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Towards Financial Risk and Housing Policy Trends

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Overview of Research

Institutions providing access to housing in all tenures have become further entrenched and exposed to financial risk. Literature on housing policy trends and financial risk cover drivers such as liberalisation, monetary approaches, innovation, political commitment, and asset management. A conceptual model is put forward for framing housing policy trends that engage with financial risk (what risk and whose risk) – tested against national cases of United States, China, United Kingdom and New Zealand. Secondary literature findings for the New Zealand case show that there is tendency to focus on the downside financial risk of known probabilities, rather than seek out unknown upside financial risks that may have escaped detection. Furthermore, it is argued that contemporary housing policy trends have incentivised institutions to take on greater financial risk. Further empirical work will generate primary data to quantitatively model in the New Zealand case, what and why there is financial risk, and institutional responses to housing policy trends.

Key Words: Financial Risk; Housing Policy Trends; Residential Property

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1.0 Introduction

1.1. Aims and Objectives

This study will focus around a core research aim and premise, to explore ideas and concepts as to whether:

> "Housing policy trends are expanding the drivers and exposure to financial risk"

To meet this research aim, several objectives were explored. First, we carried out a literature review on the drivers of housing policy trends and financial risk – especially those that centered on themes of liberalisation, monetary approaches, innovation, political commitment, and asset management. Second, we developed a conceptual model to frame housing policy trends that engage with financial risk. Third, we conducted documentary analysis of national housing policy trends mapped against a chronology and typology (what and whom) of financial risk – focusing on United States, China, United Kingdom, and New Zealand national cases. Fourth and final, our objectives were to bring forward some discussion as to how New Zealand housing policy trends tend to engage with financial risk.

1.2. Importance and Rationale

This research study has a contribution to make in that we need a set of more precise structures to think through and apply the increasing housing policy trends that engage with financial risk. Clarity of thinking is further pressing in that the subject matter is complex, as we need to unpack financial risk and housing policy trends amongst multiple tenures (e.g. owner-occupied, social rented, private rented) and multiple types (e.g. apartments, mixed-use, single dwellings). Bringing this thought in idea to practice is by scientifically framing and applying the concepts of financial risk and housing policy trends. The importance of this work will be by improving effective good education and integrity in financial risk and housing policy trends. This improvement will in turn enable practitioners to make analysis of real and hypothetical financial risk and housing policy trends.

1.3. Practical Applications

The research will have practical significance for those wishing to value housing – particularly as emerging risk from automated residential valuation needs to be mitigated and disciplined. For all stakeholders (particularly valuers) involved in the financing of housing the research, the study will provide more efficient value for money by scientifically framing and applying the concept of financial risk and housing policy trends. As well as improving effective good education and integrity in housing and residential property that increasingly uses more financial risk. The theoretical conceptual framework that integrates international policy case studies, will enable practitioners make comparative analysis of real and hypothetical financial risks given housing policy trends.

Practical applications from the study are that New Zealand practitioners and policy makers can make more informed decisions in, and from, housing policy that involve financial risk. Particularly, in highlighting the importance of property finance for the greater public good. The study also enables a building of integrity into the property profession, as institutions will have a greater understanding of how housing trends and financial risk affect institutional processes.

Educational application is also created through the lesson learning approach using the national case studies of United States, China, United Kingdom and New Zealand.

Further practical beneficiaries in application are by stakeholders engaged in improving the 'public-good' as they shape financial risk and housing policy trends. Stakeholders include valuers, developers, financiers, planners, property companies, construction companies, community groups and residents.

2. Literature

2.1. Risk in General

To understand the landscape of financial risk and housing policy trends, certain threads of thought in the literature need to be explained at the outset. What we mean by risk in its broadest sense, as 'types' help as an initial contextual filter of thinking. As 'types' of risk we tend to find 4 levels of stratification as highlighted on Table 1.

As explanation, we see the clearest type of risk as being 'quantifiable risk', where the probabilities that there will be some aspect of risk is known. 'Uncertain risk' is a less defined risk in that it is difficult to quantify and certainty is less so, although some parameters of risk (such as say political risk) can be identified. The third level of risk is 'indeterminant risk', where causality of risk in terms of how it interacts and relates to other factors are unknown.

Finally, 'ignorant risk' are those risks that are more hidden as they may not have manifested themselves or not been detected in the analysis and thinking. We now move from risk more broadly towards unpacking terms that related to narrower financial risk.

TABLE 1: RISK TYPES - 4 LEVEL STRATIFICATION

Level	Terminology	Detail
1	Quantifiable Risk	Where probabilities are known; Risk can be quantified
2	Uncertain Risk	Where the main parameters are known, but quantification suspect; Uncertainty cannot be quantified
3	Indeterminant Risk	Where the causation or risk interactions are unknown
4	Ignorant Risk	Risks have escaped detection or have not manifested themselves

2.2. Financial Risk – 'To What?' and 'To Whom?'

Narrowing the idea of risk into framing of 'Financial Risk' brings us to think of risk in terms of financial institutions, the financial mechanisms used, and those agents are financially affected by the risk. For one mainstream popular definition, we see that:

> Financial risk is the general term for many different types of risks related to the finance industry. These include risks involving financial transactions such as company loans, and its exposure to loan default" (Investopedia, 2018)

To further break up financial risk into more manageable sub-types we can consider 6 key types that have different characteristics – in essence 'To What?' is financial risk directed. The key types include the following: Asset-backed risk; Credit risk; Foreign investment risk; Liquidity risk; Market risk; and Operational risk (Horcher, 2005). These 6 different typologies are now explained in more detail to allow for deeper cognitive thinking when applying different examples of housing policy trends.

First, 'Asset-backed risk' is the risk that changes in one or more assets (such as real property disposal) that support an asset-backed security (such as a REIT – Real Estate Investment Trust) will significantly impact the value of the supported security (such as property prices). For example, we could argue that a fall in property asset prices have an impact on the supporting financial capital that is being invested into property, and thus the value of the original property assets. Asset-backed Risks could therefore include interest rate changes, term modification, and prepayment risk – that could all that encourage a switch in asset choices and subsequent value of those supporting assets held as security.

Second, 'Credit risk' as similar to default risk, is the risk associated with a borrower going into default and not making payments as promised. Here, the investor losses include lost principal and interest, decreased cash flow, and increased collection costs. As an example of credit or default risk we can view a housing developer's credit risk as the magnitude of probability that they will pay their construction creditors on time.

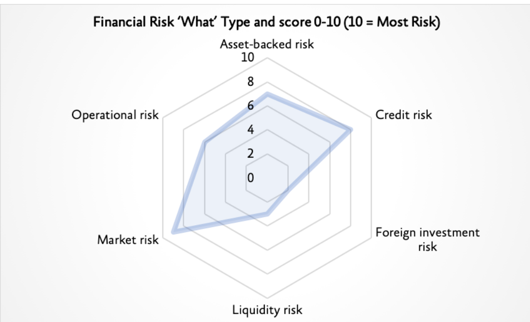
Third, 'foreign investment risk' is the risk of rapid and extreme changes in value due to foreign rather than domestic investment. Foreign investment risks could increase or decrease depending on whether the investment is in relatively smaller markets; or whether there are differing accounting, reporting, or auditing standards. Foreign investment risk may also be generated by domestic approaches that pronounce nationalization, expropriation or confiscatory taxation. Furthermore, levels of financial risk may be created through economic conflict, or political or diplomatic changes. Moreover, issues associated with foreign-domestic valuation, liquidity, and regulatory may also add to foreign investment risk. Using a residential property example, we can quite clearly see the foreign investment risk when there are restrictions placed on real estate investment for foreign buyers.

'Liquidity risk' is a fourth financial risk type and can be described as the risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss (or make the required profit). To define liquidity risk further there are two types; asset liquidity, and funding liquidity.

Asset liquidity are those assets that cannot be sold due to lack of liquidity, this could be for example a restriction in credit lending for property resulting in less buyers to generate income revenue. Whereas funding liquidity is the risk that liabilities cannot be met when they fall due. An example here would be real estate that cannot be sold quickly enough in a property market to pay off a loan.

A fifth financial risk is 'market risk' that tends to fit into four standard market risk factors. (1) Equity risk is the risk that stock prices in general (not related to a particular company or industry) or the implied volatility will change – such as a public real estate developer changing in stock value. (2) Interest rate risk that interest rates or the implied volatility will change – the cost of money to fund property will be a financial risk. (3) Currency risk is the risk that foreign exchange rates or the implied volatility will change, which affects, for example, the value of an asset held in that currency – the value of property will change depending on the currency value used. (4) Commodity risk in that commodity prices or implied volatility will change – such as the price of steel on the commodity markets. The sixth and final financial risk is operational risk and denotes a change in value caused by actual losses from inadequate or failed internal processes, people and systems. Property management firms may for instance increase their financial risk if their operations have poorly trained staff. Operational risk in finance may also be expunged from problematic external events or differences in expected losses (or gains). Here we could see inappropriate use of obsolete systems in valuation of property that may have over-valued (or under-valued) stock.

Figure 1: Conceptual Types of Financial Risk – What?



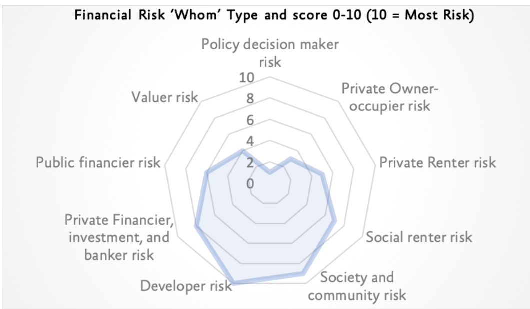
Source: Authors

Measures or scores of these 6 financial risks can generate thinking on the magnitude of the risk. Figure 1 demonstrates visual representations of 'what' the types of risk are given different measures of financial risk – as say a score of 0-10 on lowest to highest risk for each type. These radar charts will be used in this research to not only measure and visualize 'what?' the financial risk is, but as per Figure 2, visualize 'to whom?' the financial risk burden is most (or least) shouldered.

When we look at 'To Whom?' the Types of Financial Risk are burdened, nine key agents of practice and policy are considered. First (1) 'Policy decision maker risk' is the risk encountered to some degree by those in tiers of government that shape finance. Second (2) 'Private Owner-occupier risk' is the financial risk incurred by those privately owning and occupying a property. In an alternative tenure as renting, financial risk can also be borne by either the (3) Private Renter, or (4) Social renter. Fifth (5) as more difficult to measure but important is the financial risk taken on by Society and Community. Sixth (6) is developer risk, often considered in terms of added value is a financial risk generated by the profit motive. The private financiers and banks seeking investment returns are a seventh (7) financial risk in the form of returns. Eighth (8) is a public financing risk from public financial institutions that often have a lower rate of financial risk compared to the private sector.

Finally, ninth (9) we can see 'to whom' a financial burden is carried in terms of valuer risk, over and under valuation is one particular risk is for property that may be impacted on given changes in policy.

Figure 2: Conceptual Types of Financial Risk – To Whom?



Source: Authors

2.3. What we are NOT looking at in Financial Risk

It is also important to note here, what we are not considering in financial risk, as many different lens' are used in this intellectual space. Sources of risk is one aspect not specifically focused on in this study which often fall into three (3) source categories. One source is Financial risk, arising from an organization's exposure to changes in market prices, such as interest rates, exchange rates, and commodity prices (often referenced outside of the organizational boundaries as unsystematic risk) Another source of financial risk are those arising from the actions of, and transactions with, other organizations such as vendors, customers, and counterparties in derivatives transactions (in essence the connectivity between organisations). A third category of financial risk sources are those resulting from internal actions or failures (sometimes considered as systematic originating within organisational operating structures) (Horcher, 2005).

Another aspect of financial risk with which this study is not focusing attention is in terms of measuring risk, as is often tradition in this field. As a brief point of examples, we see many different techniques of measure and subsequent analysis, these include: Gap Analysis; Scenario Analysis; Instrument Sensitivity; Stress Testing; Financial Crises Analysis; and Value-at-Risk work. For this study we are trying to cover new ground by developing new measures in housing policy trends and the gradation of financial risk type (to What and to Whom)

Linking Financial Risk and Behaviour is another gap that has the potential to be filled but not of concern in this study. It is important to note that "Risks usually do not exist in isolation, and the interactions of several exposures may have to be considered in developing an understanding of how financial risk arises...Sometimes, these interactions are difficult to forecast, since they ultimately depend on human behavior" (Horcher, 2005, pp 4). This human behaviour consideration highlights that behavioral Finance in this Field has much to add on financial risk in a future research project.

2.4. Housing policy trends

In mapping these concepts of financial risk to housing policy trends it is worth demonstrating at this point what we mean by 'housing policy trends'. To narrow the conceptualisation we are not simply looking at Public, Social, and/or Affordable Housing and the housing policy trends could be beyond the public, and be in the private or cooperative spheres of property. In terms of the policy component of housing trends we think of policy as guiding actions towards a desired outcome such as the marketisation of a product of service. What's more, we see policy as government housing policy that can essentially be shaping an outcome, intentionally or unintendedly.

We are interested in intended and unintended effects. Plus, by unpacking the taxonomy of policy we are interested in types of policy such as its ability to be (re)distributive, regulatory, and constituent (part of a whole). More importantly and practically here we are interested in the content and intent of policy – i.e. the policy intentions not just the legal prescription in an act. We focus on the chronology of principal policies and legislation directly related to Housing (e.g. Acts and Bills) in a particular national contextual framework. For instance, the housing policy framework could be set in the United States (Schwartz, 2013), the United Kingdom (Mullins, Murie, & Leather, 2006), and China (Man, Zheng, & Ren, 2011); and available to analyse internationally as trends (Lawson & Milligan, 2007; Boelhouwer, 2002) and in political economy thinking of policy (Ball, 2013)

2.5. Core housing policy trends that drive financial risk

Now that we have unpacked meaning and application of financial risk and housing policy trends we can begin to consider what trends drive financial risk, as themed in the literature. Key literature themes that tend to gravitate together have been classified as drivers by (1) Liberalisation; (2) Fiscal to Monetary Shift – questionably as Innovation; (3) Political Commitment; and (4) Asset Management.

2.5.1. Driver 1 – Liberalisation

Liberalisation of markets is the first theme of many writings that explore ideas of using housing trends that drive financial risk. Neoliberal shifts encouraging financial risk and behavioral finance in housing policy are for instance those that discuss the scaling back of housing as a public and social good (Beer et al, 2007; Rolnik, 2013). Beyond the formal sector that is liberalising we see an informal sector that has possibilities for financial risk given that finance that has to some extent been liberated from housing policy (Okpala,1994; Mukhija,2004).

Conversely, the liberalisation of investment institutions also drives this housing outcome as international investors often seek secure housing asset backed risk and returns (Green and Wachter, 2007). Furthermore, empirical observations of housing policy trends driving financial risk are those heavily set within the liberalising 'deep system' of housing market finance (Warnock and Warnock, 2008). Authors also claim that we can see the greatest housing policy trend of liberalisation driving financial risk where house prices are high or rising (Miles, 1992).

More broadly in the literature, we see a shift in trend from state direct provision of housing towards less regulated market provision of housing, which sits with the well-worn discourse of neoliberal shifts in financial risk. For instance, it is argued in the case of Australia that it is important to recognise that neoliberal tendencies have been added to a housing system already dominated by the market (Beer et al, 2007). This market orientation being reinforced by housing finance that used a range of direct and indirect subsidies to support private investment in housing for both homeownership and private rental. In this case, housing trends in the absence of direct subsidy provision of social housing, is even greater aligned with deregulating private housing markets using deregulating private finance. The discourse surrounding housing finance therefore plays a part in the deregulatory and privatizing direction of travel for housing policy and its financial risk profile.

2.5.2. Driver 2 – Fiscal to Monetary Approaches – as Innovation?

Another core theme in the literature that discusses the driver of housing policy trends on financial risk is that of a shift from fiscal to monetary instruments (that the policies often encourage), with which can be argued as some innovation in the field. With respect to innovation we can see the component part of both the generation of new pioneering ideas that contain some sort of risk as part of the ideas development. Of discussion here as innovation are the financial instruments developed from policy trends which have tended to move from fiscal (tax and spend) based instruments, towards those that create new monetary streams such as through loans or bonds – of potential higher risk.

Examples of housing policy trend drivers that encourage fiscal instruments include: less betterment taxes (e.g. capital gains tax); less planning gain (e.g. a supplement payment); more impact payments (e.g. developer fees and contributions); and more cross-subsidy rather than full subsidy (e.g. a levy agreement) (Crook and Whitehead, 2002; Squires and Hall, 2013; Squires, 2013; Monk et al, 2005). Whilst similarly we see risk generated by housing policy trends encouraging riskier monetary instrument use, such as through Tax Increment Financing (TIF) (Squires and Lord, 2012; Squires and Hutchison, 2014) and Infrastructure Finance Bonds (IFB) that connects to housing policy (Hutchison et al, 2016). The latter monetary instruments centre on a principle of taking wants and needs now, rather than in the future – i.e. a future risk. There is Risk in future property value uplift and tax base. Just as there is Bonding risk as the rate of return on a bond will fluctuate.

In terms of innovation in housing policy and financial risk, in the social housing sector, Europe for instance has been traditionally been provided by local authority direct finance, and there has been recognition since the early 2000s to there is increasing engagement with risk bearing capital under the guise of financial innovation. For instance, it is argued that: 'working with the private sector to raise funds (and repay them) requires new skills, including risk management.

The state can play a key role underwriting risks and tackling affordability through allowances but these have to be structured efficiently' (Gibb, 2002, p. 335-336). Innovation in housing finance is defined to some extent here as the use of loans, guarantees, equity or quasi-equity investment, or other risk-bearing tools – that can be combined with grants and involve risk-sharing with financial institutions to boost investment in housing (Squires et al, 2016). Interestingly, a large amount of the housing finance theory with respect to innovation focuses on investment. For instance, in the UK context, attention has been drawn to housing finance by considering Social REITs (Real Estate Investment Trusts), partnership models and bond finance (Gibb et al, 2012).

2.5.3. Driver 3 – Political Commitment

In the literature considering drivers of housing policy trends on financial risk we see that beyond the instrumental innovation and liberalization there is focus around political commitment – the real issue of politics and political economy as to the magnitude of driver power. As an example, for housing policy to flourish amongst risk, there must be good governance and political commitment (Kim, 1997). Moreover, Government's money is 'cheaper' and less risky than that of private investors, but governments set the rules of the game for those investors (Malpezzi,1990). Plus, in addition, institutions such as government set the housing policy framework and enable other housing related institutions to take hold (Okapala, 1994) .

There should also be consideration of external government institutional influence of a broader set of international investors that often seek secure asset backed returns. The market and its institutions may in fact be shaping those that claim to shape the market (i.e. government). Green and Wachter (2007) note, even before the 2007-08 Global Financial Crisis, that the institutions that hold capital may have greater potency than those institutions of government that can pull the levers (e.g. setting interest rates).

2.5.4. Driver 4 – Asset Management

As a final theme of housing policy trend drivers of financial risk, we consider literature that focuses on asset management to change the risk profile. Assets can be managed to deal with financial risk, for instance, funds can be created and capitalized in relation to rental income flows (Gibb, 2011), and refinancing can occur, to enable a sustaining of existing stock that can be affective in the short term to continue the available pool of housing (Bratt et al, 1998). Other housing policy trends that coerce asset management change include aspect of equity release and reverse mortgaging can re-balance divergences in equity-debt and income-costs (Calza and Monacelli, 2013). Through such asset management the subsequent financial risk profile is changed.

2.6. Overview of NZ literature in the field of housing policy trends and financial risk

In focusing on New Zealand as an in-depth case study we show here some of the key literature issues that are brought out with respect to housing policy trends and financial risk. To start, we see New Zealand compared (to Australia and England) in terms of its planning and affordable housing that are constituent of its housing policy trends (Austin et al., 2014). This comparative placement of New Zealand in housing research is taken by Murphy (2011) when he analysis the effects of the GFC on its housing market. Comparative measures are also of interest to New Zealand with regards to housing affordability measures that are more politically constructed and compared from a US-centric position (Murphy, 2014). With respect to the theme of affordability Skidmore (2014) studies some of the lessons from the United States. More broadly and useful for New Zealand in trends, we see New Zealand placed in a larger study directly analyzing the international trends in housing and policy, although only in part with regards to financial risk (Lawson & Milligan, 2007).

For more intra-national literature on New Zealand housing to illicit policy trends and financial risk we see work looking at social housing as more currently taking a quasi-market approach (Dykes, 2018). For Fraser et al (2008), economic considerations regard house prices and bubbles in New Zealand that will clearly have an impact on financial risk.

Policy work in New Zealand is often taken more from a physical quality and health perspective, rightly so given the poor quality of build that dominates the stock (Howden-Chapman et al, 2018). As such raises the need for more housing research in New Zealand to consider policy work to also centre on economic and financial (and risk) dimensions.

Consultancy and lobbyist think tank report literature on housing and indirect policy considerations is the politically calming stocktake of New Zealand's housing more broadly (Johnson et al, 2018). This predicate's in part the social housing 'stocktake' one year earlier that considers demand for this particular tenure (Johnson, 2017). Rental considerations beyond the public are also found in the New Zealand housing literature are reported by BRANZ (2017). More direct and affiliated governmental literature on housing policy that help analyse financial risk include the more procedural Housing New Zealand Corporation Annual Report (2017). As well as publications from Ministry of Business Innovation and Employment such as minister briefings (MBIE, 2017). As well as the Ministry of Social Development social housing updates (MSD, 2017). There will no doubt be variations on the institutions and subsequent reports going into the future – particularly as housing begins to centralise certain departmental thinking on the issues and risks emerging from housing.

3. Methodology

The study took a well-worn methodological path in introducing the topic, theming the literature, developing and testing a conceptual model, then discussing and formulating a set of research premises. First of all, we used secondary literature to review the general theory of risk, financial risk, housing policy trends, and drivers. Similarly, secondary literature is used to develop the indicators and labelling for the conceptual model for policy trends in United States, United Kingdom, China and New Zealand.

The testing of applying financial risk scores 'to whom' and 'to what' are applied given the authors subjective interpretation of magnitude of risk.

Application to primary data gathering on these scores are discussed as further research later in the report. As a final stage in the method, we use secondary literature documents (academic journals, consultancy reports, policy briefs) of case specifics in New Zealand to gain an in-depth understanding of 'what' and 'to whom' the key housing policy trends generate some level of financial risk(s).

3.1. Findings and Analysis

3.1.1. New Conceptual Model enabling quantitative analysis of trends and risks – 'what' and 'by whom'

To gain a deeper understanding of housing policy trends that affect financial risk, the study maps the specific housing policy trends (mostly identified through legislation in housing acts and significant political events), against the score of risk that are encountered in the various categories of financial risk with respect to type (to what) or institution (to whom).

This mapping is visualized on radar (or spider) diagrams with which scores are subjectively applied by the author to contexts in the United States, United Kingdom, China and New Zealand. For each national context, we table the Phase and Political Party in Government, Year, Policy Trend – As Key Acts and Bills, Description, and Policy Intention.

3.1.2. Test Case 1 - US, United States

Of interest to demonstrate in the US case from the analysis is the broad sweep of trend intentions that have developed since 1945. We see a variety of different intentions at different points as allied to regulatory changes (Table 2). These policy intentions include progressive social developments with the increasing private home loans and mass public housing (1949), a greater push in public and low/moderate income housing (1954, 1965, 1968), and an increase in the equality of opportunity for housing (1968). Post 1968, we see Acts that triggered policy intentions that are increasingly financial, with developments in housing bonds (1970), vouchers (1974), equity release (1987) and capital injections into the mortgage system (2008). To take one example when mapping the trends and financial risks, we can see (Figure 3) that the 1970 Act of Increasing bond financing for housing, has a clustering of higher risks such as public finance risk, policy maker risk, private financier risk, and private owner-occupier risk.

TABLE 2: CHRONOLOGY OF HOUSING POLICY TRENDS

FEDERAL LEGISLATION IN THE US THAT INCLUDES "HOUSING" AND "ACT" IN THE TITLE.

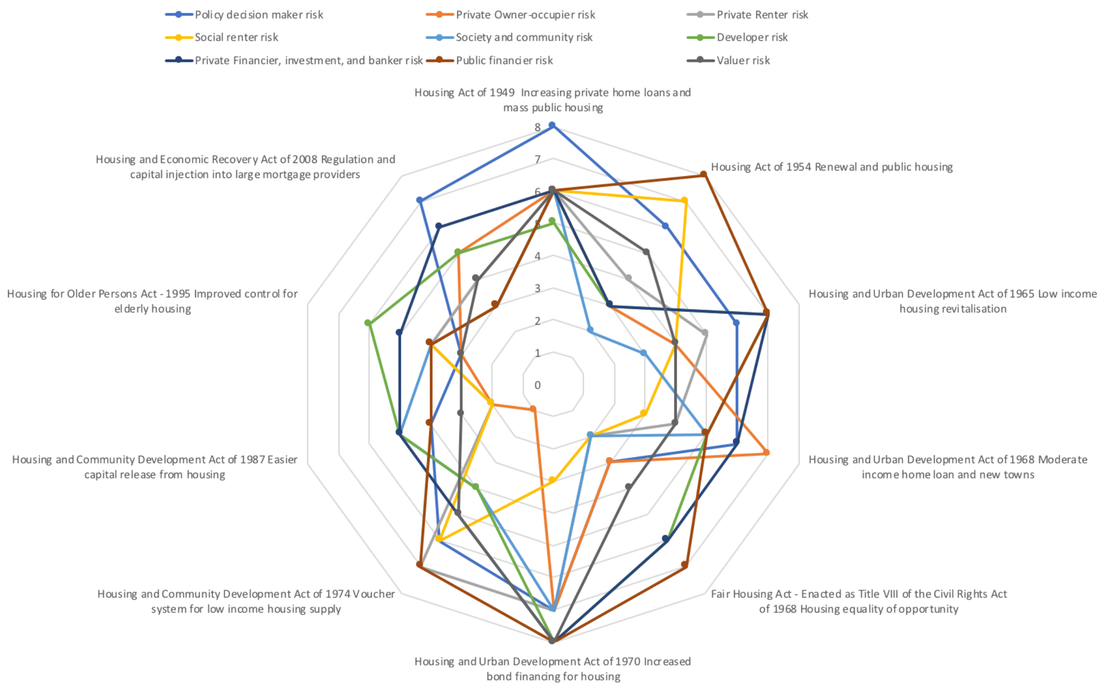
Year	Policy Trend – Key Acts and Bills	Description	Policy Trend Intention
1949	Housing Act of 1949	Expansion of the federal role in mortgage insurance and issuance and the construction of public housing. Program of domestic legislation, the Fair Deal.	Increasing private home loans and mass public housing
1954	Housing Act of 1954	Funding for units of public housing, giving preferential treatment to families that would be relocated for slum eradication or revitalization	Renewal and public housing
1965	Housing and Urban Development Act of 1965	New programs to provide rent subsidies for the elderly and disabled; housing rehabilitation grants to poor homeowners; provisions for veterans to make very low down-payments to obtain mortgages; new authority for families qualifying for public housing to be placed in empty private housing (along with subsidies to landlords)	Low income housing revitalization

Table 2: Chronology of Housing Policy Trends Continued

1968	Housing and Urban Development Act of 1968	Expand availability of mortgage funds for moderate income families using government-guaranteed mortgage-backed securities Provided funding for New Town projects.	Moderate income home loan and new towns
1968	Fair Housing Act - Enacted as Title VIII of the Civil Rights Act of 1968	Provided for equal housing opportunities regardless of race, religion, or national origin	Housing equality of opportunity
1970	Housing and Urban Development Act of 1970	New Communities Assistance Program was established to guarantee bonds, debentures, and other financing of private and public new community developers and to provide other development assistance through interest loans and grants, public service grants, and planning assistance	Increased bond financing for housing
1974	Housing and Community Development Act of 1974	Amended the Housing Act of 1937 to create Section 8 housing,	Voucher system for low income housing supply
1987	Housing and Community Development Act of 1987	The law provided insurance for FHA Home Equity Conversion Mortgages (HECM) better known as a home equity conversion loan or reverse mortgage.	Easier capital release from housing
1995	Housing for Older Persons Act - 1995	Rule changes that if the number of people age 55+ in a given community falls below the 80 percent threshold, the community could lose its age-restricted status (and loss of such status would be permanent)	Improved control for elderly housing
2008	Housing and Economic Recovery Act of 2008	Intended to restore confidence in Fannie Mae and Freddie Mac by strengthening regulations and injecting capital into the two large U.S. suppliers of mortgage funding.	Regulation and capital injection into large mortgage providers

FIGURE 4: TREND INTENTION AND FINANCIAL RISK 'WHOM' TYPE ANALYSIS (SPREADSHEET SCORES)

FINANCIAL RISK 'WHOM' TYPE AND SCORE 0-10 (10 = MOST RISK)



3.1.3. Test Case 2 - China

To provide some introduction to financial risk and housing policy trends in China, the direction of travel has been greater connection to individual private borrowing and the market since the 1949 communist revolution (Zhang, 2000, pp347, Table 3). Other significant trends over time have been intentions that see collective ownership separated from state ownership (1982), the widening of private home loans (1987) coupled with greater market sale and build of public housing (1988), the creation of deep urban housing markets (1998), along with full private property rights (2004) albeit with some tightened regulatory constraints on property rights given state ownership of land (2007). In mapping some of the financial risks against these trends, an interesting observation is that we see high market risk, asset-backed risk and foreign risk at a point in 1978 where we see a major push towards increase in market orientation and denationalisation of property (Figure 5).

TABLE 3: CHRONOLOGY OF TRENDS

Year	Policy Trend – Key Acts	Description	Policy Trend Intention
1949	Chinese Communist Revolution	Most land is owned by collectives or by the state; residential right of use; Virtually housing was solely financed by the state through budgetary funding	Land owned by state controlled collectives
1978	Chinese Reform Programme (including Housing) – denationalisation of property	Embarked on a reform programme that aimed to transform the Chinese economy from a centrally planned system to a market one	Greater market orientation and denationalisation of property
1982	1982 – Constitution (involving property and property rights)	The 1982 constitution provided for the "socialist public ownership" of the means of production, which takes two forms- state ownership and collective ownership	Collective ownership separated further from state ownership
1987	Government establishment of Yantai Housing Savings Bank	The government demonstrated its commitment to expanding mixed funding channels. Independent entity set up whose main business was to raise funds and provide loan services for the housing and real estate sector, to provide services for individuals such as individuals' housing savings and personal mortgage loans.	Private home loans enabled
1988	Implementation Plan for a Gradual Housing System Reform in Cities and Towns	Public housing units throughout the country started to be sold to their sitting tenants at heavily discounted prices. Work units significantly expanded housing production for their employees. Housing continued to be allocated as a welfare good to public employees. Public housing stock grew.	Market sale and build of public housing stock
1994	Deepening the Urban Housing Reform, which established a comprehensive framework for housing reform	Deepening the ECH - Middle- and low-income households, for example, would purchase subsidized affordable housing units produced through a program called ECH, while high-income families would purchase regular market housing units.	Programs to provide purchase of affordable housing (including a work based savings scheme for housing purchase)

	continued.	Deepening the HPF (from 1991) - aimed to raise funds from individuals and work units on the widest scale. Individuals and work units each were required to pay 5% of individuals' salaries to their HPF accounts. The money could be used for housing related purposes such as home purchase, repairs, and self-build activities.	
1998	1998 policies for new housing finance and market systems.	Abolishing direct distribution of housing by public-sector employers. Market housing, whether full-price market housing or government supported affordable housing, was to be the main source of urban housing supply. This reform is a major step toward the establishment of an urban housing market	Move towards an urban housing market
2004	2004 amendment involving property to Constitution of the People's Republic of China	The right to private property was written into the Constitution; The amendment states "Citizens' lawful private property is inviolable."	Full right to private property
2007	2007 Property Law of the People's Republic of China	Article 9 requires that creation, transfer, and destruction of immovable property rights requires registration to be effective. The law covers all of the three property types within the People's Republic of China, which are state, collective, and private which are defined in Chapter 5 of the law. Chapter 4, Article 40 of the law divides property rights into three types: ownership rights, use rights, and security rights. The law does not change the system of land tenure by which the state owns all land. However, in formalizing existing practice, individuals can possess a land-use right, which is defined in Chapter 10 of the law.	Rights tightened in property - law on ownership rights, use rights, and security rights.

FIGURE 5: TREND HEADLINES AND FINANCIAL RISK 'WHAT' TYPE ANALYSIS (SPREADSHEET SCORES)

FINANCIAL RISK 'WHAT' TYPE AND SCORE 0-10 (10 = MOST RISK) – ALL STAKEHOLDERS

3.1.4. *Test Case 3 - UK, United Kingdom*

For the UK, we can also see the broad sweep of marketisation in housing policy trend with increasing housing association provision (1961), the privatisation of public housing (throughout the 1980s), and more recent trends that attempt to safeguard impacts on homelessness (1996) and vulnerable renters (2004) (Table 4). In mapping financial risks against such trends, the 1980 Act that defined privatisation of housing sees financial risk spread over many stakeholder interests including financiers, developers and renters across all tenures (Figure 6). Arguably the public finance risk in the short term would be reduced as the public housing taken off the public balance sheet would cease to be a visible financial risk. Although risk to the public purse in other sectors in the longer term (such as health) may begin to feel the pressure in public service provision.

TABLE 4: CHRONOLOGY OF HOUSING POLICY TRENDS

Post-War Housing Acts of Parliament in the UK

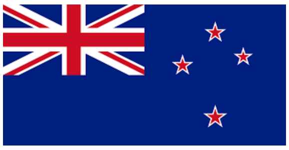
Year	Policy Trend – Key Housing Acts	Description key points	Policy Trend Intention
1957	Housing Act 1957	Provisions for securing the repair, maintenance and sanitary condition of houses. Clearance and Re-development. Abatement of Overcrowding. Provision of housing accommodation. Financial Provisions	Renewal and regulation standards
1961	Housing Act 1961	Exchequer subsidies for new housing accommodation Advances to housing associations providing housing accommodation for letting	Housing association increase
1969	Housing Act 1969	Provision for payments in respect of unfit houses subject to compulsory purchase, clearance, demolition or closing orders. Also altered the legal standard of fitness for human habitation and confer additional powers on local authorities to require the repair of houses	Further Renewal and regulation standards
1980	Housing Act 1980	Gave five million council house tenants in England and Wales the Right to Buy their house from their local authority. (seen as a defining policy of Thatcherism).	Privatisation of public housing
1985	Housing Act 1985	The act introduced laws relating to the succession of Council Houses. It also facilitated the transfer of council housing to not-for-profit housing associations. Paragraph 236 Replicates the 1935 Housing Act, Part 10, including using space standards as a means by which to control overcrowding. A breach of these standards is a criminal offence.	Further transfer of public housing to housing associations
1988	Housing Act 1988	It governs the law between landlords and tenants. The Act introduced the concepts of assured tenancy and assured shorthold tenancy.	Less permanency for public housing rental tenants

Table 4: Chronology of Housing Policy Trends (Continued)

1996	Housing Act 1996	Part VII of the Act concerns the duties that a local authority has to homeless people and when these duties arise. Section 189 of the Act concerns the "priority need" hurdle that a homelessness application must pass for a Council to have a duty to provide interim accommodation	Housing Homeless measures
2004	Housing Act 2004	Significantly extends the regulation of houses in multiple occupation by requiring some HMOs to be licensed by local authorities. Provides the legal framework for Tenancy Deposit Schemes, which are intended to ensure good practice regarding deposits in assured shorthold tenancies and make dispute resolution relating to them easier.	Regulatory safeguards for tenants to reduce overcrowding and deposit extraction

FIGURE 6: TREND INTENTION AND FINANCIAL RISK 'WHOM' TYPE ANALYSIS (SPREADSHEET SCORES) FINANCIAL RISK 'WHAT' TYPE AND SCORE 0-10 (10 = MOST RISK)

3.1.5. Test Case 4 – NZ, New Zealand



For New Zealand, at a national scale housing policy trends have encouraged market engagement given its high proportion of residential ownership, with social housing provision being more a concern for those in need. This is set alongside greater trend concerns over unaffordable housing for the middle class, as property prices have disproportionally risen against wages in many locations. Since 1992 as a timeline we have seen the commercialisation of public housing whilst being softened with demand side subsidies (1992, 2000). Housing policy trend intentions despite the financial economic imperative, have sometimes focused on the physical construction standards (1991, 2004) given the often-poor quality of build. Of more importance as mentioned has been attempts to deal with housing affordability and affordable housing, driving sub-set intentions such as encouraging developer cross-subsidies (2008), a repeal of the affordable housing act (2010), and zoned approaches to try and spatially contain the problem (2013) (Table 5). In mapping these trends against the financial risk, the risks are interestingly mixed, although we see a significant increase in market risk at points of intention to commercialise public housing (1992), a deregulation of construction supply chain (1991), and the push to make the housing system even 'freer' in a largely free market (2010) (Figure 7).

Table 5: Chronology of Trends - Descriptive

Source: Author, adapted from Murphy (2014)

Year	Policy Trend – Principal Policies and Legislation (e.g. Acts and Bills)	Description	Policy Trend Intention
1992	Housing Restructuring Act (1992)	State housing agency was required to make a profit and market rents were introduced into the state housing sector + towards a tenure neutral demand side subsidy, the Accommodation Supplement was introduced to assist all low-income households with their housing costs.	Commercialise public housing whilst subsidizing demand
1991	Building Act 1991 and the Resource Management Act (RMA) 1991	The Building Act 1991 sought to reduce regulatory barriers to consumer choices and facilitated new housing materials and techniques. The RMA introduced a new effect-based planning system	Deregulation of construction supply chain alongside positive planning incentives

Table 5: Chronology of Trends - Descriptive Continued

2000	Housing Restructuring (Income Related Rents)Amendment Act in 2000	This Act reinstated income-related rents in the state sector and restructured the organisations involved in the provision of state housing. Retained the Accommodation Supplement	Social rents revitalised with continued demand subsidy
2004	New building act was introduced in 2004	In 2009, the leaky building crisis was estimated to have affected between 22 000 and 89 000 dwellings, and the total economic cost of the problem was estimated at NZ$11 billion	Improve construction quality standards
2008	Affordable Housing: Enabling Territorial Authorities Act 2008	In line with other nations with liberalised mortgage markets, real house prices rose 80 per cent between 2002 and 2008. the Act allowed 'local councils to adopt an affordable housing policy requiring developers to make an affordable housing contribution'	Developer cross subsidy payment
2010	Repeal of Affordable Housing:	Enabling Territorial Authorities Act in 2010 National government has sought to promote market-based solutions to housing issues.	Encourage 'free' markets in housing
2013	Housing Accords and Special Housing Areas Bill enacted in 2013	Identify special housing areas, where housing is deemed unaffordable, and to enter into an agreement (accords) with local authorities to facilitate the fast tracking of land supply for residential developments.	Zoned development by local authorities

Figure 7: Trend headlines and financial risk 'what' type analysis (charts)

Financial Risk 'What' Type and score 0-10 (10 = Most Risk) - All Stakeholders

4. New Zealand Driver Focus on Downside of Risk

This final section brings forward some key aspects of New Zealand housing policy trends and financial risk that can be drawn out as discussion from the literature. Firstly, we observe that in New Zealand there is tendency to focus on the downside of financial risk in terms of known probabilities, rather than seek out unknown upside financial risks that may have escaped detection. This means that the New Zealand housing policy intentions tend to be more risk averse in policy, despite the high financial risk that is embedded in the housing system due to its significant market orientation held as household property wealth across a great proportion of its population.

In discussing who should take on the risk, housing policy trends that take on bonds at the local government level may see a more risk averse central government, but simply devolving the risk down to local government. Skidmore (2014) concludes that any risk devolved to a smaller government scale could be offset risk towards developers, although this is advised in some trade-off by cutting the length and variability in time to obtain regulatory consent. More specifically, this risk would be reduced only in larger scale housing projects could be encouraged, as this would allow a combination of subnational and national governments taking on shares of the risks as seen in similar financing of infrastructure (Skidmore, 2014).

Other examples that indicate New Zealand as having a focus on the downside of risk in housing policy trend, particularly in its intention, is when looking at private household lending rates. For instance, rental investment yields have fallen gradually from 6% to 7% in 1997 to 3.5% to 5% in 2017 (Johnson et al, 2018). As a result, these rental income yields are often less than some mortgage interest rates and/or close to low-risk deposit rates. This means that investment in rental as an aggregate for the country is similarly viewed as low-risk with regards to investment returns.

Consent and regulatory practices have to some extent tried to ensure financial risk is contained by those making the risks in a predominantly private market. For instance, local authorities have become risk averse following the Leaky Building crisis and tend to be conservative in building consenting practices (Johnson et al, 2018). Furthermore, costs associated with improvements required by the WOF (Warrant of Fitness – Proposed for Housing) are aspired to be carefully managed via implementation planning in order to reduce the financial risk being shifted onto tenants (Howden-Chapman et al., 2018). If this risk is transferred to the tenant it may be undetected risk, as tenants often avoid going to the Tenancy Tribunal because they do not want to negatively impact their relationship with the landlord and risk their tenancy being revoked (BRANZ, 2017).

For social housing and the focus on the downside

of financial risk, most literature available considers the more operating risks as would be detected in budgets and accounts. That said, the main risks arising from the Housing New Zealand Corporation (HNZC) Group's financial instruments are interest rate risk, liquidity risk and credit risk. These risks fall outside of the operational risk and to mitigate, the Board reviews and agrees policies for managing each of these risks (HNZC, 2017). We see therefore that the downsides of risk are considered here, rather than also demonstrating the upside of the risk that may yield some reward. The downside of a contribution to affordable housing has also been seen to outweigh the upside. As an example, The Affordable Housing Enabling Territorial Authorities Act, 2008 gave local councils the ability to require affordable housing contributions. Here local councils found the requirements complex, costly and risky, and no government subsidy was provided (Austin et al, 2014) – and quite possibly some hidden political risk.

4.1. New Zealand Expanding Drivers, and Financial Exposure: Towards Greater Risk?

From the New Zealand literature on housing policy trends and financial risk it is discussed that given the waves of policy intension, the economy is moving towards a greater exposure of financial risk. A policy that has encouraged house price growth can often risk overvaluation of assets when heated. In a study of actual (real) house prices relative to fundamental (real) house values in New Zealand for the period 1970-2005 it was found that much of the overvaluation of the housing market is found to be due to price dynamics rather than an overreaction to fundamentals (Fraser et al., 2017).

Hence market risk is certainly visible, and often driven by the fueling of market prices. Risk in this instance may further drive risk exposure in other sectors of the economy such as a drag on productivity. It is argued that high house prices skew savings and investment away from more productive, tradeable sectors, increase macroeconomic risks, and exacerbate the impact of the business cycle (MBIE, 2017).

Reasons behind such house price increase is now held with greater concern for risk on credit lending that was previously more sheltered during the last Global Financial Crisis (GFC). Securitisation was nowhere near as prevalent as in the United States and there was not the same disassociation between lenders and borrowers (The New Zealand Productivity Commission, 2012). The sharp rise in house prices in New Zealand during the 2000 and 2010s have reflected a number of cumulative demand-side factors against a degree of stickiness in housing supply.

The next property downturn in the cycle will certainly reveal the greater risks taken by borrowers and lenders, where less regard has been given to intermediation between lender (bank) and borrower (private investors) in New Zealand. Risk exposure is widening at all points on the income spectrum, where high and low concentrations of at-risk groups try to access housing ownership without regard for risk of a downturn or change in financing.

Homeownership and its unaffordability often feature in the risks in an upward inflating housing market. Capital-rent relationships have inherent financial risk. The continual rise of unaffordability in the last 2 decades is compounding financial risk, as those that seek to own capital become more highly geared (REAU, 2018). For many marginalised, and as representative of a high proportion of minority groups, the decline in home ownership among Māori and Pacific people could affect their ability to accumulate wealth and pass it to the next generation (Statistics New Zealand, 2016).

Furthermore, a period where rents increase at a significantly higher rate than incomes would result in further pressure on already stressed lower-income households and would likely result in an increase in Accommodation Supplement expenditure (New Zealand Productivity Commission - NZPC, 2012). For those with no choices in private ownership or private renting, need will fall to public provision, which also is being increasingly becoming more risk prone. A shifting of risk in the public sector as previously mentioned needs to be managed in a way that does not create fiscal risks elsewhere in the welfare, social service, and justice systems (NZPC, 2012). As such we see housing policy trends driving further financial risk, whilst simultaneously the financial risks in the system encouraging a policy of risk taking that may not be equipped to take it on (e.g. local authorities).

5. Conclusion

To conclude, we have put forward an outline of conceptual thinking of what is meant by risk, financial risk and housing policy trends with respect to their intentions. As well as intensions, the core drivers of risk as themed in the literature have been explained – as drivers of financial liberalisation, innovation, political commitment and asset management.

The study has enabled a new conceptual model for the quantitative analysis of housing policy trends and financial risks – 'what' and 'by whom'. In testing out the model with case focus on United States, United Kingdom, China and New Zealand, we demonstrated some of the chronology of trends, descriptions and intentions that map against financial risk either in terms of what type of risk, or who as stakeholders incurs the risk. The case study literature of New Zealand discussed the argument that there is tendency to focus on the downside (rather than upside) of financial risk when it comes to housing policy trend intentions, particularly of known probabilities rather than those that are hidden. Moreover, for New Zealand, the outcome of housing policy trends have arguably seen a greater exposure of financial risk.

6. Further Research

This initial study sets the scene for more empirical analysis. The next steps for the research is to gather data as online survey/questionnaire in New Zealand as distributed to multiple stakeholder senior staff engaged with risk in the housing and residential property sector. The results will be quantitatively modelled to score and indicate correlations of policy intension and risk, and results will also qualitatively validate model and draw out further reasoning 'why' answers were determined. Deeper exploration will be made in terms of systematic (internal institutional) and unsystematic (external institutional) reasons, as well as the focus on managing the downside/upside of financial risk when mapping to the housing policy trends and intentions.

7. Author Biography

Graham Squires is Associate Professor *(Appointed Professor commencing 1 January 2019)* and Head of Property Group at Massey University, New Zealand (PhD – University of Manchester, UK).

Graham has published extensively in top-ranked journals on Property Economics and Public Policy. He is Executive Director of the Massey University Property Foundation, a fund for the advance of property teaching and research in policy and practice. Furthermore, he is Director for the Real Estate Analysis Unit (REAU) at Massey University. He has been a visiting scholar at the University of California Berkeley, awarded by the prestigious Fulbright US–UK Visiting Scholarship Program; visiting researcher to University of Illinois, United States; and visiting scholar to Delft University, The Netherlands.

He is Author of Urban and Environmental Economics, Co-editor of International Approaches to Real Estate Development, and Co-editor of the Companion to Real Estate Development. Graham regularly comments to the media on housing affordability and other property related issues. He is on the editorial board of the Property Management Journal, and board member of the Pacific Rim Real Estate Society. He has been invited speaker to many academic seminars, consultancies and professional bodies. Reviewing work has been with international grant and political councils – the most prominent being the UN (United Nations).

8. References:

General Literature

Ball, M. (2013). Housing policy and economic power: the political economy of owner occupation. Routledge.

Beer, A., Kearins, B., & Pieters, H. (2007). Housing affordability and planning in Australia: the challenge of policy under neo-liberalism. Housing Studies, 22(1), 11-24.

Boelhouwer, P. (2002). Trends in Dutch housing policy and the shifting position of the social rented sector. Urban Studies, 39(2), 219-235.

Bratt, R. G., Vidal, A. C., Schwartz, A., Keyes, L. C., & Stockard, J. (1998). The status of nonprofit-owned affordable housing: Short-term successes and long-term challenges. Journal of the American Planning Association, 64(1), 39-51.

Bruno, V., & Shin, H. S. (2015). Capital flows and the risk-taking channel of monetary policy. Journal of Monetary Economics, 71, 119-132.

Calza, A., Monacelli, T., & Stracca, L. (2013). Housing finance and monetary policy. Journal of the European Economic Association, 11(s1), 101-122.

Crook, A. T. D., & Whitehead, C. M. (2002). Social housing and planning gain: is this an appropriate way of providing affordable housing?.Environment and Planning A, 34(7), 1259-1279.

Favilukis, J., Ludvigson, S. C., & Van Nieuwerburgh, S. (2017). The macroeconomic effects of housing wealth, housing finance, and limited risk sharing in general equilibrium. Journal of Political Economy, 125(1), 140-223.

Gibb, K. (2002). Trends and change in social housing finance and provision within the European Union. Housing studies, 17(2), 325-336.

Gibb, K. (2011) 'Delivering new affordable housing in the age of austerity: housing policy in Scotland', International Journal of Housing Markets and Analysis, 4(4), pp. 357–68

Gibb, K., & Whitehead, C. (2007). Towards the more effective use of housing finance and subsidy. Housing Studies, 22(2), 183-200.

Gibb, K., Maclennan, D., and Stephens, M. (2012) Innovative financing of affordable housing international and UK perspectives. York: Joseph Rowntree Foundation

Gibb, K., McNulty, D., & McLaughlin, T. (2016). Risk and resilience in the Scottish social housing sector:'We're all risk managers'. International Journal of Housing Policy, 16(4), 435-457.

Green, R. K., & Wachter, S. M. (2007). The housing finance revolution. U of Penn, Inst for Law & Econ Research Paper, (09-37).

Horcher, Karen A. (2005). Essentials of financial risk management. John Wiley and Sons.

Hutchison, N., Squires, G., Berry, J., Adair, A., McGreal, S., Organ, S.. Lo, D. (2016). 'Financing Infrastructure Development: Time to Unshackle the Bonds?' in Journal of Property Investment and Finance, Vol 34, No. 3, pp. 208-224

Investopedia. (2018). Investopedia: Financial Risk. https://www.investopedia.com/terms/f/financialrisk.asp [Accessed 8th January 2018]

Kim, K.H., 1997. Housing finance and urban infrastructure finance. Urban Studies, 34(10), pp.1597-1620.

Lawson, J., & Milligan, V. (2007). International trends in housing and policy responses. AHURi. http://www.iut.nu/Literature/2007/InternTrendsHousingPolicyResponses_LawsonMilligan2007.pdf

Lin, T. C. (2010). A Behavioral Framework for Securities Risk. Seattle UL Rev., 34, 325.

Malpezzi, S. (1990). Urban housing and financial markets: some international comparisons. Urban Studies, 27(6), 971-1022.

Man, J. Y., Zheng, S., & Ren, R. (2011). Housing policy and housing markets: Trends, patterns, and affordability. China's Housing Reforms and Outcomes, Cambridge, Mass.: Lincoln Institute of Land Policy.

Miles, D. (1992). Housing markets, consumption and financial liberalisation in the major economies. European Economic Review, 36(5), 1093-1127.

Monk, S., Crook, T., Lister, D., Rowley, S., Short, C., & Whitehead, C. M. E. (2005).
Land and finance for affordable housing. York: Joseph Rowntree Foundation

Mukhija, V. (2004). The contradictions in enabling private developers of affordable housing: a cautionary case from Ahmedabad, India. Urban Studies, 41(11), 2231-2244.

Mullins, D., Murie, A., & Leather, P. (2006). Housing Policy in the UK. Palgrave

Okpala, D. C. (1994). Financing housing in developing countries: a review of the pitfalls and potentials in the development of formal housing finance systems. Urban Studies, 31(9), 1571-1586.

Rolnik, R., 2013. Late neoliberalism: the financialization of homeownership and housing rights. International Journal of Urban and Regional Research, 37(3), pp.1058-1066.

Schwartz, A. F. (2013). Housing policy in the United States. Routledge

Shefrin, H. (2002). Beyond greed and fear: Understanding behavioral finance and the psychology of investing. Oxford University Press

Squires, G. (2013). Urban and Environmental Economics. Routledge.

Squires, G. and Hall, S. (2013). 'Lesson (Un)Learning in Spatially Targeted Fiscal Incentive Policy: Enterprise Zones (England) and Empowerment Zones (US)' in Land Use Policy, Vol. 33, pp. 81-89

Squires, G. and Hutchison, N. (2014). 'The life and death of Tax Increment Financing (TIF) for redevelopment: Lessons in affordable housing and implementation' in Journal of Property Management, Vol. 32, No. 5, pp. 368-377

Squires, G. and Lord, A. (2012). 'The transfer of Tax Increment Financing (TIF) as an urban policy for spatially targeted economic development initiatives' in Land Use Policy, Vol. 29, No. 4, pp. 817-826

Squires, G., Hutchison, N., Berry, J., Adair, A., McGreal, S., Organ, S.. (2016). 'Innovative Real Estate Development Finance – Evidence from Europe' in Journal of Financial Management of Property and Construction, Vol. 21, No. 1, pp. 54-72

Thaler, R. H. (2015). Misbehaving: The making of behavioral economics. Penguin

Wallace, J. E. (1995). Financing affordable housing in the United States. Housing Policy Debate, 6(4), 785-814.

Wang, W., Liu, Z., & Wu, Y. (2018). Study on the Affordable Housing Policy in China's Urbanization Process. In Proceedings of the 21st International Symposium on Advancement of Construction Management and Real Estate(pp. 1355-1363). Springer, Singapore.

Wang, Y. P. (2001). Urban housing reform and finance in China a case study of Beijing. Urban Affairs Review, 36(5), 620-645.

Warnock, V. C., & Warnock, F. E. (2008). Markets and housing finance. Journal of Housing economics, 17(3), 239-251.

Wyly, E. K., & Hammel, D. J. (1999). Islands of decay in seas of renewal: Housing policy and the resurgence of gentrification.

Yeung, S. C. W., & Howes, R. (2006). The role of the housing provident fund in financing affordable housing development in China. Habitat International, 30(2), 343-356.

Zhang, X. Q. (2000). The restructuring of the housing finance system in urban China. Cities, 17(5), 339-348.

NZ Literature

Austin, P. M., Gurran, N., & Whitehead, C. M. (2014). Planning and affordable housing in Australia, New Zealand and England: common culture; different mechanisms. Journal of Housing and the Built Environment, 29(3), 455-472.

BRANZ. (2017) The New Zealand Rental Sector Report ER22. Wellington: BRANZ

Dykes, P. (2018). The quasi-market approach: the answer for social housing in New Zealand?. Policy Quarterly, 12(2).

Fraser, P., Hoesli, M., & McAlevey, L. (2008). House prices and bubbles in New Zealand. The Journal of Real Estate Finance and Economics, 37(1), 71-91.

Housing New Zealand Corporation. (2017). Annual report 2016/2017. Housing New Zealand Corporation

Howden-Chapman, P., Baker, M. G., & Bierre, S. (2018). The houses children live in: policies to improve housing quality. Policy Quarterly, 9(2).

Johnson, A (2017) Taking Stock: The Demand for Social Housing in New Zealand.

Johnson, A., Howden-Chapman, P., Eaqub, S. (2018). A Stocktake of New Zealand's Housing. Crown Copyright. https://www.beehive.govt.nz/sites/default/files/2018-02/A%20Stocktake%20Of%20New%20Zealand%27s%20Housing.pdf [accessed 22nd February 2018]

Lawson, J., & Milligan, V. (2007). International trends in housing and policy responses. AHURi. http://www.iut.nu/Literature/2007/InternTrendsHousingPolicyResponses_LawsonMilligan2007.pdf [accessed 22nd February 2018]

Ministry of Business Innovation and Employment (2017). Briefing for the Incoming Minister of Housing & Urban Development 25 October. Wellington: MBIE. 143

Ministry of Social Development (2017) Social Housing Update – December 2017

Murphy, L. (2011). The global financial crisis and the Australian and New Zealand housing markets. Journal of Housing and the Built Environment, 26(3), 335.

Murphy, L. (2014). 'Houston, we've got a problem': The Political Construction of a Housing Affordability Metric in New Zealand. Housing Studies, 29(7), 893-909.

New Zealand Productivity Commission (2012). Housing Affordability Inquiry. Wellington: New Zealand Productivity Commission

Skidmore, M. (2014). Housing affordability: lessons from the United States. Working Papers in Public Finance. WORKING PAPER 07/2014. VUW – Victoria University Wellington

9. About the Foundation

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- The Foundation is an independent New Zealand registered Charitable Trust whose core objective is research and where the principle purpose is advancing education in the field of valuation in a manner that meets our charitable objectives and has a public benefit.
- The Foundations aims to commission, fund and resource quality and robust research and educational material within the scope of property valuation and property related issues. The intention is for research outputs to be of practical use with a focus on current or emerging property and valuation issues, to develop new methods and critical thinking and to fill knowledge gaps.
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