliber, 2005) The Japan-, Hong Kong- and US- asset price bubbles to be presented below are typical real estate bubbles. Besides measuring the period of upward price movement, Yiu et al (2009) also report the magnitude of change of the asset price when the bubbles were imploded. All of them exceeded 40%. Figure 1 below is a Theoretical Framework by Yiu et al (2009).

4.1 The Lost Decade of Japan

Figures 2, 3 and 4 shows the three asset price bubbles of Japan, Hong Kong and the US, in the end of 1980s, the 1990s and the 2000s. All the three show very similar pattern of long-term upward trend with then a very substantial drop.

Figure 2 is the Urban Land Price Index (Residential) of Japan from 1980 to 2008, where the index climbed from 60 to 126 (↑110%) in 11-year time, and it then dived to 72 (↓43%) continuously for 17- year.

4.2 The Asian Financial Crisis Contagious to Hong Kong

Figure 3 is the Housing Price Index (Composite) of Hong Kong from 1993 to 2008, where it shows two bubble bursts. This is probably the only city encountered two bubble implosions of such a magnitude within 10-year time. The index increased from 85 to 170 (↑100%) from 1993 to 1997 (upward price trend for 5-year), and then dropped to 60 (↓99%) in 2003. It climbed up again to 123 (↑105%) in 2008 (upward price trend for 6-year), when the financial tsunami came.

4.3 The Subprime Crisis of the US

Figure 4 is the Home Price Index (Conventional Mortgage) of the US from 1970 to 2008, where it shows the latest subprime crisis in 2008.

The index increased from 32 to 294 (↑819%) from 1970 to 2007 (upward price trend for more than 37-year), and then plummeted in 2007/2008.

4.4 A Unique Cause of the Bubble?

The 1990s was coined as the Lost Decade of Japan, and most of the studies on the causes of the Japan bubble burst in 1989 attributed it to the currency strength of Yen. The story is often started from the Plaza Accord signed in Sep. 1985, then the Yen to US$ exchange rate has dropped continuously and substantially (about 50% drop from 254 in 1985 to 127 in 1990; and then further to 80 in 1995), as shown in Figure 5.

Trying to retain the strength in exports, Japan had a very strong incentive to "cushion the effect of the stronger Yen". (Smick, 2008) The Bank of Japan has therefore lowered the short-term interest rate five times, from 9% in 1980 to 2.5% in 1989, as shown in Figure 6. Unfortunately,

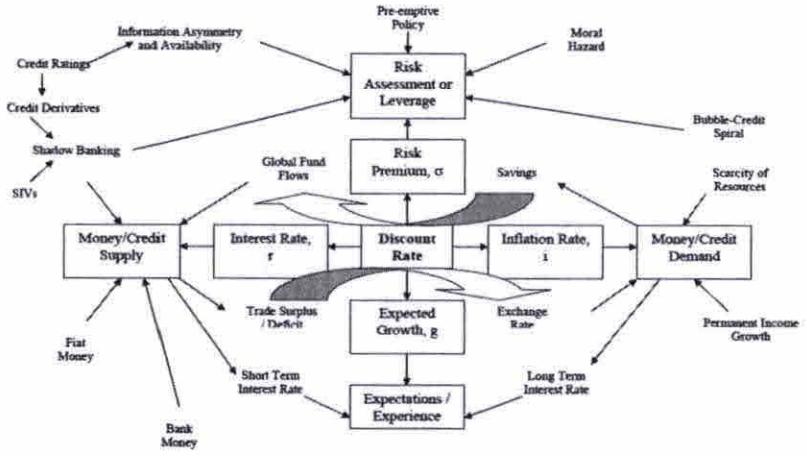

Figure 1: Theoretical Framework for the Causes of Asset Price Bubbles

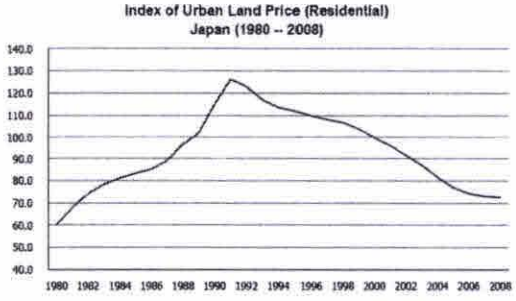

Figure 2: The Index of Urban Land Price (residential) in Japan (1980 - 2008)
Source: Japan Real Estate Institute, http://www.stat.go.jp/english/data/chouki/15.htm

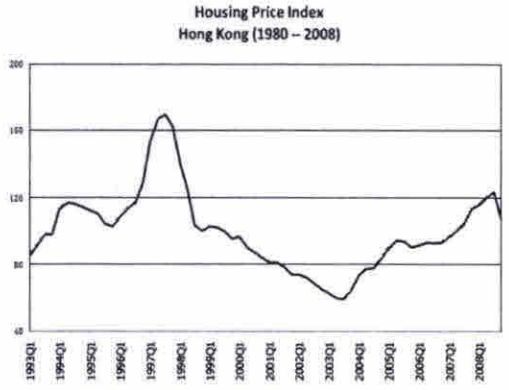

Figure 3: Housing Price Index in Hong Kong (1993 - 2008)
Source: Rating and Valuation Department, Hong Kong SAR
http://www.rvd.gov.hk/en/publications/proreview.

such a cushion has blown up an asset price bubble by injecting excessive credit supply. Then "by late 1989, realizing their mistakes as the bubble grew larger, The Bank of Japan reversed course and raised short-term interest rate in relatively quick steps to 6%", (Smick, 2008) in 1991 as shown in Figure 6. The action might be too late and the bubble was imploded in 1991. Interest rate was then reduced from 6% gradually to 0%, and drove Japan into a "Lost Decade", when the economy fell into a deflationary spiral.

The Asian Financial Crisis started in Thailand in July 1997, and was also considered a consequence of exchange rate change. However, as Hong Kong adopted a Currency Board system, with the currency is pegged to the US$, there should be no currency risk in Hong Kong. However, the Hong Kong bubble burst in 1997 was said to be a contagious effect of the whole region. Since the Hong Kong currency is pegged to US$2, the interest rate in Hong Kong is therefore closely tracked with that in the USA due to arbitrageurs, the difference between the two reflects the risk premium of savings/ defaults in Hong Kong. Figure 7 shows

Figure 4: Conventional Mortgage Home Price Index in the US (1970-2008)
Source: Freddie Mac: CMHPI, http://www.freddiemac.com/finance/cmhpi/

the short term interest rates of the US and Hong Kong, which they tracked each other closely except during the bubble burst in 1997/1998. Similarly, the subprime crisis in the US in 2008 was also regarded as a once-in-a-century incident, which is basically the consequence of the housing price plummeting and the substantial defaults of the subprime mortgages.

4.5 A Common Symptom: Negative Real Interest Rate

A generalized theory or a common symptom for more than one bubble implosion is of paramount importance in understanding the real cause of bubble bursting, and it is one of the basic scientific requirements for a prediction to be repeatable. In line with the theoretical framework in Figure 1, the four key sources of bubbles, 1)money/credit supply, 2)money/credit demand, 3) underestimation of risk and 4) expected income growth, should be reflected in the market interest rate and inflation rate. Yiu et al (2009) therefore posited that **negative real interest rate** is a common symptom of asset price bubbles, where real interest rate is defined as nominal interest rate minus inflation rate. They found that, among the three bubbles in Japan in 1989, Hong Kong in 1997, and in the US in 2008, negative real interest rate was one of the culprits. And it is the **only phenomenon** that can be found in all the three bubble implosions. In other words, each of these implosions is not the consequence of a unique cause; at least they shared a common symptom.

Figure 5: The Exchange Rate of Japanese Yen to US Dollar
Source: Statistical Survey Department, Statistics Bureau, Ministry of Internal Affairs and Communications, http://www.stat-search.boj.or.jp/ssi/mtshtml/m_en.html

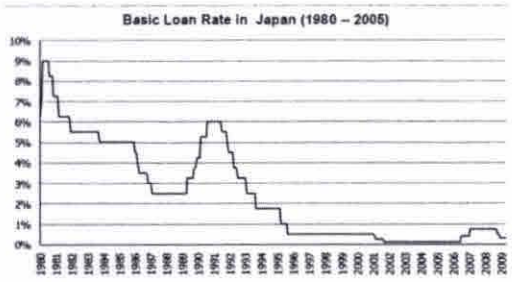

Figure 6: Basic Loan Rate in Japan (1980 -- 2008)
Source: Statistics Bureau, Ministry of Internal Affairs and Communications, Japan, http://www.statsearch.boj.or.jp/ssi/mtshtml/m_en.htm

Figures 8, 9 and 10 show the real interest rates (i.e. nominal interest rate – inflation rate) of the three economies before and after the implosions of the bubbles. The plummet of the real interest rate in Japan,

in Figure 8, from an average of 3% to almost 0% in the late 1980s coincided with the bubble implosion in 1989. In fact, the story of the Japan bubble sounds very similar to the subprime crisis of the US, "... during this period, Japanese banks recklessly financed commercial real estate and commercial land at unheard of prices." (Smick, 2008).

Explaining the two asset price bubble implosions in Hong Kong by negative interest rate makes more sense than relying on a contagious theory. Figure 9 shows the real interest rate in Hong Kong, and it vividly shows two negative interest rate sessions coinciding with the two meltdown period. There had been a long period of negative real interest rate in the 1990s, which fuelled the asset price escalation, until 1997, when the first bubble was burst. Then, following the interest rate cut of the US due to the currency board arrangement, another negative interest rate session is resulted in 2008, when the second bubble was imploded.

With the currency board arrangement and no restrictions on money flow, Hong Kong becomes a natural attraction for arbitrageurs because the interest rate in Hong Kong is always closely tracking with that in the US, but the inflation rates of the two economies can be very different, which may result in negative real interest rate in Hong Kong. When people expect higher inflation rates approaching Hong Kong assets, and lower interest rates as required in the US, money all over the world would flow into the asset markets in Hong Kong. When the expectation reverses, global funds leave the city rapidly. This force of globalization of funds further lead to a reduction of interest rate when it is already too low, and an increase of interest rate when it is too high. And indeed it is one of

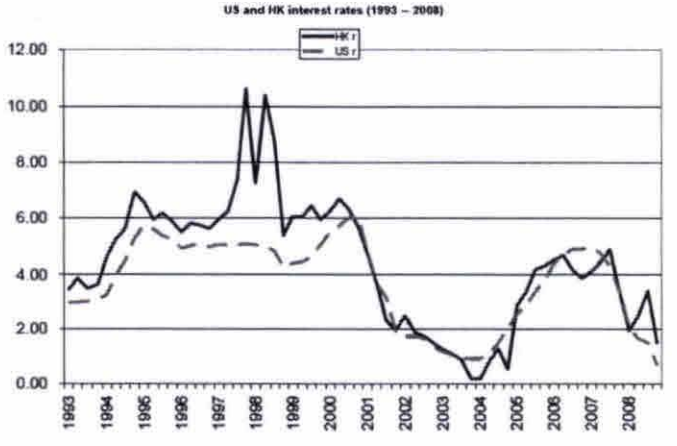

Figure 7: The Inter-bank Overnight Interest Rate in Hong Kong (HK r) and the short-term interest rate (3-month Treasury bill yield) in the US (US r) from 1993 to 2008

Remarks: HK interest rate from the inter-bank overnight interest rate in Hong Kong, retrieved at http://www.censtatd.gov.hk/hong_kong_statistics/statistics_by_subject/index.jsp?subjectID=11&charsetID=1&displayMode=T US interest rate from the 3-month Treasury Bill Yield in the U.S., retrieved at http://www.wrenresearch.com.au/downloads/files/mus3m.csv

Source: Hong Kong Monetary Authority, the U.S. Federal Reserve System

the reasons for a long period of very low long-term interest rate worldwide since the 1990s, which has soared the stock markets and real estate prices globally.

Figure 10 shows the real interest rate of the US (short-term interest rate) from 1991 to 2008, which shows a plummet in 2000 and then a substantially long period of negative interest rate in the period of 2003-2006, and then another plummet since 2008 onwards. There have been various reasons for the interest rate cut in these periods, such as the Y2K-bug in 2000, the dotcom bubble in 2004, etc. From Figure 7 above, you can find that, from 2000 to 2004, Alan Greenspan dropped the short-term rate from 6% to 1% to save the economy. It worked, but with the consequence of a subprime bubble. The latest negative interest rate hit the trough of -4% in Sep. 2008, when the financial tsunami hit.

However, using negative interest rate as a common symptom to asset price bubbles has at least two complications. First, the metric of inflation rate can be tricky, for example, in Europe and Hong Kong, inflation is a measure of all price level change including food and energy - Headline Inflation. But the Federal Reserve of the US prefers to consider the Core Inflation, which excludes price changes in food and energy. In the recent decade, however, the major contributors to global inflation were the upsurge in food and energy prices. The inclusion of them in the calculation of inflation would obtain a much higher rate of inflation (as shown above), i.e. much more negative real interest rate.

The second complication is the spread of interest rate, which the central bank can influence the short-term rate only, leaving the long-term rate to be determined by the markets. Figure 11 shows the US long-term real interest rate, which one cannot find the negative rate in the early 2000s, but just a negative rate session in 2008.

Figure 8: The Real Interest Rate in Japan (1982 - 1996)

Remarks: Interest rate from the basic loan rate in Japan at: http://www.stat-search.boj.or.jp/ssi/mtshtml/m_en.html
Inflation rate = consumer price index (composite) at DataStream.
Data after 1996 are excluded due to the volatile risk premium and expectation of income growth after the bubble burst.
Source: Statistical Survey Department, Statistics Bureau, Ministry of Internal Affairs and Communications, Japan

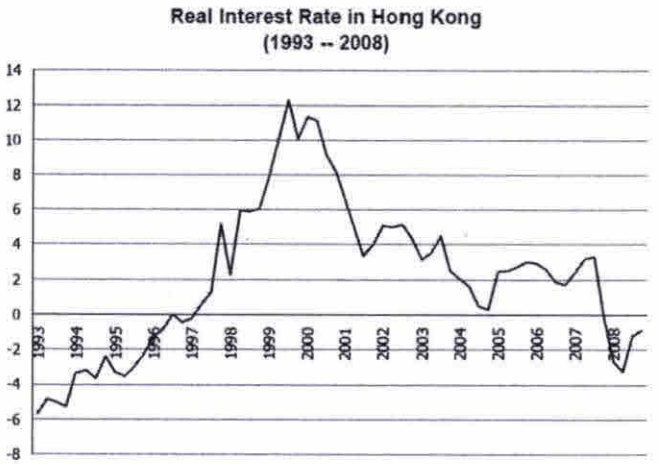

Figure 9: The Real Interest Rate in Hong Kong (1993 – 2008)

Remarks: Interest rate from 6-month inter-bank offered rate in Hong Kong retrieved at: http://www.censtatd.gov.hk/hong_kong_statistics/statistics_by_subject/index.jsp?subjectID=11&charsetID =1&displayMode=T
Source: Hong Kong Monetary Authority, Hong Kong

Figures 12, 13 and 14, plot the scatterplots of housing return versus real interest rate in Japan, Hong Kong and in the US, all show a negative relationship between housing return and real interest rate. It confirms our contention that real interest rate is a common indicator on the change of housing price (i.e. growth rate of housing price).

If real interest rate is a common symptom of asset price bubble, then why governments, bankers and institutional investors could not predict and prevent the bubbles? It shall be noted that the identification of the common symptom of asset price bubbles does not necessarily imply that they can be prevented in the future. However, people may further argue that, unlike an earthquake, an asset price bubble is human-made and shall be able to be released by human acts rather than letting it implode. Why governments and bankers could not do so?

Soft-landing or deflating-a-bubble is easier said than done, the difficulties can be imagined by an analogy of Robinson and Berridge's (2003) ***"Drug Addiction Model"*** A growth of the economy achieved by credit expansion works like drug addiction, as it provides a pleasant reinforcer of further growth and an unpleasant symptom of recession associated with withdrawal. Unfortunately, with repeated drug use results in addiction, and which would intensify the magnitude and the duration of the unpleasant symptom. In other words, with more successful preventions of recession by credit expansion, more substantial credit supply is necessary to keep the bubble booming, and the more torturous the results of a bubble implosion would be.

So having discovered that negative interest rates is a **common denominator** in three major asset bubbles which caused massive Real Estate Tsunamis and tectonic aftershocks which in some

Figure 10: The Real Interest Rate in the US (1991 - 2008)

Remarks: Interest Rate from US 3-Month Treasury bill Rate, retrieved at http://www.wrenresearch.com.au/downloads/files/mus3m.csv
Inflation Rate = Consumer Price Index for All Urban Consumers: All Items, retrieved at
http://www.forecasts.org/data/data/CPIAUCNS.htm
Source: the U.S. Federal Reserve System

cases lasted for over 14 years (Japan) and stubbornly high unemployment rates in the USA (2009-2010), The relevant question should be how can Asian economies erect economic breakwaters or bulwarks to stem the overflow or financial tidal waves caused by hot monies or the implosion of asset bubbles which can devastate real economies and destroy jobs leading to acute misery and economic hardships? To answer this question we now must look at the major and most influential country in Asia pacific with the highest rate of GDP growth (10.7%) in Q4 2009. A country that not only shrugged the Western Financial Crisis of 2009 but also provided a model for economic breakwater and is looked upon by the Western world as the potential engine of growth for the next decade as the Western economies rebuild their shattered banking infrastructure, redress saving imbalances and chronic unemployment coupled with fiscal deficits. This country is China known to the local citizens as **"Zhong Guo"**, the Middle Kingdom.China not only was the first nation to successfully emerge come out of the Western Financial Crisis relatively intact with excellent economic infrastructure but is amongst the first nation to begin to **normalise interest rates** to prevent the rising inflation rate which could give rise to asset bubbles and negative interest rates which we have earlier demonstrated and argued is the root cause for asset bubbles and eventual collapses. So to better build the linkages and erect the appropriate economic breakwaters, we must also understand the cultural, political and social strategies pre-crisis and post crisis and understand the "China Promethean Model" that can serve as a basis for other nations to build up their economic defences and provide shock absorbers for the next Economic aftershock or financial Tsunami.

Figure 11: The Long-Term Real Interest Rate in the US (1991 - 2008)

Remarks: Interest Rate from US 10-Year Treasury Bond Yield Rate, retrieved at http://www.wrenresearch.com.au/downloads/files/muslb.csv
Inflation Rate = Consumer Price Index for All Urban Consumers: All Items, retrieved at
http://www.forecasts.org/data/data/CPIAUCNS.htm
Source: the U.S. Federal Reserve System,

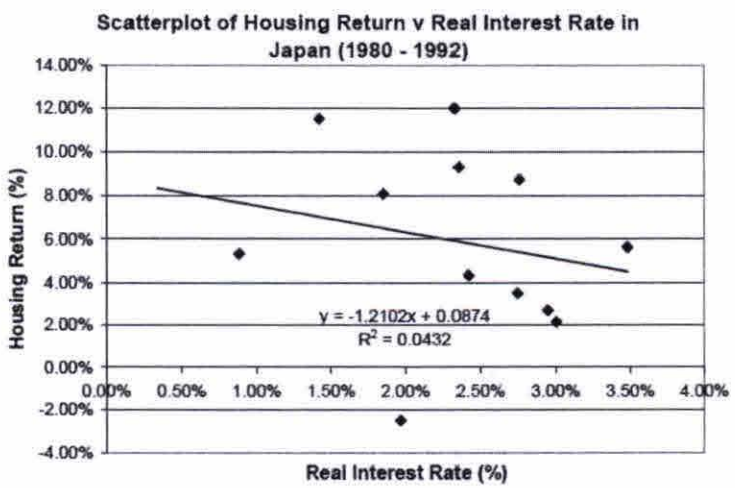

Figure 12: Scatterplot of Annual Housing Return versus Real Interest Rate in Japan (1980 - 1992)

Remarks: Annual Housing Return = dln (Annual Japan Land Price Index) * 100%]
Real Interest Rate = (Nominal Interest Rate – Inflation Rate) * 100%
Data after 1992 are excluded due to the volatile risk premium and expectation of income growth after the Bubble burst

5.0 The Western Financial Crisis highlights the reality of a New Asian World Order with the China Promethean Model

The Western Financial Crisis highlights the reality of a New Asian World Order with China in the Driver's Seat. Inexpensive Chinese goods have kept U.S. and European inflation down, despite the U.S. Federal Reserve's highly stimulative monetary policy under Alan Greenspan, which persisted well after the tech bubble bust in 2002, and despite the Bush administration's highly stimulative fiscal deficits. Because the Federal Reserve was only willing to counter goods inflation, not asset inflation, Western interest rates in turn were kept lower than they would otherwise have been. As the U.S. Department of Treasury sold bonds to finance the budget deficits, large purchases by Chinese, other Asian and Middle Eastern countries kept interest rates on those bonds from rising as much as they otherwise would have. Meanwhile, Japan's near-zero interest rates enabled hedge funds and others throughout the world to borrow yen at very low interest rates and invest in every kind of asset, including real estate, stock markets, and private equity, driving asset prices up throughout the world.

Whenever an economy is swamped by excess liquidity and goods inflation is capped, the prices of assets like real estate and stocks rise. Excess money has to go somewhere. When the amount of liquidity is exceptional, the rise of asset prices is similarly exceptional. In all the resulting asset bubbles, financial speculation accelerates. The recycling of China's huge foreign exchange reserves was far from the only source of the tsunami of liquidity, but it was one of the largest. Chinese leaders have angrily denied that Chinese funds and inexpensive exports played this role, but ultimately it is a simple fact. Conversely, Western politicians have been far too quick to blame Chinese currency policies when the actual problem stemmed from the U.S. bubble demand, combined with high Chinese savings rates, that were the inexorable consequences of a huge, young

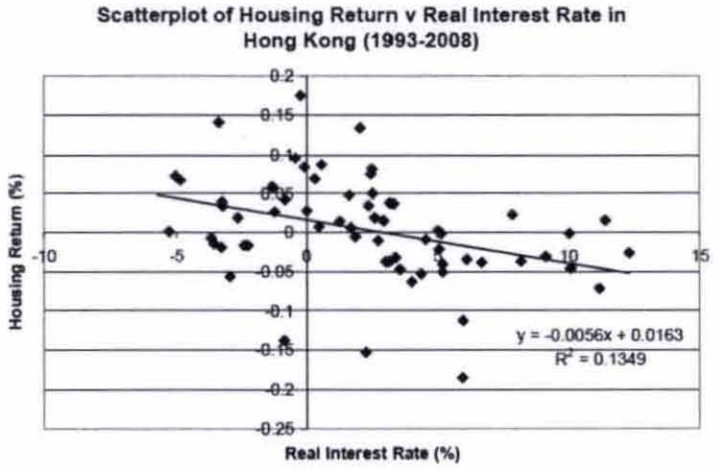

Figure 13: Scatter plot of Quarterly Housing Return versus Real Interest Rate in Hong Kong (1993 - 2008)

Remarks: Quarterly Housing Return = dln (Quarterly Housing Price Index) * 100%
Real Interest Rate = (Nominal Interest Rate – Inflation Rate) * 100%

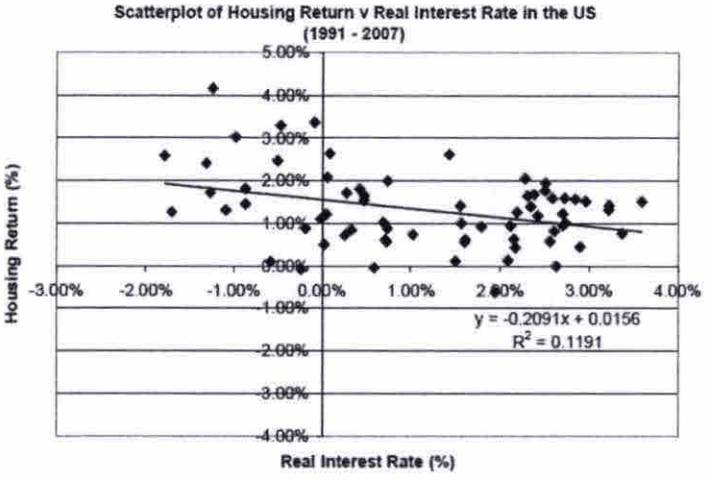

Figure 14: Scatter plot of Housing Return versus Real Interest Rate in the US (1993 – 2007)

Remarks: Quarterly Housing Return = din (Quarterly Housing Price Index) * 100%
Real Interest Rate = (Nominal Interest Rate – Inflation Rate) * 100%
Data of 2008 are excluded due to the volatile risk premium and expectation of income growth during the Bubble burst

Chinese population desperately needing to save to ensure that their children would receive good educations, and that they themselves would have adequate health care and retirement security given the country's lack of adequate medical insurance, social security, and pensions. The Chinese government was investing proportionately huge sums to address those inadequacies, but the shortfalls were too large to be offset in anything less than decades.

The flood of liquidity would have caused serious bubbles in any imaginable circumstances, but those bubbles as well as the consequences of their collapse were inflated by Western failures: poor bank supervision, congressional refusal to allow tightened regulation of government-backed mortgage institutions, corrupt credit rating procedures, and central bank insistence that it was right to bail out the markets when bubbles burst, but wrong to prick the bubbles when they inflate. Western mismanagement, therefore, ensured maximum damage from excess Asian liquidity.

The central phenomenon underlying the global financial crisis is a combination of financial globalization and national monetary policy. The surge of liquidity and the management problem it creates are global, but each country manages as if it were an island. Western politicians have sought to blame the Chinese currency regime for global imbalances position that is untenable on the evidence. Chinese politicians have consistently denied that China contributed to the crisis while distinguished Chinese scholars have even claimed that U.S. management of the dollar has been responsible not just for the current financial crisis but also for the earlier Mexican (1994), Russian (1998), and Asian (1997 – 1998) crises.

5.1 China's Pre-Crisis Economic Strategy

China's domestic situation and policy misjudgments have magnified the impact of the financial crisis on China itself. Prior to the crisis, China was experiencing a paradoxical combination of rapidly rising inflation (from near-zero to over eight percent in about two years) and spreading bankruptcies. That seemingly contradictory combination signalled a structural problem, namely a strategy for growth that had been fabulously successful but was becoming obsolescent. China's spectacular growth had two main drivers. Heavy industry and infrastructure was the first. Chinese development of modern highways, ports, and telecommunications provided the foundation for its rapid development. In every year of the reform era, China built more modern highways than India had built in the entire period since independence in 1947. In support of such efforts to build infrastructure and industry, China's petrochemical, steel, aluminium, and concrete industries, among others, compounded spectacularly. By 2007, China's capacity to make steel constituted 38 percent of world production, dwarfing each of its major competitors; Europe, Japan, and the United States.

When the centre of gravity of this development of infrastructure and heavy industry was, for instance, highway and rail lines connecting Beijing and Shanghai, the economic payoff was large and immediate. Later, when much of it focused on palatial, redundant shopping malls and luxury property developments, the payoff became negligible to negative. China was driving up the prices of raw materials throughout the world, degrading its own environment, and using vast amounts of capital in the pursuit of drastically diminishing returns. The second driver of rapid Chinese growth was the use of cheap labour to manufacture and export vast amounts of low-end products: socks, shoes, shirts, toys, basic consumer appliances, and much else. But Chinese wages had been rising very fast for a very long time, and a new labour rights law immensely increased the cost of labour, so this thrust of China's growth strategy was also meeting diminishing returns. Earlier, foreign investors looked primarily to China when investing in these industries, but as labour costs continued to skyrocket, they started deserting China in droves, favouring cheaper places like Vietnam.

5.2 China's Growth Strategy; Riding a Crouching Tiger

For China's success to continue, the next wave of rapid growth will need to focus on higher value added manufacturing, a shift toward the domestic market, a shift of the centre of gravity of growth from the coast to the interior, a vast expansion of the service sector, and the dynamism of small and medium enterprises which are predominantly private. The response of the current Chinese administration to this new strategic situation prior to the crisis has been far less decisive than the Deng Xiaoping and Jiang Zemin/Zhu Rongji administrations had been. President Hu Jintao and Prime Minister Wen Jiabao have strongly and successfully emphasized a shift toward development of the interior, but the other policy imperatives are addressed slowly at best. The reasons go to the heart of China's current political situation. Under Zhu's determined leadershipp, the structure of China's industry had been transformed at the price of a degree of social stress that is inadequately appreciated in the West. In the decade after 1994, state enterprise jobs declined by 44 million and manufacturing jobs by 25 million.

The new administration of Hu and Wen, which began in 2003, was a direct reaction to this situation. Both have stood for fairness and stability, rather than rapid commercialisation and social stress. They

represent the interests of the interior against the dynamic coast (Western impoverish provinces of Qinghai and Gansu versus the industrialised Eastern provinces of Guangdong and Zhejiang) and of the poor against the very rich. President Hu Jintao's stated goal, the **"Harmonious Society",** at the grandest level, represents a forward-looking replacement for the Leninist—Maoist political dynamic of class struggle and class dictatorship with a post-Marxist acknowledgement of the realities of an emergent middle class society, along with the possibility of Governance based on largely shared middle class interests as elaborated by Saich and Yusuf (2008). At the operational level, it repudiates the ruthless commercialisation, inequality, and social and environmental stress of the preceding decade.

In many ways, the history of China in the reform era was like a man being chased by a tiger. If you focus on the man, you are impressed by the extraordinary speed at which he runs. If you focus on the tiger, which was China's frightening problems of unemployment, urbanization, environmental deterioration, and many others then you are impressed that the man is barely able to avoid being eaten. (This has given rise to two separate literatures on China: "the rise of" and "the coming collapse of" genres.)

5.3 The Western Financial Crisis and China's Leap of Faith

The Harmonious Society required imperatives, namely two which stand out. China would have to abandon a wide swath of low-end manufacturing at the cost of many jobs, or at least millions of people changing jobs. The production of socks and towels has moved over the last half century from Mississippi/Alabama, USA to Osaka, Japan to Seoul/Taipei to Philippines/ Malaysia/Thailand to China and now on to Sri Lanka/South India and Vietnam. Nevertheless, China's manufacturing job losses have already been great and the imperative for further rapid change is a tough challenge for the promoters of the Harmonious Society.

The second aspect of the new path is the requirement to surrender political levers of control in return for potentially vast but uncertain gains. To put this in perspective, each major phase of Chinese development has involved such a trade off. Under Deng, Chinese leaders acquiesced in the dissolution of rural communes in favour of a return to family farming. With the communes, government and party leaders had direct control of the jobs and livelihoods of almost all the rural population. Likewise, when Zhu reformed urban industry, shedding all those state enterprise jobs and stepping back in many other ways from direct controls over urban livelihoods, the party enjoyed economic growth that transformed the lives of the overwhelming majority of Chinese people. As a result of Deng's and Zhu's successful policies, top Chinese leaders enjoyed public approval ratings their Western counterparts can only dream about.

Similarly, the next phase of rapid Chinese development will require the leadership to surrender substantial control over the flow of capital throughout the Chinese economy. Today, bank loans go mainly to large state enterprises. Listing on the Shanghai stock market is not based on objective economic performance criteria, as in Hong Kong and New York, but rather requires a license. Those licenses are granted mainly not exclusively but mainly to large state enterprises. Behind these controls lie both a genuine social purpose and a crucial political concern. China's leaders want to preserve and enhance the value of state enterprises as a way to fund the seemingly overwhelming financial costs of the medical insurance, social insurance, and pensions China so desperately needs.

They have to do this in less than a decade, before a graying society makes those costs insurmountable.

But to take the Chinese economy to the next level, they are going to have to risk: subjecting those firms to the full force of competitive markets; witnessing the potential decline of high stock market prices that make paying for a social safety net seem (barely) possible; and sacrificing much of the enormous political leverage that derives from ultimate control over the flow of capital. This phase is not as risky as the ones Deng and Zhu launched, but it is immeasurably greater than the risks The Obama administration is taking with health care reform. For the leaders of the Harmonious Society with their emphasis on order, stability, control, fairness, and harmony, this is a formidable challenge and requires a tremendous Leap of Faith.

5.4 Currency Appreciation and Mass Incidents

As a result, the new Hu/Wen team was slow to move toward a new growth path. But pressures mounted, and these leaders had good advisors fully aware of the emerging economic realities, so in mid-2000's they started to move fast. The currency was allowed to appreciate over 20 percent from $8.28 in June 2005 to $6.83 in August 2008. More importantly, when wages were already quickly rising because of a tight labour market, a new labour law took effect on January 1, 2008, drastically raising labour costs. The exact costs are controversial and difficult to calculate because one of the biggest impacts varied greatly among companies: a requirement for employers who laid off workers to pay out the workers depending on their tenure with the firm. For many foreign employers that raised their labour cost by 200—300 percent. A survey by the Hong Kong Federation of Industries (HKFI) published in October 2008 found that, of the 70,000 firms in China owned by their members, 20 percent were either out of business or being phased out. The owners primarily blamed the new labour law for this development, which preceded the full demand collapse caused by the global financial crisis. In the Global capital of toy manufacturing – Guangdong Province, 53 percent of all toy companies (by number, not dollar volume) had collapsed by October 2008, before the effects of the Western financial crisis had really hit the shores of Asia Pacific.

When the Western financial crisis hit, the pre-existing deleterious combination of rising currency, market-based wage rises, and the residual effects of the previous years' inflation was suddenly magnified by a global collapse of demand. Foreign companies fled China like rats leaving a sinking ship. Local companies closed. Managers who didn't have the funds for the required payouts to laidoff workers fled to Taiwan, South Korea and elsewhere. According to official calculations, about 20 million workers lost their jobs (in the business community and amongst many Western economists, the number was believed to be far higher). Coastal China was vulnerable and was hit hard. The loss of tens of millions of jobs supplemented another domestic trend, namely the rapid rise over the years in the number of "mass incidents," or popular demonstrations.

According to official statistics, these had risen from 8,700 in 1993 to about 40,000 in the year 2000, compounded by increasing size, violence, and effectiveness of the protests, with a further rise to 74,000 in 2004. Official statistics do not yet reveal the scale of the additional impact of the Western financial crisis, but there have been many widely publicized protests by workers losing their jobs.

This led some Western commentators to speculate that regime stability could be threatened, although that seems extremely

unlikely. Everything we know about the demonstrations is that they are directed at local businesses and local government and party officials. In almost all cases, they constitute an effort to attract the attention of the central government, which according to credible polls is generally regarded as doing a good job under difficult circumstances, whereas sub-provincial governments are generally regarded with something between disdain and angry contempt as noted by Tanner (2004).

Having said this, demonstrations were sufficiently numerous and vehement to raise strong central government concern about the risk of even wider unemployment and even deeper mass disaffection. In particular, the government became relatively cautious regarding issues that could exacerbate unrest preferring to emphasize political unrest in Tibet and Xinjiang Province instead. One must hasten to add that the spark that exploded in Urumchi, Xinjiang was over displaced Uyghur migrant workers protesting unjust racial prejudice over legal court cases involving sacked Uyghur's in Guangdong Province. The appreciation of the RMB currency ceased, since a rising RMB currency would make imports more uncompetitive and add to rising unemployment and factory closures in the Coastal Provinces. In some cases, the Beijing government called off important plans, such as the sale of the Linzhou Iron and Steel Co. in Henan observed by Shai (2009), when confronted by violent worker protests.

5.5 The China Promethean Model.

Given the regime's awareness that it derives its legitimacy from strong economic performance, Beijing responded decisively to the financial crisis. On November 9, 2008, it announced a fiscal stimulus of RMB 4 trillion ($586 billion). The exact incremental stimulative effect was difficult to pin down because some of the expenditures may have been previously budgeted and much of the burden of funding projects was directed to local provincial governments, whose obedience is imperfect. But there was no doubt about the massive scale of the stimulus and its effect on project spending throughout China. This model known as the **China Promethean Model** is not only massive hence the name "Promethean" but also extensive in its reach to uplift the economic standard of living for the poorer Western Regions.

Officials reported that, whereas the central government had previously acted to constrain local governments from implementing projects that seemed to be of dubious value, now the pressures flipped to very serious criticism of those same local governments for not implementing even more projects quickly enough. Compared to the United States, China had many more shovel-ready projects and its system presented fewer legal or regulatory obstacles to their rapid implementation. Moreover, the Chinese fiscal stimulus was far more focused on actual crisis stimulus than its U.S. counterpart, which was heavily a social improvement agenda that included health care, education, alternative energy, and the like (as contrasted for instance with revamping badly deteriorated physical infrastructure), and with spending spread out over a good many years. In China, monetary and fiscal stimuli overlapped and reinforced each other to a far greater extent because China's monetary stimulus, in a well-capitalized banking system, was channelled much more into actual projects. U.S. monetary policy had to focus on bailing out a collapsing financial system.

Having come off a restrictive anti-inflation policy, starting in September 2008 the People's Bank of China (China Central Bank) cut Chinese interest rates three times by 0.27 percent each time and then by 1.08 percent in November to a deposit

rate of 2.52 percent. More importantly, it cut the highly restrictive requirements for bank reserves and mandated such sharp increases in lending that many observers were alarmed as explained by Fang et al (2009).

5.6 China's GDP Growth Predominantly from Domestic Sources.

The China government's efforts to stimulate the economy via the **China Promethean Model** are unquestionably successful. Fixed asset investment in the first half of 2009 rose 33.5 percent over its 2008 counterpart, and according to official statistics, gross domestic product (GDP) growth in the first quarter of 2009 was 6.1 percent, followed by 7.9 percent in the second quarter. GDP growth in Chongqing, China's largest city and the centre of gravity of central government efforts to develop the relatively backward interior was running in excess of a 15 percent annual rate. Supported by central government subsidies for the purchase of consumer electronics and appliances, national retail spending in the first half of 2009 grew 15 percent. August 2009 real estate investment was up 14.7 percent over August 2008.

In early 2009, China surpassed the United States for the first time in total car sales and was expected by brokerage analysts to sustain that lead for the full year by selling 10—11 million cars. Enhanced as elsewhere by stimulus programs, Chinese car sales in June 2009 rose 48 percent over 2008 – General Motors' sales in China that month were up 38 percent. Asset prices also reflected recovery. By summer 2009, property prices in Shanghai and other major cities were back to their peak 2007 bubble levels. By mid-July 2009, the Shanghai stock market had gained 75 percent over its level at the beginning of the year.

By July 2009, the government was sufficiently confident about recovery, and sufficiently concerned about asset bubbles, that it started applying the monetary brakes as observed by Anderlini (2009). The volume of new lending by Chinese banks slowed by 77 percent in July 2009 compared with June 2008 as explained by Oliver (2009) and the pace of economic growth slowed slightly. China had stepped on the accelerator more decisively than the rest of the world and started applying the monetary brakes correspondingly earlier, thereby seeming to set a gold standard for crisis management.

5.7 The Future for China and Asia Pacific?

There remain two levels of questions about the future. The first concerns the hangovers from the stimulus, which will be ubiquitous. Top bankers acknowledge that there will be a hangover of bad loans in China as a result of the hasty approval of numerous projects that would never have passed reviews before the stimulus. We will not know the scale of the bad loans for at least a couple years, but the consensus is that they will not be crippling. The big banks, chastened by their difficulties of a decade ago, were more cautious than the statistics indicate. Increasingly capable credit departments were supplemented by gamesmanship in meeting Beijing's lending targets: just under one-third of their increased "lending" may have been a virtually risk-free exchange of notes among themselves.

The problems will fall primarily on smaller banks. The financial stimulus completely re-inflated the property market in major cities. The government not only bailed out the market but also all the major property developers. Market insiders say that bubble psychology has completely and dangerously revived. In this sector, the Chinese government has particularly set the global lead standard for creating moral hazard. There will eventually be a substantial price to pay. Likewise, the

spectacular rise in the Shanghai stock market may prove to be unsustainable. Given the decisiveness of the government's other moves, it could prove decisive here also, but the question remains until data answers it. Meanwhile, household savings were falling in the summer of 2009 (i.e. by RMB 19.2 billion in July) as families shifted out of savings into the stock market.

At the second and more strategic level, the crucial question for China's economic future is whether the government not only can push the economy onto a new growth path but move beyond obsolescent strategies based on overinvesting in heavy industry and relying for employment on extremely cheap labour. Small and medium industries, the service sector, and the private sector appear to have been severely damaged by the Western Financial Crisis. As elsewhere, the stimulus has flowed into older sectors the state enterprises that could create jobs quickly and were more likely to be able to pay back their loans. On this level, the need for new directions comes solidly up against the apparently strong inclination of the Hu/Wen administration to continue to rely heavily on state enterprises for political control.

As is often the case, Chinese leaders continue to push stimulus programs when the economy seems to them not to have fully revived. The result in China is inflation of property and stock markets while the prices of goods deflate due to overcapacity. The only solution is to let firms go bankrupt until overcapacity and obsolete capacity have evaporated, while creating new jobs to replace the lost ones. As everywhere else, the only kinds of firms in China that can create massive numbers of jobs quickly are small, medium, largely private sector enterprises in higher-value manufacturing and services. Whether China's current leadership can grasp this and make necessary decisions, notwithstanding the associated political grief, remains to be seen.

One positive glimmer is the long-delayed plan to open the Growth Enterprise Market (GEM) in Shenzhen during October 2009, which is designed to support small companies. Another glimmer is enthusiastic government support for private equity funds, which would channel capital toward more efficient uses than constrained banks and stock markets. But these are as yet small glimmers. Decisive moves toward a new path might have to await the arrival in 2013 of the next administration, key candidates for which are believed to be more market-oriented.

The global financial crisis did not change the shape of the Pacific or global politics. It accelerated changes that had been long under way and some will celebrate the new reality; many will recoil from it. But, the financial crisis highlighted the reality of a new order in Asia and to some extent in the World. Washington and Beijing could make big decisions and deploy vast resources in a focused way that Brussels (EU), New Delhi, and Tokyo could not. As Chinese demand gradually restored growth in Japan and other Asian countries, the new realities are far more quickly acknowledged in Asia than in Washington. To this end, we in Asia Pacific must begin to question if this new China Promethean model can be a bulwark of defence in times of Economic Tsunamis and consequently, be a topic for further research.

6.0 Conclusion: How to prevent the financial tsunamis from overwhelming our economies by building robust breakwaters

Reviewing the previous three asset price bubbles in Japan, in Hong Kong, and in the USA, we identified a common symptom of **negative real interest rates** in the three economies before any bubble implosions. The common symptom is in line with the theoretical model derived from the Yiu et

al (2009). Asset price is determined by the current income and the discount rate, which is determined by four components, viz. (1) nominal interest rate, (2) inflation rate, (3) risk premium and (4) expected income growth. Real interest rate is the difference between nominal interest rate and inflation rate. The empirical results show that real interest rate exerts a negative effect on the housing return. The bubbles were also found to be fuelled up by a period of negative interest rate, and then burst when the negative interest rate regime ended. Although a common symptom of asset price bubbles is found, it does not necessarily imply that bubble formation and implosion can be prevented in future. It is easier to avoid bubble formation than preventing a bubble implosion.

By studying China's employment of the Promethean economic model, we recognize that China has the huge financial reserves in order to undertake massive economic stimulus to mobilise local government spending to stimulate the regional economies. China invested heavily and wisely in heavy infrastructure spending which had the highest economic multiplier effect .China was the first nation to emerge from the Western Financial Crisis (Tsunami) relatively unscathed and has began to apply the monetary brakes and raise interest rates whilst restricting bank lending to equities and real estate which have smaller multipliers. This pre-emptive monetary action prevents an environment of negative interest rates which is a proven precursor to most excessive bubbles.

So the lesson we can apply to all emerging Asian nations is to apply massive quantitative easing at the start of any financial crisis and immediately undertake massive Keynesian expenditures and fiscal deficit financing. Upon successful jumpstarting of the local economies, to rapidly apply monetary tightening in tandem with rising inflation to prevent a negative interest rate environment which can cause explosive bubbles with even more devastating consequences when they burst and collapse. Consequently, Japan should learn from the China example and rapidly reflate her economy with massive fiscal expenditures instead of resorting to accommodative monetary policies of zero interest rates. A strong Japan with advanced technological capabilities coupled with the massive manufacturing capabilities of China makes for a dominant Asian economic trading bloc. Perhaps, the need to study an Asian Common currency will not be too remote. What is required is political will coupled with economic stability and stable partnerships of mutual benefit and assistance amongst Asian neighbours which will give rise to a "enrich thy neighbour policy" rather than "beggar thy neighbour".

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REVIEWING THE IMPACT OF THE 2008/2009 GLOBAL FINANCIAL CRISIS (GFC) ON INTERNATIONAL PROPERTY MARKETS AND PROPERTY PROFESSIONS

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Abstract

The global financial crisis that impacted on all world economies in 2008 has had a continuing impact on all world economies throughout 2008 and 2009. This impact has not been confined to the finance industries but has had a direct and indirect impact on the property industry worldwide from both an ownership and investment perspective.

Property markets have experienced various levels of impact from this event, but universally the greatest impact has been on the traditional commercial and industrial property sectors from the investor perspective, with investment and superannuation funds reporting significant declines in the reported values of their investments.

Despite the very direct impact of these declining property markets, the GFC has also had a very significant indirect impact on the various property professions and how these professions are now operating in this declining property market. Of particular interest is the comparison of the property market forecasts in late 2007 to the actual results in 2008/2009.

Key words
Global Financial Crisis, property markets, property professions, commercial property, industrial property, residential property.

Introduction

The Global Financial Crisis (GFC) of 2008, that continued into 2009 (and still an issue for some countries and individuals leading into 2010) has had an impact across all financial and economic markets across the world. Although the impact was greatest in the developing countries that either relied heavily on foreign capital or were heavily geared (e.g. Iceland and the Baltic countries of Latvia, Estonia and Lithuania) the impact was also of concern across the developed countries. Of the developed countries, the hardest hit by the GFC were the United States, Japan (whose economy was already suffering prior to the GFC) and the majority of developed Western Europe countries, especially those that relied on trade as their major economic driver (Beelaerts, 2007).

Individual investors were the major losers in the crisis due to the significant losses across the share markets, wiping out considerable company and individual wealth, particularly those investors who actually took out loans to take advantage of high gearing to grow wealth. Even cautious investors, including academics, saw their superannuation funds decline by up to 30 to 40% of their previous GFC balances (Unisuper, 2009).

The property sectors throughout the world were also subject to the fall out from the GFC. As many investors had geared heavily to maximise profits and capital growth in the equity markets, similar strategies were also prevalent in the property market. The reliance of the property development and property investment industries on retail and wholesale funds resulted in the commercial, industrial and in some cases the residential property sectors suffering significant declines in both activity and values.

Although the major real estate markets in most countries suffered a downturn during this period, this downturn was not consistent across countries or specific property sectors. The variation in relation to property market impact was offset to an extent by the various strategies put in place by governments to limit or reduce the impact of the GFC on the general economy and the regulation that was in place prior to the GFC, particularly in relation to the residential property markets.

Compounding the impact on the property market was the fact that this financial crisis had both a direct and indirect impact on companies and individuals. The fall in property values, as well as share prices, reduced the value of investment and pension/superannuation fund values by as much as 30% to 40%, with a direct impact on the ability of companies and individuals to provide additional funds for further investment in the property investment and development sectors.

Despite the overall negative impacts on the value, demand and supply of property, there have been some positive results following the crisis that will have some longer term benefits to the property sector. However, these positive benefits do not outweigh the negative impacts and have tended to only be of assistance to a small proportion of those involved in the property industry.

This presentation will review the property markets pre GFC at the end of 2007 and post GFC in late 2009 and provide a comparison of market expectations from the main real estate research firms in 2007 and actual results in 2008 and 2009. An overview of the impact of the GFC on selected direct property markets and how varied the impact has been on both commercial and residential property will also be addressed in the presentation.

GFC Winners and Losers

Before discussing the direct impact of the GFC on the property markets in developed countries, it is interesting to note which industries have benefited or suffered during this crisis. Recent reports by Ibis (2009) and Beelaerts (2009) have highlighted the various industries and sectors that have either benefited or been negatively affected by the GFC.

The Winners

Business Services

Business consulting services, particularly human resources management, liquidation and administration and legal advisors have benefited from the GFC as the demand for redundancy services, employment services and business restructuring services increased.

Agriculture

The agriculture sectors have been very resilient in respect to the impact of the GFC, particularly in relation to the staple commodities. Farm values have been relatively stable compared to other real estate markets.

Health

Health sectors have also shown growth and resilience during the GFC. As consumer

incomes fall, less is spent on healthy living and the incidence of sickness has increased so has the demand for health services. Issues of mental health and depression have also seen an increase during the GFC as people lost their employment or worried about losing employment.

Infrastructure

A major winner in the GFC has been any sector involved in infrastructure; especially those involved in the government bail-out plans (G8- Canada, France, Germany, Italy, Japan, Russia, UK and US). As these projects have been in the order of $billions, any sector involved in these projects survived and recovered quickly. Major construction companies were big winners in the GFC, with these infrastructure projects taking up the reduced demand in the commercial property construction area.

Retail

In countries that provided direct financial stimulus packages to individuals (Australia, US), the retail sectors have been spared the major impact of the GFC

Australian Banks

Australian banks (including New Zealand subsidiaries) were also winners during the GFC and actually profited, which was not the case for the US banks. In addition to deposit guarantees from the Governments, these banks also benefited from a reduction in competition. During the period from late 2007 to 2009 the number of second tier lenders in Australia and New Zealand reduced dramatically. In New Zealand in 2007 there were 22 Finance companies operating in the commercial and residential property sectors. By 2009 this had reduced to five (5).

Australian and New Zealand banks have now become the dominant lenders in the leasing market, where they did not have a significant exposure prior to the GFC.

Interest rates

A major tool used to boost economic spending and to support financial institutions during the GFC was the reduction in official cash rates. Any company or individual with debt has benefited from these reduced interest rates.

Resource Stocks

Although the equity markets throughout the world have been losers in the GFC, resource stocks have actually been winners, particularly during 2009, as the prospect of recovery is more likely.

The Losers

Tourism Sectors

Tourism has been a major casualty of the GFC. Little of the various retail stimulus packages found its way into the tourism sectors. Over the period of late 2007 to end of 2009, few airlines recorded profits and a number of once dominant airlines declared bankrupt (Alitalia, JAL). A major factor in the reduction in airline profits has not just been a reduction in leisure travel but also in businesses only allowing economy travel for staff.

Selected Equity markets

Two of the major losers in respect to their equity markets have been Europe and Japan. The Japanese Government did not introduce the sweeping stimulus packages that other countries introduced and this had a major impact on the share market that was already suffering prior to the GFC. The only stimulus package introduced in Japan was targeted to residential property including tax breaks on home mortgages, which increased residential property development.

The recovery of the European stock markets has not been as strong as the recovery of the US and Australian equity markets during 2009. This has been mainly due to negative sentiment as to whether the economy has actually improved.

Hedge Funds

Although hedge funds promoted the concept that profits can be made in declining as well as rising markets, during the GFC this has not proven to be the case, with very few hedge funds profiting in the recession.

Investors and self funded retirees

While reduced interest rates are beneficial to individuals and companies with debt, the reverse applies to individuals or companies that rely on interest generated from their investment assets. These groups have seen their incomes reduce substantially and many have had to realise capital assets to support themselves during this period of artificially low interest rates.

Property

One of the major losers during the GFC has been property. Across the globe commercial property markets (including retail) have seen significant declines in demand, new supply, income and values. Residential property has seen significant declines in value in the US, UK and New Zealand. The low value residential housing sectors in Australia were cushioned to some extent by the introduction of first home buyer grants, stamp duty waivers and interest rate reductions.

The indirect impact has been in relation to the employment areas of property. Property development companies were the first to make redundancies, followed by the property investment sector, sales and leasing and valuation firms. University graduates in 2008 and 2009 were also losers in the GFC, as employment opportunities were limited compared to the period 2000-2007.

GFC and PROPERTY

The focus of this presentation will be a review of the market analysis and forecasts by the major real estate research sources, as at 4th quarter 2007 and compare these forecasts as to what actually occurred in the markets during the GFC. This review will be based on the comparison of the Prime office sectors in Brisbane, Auckland and Chicago. In addition a review of the investor sentiment surveys from late 2006 to late 2008 will be presented to show the difference in investor sentiment just prior and during the GFC.

Property Late 2007

In Australia, US and New Zealand, commercial, industrial and residential property had experienced a relatively long period of increasing demand and prices. From the period 2001 to 2007 the growth in the value of direct property was fuelled by readily available finance, less stringent lending criteria and an increasing supply of property based on a boom in speculative property development.

A review of the market commentary, as at 4th quarter 2007, provides an interesting retrospective view of how the property industry saw the outlook for property in 2008 and 2009. These market reports were prepared by the major real estate agents in the US, New Zealand and Australia and these reports also show that the research departments of these firms did not have any pre-warning of the impending GFC and its impact on the property market. Excerpts from these market research reports follow for the commercial CBD office markets in Chicago, Auckland and Brisbane. These predictions will then be compared to the actual market performance in 2008 and 2009.

Brisbane CBD Office

Predictions 4th Quarter 2007

The following are extracts and comments from various research firms and commentators for the Brisbane office market. The underlying theme from all sources was that the buoyant office market would continue into 2008 and 2009.

"the demand for office space is expected to continue at or better than the five year rate of 40,000m2 annually if there was sufficient supply" and "with vacancy rates at 1.2%, absorption will continue to be constrained and existing tenants looking to expand in the short term, will either have to stay put or look at the city fringe (Colliers International, 2007)".

Another major real estate firm also stated *"The strong tenant demand is anticipated to continue, with underlying economic conditions to remain positive for business expansion" and " Investment interest in Brisbane CBD is at an all time high, with investors seeking to gain a share of the reversionary income expected to flow through the majority of buildings within Brisbane over the next few years (Savills, 2007)".*

These optimistic predictions in late 2007 for the 2008 year were based on the very bullish market from 2005 through 2006. Data for Brisbane in late 2007 for office stock and vacancy is shown in Table 1.

The significant decrease in office stock in 2007, and the subsequent decrease in the vacancy rates for all but the Grade A space, did not provide any indication that the office market would not continue this trend in 2008. The optimistic forecasts by the Australian market researchers was based on the fact that as at the 4th quarter 2007 there was strong population growth, above average national private investment and strong interest generated from the availability of new and refurbished office space for lease and sale. Many forecasters highlighted the fact that property and Business Services, Utilities and Government were sectors that were very prominent in new leases throughout 2007.

Commercial office sales in Brisbane during 2007 were also at an all time high with sales of over $1.572 billion for 19 transactions reported for the year, with these sales also recording lower yields than the previous 12 months. Table 2 shows some of the major office sales in Brisbane over 2007.

The highest reported sale for Brisbane in 2007 equated to $14,682/m2, again with yields lower than previous years. One leading forecaster stated *"With the recent increases to the cost of funds, the beginning of a global repricing of the risk and the crystalisation of the rental growth flowing into the market, there is now some stabilisation expected in the yield range".* However, this forecast went on to state *"given the growing expectation*

Table 1: Brisbane CBD Office Summary 2007

Grade	Stock	Vacancy	Vacancy % Jul -07	Vacancy % Jul -08
Premium	140,015	180	0.1	5.8
Grade A	590,244	9,862	1.7	0.2
Grade B	815,314	7,315	0.9	1.6
Grade C	157,873	1,480	0.9	8.8
Grade D	41,262	1,337	3.2	5.7
Total	**1,744,698**	**20,174**	**1.2**	**2.3**

Source: Property Council of Australia, 2007

Table 2: Brisbane CBD Office: Significant Sales Activity 2007

Date	Price ($m)	Area (m2)	$/Sqm	Yield (%)
Feb-07	$76.6	15,216	$5,034	6.66
Jun-07	$110	13,422	$8,195	6.23
Jun-07	$45	8,327	$5,404	6.20
Jun-07	$40	6,361	$6,288	3.70
Jun-07	$16	2,670	$5,768	6.00
Aug-07	$48.5	6,566	$7,387	N/A

that the market rents are now achieving a premium which will be eroded in three to four years time, the core market yields may increasingly reflect this perceived risk. In late 2007, this market analyst had predicted some correction in the market but not to the same extent that occurred in 2008".

Some of the final comments in relation to the market expectations for the Brisbane market in 2008 were:

"The Brisbane CBD is entering a golden era of development that is unprecedented in its history. Over the next 5 years, Brisbane will see 500,000 m2 of modern energy efficient office space added to the existing stock" and "The Brisbane office market will be well poised to capitalise on improving local and international trading conditions by getting back to balanced supply and demand equation as soon as possible and then maintaining vacancy rates around 5% to 6%, which allows growth and movement in tenancies" (Savills, 2007)

The strength of Brisbane's white collar employment growth is putting more pressure on smaller tenants trying to secure CBD office space. The resources boom and Queensland's $82 billion infrastructure program have created expansion opportunities across all relating sectors underpinning strong tenant demand. This strong leasing activity has positioned Brisbane's vacancy rate at an all time low of 0.45% at September 2007. The market is suffering from unsatisfied demand as major tenancy requirements (>2,000m²) exceed 170,000m² (Colliers International, 2007).

A more cautious forecast was proposed by Knight Frank (2007), *"While the level of transactions for 2006/2007 was subdued, this is expected to change dramatically over the remainder of 2007 and into next year as the level of assets offered to the market has increased during the second half of this year. While the underlying investment demand remains extremely strong, purchasers are grappling with quantifying the sustainable rental levels when determining the amount of reversion to be expected from CBD assets.*

It is interesting to note that a less optimistic forecast was provided by Landmark White (2007) with their main forecast being *"Growth in effective rents to ease before a negative patch expected in 2010 and 2011 and prime and secondary yields forecast to soften 25 basis points by June 2008, with further softening in secondary properties expected in late 2009.*

The general market perception leading into 2008 was that the Australian office market was at an all time high and the confidence shown in previous years was set to continue into 2008 to 2009 but some commentators and researchers considered that there could be some decline in leasing and sales demand by 2010 or 2011. As late as December 2007, there were no research or outlook reports suggesting a decline in the direct commercial property markets.

Brisbane Office 2008-2009 reality

Although the Sydney and Melbourne office markets had seen a significant decline in sales and leasing activity in the first 2 quarters of 2008, the Brisbane market was still being supported by the Queensland resources boom. However as reported by Knight Frank (2008) the vacancy rate for Brisbane office space suffered its first increase in the second quarter 2008, with an increase of 0.5%, with a prediction that it would increase to 2.0% by the 4th quarter 2008.

Mid 2008 saw the peak in Brisbane office rental rates with the average prime gross rental rate increasing to $835/m2 (a 23% increase in the 12 months to June 2008; however the prediction was that this would fall to $800/m2 gross by the end of 2008 (Knight Frank, 2008).
Confidence in the Brisbane office market was softening and this was reflected in the market forecasts of mid 2008:

"In recent months, it has been noticeable that there is increased conservatism and longer decision making time frames by companies, although there still appears to be solid underlying demand from the tenant base. Sales activity has been sporadic and underpinned by private investors. Over the past six months yields have softened by 0.75 to 1.0% (Knight Frank (2008).

By the end of 2008, these predictions had been confirmed, with prime yields softening another 1.25% in the six months to December 2008 (Knight Frank, 2009).

Vacancy rates increased over the second half of 2008 from 2.0% to 4.2%, a significant 6 month increase. However, vacancy rates in the prime institutional grade property were still at pre GFC levels at 0.8%. The forecast for vacancies in early 2009 for the 2009 year was an increase in the range of 8.5 to 10.0% due to the impact of the GFC, particularly due to the limited availability of credit. The Knight Frank forecast for 2010 is a vacancy rate of 12%.

By mid 2009 Colliers International reported a vacancy rate for Brisbane CBD at 10.5% and a 2010 forecast of between 13-15%, with186,000 m2 of space available. Of that, 34,850sq m was new supply, 104,036sqm was backfill in existing buildings, and the total sublease space on offer was 47,307sq m. The increase in vacancy rates across Brisbane CBD office also resulted in a decrease in the average prime gross rent from $835 in mid 2008 to $725 by December 2008. Rents in the B grade sector decreased over the second half of 2008 from a range of $500-$575/m2 to $450-$500/m2 (Colliers International, 2009).

Although the GFC did not stop sales investment activity in the Brisbane office market, it did change the dynamics of the sales investment market. In the 12 months from March 2007 to February 2008, there were 18 office building sales in Brisbane for a total value of AUD$2.275 billion. However, for the 12 months from March 2008 to February 2009, there were 11 sales but with a total value of only AUD$671 million. Figure 1 shows that this low sales volume was predominately due to the fact that the buyers in the market over this period were private buyers in the B, C, D, grade markets, rather than Institutional buyers in the Prime and A grade markets.

2009 saw a continuation in the decline of the Brisbane CBD office market. The main factors behind this continuing decline were the difficulty in investors obtaining finance, flagging business confidence and limited development activity due companies postponing commitments (Blundell, 2009).

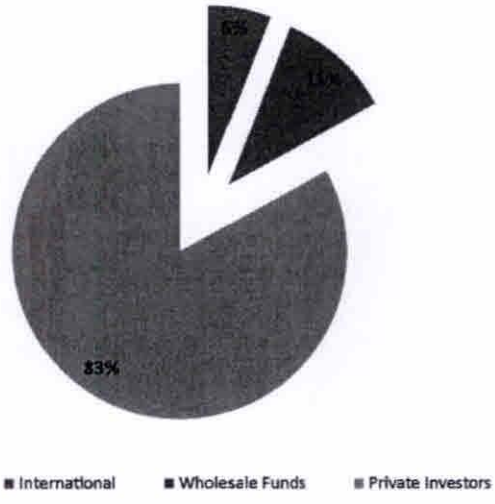

Figure 1: Brisbane Office Sales: Buyer Characteristics

The CBRE summary of the Brisbane CBD office market in 2009 was:

"Brisbane's office markets in 2009 have been characterised by a diminishing supply pipeline, negative net absorption, rising vacancy, falling rentals and softening yields. Investment demand has been subdued".

Although the fall in gross rentals declined further in 2009 from $725/m2 in December 2008 to $662/m2, the effective average prime rental was actually only $516/m2 due to rent incentives of 22%. The level of rent incentives in the B, C and D grade markets were in excess of 30% (Knight Frank, 2009a)

By the end of 2009, core prime office yields had softened to 8.00 to 9.19%, well below the 2007 levels of 6.2% to 6.5%.

Despite these significant falls in all areas of the Brisbane office market in 2008 and 2009, the increased optimism in the general Australian economy, the major real estate firms and market analysts still have a pessimistic forecast for 2010.

Based on the latest reports from Colliers International, Knight Frank, CBRE and Jones Lang LaSalle the following are the forecasts for the Brisbane CBD office market for 2010:

- Yield will continue to soften before stabilising in late 2010, remaining stable in 2011 and firming in 2012
- With falls of 30%+ in effective rents over 2009, a further 10% to 15% reduction is likely before a period of stabilisation.
- The increased sale activities in the second half of 2009 were promising signs for the capital market; however, a greater breadth of purchasers beyond private investors is required to consolidate the yields.
- While it appears that Australia has avoided a technical recession and the worst of the GFC may be behind us, there is unlikely to be any significant turnaround in Brisbane's office market performance until 2011 at the earliest.

Chicago Office Market

Chicago CBD Office

Predictions 2007

As early as 1st quarter 2007 some researchers were indicating that despite the relative slow market in Chicago in 2006, the outlook was till positive leading into 2008. According to New York Real Estate News (2007) "The regions slow economy and weak job growth has hindered Chicago office property leasing, but record office sales in 2006 and investor appetite for Chicago property is reason to build".

According to Newmark Knight Frank (2007) virtually all of the Chicago Office markets

enjoyed some improvement during 2006, with these markets expected to improve in 2007 due the moderate amount of inventory that will be added next year in a number of the better-performing markets. This sentiment was echoed by Bradford Allen, (2007) who stated that vacancy rates for the Chicago office market were at their lowest point since 2001, with the expectation of increasing rental rates and the 2nd quarter 2007 recording the highest rates of return since 1st quarter 2002

By late 2007 and the 1st quarter 2008, the forecasts for the Chicago Downtown office market were still reasonably buoyant, with some expectation of a softening market.

"The 1st quarter overall CBD vacancy rate measured 13.5%, a slight increase from 13.3% posted during the 4th quarter 2007. This marks only the second increase in CBD vacancy in the last 12 quarters, a sign that the market MAY be softening (Colliers Bennett & Kahnweiler Inc, 2008)"

By late October 2007, there was still a measure of optimism in the Chicago office market. According to Diesenhouse (2007), a survey of 600 real estate experts interviewed for an Emerging trends report stated that:

- Chicago was not a 24 hour city but an 18 hour city and a great place to invest.
- This aspect of the city will help it withstand the slowdown from the sizzling commercial property market of the past few years.
- 78% of respondents predicted that real estate would outperform US stocks and bonds over 2008.
- The downturn in commercial real estate will be less severe than the slump in residential property.

Chicago Office Market 2008-2009 Reality

By early 2008, the impact of the GFC was starting to be reflected in the forecasts for the US commercial office markets, including Chicago. However, these early 2008 forecasts were still reasonable optimistic.

"Despite the significant residential real estate downturn and meaningful reductions in net absorption, the commercial real estate fundamentals are expected to remain relatively stable based upon controlled delivery of new product and relatively low vacancy rates" and "Business confidence is expected to remain flat in the first half of 2008 as the sub-prime factor and broader capital markets displacement gradually play out. As a result, national office vacancy rates are expected to increase slightly in 2008 and a few markets are beginning to experience an increase in tenant inducements" (Wong, 2008).

However, the market reviews in 2009 and the market predictions for 2010 provide a more sombre outlook on Chicago office performance.
The following Table 3 is a summary of the CB Richard Ellis market expectations for 2009/2010.

The Chicago Downtown office market will have an increase in stock due to the completion of pre GFC construction projects.. The slight increase in the absorption rate in 2008 will be offset by a negative absorption of 159, 391m2 in 2009.

Table shows the significant increase in vacancy rates for office space from 12.8% in 2008 to 16.5% at the end of 2009, with a decline in the overall absorption rate from the end of 2008 to late 2009.

A breakdown of office vacancies in the Chicago CBD also shows that the Prime

Table 3: Chicago Downtown Office Market Accommodation Summary

Chicago CBD	2008	2009
Vacancy Rate	12.8%	16.5%
Absorption rate (m2)	28,248	-159,391
Inventory (m2)	11,912,870	12,252,360

office market at the end of 4th quarter 2009 had a vacancy rate of 17.1%, compared to 16.0% and 14.2% respectively for A and B grade office buildings.

Figure 2 shows the significant fall in the total value and number of sales that occurred in the Chicago CBD office market in 2008. Of more significance is the fact that during 2008 there was only a single sale of a Prime grade office building in the Chicago CBD.

The forecast for 2009 in the Chicago CBD office market was that all sectors of the market were cautious and that any buyers would expect a discount to replacement cost and most often these buyers would require vendor financing or buildings with income streams that covered any finance charges (positive gearing) (CBRE, 2009).

CBRE's (2009) final forecast for this market was "Given the current economic circumstances and widespread credit shortages, we expect 2009 sales activity to be about on par with 2008 activity. However, we anticipate that sales activity in 2010 will approach volumes closer to historical averages".

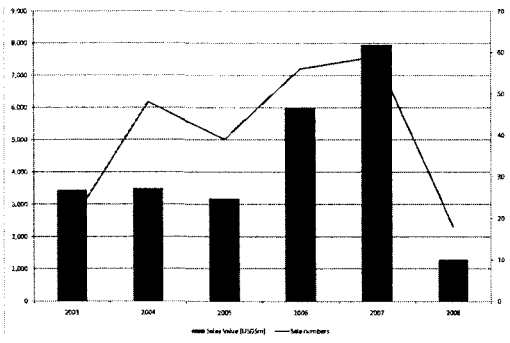

Figure 2: Chicago Downtown Office Sales Activity 2005 to 2008

From an income perspective the gross asking rent increased from $344/m2 in 2007 to $353/m2 in 2008. However, the expectation for Chicago gross asking rents in 2009 was a significant fall and a possible eight year rental recovery cycle (CBRE, 2009). According to Colliers (2009) rentals at the end of 2009 had fallen to $306/m2, well below both the 2008 and 2007 levels.

Colliers forecast for 2010 is a continuing deterioration in the Chicago office market but not at the same rate as 2009. This decline will be in both the level of gross rents, as well as the sale price for buildings that are coming onto the market as cash strapped owners fail to seek refinancing (Colliers B&K, 2010).

Auckland CBD Office

Predictions 4th Quarter 2007

The New Zealand property market was also experiencing a period of substantial growth in the five years up to the end of 2007. This growth was across all sectors, with significant growth in the office and residential sectors (Eves, 2008; 2009). Unlike the Australian commercial property sectors, the New Zealand market experienced significant downturns in the mid 1990s and also in the late 1990s. However, there was significant activity in the commercial office market, particularly

Auckland, from 2001 to 2007 as Australian investment and superannuation funds were actively purchasing property in Auckland.

In mid 2007, the outlook for Auckland was very positive. There had been over 16 high value commercial office buildings sold in the Auckland CBD from October 2006 to May 2007 for a total sale price in excess of NZ$500 million, with market yields ranging from 8.8% to 6.43%, record lows for this market sector (Colliers International, 2007; Bayleys, 2007)

As at June 2007 the Auckland CBD vacancy rate had reduced from 10.9% as at December 2006 to 9.5%. However, the Prime CBD vacancy rate was only 1.2% and A Grade 4,5% vacancy with virtually no incentives needed to attract tenants (BIS Shrapnel, 2008).

Limited supply coming onto the market was a major factor in the optimistic view of increasing rents, lower yields and limited tenant incentives (Colliers International, 2007). The average prime rent as at June 2007 in Auckland was $302/m2 p.a., with a forecast to rise to at least $320/m2 pa by December 2007.

The Bayleys and Colliers International forecast for the 2007 year was "Overall market indicators point towards a strong year for the Auckland CBD, with high levels of leasing enquiry and absorption resulting in a tightening market and growth in values.

By December 2007, the Auckland commercial office market was still performing strongly and market forecasts were still very favourable. By December 2007, the vacancy rate for all office accommodation in the Auckland CBD had decreased to 8.6%, a level not recorded since major real estate agency firms commenced research records in 1995. According to Colliers International (2008) "On-going leasing enquiry shows no clear sign of easing" and "Overseas demand, particularly from European and Australian investment companies, was responsible for many of the major sales, with over $300 million worth of investment coming from off-shore funds.

The mid 2007 forecast for average prime rents to increase to $320/m2 were exceeded with the average prime office rent reaching $345/m2 by December 2007,an annual increase of 9.4% in 2007 (Colliers International, 2008).

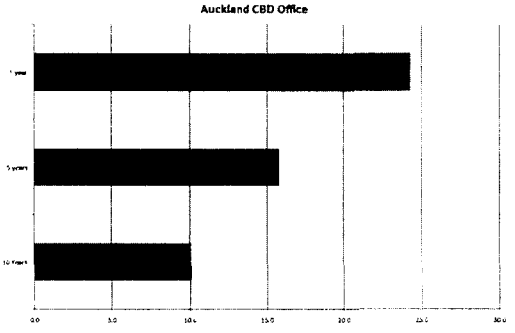

Figure 3: Auckland CBD Office Total Return (%): 2007, 2003-2007 and 1998-2007
Source: IPD

Figure 3 shows the significant investment gains for Auckland CBD office property in 2007. The annual total return for 2007 was 24.47%, compared to 10.1% for the last ten year average and at a time when yields were at record lows of 6.43% (PCNZ/IPD, 2007).

Auckland Office 2008-2009 reality

By the end of 2007, market players were still confident that the market fundamentals were still strong and the outlook for 2008 would follow the movement from the

previous 5 years, as evidenced by the following quote from Colliers international research, 2008:

"Despite negative sentiment surrounding global credit issues, economic uncertainty and the demise of a number of financial companies, Auckland's CBD office market continues to produce positive results". And *"In the short-term, Bayleys Research anticipates that the Auckland CBD office market will continue to perform strongly and consolidate on the strong foundation that now sees it at its current healthy state.*

By the end of 2008, the effects of the GFC had impacted on all sectors of the Auckland CBD market. Figure 4 shows that the level of investment sales had declined significantly in 2008, compared to the previous 5 years and in the main this was due to the absence of the Australian investment and superannuation companies from the market (CBRE, 2008).

Even by August 2008, market sentiment in Auckland had changed significantly due to the GFC. Market expectations were following the sentiment below:

- There is an increased supply of property on the market but not forced sales at giveaway prices
- domestic institutional demand will remain subdued
- the ability and imperative for Australian funds to invest in New Zealand will be reduced (CBRE, 2008).

These less optimistic views were driven by a decline in sales activity, reduced effective rental growth and a lack of investor confidence. Figure 5 shows that during 2008 the effective rental growth across the major property investment markets were all negative, with the Auckland CBD market showing negative growth of 17.1%.

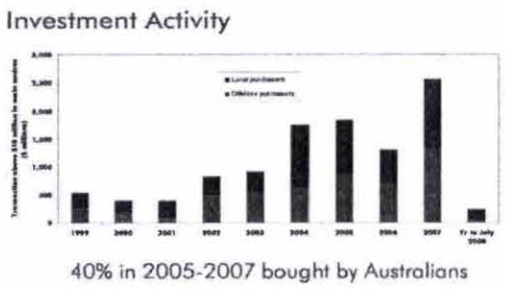

Figure 4: Auckland CBD Sales Activity: Buyer Profile
Source: Bayleys Research, 2008

Figure 5: Auckland Property Sectors: Effective Rental growth: 2008

By the 3rd quarter 2008, the impact of the GFC was being felt in the Auckland property market. Continued negative rental growth across all sectors resulted in the reduction of total returns for the 2008 year. The following statement from PCNZ/IPD provides a telling summary of how the GFC was impacting on the office market.

"The Property Council/IPD New Zealand Property Index for the 12 months to end June 2008 shows the total return for New Zealand ungeared direct property investments was 13.5 per cent, a significant drop from the 24.1 per cent return achieved over the same period to June 2007. The main driving factor was the fall in the capital growth rate - from 14.6 per cent in June 2007 to 5.8 per cent in 2008. Income return drifted downwards at 7.2 per cent

compared to 8.3 per cent over the same period last year".

Although this appears to be a minor fall, it was across the institutional grade property that had very little change in vacancy rates and a lower fall in effective rental growth. While the impact on the prime CBD office market was significant, the impact on the secondary markets was considerably greater. In 2008 rent incentives in these lower grade markets had increased to over 15% and yields had softened to over 10% (Colliers, 2009).

The full impact of the GFC was felt during 2009. By the 4th quarter 2009, Auckland CBD prime office vacancies had increased from 4.1% in 2008 to 11.5%, with the secondary office space with average vacancy rates over 30% (Colliers International, 2010).

Prime office capital values declined by (-15%) during 2009, and this was accompanied with a reduction of (-8.4%) in prime rentals (Colliers International, 2010).

Forecasts for the Auckland office market in 2010 suggests that the decline in this market will continue, with the prospect of some improved investor confidence in the last quarter of 2010.

Investor Sentiment 2006 and 2008

The final section of this comparison of market sentiment both before and during the GFC compares the results of the Jones Lang LaSalle Survey of Investor Sentiment 2006 and 2008 (Australia).

This comparison shows the significant variation in the thoughts and attitudes of investors over this short time period of two years. This change in sentiment was due to the impact of the GFC on the Australian property and investment markets. Table 3 provides a comparison of the survey results. Respondents to the survey place blame for the significant differences in their expectations for all sectors of the property markets in Australia on the direct impact of the GFC (Jones Lang LaSalle, 2006; 2008). The 2008 survey also stated that the low interest rate in 2008 was the main factor in the decision to hold property assets.

Residential Property

Although this paper has concentrated on the commercial property investment market, it is interesting to view the impact of the GFC on a residential property market. For this purpose the Christchurch New Zealand market has been analysed to show the changes in this market both just before the GFC and during the GFC to December 2009.

Figure 6 shows the average residential listings for 15 suburbs of Christchurch. This figure shows the significant decrease in house and unit listings as the GFC took hold across the residential markets.

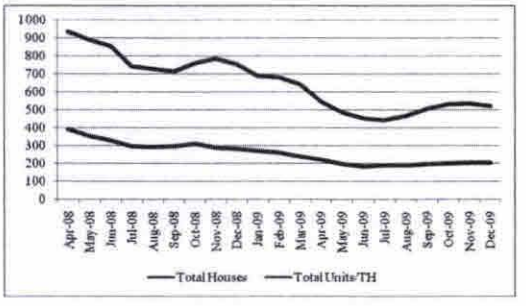

Figure 6: Christchurch Residential Property LIstings 2008 - 2009

This decline for both houses and units continued through to July 2009, where there was a greater increase in the average number of house listings; however, there was not a corresponding increase in the number of units being offered for sale from July 2009 to December 2009. During the period, April 2008 to February 2009, the reduction in houses available for sale was also occurring at the same time as an

Table 3: Investor Sentiment Survey Comparison: 2006 and 2008

2006 (investors favour office property)	2008 (Investor sentiment for property negative)
Retail property is still judged to be around the peak of the current cycle (some survey respondents considered that the retail market had moved into the next phase of the cycle. Over 2006, the office sector was seen to have moved up to join the industrial sector at the "late upturn phase"	All three commercial property sectors are judged to be in the midst of the early downturn stage of the cycle. Respondents indicated that there is very little to split the sectors with the average of 1.4 being the lowest since the survey began in 1991.
Short term investor sentiment has eased but remained solid. In contrast investors are now more confident in the medium term (3 years) outlook than they were 12 months previously (2005)	Short term investor sentiment towards the commercial real estate markets has changed considerably since the last survey, with the net balance shifting fro three years of fairly positive sentiment to extreme negativity in 2008
Investors remain confident about the office market in the short and medium term; slightly less positive about the industrial sector, but still more positive than 2005, but retail is expected to have lower returns in the short and long terms	Sentiment towards the commercial market in the medium term has fallen for the second consecutive year, with the office market in particular expected to remain highly volatile
Investors are confident about property in Sydney and Melbourne in the short term. Over the medium term, investors still like Sydney and Melbourne, but are more evenly split over Brisbane and Perth and consider lower returns will be achieved in Canberra and Adelaide.	Investor sentiment towards all cities is extremely negative, marking a major turnaround from last year, especially for Melbourne and Sydney
Overwhelmingly investors intend to keep purchasing real estate through all investment vehicles over both the short and medium term. Investors also intend to increase their overseas exposure to direct property	Investors overwhelmingly are intending to hold on to their commercial real estate over the next 12 months. The overall strategy of almost half the respondents is to keep hold of assets, while a third indicated that they were keen to sell down.
Investors suggest that required long term returns have fallen slightly across all sectors. Office and industrial property are expected to achieve returns above investor expectations and retail at investor expectations	The expected 10-year total return forecast by respondents remain unchanged for office and retail assets , but softened for industrial
Respondents indicated that sustainability was having a significant impact on investment decisions and that it would be a critical issue within five years. "Tenant expectations was identified as the most important sustainability issue	Sustainability remains high on the agenda for most investors with 52% (76% in 2006) of respondents citing that all other things being equal sustainability would sway their decision between alternative investments.

overall reduction in the actual number of residential property sales (refer to Figure 8).

Figure 7 breaks down the monthly listing based on the value of the properties in the markets. This figure shows the average monthly listing for low, middle and high value suburbs in Christchurch. Again this figure shows that the impact of the GFC was not consistent across all markets. Although the number of properties offered for sale declined over the GFC period, along with median house prices, there were more properties for sale in the middle to higher value suburbs than the lower value suburbs of Christchurch, despite the fact that there is greater stock of houses in the lower value markets compared to the higher value residential property markets in Christchurch (Eves, 2009). Since July

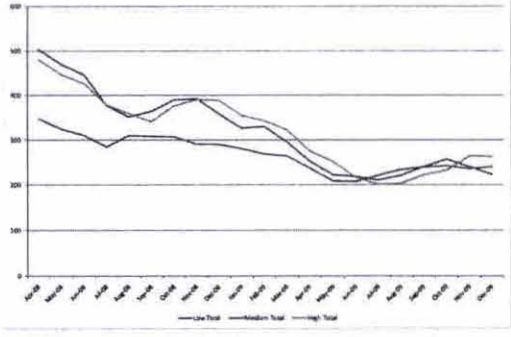

Figure 7: Christchurch Residential Property Listings: Socio-Economic Sectors.

2009, there has been an increase in the number of properties being placed on the market, and this has been particularly the case in the higher value suburbs.

Figure 8 compares the average monthly listings in 15 suburbs in Christchurch and the subsequent monthly sales in those same suburbs. It can be seen that during the initial stages of the GFC the decrease in listings was also corresponding with a decrease in the number of actual sales occurring across the market.

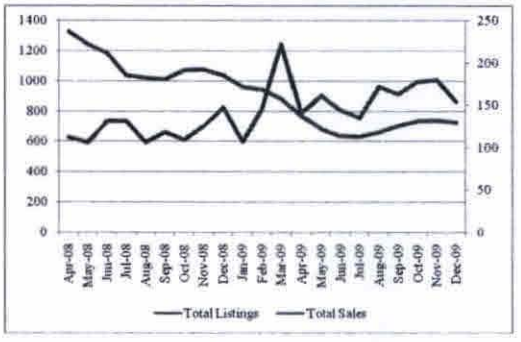

Figure 8: Christchurch Residential listings v Sales Activity

March 2009 was a turning point in the Christchurch residential market, with sales activity increasing at a greater rate than the actual number of properties being listed for sale. This was driven by the low interest rates and declining median prices resulting in home affordability being greater than the 2007 boom. The increase in sales activity, combined with a reduction in available residential property supply, has not resulted in a corresponding increase in residential housing values, as the availability of credit is still an issue in this market.

Conclusions

An important aspect of the GFC and the world property markets was the fact that virtually all the major property research firms did not predict the timing and extent of this downturn. Even by as late as mid 2008, not all property markets had been substantially impacted by the GFC. However, the overall forecasts had become very negative by June 2008, especially in the office property market.

The decline in the property sector was not consistent geographically or on a land use basis. The Chicago market had been weak prior to the GFC but there was still a reasonable amount of office accommodation supply to come on the market in 2008 and 2009, which only exacerbated the impact on the overall market.

In New Zealand, during the initial stages of the GFC, concerns were predominately focussed on the fringe and lower grade office property. However, by late 2008 the prime office sector was suffering to a similar degree as the lower quality office markets. Commentators who stated that this sector of the market would perform better than other property assets were proven to be incorrect.

In markets such as Brisbane CBD, the GFC was delayed due to a resource boom fuelling the property market but this was short lived with effective rents for Prime office building falling 30% or greater and yields softening to levels similar to equivalent markets in Australia.

One flow on affect of these declining markets was also felt in the valuation and investment sectors of the property industry. The reduced sales activity has resulted in valuers having to assess values in a declining market on less than 10 genuine sales in the Brisbane and Chicago CBD office markets and an analysis of the sales of prime buildings in Auckland reveals that in 2008 valuers only had one genuine prime office sale to use as the basis for valuing property in the Auckland CBD.

Despite the strong performance of office market in the developed countries, few market research analysts considered that there could be a possible downturn in 2008. However, there were a number of analysts and researchers who stated in 2007, that the CBD office markets would suffer a significant correction in 2010 or 2011.

This optimistic view of the property markets was also shared by the investment sector, who stated that they were comfortable with both indirect and direct property and would be investing in these markets in 2007 and 2008. This view was completely reversed by late 2008, with the same investors now stating that at best they will be holding their current property assets with a large percentage divesting these assets in the short term.

The final victim s of the GFC and property industry have been the large number of people that have lost their jobs with virtually all property firms downsizing throughout late 2008, 2009 and continuing to do so in the early months of 2010.

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IMPLICATIONS OF THE GLOBAL FINANCIAL CRISIS FOR PROPERTY INVESTMENT

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Abstract

The global financial crisis has had a major impact on international property markets with a sharper focus on prime income producing properties at the expense of secondary locations and the prospects for capital value uplift.

The paper assesses the impact of the global financial crisis on commercial property investment decision making. Macroeconomic and property data (NCRIEF for US and IPD for UK) are utilised to analyse trends in the general economy and property returns in order to demonstrate the impact of the financial crisis.

The implications for returns and also for risk are considered in relation to the new financial climate for investment. The financial crisis has adverse implications for investment strategies for both prime and secondary property with the latter in terms of major urban renewal projects being most highly impacted in the short run period.

1.0 Introduction

The global financial crisis has had a major impact on international property markets as demonstrated in the real estate press with a sharper focus on prime income producing properties in order to service debt obligations at the expense of secondary locations and the prospects for capital value uplift. The turmoil in commercial property markets has escalated concerns regarding the giant overhang of real estate loans, many under the control of the bailed-out UK banks, which are likely to have major adverse impacts on refinancing estimated at £35 billion in 2010 and up to £120 billion by 2013 (Economist, 2009).

The adverse impact of the financial crisis on the property market and its implications for future investment decision making have raised questions as to why so many market participants did not see the downturn coming. The significant uplifts in capital values during the rising phase of the market, which were not supported by prospects of rental value growth, are set by Reinhart and Rogoff (2009) in a context of 'boom and bust' cycles Their analysis indicates that the most common investment advice given in the boom arises from the perception that this time the growth phase is different. The inference is that the traditional rules of market valuation no longer apply rather there are new fundamentals operating. Furthermore it is often considered that market participants, governments and financial advisors are

now more sophisticated than in previous eras so that the current boom, unlike earlier ones that preceded catastrophic collapses, is considered to be different. The view is that the current boom is built on sound fundamentals, structural reforms, technological innovation and good policy.

In more recent years it has been considered that improvements in financial engineering and the conduct of monetary policy have facilitated a smoothing of the business cycle thereby limiting the risk of financial contagion. However the recent financial crisis has proved this wrong. The current crisis has been a dramatic transformation in the global economic environment and its ultimate resolution will likely reshape politics and economics for at least a generation (Reinhart and Rogoff, 2009).

This paper assesses the impact of the global financial crisis on commercial property investment decision making. We test the hypothesis that this time the financial crisis is different from earlier crises that impacted on real estate performance. If the current financial crisis is different or not different the implications for returns and also for risk are considered in relation to the new financial climate for investment. The analysis undertaken in the paper examines four main macroeconomic variables and their relationship to property investment returns in the UK and USA and implications for the prime and secondary property markets.

The structure of the paper encompasses five sections. Section 2 comprises a critical evaluation of the literature of the impact of financial crises on the investment environment. Sections 3 and 4 highlight the methodology employed in the paper and the analysis of results respectively prior to the presentation of conclusions in Section 5.

2.0 Impact of the Financial Crisis on the Investment Environment

In an analysis of the impact of the late 2000s credit crunch and financial crisis Inderst (2009) found that the credit crisis starting in 2007 has altered the broad investment scenario. Due to tighter liquidity and lending conditions, and the global economic slowdown, asset prices have adjusted downward with resultant effects on private equity, real estate and infrastructure funds. However the impact is not uniform and varies across infrastructure sectors and investment vehicles, depending on the level of gearing, the debt profile, the exposure to business cycles and other factors.

Inderst (2009) notes that in 2008, some large Australian infrastructure funds started to divest assets, in some cases in order to reduce debt levels when interest costs rise and asset prices fall. In contrast another effect of the credit crunch is that the comparatively stable infrastructure sector has attracted new investors in the form of private equity firms, hedge funds and sovereign funds.

Parkinson et al (2009) examined the impact of the credit crunch on regeneration in the UK during 2008 and argue that worries about the viability of sub-prime mortgage lending spread around the financial system, are undermining the ability of banks and building societies to borrow sufficient resources or to feel confident about continuing lending to customers. Across the globe over the past twelve months there has been a chain reaction as it gradually became clear that in a globalised financial system bad risks had spread into many national and international banks with no clarity about where the risks lay.

The recession of the early 1980s resulted from the tight fiscal and monetary policies which raised interest rates and reduced

public spending to reduce the budget deficit and bring down inflation. Following the 'Lawson Boom' – the economic upturn and the halving of the official unemployment count – in the late 1980s, the UK went into recession in the third quarter of 1990 as a result of anti-inflationary policies and the collapse of the housing market. The origins of the current recession lie within the financial sector and the subsequent collapse of credit, house prices and demand (The Work Foundation 2010).

Coaffee (2009) concludes that the potential impact of the credit crunch and impending recession is often talked about in negative terms and in relation to the social and economic fissures that may widen still further and the funding models that now appear redundant.

Ward (2009) argues that the UK banking system has faced two crises, one of insolvency, the other of liquidity. Corporate lending has been falling and banks which have seen their solvency put at risk, are urgently trying to reduce their liabilities in order to improve their balance sheets.

Parkinson (2009) postulates that the housing business model which underpinned the boom of the 1990s will not work in the next business cycle. The financial crisis underlines the weaknesses of that model which depends upon the individual landlord rental model.

Newell et al (2009) examine the impact of the global financial crisis on property securities markets in Asia over the first six months of 2009 with performance in 2008. The dramatic downturn in the markets in 2008 is demonstrated relative to the first half of 2009. Real estate investment at a global level has grown in significance over the past decade as evidenced by the increase in capital flows and the range of investment funds targeting the sector.

Newell et al (2009) highlight the expansion of global property investors from traditional property markets into emerging property markets especially in Asia where significant economic growth and increased market maturity has characterised the region and individual countries such as China.

Mueller et al (2008) argue that the growth in global real estate investment funds requires new investment strategies to help real estate investors. They examine the literature relating to volatility, correlation in returns across international markets and diversification benefits of including real estate in a domestic portfolio. On the basis of their analysis they propose a change in the portfolio's regional allocation when the home region volatility moves from one predefined level to another. A higher allocation to North America is justified in declining and low volatility periods whereas a higher allocation to Europe is warranted during rising and medium volatility periods however no clear allocation strategy was identified during the two high volatility periods. This last finding is interesting given the significant turbulence in markets created by the global financial crisis.

Jin et al (2007) in their study of Asian-Pacific countries found that since the Asian financial crisis the currency effects on emerging markets provided benefits for US investors. However domestic investors suffered financial loss by the currency effect against the US dollar after converting the US-denominated return to local currency level. Currency fluctuations in emerging markets tended to be more volatile which is a major concern for international investors in evaluating risks in such markets compared to mature markets. Despite the currency risk Jin et al (2007) showed that mixed-asset portfolios from emerging economies outperformed the assets of developed countries for moderate and aggressive investors targeting Asian-Pacific countries.

The De Montfort University survey analyses the lending activity of the major commercial property lenders operating within the UK during the first two quarters of 2009. It reports a total of £242.1bn of outstanding debt secured on commercial property located in the UK, and including loans to social housing, was reported to the survey as at 30 June 2009.of bank lending for commercial property. At mid-year 2009 approximately £224.1bn of outstanding debt was secured by UK commercial property and retained on the loan books of organisations that contribute to the De Montfort University Report. This represents a decrease of 0.6% from £225.5 recorded at year-end 2008. This is the first time that this report has recorded a negative rate of growth in the net aggregated commercial property loan book size. This rate of growth compares to 3% recorded during the first half of 2008. During the whole of 2008, outstanding loan books grew by 8.5%. Table 1 presents the year-on-year changes in value of outstanding debt secured by commercial property and recorded by organisations that have consistently reported to this research.

Grissom et al (2009) use Arbitrage Pricing Theory to test for differences in the levels of integration between the UK and US property markets and the influence of cyclical patterns and trend reversion behaviour. Their findings are developed to formulate decision strategies for cyclical investment in the UK relative to global financial performance and US real estate markets. They cite earlier literature to show the importance of macro-level system attributes on the pricing of property and equities.

Relatively low correlations are found between the two property markets which contrast with moderate to high associations of macro-economic variables and high negative correlations between capital factors in the two markets.

Grissom et al (2009) show that UK property market performance as characterised by trend reversion behaviour is segmented and not directly integrated with US real estate performance. Consequently US macro-economic and property market behaviour does not provide a signal of turning points in the UK market. They conclude that differences in the US and UK property markets are due to endogenous spatial, institutional and structural differences in economic and investment behaviour. Furthermore they conclude that the UK property market will turnaround before the general economy, while the opposite is forecast for the US.

Fiorilla et al (2010) argue that the current financial crisis unlike earlier crises has caused a paradigm shift in the financing of real estate. They show that over the period from 1952 to 1996 the ratio of debt:GDP for the private non-financial sector grew by 1% per annum. Since 1996 the ratio has increased by about 9.5%. They highlight that while GDP was growing in nominal terms at about 5% annually, private debt outstanding increased at 9.5% annually. The reason for the rapid growth is the emergence of new financial technologies such as securitisation, collateralised debt obligations and credit default swaps which provided creative vehicles to move risk to third parties and manage balance sheets.

Fiorilla et al (2010) employ three approaches to estimate the likely contraction in the commercial mortgage market: the first is to compare debt outstanding to GDP, the second compares the share of commercial mortgages to private debt and private debt relative to GDP, while the third models origination and refinancing volumes against the supply of and demand for debt. Their analysis indicates a reduction in outstanding commercial mortgage holdings of 10-30% over the next five years leading to a void of several hundred billion US dollars. This will create a major refinancing problem as loans mature within this period.

Table 1 : Year-On-Year Increases In The Value Of Outstanding Debt Recorded In Loan Books

Year In Value Of Aggregated Outstanding Loan Books

YEAR	*% increase in value of aggregated outstanding loan books*
1999 to 2000	*29%*
2000 to 2001	*20%*
2001 to 2002	*11%*
2002 to 2003	*17%*
2003 to 2004	*13%*
2004 to 2005	*16%*
2005 to 2006	*10%*
2006 to 2007	*18%*
2007 to 2008	*8.5%*

Year-end 2008 to Mid-year 2009 - 0.6%

Source : De Montfort University The UK Commercial Property Lending Market: Mid-Year 2009

Fiorilla et al (2010) conclude that this gap in refinancing is likely to be filled by equity funds such as speciality lenders, sovereign funds and investors with an appetite for distressed assets. The era of high leverage has been replaced by a more cautious financial environment which is likely to persist over the short run period. The implication is that less debt will result in more equity and falling property prices creating opportunities for REITs.

Parkinson (2009) highlights that the financial model that underpinned regeneration during the past decade is now fractured, if not broken. The banks and investors that paid for it in the past are unlikely to do so in the same way in the future implying that financial partnerships between the public and private sectors and the use of public resources in those partnerships will become a more fruitful way forward. Ward proposes that we need a new concordat between the public and private sectors – sharing assets and risk to ensure that development takes place. This will involve experimenting with a variety of institutional arrangements – joint ventures, local housing companies, asset back vehicles.

Reinhart and Rogoff (2009) analyse banking crises covering 66 countries over nearly 8 centuries and find a pattern of serial banking crises in advanced economies over the period 1800-2008. They argue that real estate cycles around banking crises display similar patterns in duration and amplitude in both advanced and emerging economies which is surprising as most other macroeconomic variables exhibit higher volatility in emerging economies. However leading financial centres in advanced economies such as US and UK have the highest frequency of banking crises, 13 and 12 respectively since 1800. Only China (10) and Japan (8) approach this magnitude whereas other Asian economies display a much lower frequency, Malaysia (2) and Singapore (1).

Reinhart and Rogoff (2009) further find that periods of high capital mobility at a global level have consistently produced international banking crises over the long run period. The authors demonstrate a link between banking crises and financial liberalisation across both advanced and emerging economies. They argue that

despite the "this-time-is-different" view in the 2000s US, financial innovation as a variant of the liberalisation process contributed to the banking crisis.

Reinhart and Rogoff (2009) further undertake a comparative historical analysis of the aftermath of systemic banking crises. They argue that such benchmarking is important as in analysing extreme shocks such as the current financial crisis standard macroeconomic models may be of little use. Severe financial crises share three characteristics:

- Asset price downturns tend to be deep and prolonged
- Banking crises tend to be associated with deep falls in output and employment
- Government debt increases dramatically due not to bailing out the banks but primarily from a loss of tax revenues due to output contraction

Following the Great Depression of 1929 countries took an average of ten years to reach the same level of output as in 1929.

The duration of house price declines at 6 years is longer that equity price falls at 3.4 years. The latter tends to be much steeper (55.9%) than the former (35.5%). Emerging markets, particularly those in Asia unlike advanced economies record better performance in terms of unemployment. Recessions related to banking crises tend to be unusually long compared to normal recessions which typically last less than a year.

The literature concludes that the severity of the current financial crisis unlike earlier episodes has created a new financial environment in terms of investment decision making and financing real estate. Global property investment has grown in response to diversification opportunities however increased volatility in emerging economies and currency fluctuations create uncertainty. Increasing focus is being placed on macroeconomic performance as a guide to property market recovery. The following section examines the relationship between four macroeconomic variables and property market performance in the pre and post crisis periods in the UK and US.

3.0 Methodology

The methodology employed in the paper comprises two stages. The first is an analysis of four macroeconomic variables relative to property performance. The macroeconomic variables are Gross Domestic Product, unanticipated inflation, term structure and risk premium.

Gross Domestic Product: percentage change in GDP employs monthly data from UK National Statistical Office and US Bureau of Economic Analysis. GDP measures the rate of real production or change in potential national income at the national level. Diermeier et al (1984) identify the variable as a proxy for incremental flow of actual real capital supply.

Unanticipated Inflation: is the spread between LIBOR, as a proxy for anticipated inflation embedded in the short term interest rate, and actual inflation which is defined by change in the RPI in UK and CPI in the US.

Term Structure: measures the spread between long term interest rate and short term LIBOR. The former is based on the 10 year Treasury Bond in the US whereas the UK rate is based on the return for 5-15 year gilts.

Risk Premium: is the spread between the risk free LIBOR rate and equity capital returns measured by the S&P 500 stock index in the US and the FTSE 100 in the UK. The variable facilitates an industry performance measure in the US and UK

relative to the opportunity cost of capital that has a bearing on investor decision making.

Change in the macroeconomic variables in the UK and the US is measured relative to periods of economic growth and recession.

Property performance is analysed over the period 1985 to 2009 using monthly Investment Property Databank (IPD) in the UK and quarterly National Council for Real Estate Fiduciaries (NCRIEF) data for the US, comparable to Grissom et al (2009). We also use equity and bonds data. To facilitate comparability in analysis NCRIEF quarterly data were converted to monthly returns.

Regression modelling of the impact of the recession relative to macroeconomic and property performance is undertaken as a second stage of the methodology. Regression analyses are undertaken as follows:

- UK: returns over the period 1988 (M1) to 2008 (M9) comprising 249 observations after adjustments.
- US: returns over the period 1988 (M1) to 2009 (M1) comprising 253 observations after adjustments.

The UK market context shows that over the period 2001-2009 a boom and slump occurred. A period of 65 consecutive months of growth from February 2002 to June 2007 saw capital values increase by 53%, 8.2% per annum in nominal terms (4.8% in real terms). The down phase is demonstrated by the reduction in capital values from July 2007 to May 2009, 23 consecutive months. From June 2007 to March 2009 the IPD monthly index fell by 40% in 21 months, an average of 2.5% per month. In the previous downturn in the early 1990s the index fell by 27% over 43 months, an average of 0.7% per month.

4.0 Analysis of relationship of macroeconomic and property variables

The relationship between property and economic variables is examined in relation to the business cycle and builds upon the analysis employed by Grissom et al (2009). Economic and property variables are mapped onto business cycles over the period 1985 to 2010. The lighter shaded vertical bands in Figure 1 represent recessionary phases in the UK, defined as two consecutive quarters of decline in GDP, namely, 1994-95, 1998-99 and 2004-05. The darker shaded bands reflect recessions in the US. Where recessions in UK correspond with those in US the bright and dark shaded bands overlap.

4.1 Property Performance and Change in GDP

The pattern of GDP growth in the UK has generally provided a good indicator of movement in the IPD index as expected (Figure 1) however GDP growth has been more amplified than the IPD index.

The study undertaken by Grissom et al (2009) showed that the real growth trend in the UK was positive going into the crisis. In contrast the current research in 2010

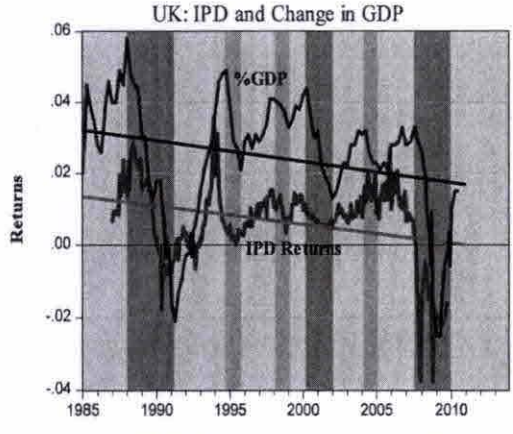

Figure 1: UK IPD And Change In GDP

shows that change in the long term pattern of GDP and the general economy now has a negative slope. This reversal is in line with the US pattern of GDP (Figure 2).

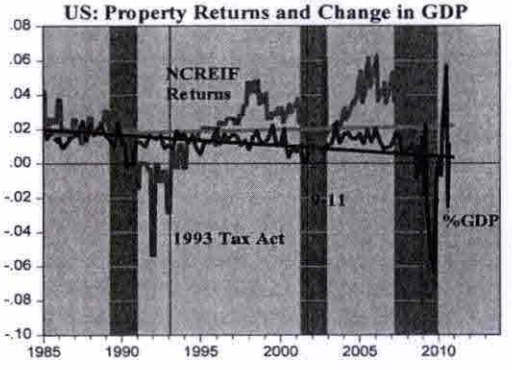

Figure 2: US NCREIF And Change In GDP

The downward trend in GDP is heavily influenced by the downturn in the economy from mid 2007. The emerging upturn since mid 2009 is not sufficient to influence the long run impact highlighting the severity of the downturn experienced over 2007-2009.

Over the long run the general economy appears to be more volatile than property performance in UK. However the recession is correcting. The degree of fluctuation at the end of 2009 led to suggestions of a double dip but such a trend is not evident in the analysis.

The negative long term trend in UK property performance raises questions about the short-term recovery of the market if a positive real growth trend occurs. The inference is that recovery in the property market may take significant time which is not reflected by GDP performance measures.

In the US the long term performance of the real estate market has exceeded GDP but unlike the UK the US market shows greater volatility than the underlying economy.

The decline in GDP has increased as a result of the impact of the crisis. The long-term trend is down, even though the current market rose quickly and then dropped by about half reinforces the inference of the double dip recession. The property long run trend is still positive but greatly modified from the trend prior to or into the early part of crisis (Figure 3).

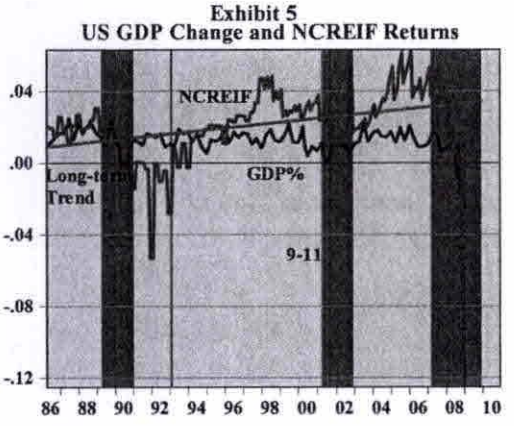

Figure 3: US NCREIF And Change In GDP Prior To The Crisis

Grissom et al (2009) note that the high level of volatility in the real estate market is due to financial capital growth arising from economic policy and innovative funding unconnected from the real estate fundamentals.

The introduction of the 1993 Tax Act highlights the structural change in the real estate market indicating a large scale movement by institutional investors into property. This allowed the restructuring of REITS. Of special significance is the 5 years plus growth in property yields.

The Asian crisis of 1997-98 is more marked for UK property (Figure 1) than US real estate returns (Figure 2) reflecting the greater impact of overseas investment in the UK than in the US.

4.2 Property Performance and Term Structure

The spread between short-term and long term interest rates in the UK is negative inferring an inverse yield curve in the debt capital market (Figure 4), the inverse situation of pricing short term risk over long term spreads. The current risk is more relevant that future risk, there is not an incentive for saving or taking long-term investment risk, and the relationship is diminishing over time.

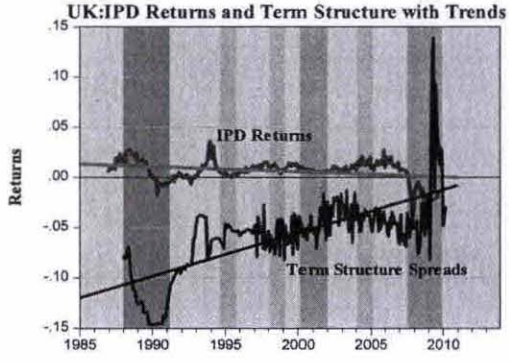

Figure 4: UK IPD Returns And Term Structure

A positive yield curve is noted for the period from 2009 into 2010 which infers a concern with long term asset risk at the height of the crisis. A negative slope is observed in the capital market, focussing on pricing of assets in the short run. This may infer that the problems that led to the financial crisis are not going to be addressed easily.

Analysis of the term structure shows that the impact of the current financial crisis is different from the 1991 crisis. The volatility in 2009 is greater.

The yield curve related to term structure is much more positive in US, the long term rate is higher than the short term reflecting a positive slope from the short term rate to long term. This indicates a major difference between the UK and US capital structures.

In the US, despite the higher rate for long term saving/investing relative to short-term, the trend is declining so that the spread is becoming smaller. This suggests greater convergence with the same capital outcome occurring in the US as in UK despite different starting positions. Both economics appear to be heading to a flat yield curve indicating little difference in both long term and short term yields. A reduced time period risk linkage, zero discount for a pure time preferences, however other risk issues may dominate. A further explanation may be an increase in the options and variety of financial investment assets.

It is also noted that the long run property return trend is positive sloped, however there not at much variance from the money/ financial debt spread trend. Therefore is property in US performing like the capital market? This is the spread between the 10 year bond and LIBOR which is assumed to be similar to the lease structure (10 years) in a DCF model and base interest rate (LIBOR). The question arises why is there less spread for time in the UK (negative between UK 15 year gilts and LIBOR)?

4.3 Property Performance and Unanticipated Inflation

Unanticipated inflation is the spread between actual inflation (or recorded inflation as typically measured by the RPI in UK) and anticipated or expected inflation. Expected inflation is estimated as the spread between the nominal interest rate (LIBOR and the real interest rate – as suggested by Fisher (1930) where $i = r + E(\varphi)$ where $E(\varphi)$ = expected inflation and r = real interest rate and i= nominal interest rate; so by definition $E(\varphi) = i-r$. The expected rate has also been determined with the Livingston Survey, a survey of economists on the level of expected inflation. Furthermore it has been calculated using a moving average of the previous three (month) period.

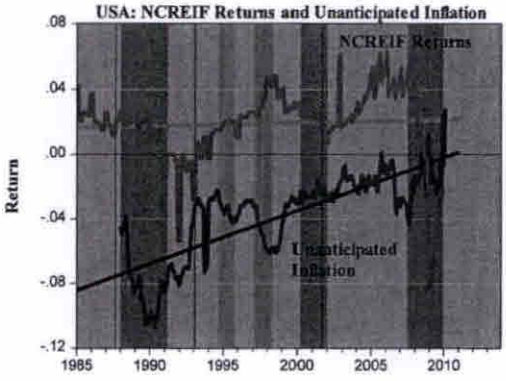

Figure 8: US NCREIF Returns And Unanticipated Inflation

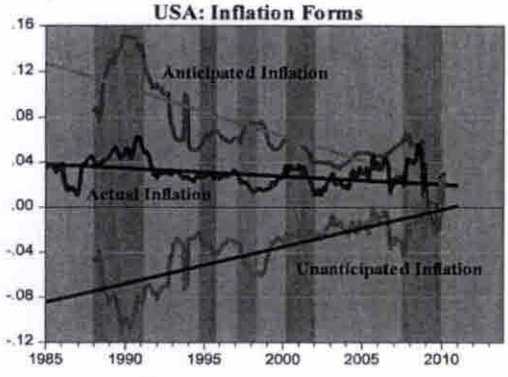

Figure 9: US Inflation Forms

occurring at a higher rate than the near zero position in the UK.

The patterns with all finance and investment variables are fairly similar. The trend in the US is similar to UK, but the spread between anticipated and actual inflation is smaller than in UK, which produces a smaller unanticipated inflation rate than experienced in the UK. This results in more moderate trends than experienced in the UK.

4.4 Property Performance and Risk Premium

The volatility experienced in the returns from equity (stock) assets show a magnitude that greatly exceeds the volatility of the property market in the Uk (Figure 10). Despite the magnitude of differences in returns, it can be observed that the property and equity markets tend to have similar cyclical patterns, though they are converging from the positive returns for property and the negative real premiums given stocks return spread over the risk free rate (LIBOR). The lack of a positive risk premium over risk free rates for equity supports much of the literature on the equity premium puzzle in which empirical measures of risky assets (macro-finance) have not supported the risk reward suggested by theory. The implication is that investors do not require the risk loadings over more certain investments, that is often suggested.

In the US as compared to UK, the periodic volatility though high is less periodically variant than UK, but has much greater variance at the extreme points of fluctuation, especially the market drop in 1987 and the peaks in the early 1990s (Figure 11). Note that equity markets in both countries reflect major drops concurrent with the Asian crisis in the latter 1990s and the current crisis. This differs from the associations noted with the real economic measures (change in GDP), but is more consistent with the term structure measures.

4.5 Regression Analysis

The analysis examines the impact of the financial crisis on the expected returns for US and UK property with the change in the general economy (GDP) as a function of the financial crisis.

The econometric analysis for the UK and the USA prior to full consideration of the crisis shows that there is a decrease in systematic risk in both the UK and US when the period covering the financial crisis is included in the valuation. This is witnessed by the decline in the R2 measures and the

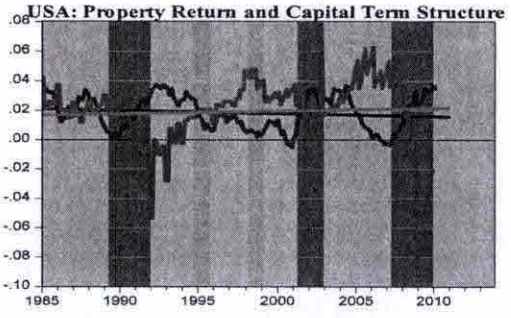

Figure 5: US NCREIF Returns And Term Structure

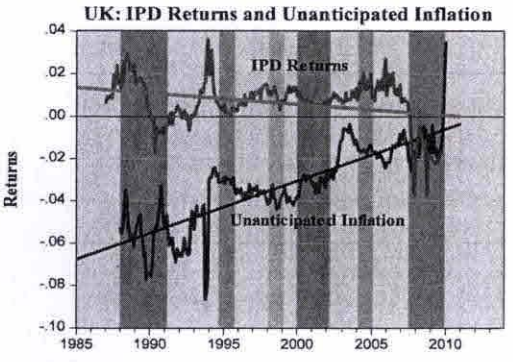

Figure 6: UK IPD Returns And Unanticipated Inflation

In the US, unanticipated inflation has only occurred positive 5 times (years) of 50 years observed. The longer periods of negative observations means that the estimation of expected inflation has greatly exceeded actual inflation. They are becoming more equivalent and converging towards the trend for property in UK.

Does this mean that the potential for property as an inflation hedge increasing? Will this be a forward concern of investors to the financial and property crisis?

The variant forms of inflation show that lenders have been well protected since before the recession of the early 1990s (Figure 7). Expected inflation, which is loaded into the nominal interest rates as per the Fisher Equation has been greater that the actual inflation experienced or at least measured by the RPI index. The excess of expected inflation over actual inflation accounted for produces measures of negative unanticipated inflation.

The unanticipated inflation based on the spread between anticipated and recorded inflation is decreasing towards zero (in its negative magnitude). This is suggesting a decrease in financial uncertainty and suggests that a possible decline in future interest rates. The deduction in negative unanticipated inflation as a construct spread in expected and actual inflation also shows the distance between the high inflation experienced in 1979 and impounded in financial decisions. It is important to note the long time period that had been required to purge the cost of capital from the high inflation that built up from the 1950s to the deregulation experienced in the Thatcher and Reagan administrations in the 1980s.

Despite the relative large drop in property returns, the equity decline was larger, but the pattern for both risky assets is converging in the financial crisis. Correction of the crisis may witness a future dispersion during the positive growth phase. But in the US property markets the long term trend is positive despite the greater decline in performance during the crisis. With the possible capital cost convergence

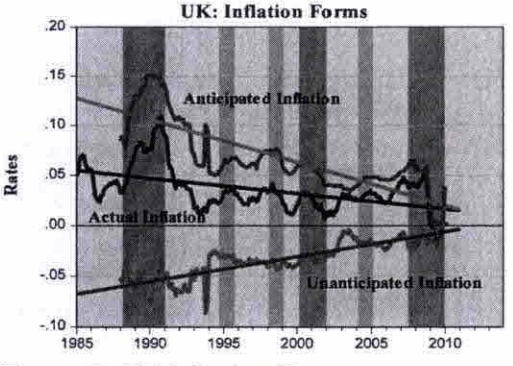

Figure 7: UK Inflation Forms

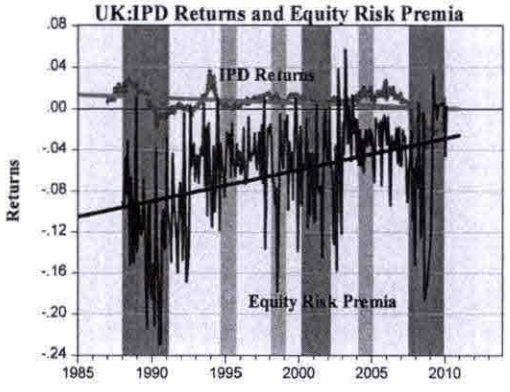

Figure 10: UK IPD Returns And Equity Risk Premia

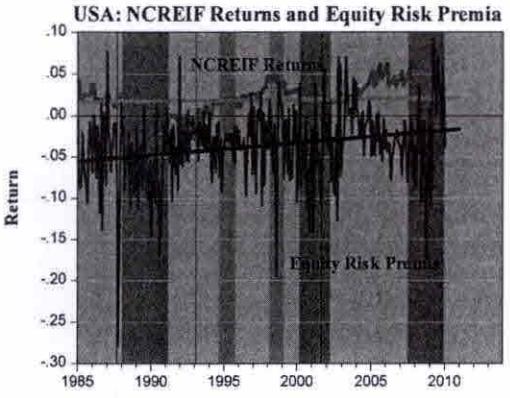

Figure 11: US NCREIF Returns And Equity Risk Premia

reduction in the t-statistics and p value for the term structure in the UK and the risk premium variable in the US.

Coincidentally, the intercept or measure of expected unsystematic risk becomes significant in both the UK and US, with the US showing a major increase in the (expected) unsystematic component of the predicted return. In combination the systematic decline and the increase in the level and/or significance of fundamental risk infers an increase in uncertainty in both markets. This is consistent with asset pricing and financial expectations in a monetary based capital recession.

The association of asset deflation with financial conditions more so than the (real) economy and business cycles (GDP) supports the implications and theory associating property with the banking crises.

Prior to the financial crisis the regression model shows that the four variables explain 93% of the variability in property returns (Table 2) whereas when the financial crisis is included this figure reduces to 48% (Figure 14). The t-statistic for term structure reduces from 2.318 (probability 0.0213) to -1.70 (probability 0.0899).

The magnitude and sign of the coefficient for the unanticipated inflation variable pre (-0.8686) and post (0.1303) the crisis points to a change in the pricing of risk.

In contrast the reduction in the US resulting from the financial crisis is much less severe showing a reduction from 75% figure (Table 3) to 51% (Table 5). The reduction in the t-statistic (2.440 to -0.1037) and p value (0.0154 to 0.9175) for the risk premium variable in the US highlights the decrease in systematic risk when the period covering the financial crisis is considered.

5.0 Conclusions

The research undertaken in this paper highlights that the impact of the current financial crisis on the property market is much greater than previous downturns. The severity of the current recession is evidenced by the downward trend in GDP in both the UK and US and the economic variables point to a much longer recovery period for the property market than in previous recessions.

While the impact of globalisation suggests that markets show greater levels of convergence the analysis of term structure

and property performance indicates major differences between capital structure in the UK and US.

The regression modelling suggest that the impact of the financial crisis while variable across the UK and US has had a greater adverse impact on UK property performance. The magnitude of the impact relative to earlier recessions does support the thesis of Reinhart and Rogoff (2009) that this time is different.

The impact of credit crunch on funding of urban renewal projects in the UK has been significant however, despite concerns that many new regeneration schemes have become unviable in the current economic climate, regeneration property has proved surprisingly resilient and hasn't significantly underperformed in comparison to the IPD All Property average. The implications are that, in the field of regeneration, considerable change is needed in the way the property industry and its funders operate. This is particularly the case at the boundaries between investment and development, short term holding and long-term holding and the boundaries between different property types, including residential.

Table 2: UK Pre Financial Crisis

Dependent Variable: PROPRETURNUK
Method: Least Squares
Date: 02/20/09 Time: 19:38
Sample (adjusted): 1988M01 2008M09
Included observations: 249 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPUK		0.347208	0.043835	7.920781	0.0000
UNANTICIIFLATUK		-0.868562	0.050658	-17.14555	0.0000
TERMSTRUUK		0.108614	0.046866	2.317567	0.0213
RISKPREMUK		0.035194	0.013662	2.576084	0.0106
C		-0.003927	0.002219	-1.769832	0.0780

R-squared	0.932774	Mean dependent var	-0.063514
Adjusted R-squared	0.931672	S.D. dependent var	0.034610
S.E. of regression	0.009047	Akaike info criterion	-6.552910
Sum squared resid	0.019971	Schwarz criterion	-6.482278
Log likelihood	820.8372	F-statistic 846.3853	
Durbin-Watson stat	0.527139	Prob(F-statistic)	0.000000

Table 3: UK Pre Financial Crisis

Dependent Variable: PROPRETURNUSA
Method: Least Squares
Date: 02/20/09 Time: 21:21
Sample (adjusted): 1988M01 2009M01
Included observations: 253 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPUSA	1.209816	0.232400	5.205751	0.0000
UNANTIINFLAT	-1.221854	0.100710	-12.13241	0.0000
TERMSTRUSA	0.188532	0.123262	1.529515	0.1274
RISKPREMUSA	0.079061	0.032403	2.439929	0.0154
C	-0.008317	0.004089	-2.034205	0.0430

R-squared	0.759743	Mean dependent var	-0.049201
Adjusted R-squared	0.755868	S.D. dependent var	0.042816
S.E. of regression	0.021155	Akaike info criterion	-4.854284
Sum squared resid	0.110992	Schwarz criterion	-4.784454
Log likelihood	619.0669	F-statistic	196.0566
Durbin-Watson stat	0.361493	Prob(F-statistic)	0.000000

Table 4: UK Post Financial Crisis

Dependent Variable: IPDUK
Method: Least Squares
Date: 02/25/10 Time: 20:20
Sample (adjusted): 1988M01 2009M09
Included observations: 261 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPUK	0.416887	0.030983	13.45528	0.0000
UNANTICINFLATU K2010A	0.130288	0.037238	3.498781	0.0006
TERMSTRUUK	-0.031604	0.018566	-1.702271	0.0899
RISKPREMUK	0.034178	0.011678	2.926709	0.0037
C	-0.007605	0.001403	-5.419054	0.0000

R-squared	0.483731	Mean dependent var	0.006278
Adjusted R-squared	0.475665	S.D. dependent var	0.011190
S.E. of regression	0.008103	Akaike info criterion	-6.774230
um squared resid	0.016808	Schwarz criterion	-6.705944
Log likelihood	889.0370	Hannan-Quinn criter.	-6.746781
F-statistic	59.96646	Durbin-Watson stat	0.398913
Prob(F-statistic)	0.000000		

Table 5: US Post Financial Crisis

Dependent Variable: NCREIF
Method: Least Squares
Date: 02/25/10 Time: 16:40
Sample (adjusted): 1988M01 2009M12
Included observations: 264 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPUSA	0.856913	0.097397	8.798164	0.0000
UNANTINFLATLIB OR2010	-0.252811	0.043093	-5.866691	0.0000
TERMSTRUSA2	-1.122147	0.095596	-11.73844	0.0000
RISKPREMUSA2010	-0.002586	0.024942	-0.103687	0.9175
C	0.038715	0.002971	13.03141	0.0000

R-squared	0.511940	Mean dependent var	0.018685
Adjusted R-squared	0.504403	S.D. dependent var	0.024767
S.E. of regression	0.017436	Akaike info criterion	-5.241841
Sum squared resid	0.078737	Schwarz criterion	-5.174114
Log likelihood	696.9230	Hannan-Quinn criter.	-5.214626
F-statistic	67.91822	Durbin-Watson stat	0.476224
Prob(F-statistic)	0.000000		

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SURVIVING THE ECONOMIC CRISIS: CAN CREATING 'ECO-TOWNS' HELP THE REAL ESTATE SECTOR?

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Abstract

Like most major economies aiming to attract knowledge based industries, the UK has sought (prior to the onset of the global economic crisis) to address chronic real estate shortages by planning for more housing, built to modern environmental standards. In June 2008, the UK Government's National Housing and Planning Advice Unit called for 297,700 new homes delivered per annum. However, the credit crunch has thwarted this ambition, at least in the short term. With a mere 75,000 new homes built in 2008, and a lower number in 2009, this target will almost certainly be missed for the 2016 finish line.

The UK Government's eco-town programme has invited considerable controversy. Advocates argue that this programme is a necessary step to help kick-start an economy where one-fifth of the GDP is tied to Real Estate activities; and to lead the way towards low-carbon sustainable living. In contrast, opponents see eco-towns as another socio-economic experiment with uncertain outcomes.

Drawing comparisons with the legacy of the post-war 'new towns' programme in the UK, this paper will examine the organisation and finance structure of the current eco-town programme. The paper concludes that, whilst the eco-towns programme may eventually succeed, the UK has missed an opportunity to maximise the projected benefits from the programme, by opting entirely for new settlements, and not including existing housing stock.

A more serious concern raised in this paper focuses on the low level of public sector involvement in financing eco-town developments. How realistic is it to facilitate private sector engagement in the development of new settlements, without significant public co-funding, especially when trying to achieve sustainable communities? A private sector led development will naturally seek to vary the scale and pace of development to suit market conditions; and the profit margins of the bidding developers will be the most decisive determinant in the development process especially under limited credit availability. In the current economic climate, raising capital will be a massive challenge to developers because no matter how buoyant the eventual market might be, both banks and the Real Estate sector are still afraid that a repeat disaster may not be far away.

There is little dispute that the financial cost of developing an eco-town will be enormous for the Real Estate sector, so there must be sufficient public financial backing. Higher levels of public-private partnership, similar to those employed in the past (following the Town Development Act 1952, for example, in the UK) may be the best way forward. Experience from Singapore, Malaysia, and other countries, points to this model of investment as potentially the best way forward for the Real Estate industry, especially where social and environmental agendas are also involved.

Recent Eco-Town Developments in the UK

On February 8th 2010, the UK Housing Minister, John Healey, announced the funding allocations for the four first wave eco-town locations. £60 million was made available from the government's Growth Fund in July 2009.This will help fund some local infrastructure improvements and early demonstrator projects at the sites.

The UK Department for Communities and Local Government (CLG) funding has been designed to support a range of technological innovations:

- In Whitehill-Bordon, Hampshire, 25 homes to be built to 'Code for Sustainable Homes Level 6', powered by a biomass-fired Combined Heat and Power plant;
- in Rackheath, Norfolk, a project to encourage long lasting behaviour change;
- In Bicester, Oxfordshire and St Austell, Cornwall, projects to promote eco-home systems in existing neighbouring area.

In addition, the Department for Children Schools and Families (DCSF) has provided £2.5million match funding for education related projects in the eco-town locations. Projects that will be taken forward, as a result, include retrofitting primary schools and a library in the Whitehill-Bordon area (Hampshire) and the inclusion of eco-features for a new sixth form school building in Bicester (Oxfordshire).

According to an extensive report by the BBC, these locations could house up to 30,000 people in eco-friendly dwellings in five years' time (BBC, 2010).

Whitehill-Bordon, Hampshire

There are plans to build up to 5,500 homes on this Ministry of Defence-owned site situated west of Whitehill-Bordon. In an area where more than 2,700 people are on the waiting list for affordable housing, the proposals could eventually lead to the building of 2,000 affordable homes. Between 70 and 200 eco-homes are to be built on the site first, while low interest loans will be given to those already living there so they can adapt their homes.
Government money will also be used to fund improvements to public transport, installing electric car charging points and a feasibility study on re-opening a rail link.

St Austell, Cornwall

The second project to get permission to proceed is a development of about 5,000 homes on former industrial and clay mining sites near St Austell in Cornwall. Proposals have centred on building 1,500 affordable homes in an area where more than 5,000 people are on the affordable housing waiting list.

Some of the central government funding will pay for an initial 37 affordable environmentally friendly show homes in the town centre. The iconic Eden Project, which in the vicinity, is to support the developers to run a community hub, as part of its role as a conservation attraction and educational charity. It will display new environment technologies and provide educational projects for the community. This development will also see a new bus station where the emphasis will be on green transport, with the inclusion of electric bike charging points.

North West Bicester, Oxfordshire

The North West Bicester proposal is for an eco-town with 5,000 homes in an area where more than 7,000 people are on the waiting list for affordable housing. The eco-town would provide at least 1,500 affordable homes. Although not all details have yet been published, the government

funding will pay for up to 200 pilot eco-homes. Proposals to improve the public transport in the area include a pedestrian-only path from Bicester North station to the town centre and extended bus routes.

Rackheath, Norfolk

The fourth project to be given funding by the government will lead to the building of 6,000 homes on the northeast edge of Norwich. The developers hope to build 1,800 affordable homes in an area where more than 12,000 people are on the affordable housing waiting list. All the new homes will be built to high environmental standards; and will incorporate rainwater re-cycling, low flush toilets, high insulation fittings, as well as environmentally friendly roofs. There are plans to build an initial 200 eco-homes showing the different types of houses and technologies possible. There is also a plan to build a demonstration biomass-fuelled combined heat and power plant, which could sell electricity back to the grid. Resident who use very little energy may be able to partake in a pioneering personal carbon-trading scheme while others can also apply for grants to help make their homes more carbon-neutral. The grant will have to be paid back when their houses are sold.

The Eco-Town Programmes in South East Asia

Towards the end of January 2010, a report by Jessica Cheam, of Singapore's Straits Times, confirms that interest in eco-towns is as keenly felt in Asia, as it is in Europe and North America (Cheam, 2010). According to the report, the former fishing town Punggol has been designed to promote sustainable living, and is planned to have smaller estates, with common green spaces, supporting municipal facilities, and a well-integrated public transport network to enhance accessibility. One of the key green initiatives for Punggol is the introduction of a waterway traversing through the town.

Large-scale trials of new green technologies and urban solutions in the areas of energy, waste and water management will also be carried out, with the hope of replicating these across other towns. Cycling paths, charging stations at car parks and spaces for car sharing services in the estates will be built to encourage clean commuting.

As elsewhere in the world, the Singapore project is designed to achieve the following objectives (Berkel et al, 2009):

- Introducing effective, participative planning and design concepts to make it conducive for residents to adopt eco-lifestyles;
- Exploiting new urban technologies to achieve cleaner environments;
- Educating residents to be part of the green life style.

In Malaysia, similar aspirations are being promoted in relation to eco-towns. In a speech by Penang's Chief Minister, Yab Tuan Lim Guan Eng, at the Penang Eco-Town Stakeholders' Roundtable Discussion (24th August 2009), Mr Eng stressed that the development of eco-town in Penang will create what he described as a 'sustainable industrial environment'.

As Mr Eng put it (Eng, 2009):
'The scope of activities in the Penang Eco-town will cover integrated waste management, encompasses the practice of 3Rs of reduce and recycle, reuse, green planning, green purchasing, eco-efficient use of natural resources and air emission controls... I understand that some of the SMEs have constraints in terms of capital and expertise for improvement in their environmental performance; however, I hope that SMEs will look closer proactively into the green incentives given by the

federal government and the long-term benefits that will be brought by good environmental management. Let us work together to transform our working and living environment into a sustainable international city that ensures resources used today are still available to be used tomorrow. If we are to make eco-town a successful project, there are three important issues that we need to address: energy and water consumption, effective public transportation and affordable housing...'

It is worth noting that the concept of eco-town has often been used in two contexts. In Japan (and to some extent, what is being proposed for Penang), eco-town projects focus on transforming industrial estates to become more environmentally friendly, through a number of measures:

- Waste minimisation and reduction of pollution;
- The 3 Rs: recycle, reuse, reduce
- Waste exchange or process compatibility (using a by-product from one process as input in another one)
- Ecological modernisation: use of cleaning and cleaner technologies to reduce waste and pollution impacts

In the European context (and in Singapore's Punggol project), eco-towns involve either:

- the creation of new environmentally friendly settlements (as in the UK); or
- transforming existing towns into more environmentally sustainable settlements (as practised in Germany).

In the UK, all but one of the new eco-towns are new settlements. The exception is Whitehill-Bordon (Hampshire), which owing to political pressures has been included as a direct replacement when the Ministry of Defence vacates the location in 2013.

How should Eco-Towns Work within a Planning Context?

According to the UK approach to eco-town development (as outlined in the relevant Planning Policy Statement on Eco-Towns), eco-towns are intended to meet the following broad principles:

- Affordable housing: with a minimum of 30% affordable housing in each eco-town;
- Zero-carbon: eco-towns must be zero-carbon emitters over the course of a year (but not including transport emissions);
- Green space: a minimum of 40% of eco-towns must be comprised of greens paces;
- Waste and recycling: must have very high recycling rates and make use of waste to generate energy, etc;
- Employment: at least one job opportunity per household (with the job marker being accessible by public transport, walking or cycling);
- Services: retail premises, schools and other services within walk distance;
- Transition/construction: facilities should be in place before and during construction
- Public transport: a high degree of environmentally friendly transport systems;
- Community: mixed used development, with a mixture of housing types and densities, and with residents involved in the governance of their local communities and neighbourhoods;
- Home developers must aspire to build to the highest Code for Sustainable Homes (at level 6).

The UK has been the pathfinder country for many years when it comes to designing sustainable residential communities, and the UK urban landscape provides considerable lessons and experiences for other countries (DCLG 2007a, Falk 2008, Ward 2005). However, when it comes to

sustainable living, the exemplar countries are currently Germany and Sweden.

The present eco-town programme can be characterised as the UK Government's attempt to regain the initiative. The main aims of this programme are to build "new settlements that will have sustainability standards significantly above equivalent levels of development in existing towns and cities, and which are separate and distinct, but well linked to higher order centres and have sufficient critical mass to achieve the eco-town objectives". They are also to "encourage and enable residents to live within environmental limits and in communities that are resilient to climate change". As such they would "provide a showcase for sustainable living and allow Government, business and communities to work together to develop greener, low carbon living" (DCLG 2008a pp 1-3).

Notwithstanding the merit of the UK government's focus on eco-towns, a number of controversies may have not been adequately addressed. For example, in choosing a location that could meet the criteria, the Government's approach has been to invite bids from developers. This is somewhat contrary to the more established, and democratically accountable approach, of allocating sites through development plans outlined by local authorities in consultation with the local communities. Furthermore, to assist prospective bidders with their proposal, and to provide some legitimacy to the whole process, the government set up an eco-town challenge panel, consisting of those with expertise in aspects of sustainability and the delivery of new settlements, to provide advice to prospective bidders. This was apparently designed to drive up the proposed eco-towns standards, but also to root out "putative green utopias which were speculative housing projects already turned down by planners" (Girling 2008 p2). A case in point was the Eagle Star proposal for Micheldever, in Hampshire.

As elsewhere in the world, the UK government consolidated its support for the delivery of eco-towns through the planning system (DCLG 2008b). The stated intention was not to by-pass the plan-led approach that forms part of the statutory planning process. However, since the timing of this programme is clearly out of kilter with the review of most of the relevant Regional Spatial Strategies presented by local authorities, the Eco-Towns Planning Policy Statement (PPS) has been prepared as a 'material consideration' which under the UK Planning Acts allow the decision-maker to overturn a proposal that is contrary to a local development plan. There has clearly been a careful timeliness underpinning this governmental approach, as waiting for the next review of the key Regional Spatial Strategies would have considerably delayed the rollout of this programme (TCPA 2008).

Furthermore, the eco-towns Planning Policy Statement does not seek to, nor does it specify shortlisted locations. The two exercises – standards and locations – appear to be running in parallel, a matter that has confounded supporters and critics alike. The outcome of the programme, as recently announced, has therefore been a short-list of locations that the government considered sustainable, combined with a Planning Policy Statement that sets appropriate standards of what constitutes an eco-town. Paradoxically, however, any successful bid from real estate developers will still have to be submitted as a planning application to the local planning authority. The role of the planning authority in this context will be a limited one: deciding whether the bid meets the criteria set out in Planning Policy Statement on eco-towns.

Remaining Questions

The eco-town programme has polarised opinions. On the one hand, many supporters, such as the Town and Country planning Association and the homelessness charity Shelter, argue that new housing is required, and that this is an opportunity to contribute positively to the wider Government climate change programme (TCPA2008). However, there is also considerable opposition, from political parties, the media and local communities living in close proximity to the locations of the shortlisted schemes. Indeed in only two cases – Whitehill-Bordon and Rackheath – is there less opposition or anything resembling positive support.

Opposition to the eco-towns may usefully be summarised in three points (Finch 2008):

- Why is the eco-town initiative required, when it will provide only a fraction of the government's own housing target? Many real estate organisations, such as the House builders Federation and the British Property Federation, have argued that despite its merit, the eco-town project unnecessarily detracts the government from its major task of delivering its housing agenda;
- Environmental groups, such as the Campaign for the Protection of Rural England among others (CPRE) put forward the idea that a further alternative would be to turn an existing small town into an eco-town or to promote other forms of urban development. The government's eco-town scheme does not appear to pay sufficient attention to the need for higher environmental performance for existing housing stock; and
- Many of the eco-towns are simply being built in the wrong place from the standpoint of transportation and infrastructure pressures. This has been the primary reasons why most local community groups have not welcomed the government's eco-town scheme.

There is also an intense political interest in the future of the Labour government's eco-town scheme in its current form. Most of the proposed bids are in Conservative constituencies, and may therefore not come to fruition in the event of a Conservative victory in the 2010 General Elections (Shapps 2008). Furthermore the Conservative media have roundly criticised the programme from the outset. As a leading columnist in the Daily Express put it (McKinstry 2008):

"Socialist planners who repeatedly promise a new utopia and always end up building a concrete nightmare...the scheme is being driven by an unedifying mix of Stalinist central control from Whitehall planners and naked greed from the Major developers and retailers"

The controversy has also led to claims that this whole programme was being driven by political pressure rather than a systematic attempt to allocate the most appropriate sites (CPRE 2008). The most vociferous opposition, however, came from the local Government Association (LGA) and local residents. Indeed, the LGA, in fear that the proposed approach might undermine the planning system, commissioned legal advice, which confirmed that there were solid grounds for seeking judicial review of the eco-towns programme (LGA 2008).

Financial Challenges

In so far as financing eco-towns is concerned, the fundamental question for the UK government is: How desirable is it to facilitate private sector development in the creation of new large real estate assets, whilst at the same time achieving balanced communities and sustainable development?

The 1946 Reith Committee report (examining post World War II residential real estate needs) closely reflected the principles espoused by Ebenezer Howard (famous for his publication in 1898 of Garden Cities of To-morrow). However, there were some clear differences to reflect the political, economic and environmental position of the time. One such difference was the heavy and direct involvement of the state in financing the scheme, signalling top-down real estate planning and finance over bottom-up self-governance (Cherry 1998).

The subsequent New Towns Act of 1946, which implemented most of the findings of the Reith Committee, set out the legislative framework for delivering New Towns. The key feature was the creation of New Town Development Corporations, set up and sponsored by government with the express aim of constructing each new town. Not surprisingly, they had wide-ranging powers. Original funding came from the government in the form of loans, which were then expected to be paid back as revenue from the sale and rent of housing (ODPM 2002). The role of the private developer was extremely limited to that of a building contractor. Largely, this organisational structure lasted throughout the whole New Town Programme. In later years as the Development Corporations were wound down, the remaining assets were transferred to the Commissions for New Towns, who had a remit for disposing of them (House of Commons 2002). Although the New Town programme stopped in the 1970s as Government policy switched towards urban renewal (Pacione 2004), a number of the third generation New Towns (in particular Milton Keynes, Northampton and Warrington) continue to be developed largely under the terms of the New Towns legislation.

During the 1960s, as public-sector sponsorship of new towns declined, the private real estate sector took over (Pacione 2004). The first notable examples of such settlements – Cramlington in Northumberland and New Ash Green in Kent – were on a far smaller scale to the original New Towns, and financed entirely by private companies (Ward 2005). Whilst Cramlington was built out as planned, the New Ash Green proposal faced a number of practical difficulties. Its ambition for combining housing with local employment and a mixed community started well; but a combination of factors – including the need to provide upfront expenditure of the required infrastructure – meant that the original vision had to be modified. The settlement was eventually built by a real estate development firm, but the original vision was watered down.

However, as Pacione (2004) points out, the experience of the New Ash Green raised a number of issues relevant to new eco-town project: the appropriate development vehicle, finance and social composition. Large sceal estate developments such as South Woodham Ferrers (TCPA 2007) and Lower Earley proved to demonstrate that private sector developers could construct reasonably sized new settlements on privately-owned land (Ward 2005). In the current marker and political environment, whether a new settlement is to be promoted through the public or private sector will be driven primarily by political rather than planning pressure. There are clear advantages with either option: the private sector approach minimises the use of public expenditure, but also leaves the pace of the development open to the market (Pancione 2004). However, as we experienced during the recent economic climate, the private sector will seek to vary their pace of development to suit market conditions. This may present significant difficulties in planning for new municipal and transportation infrastructure which are difficult to implement in a piecemeal fashion.

With the government - in stark contrast to the New Towns programme - not making available major financial contribution outside the Growth Fund, the financial health and predicted profit of the proposed bidders will play an important role in the overall process. In this context, it is interesting to note that Breheny et al (1993) argue that public sector involvement is a necessary requirement, whether through legislation such as the New Towns Act or in partnership with the private sector.

At present, the main basis for funding the eco-towns is a private sector-led approach. There also appears to be no additional government financing of the programme, except for those proposals which fall within a government growth area (in which case developers and local authorities might be able to bid for the Growth Area funds that have been made available to support additional housing in these areas) (DCLG 2007a, 2007b, 2007c, 2007d). As such, the risk now falls almost entirely on private real estate developers and their financiers. Although it may be some time before any development gets underway, the current economic climate makes it far more difficult for developers to obtain the required backing.

Of course, part of the finance is likely to come through the uplift in land values once planning permission had been granted. Indeed land values traditionally accounted for 30-40% of the value of a home, but this has risen to near 50% in some high profile locations (Falk 2008).

Equally, through planning gain ('Section 106 Obligations') the developer is likely to be required to fund the provision of much of the infrastructure needed to sustain a new development. Historically, successive governments have been grappling with the principle of community gain Since the Uthwatt report in 1942: how much of any increase in land value should be kept for the benefit of the community? How much of the proposed infrastructure should the private sector be responsible for financing? The issue is fundamental to establishing the balance of power between public and private interests on the use of land (Pacione 2004). How this balance plays out in the eco-town initiative will have some influence over the success of the programme.

It is highly likely that Local Planning Authorities will seek to ensure that they receive their slice of the uplift in land and, quite possibly, the government will want to ensure that a further slice of funds – via the Community Infrastructure Levy – will be invested in infrastructure. This puts considerable premium on the value of land and raises questions about the real estate developers' business model and capacity to absorb the cost.

The further challenge is those real estate developers' costs in implementing the Code for Sustainable Home requirements will be higher in eco-town developments. Youkee (2008) argued that, for a real estate developer, the additional cost per house of improving up to Code level 3 is manageable at £5,000 per unit, rising to £15,000 per unit at Code level 4 and £26,000 per unit at Code level 5. The standards put forward by government in the Planning Policy Statement will exceed those in the Code. Consequently, the additional costs will be significant and raises the important question of whether the financial and institutional arrangements are in place to deliver the proposed eco-town programme.

It appears that the current financial debate is focussed on a nearly exclusive private-sector approach. There seems to be little consideration of the merits of alternative business models. One logical model would be more public-private partnership, similar to those already employed in the past (including under the Town Development Act 1952). There is no dispute that the

financial cost of developing an eco-town will be enormous, so there must be sufficient backing. Despite the 'spin', existing government funds are very limited at present.

Conclusions

The eco-towns programme has raised a number of principles, which affect the sustainability, and success of this grand project. In the first instance, this relates to the physical environment: choosing the size and location; and ensuring that each settlement contains a suitable balance of housing and employment are key to the eco-town programme. Secondly, the organisational and financial issues must be properly resolved in a workable fashion.

The proposed size of settlement on each of the eco-towns is potentially larger than most previous private sector development of new towns, but the government is still requesting a private sector-led approach. Yet, there appears to be no firm discussion about the prospects of alternative financial models to support such an important programme. There appears to be vulnerability with the overall approach. Whether or not these particular proposals go forward in a substantive fashion in the near future, there is clear need for a better business model that can support the higher costs of the higher environmental standards required for eco-towns.

There are likely to be significant benefits in the eco-towns programme, but they may take some time to materialise, and the whole programme is not without risk. Choosing an urban extension or urban infill might well have provided wider benefits to the existing housing stock; as well as learning from European examples.

The right financial framework for a new settlement is critical if a New (eco) Town is to be delivered. Being a private sector led approach, the eco-town programme in the UK runs a higher risk of delay, especially if costs – through rising land values and planning gain in particular – climb. Again, on this point, the UK government may not have explored the benefits of a public-private partnership, which would be more robust and less susceptible to the volatility of the economic climate.

Matters are not helped by the timing of the programme. The credit crunch has totally undermined the current house building agenda, virtually making impossible an already challenging housing subject. Unless the UK government is willing to prop up the proposed eco-town programme with higher levels of public funding, it is hard to see how the new eco-towns will be built and assessed in time to realise maximum benefit.

The eco-town concept, in both the UK and elsewhere, will certainly provide lessons for the creation of new communities. However, it is unlikely that the lessons learnt can apply fully to existing housing stock where the focus will be on retrofitting much of the existing infrastructure. Unfortunately, it is too early to gauge the impact of the eco-town initiative; and how it plays out alongside other government initiatives. However, like it or not, future urban form in the UK and elsewhere is inescapably going to be more sustainable than in the past, and there will be plenty of opportunities to assess such benefits.

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All contributions 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 confidentially. 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. Submissions can be in either Malay or English language. 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 reised.

4) Contents

Papers should preferably be in the range of 4,000 to 6,000 words, including illustrations. A brief (max 60 words profile of the contributor should accompany each erticle.

All manuscripts for publishing are to be typed in double-spacing on one side of A4 sized paper with 1.5 inch margin on the left-side. The pages should be numbered consecitively.

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 are an abstract of not more than 200 words and to up five keywords to facilitate indexing. The abstract should summarise the objectives, main finding and conclusions of the paper.

b) References

Only references which 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 bracket, e.g. (Agus, 1994).

Reference should appear at the end of the article, arranged in alphabetical order by the first author'ssurname as follows:

For books; surname, initials, (year) *title*, publisher, place of publication.

For journals: surname, initials, (year) "title", *journal*, volume, number, pages.

Example

Reference:

Book
Lim, K. K. (1990), *Valuation Methods,* Pelandok, Kuala Lumpur.

Journal
Zahuruddin A. (1994), "The New Economic Policy and the Integrated Housing Model", *Ilmu Alam,* Vol. 2 No. 7, pp 23-35.

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Illustrations such as diagrams, tables, graphs and similar materials should not be part of the next but should be submitted separately with the text. Tables 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 1 or Table 1., etc". The exact places where illustrations are to be iinserted in the text should be clearly shown in the manuscript. Photographs should be blach and white glossy paints. The contributor's name, figure number, caption and an indication of which in top, should be written lightly ob the back of each photograph.

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Footnotes, Endnotes
a. Comment
b. Comment
c. Comment

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