

16th Pacific-Rim Real Estate Society Conference

Wellington, New Zealand, 24 to 27 January 2010

Homeowner Risk Appetite in a Growing Metropolis

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Abstract

Infrastructure, such as new power lines or urban renewal projects, disrupts housing consumption services but can enhance investment returns. The paper investigates how disturbance risk appetite varies spatially. It conducts a preliminary study of two diverse locations in Brisbane, Australia. Risk appetite of peri-urban homeowners is inferred from a focus group study. The risk appetite of centrally-located home buyers is derived from a survey. The results suggest that homeowners in central locations tolerate disturbance better than peri-urban ones, presumably in the expectation of compensating financial gain. The policy implication is that project evaluation should consider the spatial variation of risk appetite.

Keywords: risk appetite, disturbance, infrastructure, focus group, urban renewal

Risk

The Global Financial Crisis raised the general profile of risk and undermined confidence in presumptions of market efficiency (Minsky 1977). In Australia, its repercussions included the collapse of Storm Financial in 2009 amid a general deterioration in A-REIT performance (Newell and Peng 2009). Risk, in the vernacular, is the 'possibility of loss or injury' (Webster, 2006). In business, 'risk appetite' is the 'willingness to accept risk' (KPMG 2009:1) given sector, strategic intent, liquidity and operational details (Davidson Frame 2003; Standards Australia Limited 2004; Cavusgil et al 2008; CPA Australia 2008). In finance, arbitrage tends to equalise the marginal price of risk but markets are not perfect and behaviour not always rational (Thurnstone 1927; Arrow 1951; Simon 1955;

Markovitz 1952; Simons 1956; Scharpe 1964; Akerlof 1970, 1976; RICS 1999; McFadden 2000; Satyajit Das 2006; Taleb 2007). In short, the various conceptualisations of risk can be rendered into the cleavage between 'rational' and 'behavioural' perspectives.

Property investment risk is defined as 'the probability of loss or of not receiving expected returns', or 'the difference between expectation and realisation' (Pyhrr *et al* 1989: 628). Property investors cannot diversify away from global economic risk but attempt to diversify from or mitigate idiosyncratic risks whether spatial or not. Often, in imperfect and segmented property markets, subject to planning contingencies, *ex ante* spatial risk drivers are not well articulated, but stochastic discount rates certainly vary by location. Hatzvi and Otto (2008), for example, suggest lower spatial risk explains the inflation of real estate in some Sydney locations.

From a behavioural perspective, people are often 'irrational' when circumstances unduly influence risk appetite. It is well known that perceptions about degree of control and collectivisation involved in decisions can influence risk appetite. Based on Adams (1995: 45), Figure 1 illustrates the influence of collectivization and control on the risk appetite. In the model, individuals who control risks, tolerate them better. On the other hand, when a risk is externally prescribed, people's appetite for it decreases. Collectivisation also generally increases resistance to risk. When the model is applied to homeowners, it suggests that risk appetite varies spatially. In locations characterised by community embedded homeowners, it will not be accepted. On the other hand, in locations where investors prescribe risk and have weak community links, there will be more of an appetite for environmental disturbance risk. In rapidly growing metropolii, disturbance risks include noise, dust, and traffic, visual blight associated from the construction of tunnels, roads, and HVTOL pylons

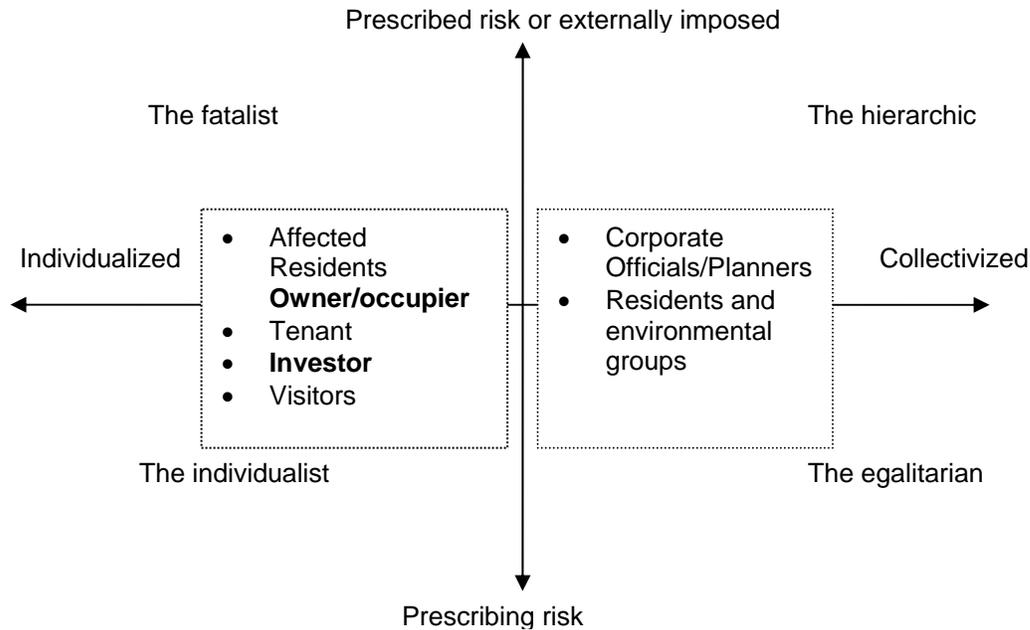


Figure 1: Risk appetite and the provision of new infrastructure: stakeholder control and collectivization

Source: based on Adams (1995: 45)

Study Methods and Context

The paper applied the model outlined in Figure 1, and conducted a preliminary investigation into the spatial variation of disturbance risk appetite. It integrated two separate qualitative and quantitative studies, conducted in Brisbane and its South East Queensland (SEQ). Both studies were conducted during the property boom from 1998 -2008. Brisbane is a growing but increasingly fragmented ‘Sunbelt’ metropolis. Since 2001, its population increased by almost half a

million (Queensland Government, Department of Infrastructure Planning 2009). If migration, climate change and global competitive pressure continue, ongoing substantial infrastructure investment will be required. Economic reconfiguration towards a sustainable 'knowledge' city will require securing water, reconfiguring the electricity grid and reinforcing urban connectivity but, possibly, accentuating urban fragmentation (Chetri *et al* 2009). Consequently understanding the factors influencing disturbance risk appetite is important.

The qualitative study analysed attitude towards homeownership in suburban and peri-urban area through focus groups. The statistical one investigated the motives of home buyers in the revitalising central location of West End. Although the studies were originally conducted using different methodology and for different purposes, there was a commonality with respect to investigating how environmental disturbance influence homeownership decisions.

Suburban and Peri-Urban Findings

Focus group participants were sampled from a database of urban and peri urban Brisbane residents who registered online to participate in market research. The focus group sessions were organised and facilitated by Footprints Market Research, Brisbane. A random quota sample was taken using criteria of home ownership, gender and geographic location. In total, four suburban and four peri-urban group sessions were undertaken and participants were generally from all parts of Brisbane and its peri urban fringe. Prior to these sessions two pilot sessions were completed to improve focus group questions.

Before each session, participants were advised that the purpose of the focus groups was to explore the issues that contribute to attitudes associated with living near various types of infrastructure. Each focus group comprised 7 or 8

participants and was audio and video recorded for transcription purposes. Although each session lasted approximately 80 minutes, this paper draws on element from the transcripts which referred to questions relating to home ownership. More specifically the questions and discussion explored what participants valued in home ownership, financially or otherwise and the risks related to owning your own home. Quotes from transcripts are verbatim wherever possible and referenced according to their group number (see Table 1).

Table 1: Summary of Focus Groups

Group number	Number of participants	Date	Location in Brisbane	Nature of home
Group 1	8	14/08/2008	Metropolitan suburban	Small block
Group 2	8	18/08/2008	Metropolitan suburban	Small block
Group 3	8	20/08/2008	Metropolitan suburban	Small block
Group 4	8	26/08/2008	Metropolitan suburban	Small block
Focus Group Logan	8	18/09/2008	Peri Urban Logan	Acreage
Focus Group Ipswich	8	1/09/2008	Peri Urban Ipswich	Acreage
Focus Group Redlands	8	25/09/2008	Peri Urban Redlands	Acreage
Focus Group NL	8	29/9/2008	Peri Urban North Lakes	Acreage

After an introductory discussion where people were asked their name and the suburb in which they lived, they were asked what they valued in home ownership from both a financial a non financial point of view and invited to discuss the risks involved in home ownership. Overall they considered home ownership as a significant financial asset as typically expressed in the following sentiment:

'Bricks and mortar'. It might slump occasionally but it's always going to bounce back. So it's [a] safe, secure, reliable asset everyone wants to own (Brisbane Focus Group 2).

Or again, 'It is worth something now. Starting at a very low sort of rate but working up. I know it is there in the future if we do need to sell...to me it is like cash (Brisbane Focus Group 1).

Not everyone, however, was convinced that a home was an unequivocal financial asset: For example:

'I used to think it was an asset but not any more because it doesn't bring you money. An asset has to give you money but it provides security. It's better than renting (Brisbane Focus Group 4).

Notwithstanding turbulence in asset markets which were taking place at the time, the overriding feeling expressed with respect to the role of home ownership was one of security and stability. For example:

'As a money value thing? It is my home. I never ever want to – I don't put a money value on it because I never want to sell it. It's my home. That's my feeling. It's like an asset, and values have gone up so much, but it doesn't matter because I don't want to leave. (Focus Group Logan)

That home ownership as an economic good and security for the future in terms of insurance was readily identifiable:

'I like the security of owning a house.....It's something that we do own and if we are in trouble health wise or whatever for whatever reason, there is an asset there (Brisbane Focus Group 1).

Security, too, for your family, especially when you get to my age because I have children...and they are planning to have children.....With the price of property, we have got quite a large house. So we have got the security that we could take them in if necessary (Brisbane Focus Group 4).

All focus groups recognised the significance of home ownership as an investment good and with time and rapidly increasing house values people arguably become more committed to their financial investment. With this also comes the recognition of risk. For example, focus groups were asked about the risks of owning a home and how they felt about the home being a significant financial asset. A particular response which received general agreement was the impact of interest rates:

Participant A) Interest rates worry me, for my house [most participants respond with agreement].If interest rates go through the roof, I probably couldn't afford to pay for my house. So that's the main ...worry.

Participant B) I agree. What we get worried about is – because our value has gone up so high, nobody's got the money to buy it... So yeah, if the interest rates go up too high and we can't afford it... (Focus Group Ipswich).

However home ownership can be linked to risk perception in a much more fundamental sense. It is argued by theorists of the risk society that the day to day lives of people involve an increasing array of decision making scenarios and this process creates uncertainty which can undermine people's emotional security (Ford et al, 2001:7). Clearly the potential interference with property rights as a result of infrastructure provision is just one more factor, since it threatens the emotional security of home ownership and adds to uncertainty in modern society. Elements of emotional security include the need for stability and to be in control of one's life.

Security means control

Richards' interviews (1990:125) found the element of control in the context of security was always associated by typical phrases such as 'no one can put you out' and you can 'make it yours'. Such phrases were also common in many of the focus group discussions, rural peri urban and urban:

There are other people who are...quite happy renting. Good luck to them. At the end, it doesn't take much for it to be sold and kicked out' (Brisbane Focus Group 3).

'And making it a home, I think it is better. A security thing. You can't do as much as you want with a rental property. You can do whatever to your own house (Brisbane Focus Group 4).

It's sort of stable too. When you rent you can pretty much get kicked out (Brisbane Focus group 1).

Less risk than renting...Yes, instead of paying rent, I am paying it into something that I am going to own. And nobody can throw me out of my own home (Focus group Ipswich).

In the financial context, it can be argued there is little differentiation in the focus groups with respect to key home ownership values of security, stability and control over one's future. However if the central theme of security is analysed in terms of lifestyle, geographical variations in attitudes can be identified.

Security can be associated with lifestyles linked to home ownership, such as support for leisure and work activities, identification of place, privacy and peace and quiet, exclusion, relaxation and self expression (Ronald 2008: 55). A core feature of contemporary risk culture is uncertainty and the need to evaluate risks constantly that might affect our lifestyle choices such as house purchase. As such, it is to be expected that house purchase decisions and subsequent home ownership values will reflect specific lifestyle choices and their associated emotional security. Metropolitan suburban based focus groups emphasised the more tangible elements of lifestyle in terms of the need for transport linkages and proximity to services such as schools, transport and shopping centres.

(Interviewer) I am going to talk about property ownership... what would you say you value the most about your current property?

Participant A) Location

Participant B) The area

Interviewer) What is it about the location you value?

Participant A) East Brisbane, I can get the ferry if I want to and there's lots of public transport

Interviewer) So transport links?

Participant A) Close to the City

Participant B) With mine, – I'm retired now, but I used to – you know, closeness was a good thing too because you have got- when I was working, I would just catch the bus, which was literally around the corner; would be in my office in half an hour and shops were about

eight minutes walk. When we had children at school age, the school was close and the transportation was pretty good. (Brisbane Focus Group 4)

The more intangible elements of lifestyle associated with awareness of place were also expressed in terms of liveability and the bush environment:

Participant A) I just love it there, with all the trees and the lake there. It's a nice walk around the lake. It's just a nice place to be.

Participant B) And also with the environment, something occurred to me – I used to work in promotions in the government and part of our department was the old forestry department and it hadn't really occurred to me that area was – you know, it's a subliminal thing. You don't realise how lucky you are (Brisbane Focus Group 4).

My friends would come and visit me and went, wow, when I said how much the land cost. They couldn't believe it. Green yeah, it was just like Garden City (Brisbane Focus Group 2).

Key words common to most focus groups were associated with peace and quiet, but they were particularly noticeable in the peri urban groups:

I value the peace and quiet and the nature and privacy. (Focus Group Logan)

Peace and quiet [mostly agreed]. I was going to say not city quiet. (Focus Group Redlands)

There was a contrast between the metropolitan suburban and peri urban groups in terms of emphasis. Metropolitan suburban groups tended to focus on the

more tangible services of proximity to urban services, in contrast to peri-urban groups who emphasised qualities such as lifestyle, an attachment to nature and a freedom from hustle and bustle of city life:

I value the space and the quiet and the nature and the privacy and my neighbours are all wonderful and we have got the pets we always wanted. It's just lifestyle that I adore about it. It's just great. (Focus Group Logan)

I think for us having – you know having had two children, 15 years ago, the ability to be able to grow up and have their chickens and my daughter has a horse and my son has room to ride his bike and he has a dam to fish in (Focus Group Ipswich).

Threats to basic needs and values in home ownership in a risk society, then, can be viewed as significant additions to the uncertainty that permeates modern life. Also, risks to home ownership values that are a consequence of urbanisation and technological change and, more particularly, from subsequent property interference contribute to an uncertainty which is often intensified by a lack of faith in 'experts' (Ford et al, 2001: 7). Property ownership is associated with deep rooted human needs for security. Proposals new infrastructure can interfere with property rights and inevitably creates some anxiety and concern, explored in the focus groups. In order to understand people's perceptions of property rights, focus groups were asked 'what do you see as your rights in owning property'? All focus groups responded generally in the same negative way:

*Haven't got any rights. They could take my house just like that.
(Brisbane Focus Group 1)*

We really don't have very many. (Focus group Redlands)

However this negative attitude was also set within a more positive recognition that, in most instances, there were logical reasons for limitations imposed.

So we live a society where rules protect all of us. I think we have got to toe the line because we expect other people to do it as well (Brisbane Focus Group 2).

You do need rules. They are obviously put into place initially with all good intentions. Sometimes there's not enough real thinking that goes into it (Brisbane Focus Group 4).

We have to get the Environmental Protection Agency in and they look at the quality of the trees... and say yes, you can take that or no, you can't... But I am prepared to put up with that because that's what I value (Brisbane Focus Group 2).

Interference with property rights are tolerated so long as the authority is considered credible.

As far as government goes, rules and regulations are only there to hit people over the head whenever they feel like. If they want to do something that is out of the rules, they will do it anyway. That's just typical of the public service. (Brisbane Focus Group 4)

The government will take the easiest route and upset the least number of people to do what they like. There not a lot you can (do) – you know, we have fought long and hard over things in the past and there is not a lot you can do about it. (Focus Group Ipswich).

Yeah, but it also depends on who you are and who you get to do your bargaining for whether you get a yea or nay. I mean, I suppose we have all seen enough things about corrupt councils and that – I'm not saying they are corrupt but they can be influenced (Brisbane Focus Group 1).

In some instances the urban groups understood the positive aspects associated with property interference:

I think the thing is it's in the public (interest) - really in the public's good, I suppose. I wouldn't like it with my own property. (Focus Group 3)

Well yeah, as the population grows, they have to. It's just progress, I suppose. But I wouldn't – you wouldn't like to be involved. (Focus Group Redlands)

To summarise then, although different focus groups recognised home ownership as an investment asset for their long term economic security, their overriding sentiment with respect to the role of home ownership was one of security and stability in the wider sense rather than just related to financial returns. Issues such as the 'liveability' of the neighbourhood and the importance of psychic elements associated with a quiet lifestyle were emphasised. The risk of environmental disturbance was seen as a threat to their basic values in home ownership and a significant addition to the risk of modern life. More particularly, such risk is often intensified by a lack of faith in 'experts.' Response to such risk by the focus group participants, was, not surprisingly, negative but largely accepted as prescribed and fatalistic in nature.

Revitalising Location Findings

The quantitative study of risk appetite was conducted in the centrally located and revitalising suburb of West End in 2004. Previously neglected, the location received and continues to benefit from substantial public investment which accentuated its property boom. A random selection of homeowners was selected from the sample frame of all residential transactions over the period 1998 – 2004. Respondents were asked to rank the importance of the factors they considered prior to purchase using a Likert-scale ranging from very low (0) to very high (4). Responses were analysed using principal components to eliminate insignificant variables. Compression was accomplished in two steps. Some continuous variables were eliminated because they failed a Kaiser-Meyer-Olkin (KMO) sampling adequacy test. Specifically, 25 variables with individual KMO scores below 0.6 were excluded. The elimination procedure generated a new overall KMO score for the remaining 17 'core' variables of 0.883, high enough to merit further compression. Descriptive statistics of the 17 core variables are given in Table 2. The 17 core variables were subsequently grouped on their underlying principal components to increase the degrees of freedom. Since all correlation coefficients were below 0.9, multicollinearity was considered acceptable. One thing worth noting from Table 2 is the elimination of pedestrian conviviality indicators, included in the survey questions, which suggests many homeowners were investors.

Table 2 core survey variables, acceptable under the Kaiser-Meyer-Olkin (KMO) statistic test for measuring sampling adequacy, West End, 2004.

<i>Variable</i>	<i>Mean</i>	<i>Std. Deviation</i>
RenovationResale40	2.07	1.345
VFM41	3.13	1.263
Site53	3.20	1.432
Facts59	1.91	1.309
NoticedDvt60	2.35	1.294
SalesActivity64	2.33	1.233
MediaDvt67	1.96	1.290
MediaBohemia68	1.67	1.055
MediaPrices69	2.45	1.259
KnowProjects70	1.76	1.053
FamilyTalk74	2.91	1.431
MediaChange76	2.62	1.367
MediaPrices77	2.67	1.428
TriggerDvt80	2.33	1.277
TriggerPeople81	2.09	1.206
TriggerSale82	2.84	1.358
TriggerMedia83	2.53	1.215

Table 3 shows results of principal component analysis conducted on the 17 core variables. The groupings of the 17 core variables gave insights into the major determinants of housing and location decisions for West End buyers. Eigen values were generated for each component, extracted and rotated. Eigen values represent the absolute and percentage data variance explained by particular components. Table 3, only includes components with Eigen values greater than 1.0. The most important component returned an Eigen value of 8.575 and explained 50.4% of total data variance (see Table 3). When components were rotated to optimize their structure, components 1 and 2 explained 50.94% of variance. Rotation reduced the variance explained by component 1 and increased that of components 2, 3 and 4.

Table 3: Summary principal component analysis, Micro-Operational Phase survey, West End, 2004

<i>Component</i> <i>t</i>	<i>Extraction Sums of Squared</i> <i>Loadings</i>			<i>Rotation Sums of Squared</i> <i>Loadings</i>		
	Total	Variance %	Cumulative %	Total	Variance%	Cumulative %
1	8.57	50.440	50.440	4.528	26.638	26.638
2	1.36	8.016	58.456	4.131	24.302	50.940
3	1.26	7.451	65.907	2.295	13.503	64.443
4	1.10	6.512	72.419	1.356	7.976	72.419

Extraction Method: Principal Component

Components were then broken-down into their constituent variables with Varimax rotation and Kaiser Normalization (Tables 4). The matrices display variable loading on to each principal component. For clarity of exposition, only loadings over 0.4 are included. Clearly, most of the variables loaded on to component 1 labelled as 'investors'. Component 1 groups cases where local construction, immigration and sales activity were accentuated by the media. An interpretation is that Component 1 agents based their purchase decision, in part, on disruption associated with revitalisation and, therefore, accepted the associated disruption risk. Component 2, labelled as renovators, groups cases where sales activity signal are moderated by the budget constraints or value for money (VFM). While perhaps less sophisticated, they were nevertheless alert to revitalisation and even relied on anecdotal signals of local sales activity before buying. Component 3 groups more developers with project or renovation intentions. Finally, Component 4 groups transactions driven by local family knowledge.

Table 4: Rotated Component matrix survey, West End, 2004

	<i>Component</i>			
	<i>1 (investors)</i>	<i>2 (owner- renovators)</i>	<i>3 (developer)</i>	<i>4 (locals)</i>
MediaDvt67	.861			
NoticedDvt60	.792			
MediaBohemia68	.733			
SalesActivity64	.678			
TriggerDvt80	.635	.509		
MediaPrices69	.536	.498		
TriggerSales82		.849		
VFM41		.714		
MediaPrices77	.471	.705		
TriggerMedia83		.695		
TriggerPeople81	.512	.684		
MediaChange76	.552	.569		
Site53			.796	
RenovationResale40		.465	.666	
Facts59	.527		.616	
KnowProjects70	.411		.548	
FamilyTalk74				.889

Extraction method: principal component analysis. Rotation method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.

In summary, Table 4 suggests that development activity and its associated disturbance accelerated rather than dampened house purchase decisions in West End. The attention to media signals (MediaDvt67, MediaBohemia68) and development activity (NoticedDvt60, SalesActivity64 and TriggerDvt80) suggests

they were well aware of revitalisation and, presumably, were prepared to tolerate environmental disturbance risk.

Conclusion – Risk Attitude Diversity

Risk appetite is central to understanding the dynamics of urban property markets, particularly during boom euphoria. For consumers, not all property risks are financial but include disturbance and other consumption risks. Disturbance risk appetite varies spatially. Peri urban and suburban homeowners have a lower risk appetite for disturbance compared to homeowners in revitalising locations. In contrast, players in central locations actually read the environmental disturbances caused by increased sales and construction activity as a signal to buy. Understanding the spatial variation of homeowner risk appetite could help government and corporate utilities better tailor their strategy, consultation and compensation regimes. Infrastructure providers who prescribe or impose risk need to manage their media communications appropriately to take account of its spatial variation. With a rapidly increasing population, Australia needs to intelligently manage the increasing tension between development and conservation. It involves long range planning, coordination between government and transport bodies, sensible price signals, compensation, personal health and governance. Further research is required to investigate the impacts of climate change and cyclical financial perturbations on spatial profile of homeowner risk appetite in various urban housing sub-markets.

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