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MATURITY OF THE AUSTRALIAN AND CHINESE HOUSING MARKETS: A COMPARATIVE STATUS REVIEW

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ABSTRACT

Each property market is inherently unique due to institutional differences in various factors such as lease law, planning protocols and land titling procedures. To acquire a greater understanding of a property market's nature and potential performance in the future, market maturity concepts have been developed principally for commercial property and applied to analyse different markets around the world. This paper aims to develop this approach and to compare the level of maturity of housing markets in Australia and China. It is underpinned by three research questions. What are the key components of housing market maturity? What is the current maturity level of the housing markets in Australia and China? What are the key lessons that can be drawn from the housing market maturity in Australia and China? To answer these questions, the paper firstly conducts a review of the literature on market maturity. Secondly, a framework of key components of housing market maturity is developed from the synthesis of literature review findings. Thirdly, the paper applies the framework to the case studies of Australia and China to comparatively analyse housing market maturity in both countries. Lastly, the paper draws key lessons from the two case studies for promoting housing market maturity.

Keywords: housing, markets, maturity, regulations, Australia, China

INTRODUCTION

The property market is widely recognised as an imperfect market with a definitive range of constraints on information availability and the flows of demand and supply. Nevertheless, each property market is inherently unique due to institutional differences in such factors as lease law, planning law and land titling procedures (Akinbogun *et al.*, 2014). Consequently, the concept of market maturity has been explored and developed since 1990 as a tool to analyse and compare property markets (Akinbogun *et al.*, 2014; Keogh and D'Arcy, 1994). However, these concepts have been explored in the context of commercial property markets, thus limiting their applicability to other property markets.

This paper seeks to develop the maturity concepts further by answering three research questions. What are the key components of housing market maturity? What is the current level of maturity of the housing markets in Australia and China? What are the key lessons that can be drawn from the housing market maturity in Australia and China? To answer these questions, the paper comprises five sections. Firstly, the paper conducts a review of the literature on market maturity and synthesises the findings into a conceptual framework of housing market maturity. Secondly, the paper applies the framework to analyse the maturity level of the Australian housing market. Thirdly, the framework is applied to the Chinese housing market. Fourthly, the paper comparatively discusses the key findings from the case studies and the relative level of maturity of both markets. Lastly, the paper concludes with key lessons for promoting housing market maturity.

LITERATURE REVIEW

Whilst the notion of market maturity has progressed since it was first conceptualised, it remains relatively undeveloped in the literature (Cohen and Galiniène, 2014). Furthermore, past maturity concepts have been developed primarily to compare and analyse commercial property markets. According to Seek (1995), different markets evolve through the same stages at a different pace: early development, immaturity and lastly, maturity. Similarly, a typical property market may evolve through different stages including 'an initial phase, an overbuilding phase, a maturing phase, a mature phase and, finally, a post mature phase' (Chin and Dent, 2005, p. 356). Keogh and D'Arcy (1994, p. 217), however, noted that market maturity should "be seen as a relative rather than an absolute achievement" given that future development of property market process may render the current perception and ideas of maturity outdated. Furthermore, market evolution is a process which is unique to each market due to structural and institutional differences across markets. As such, it can

be argued that no specific evolutionary path exists for emerging markets (Keogh and D’Arcy, 1994; Cohen and Galinienè, 2014). In addition, although market maturity can be used as an indicator of likely future performance of a market, it does not necessarily equate to market efficiency (Keogh and D’Arcy, 1994).

Keogh and D’Arcy’s (1994) market maturity principles are extensively perceived as the most comprehensive conceptualisation of market maturity (Armitage, 1996; Cohen and Galinienè, 2014; Chin and Dent, 2005; Lee, 1999). In its most simple form, a property market lacks “identifiable and separate markets for user and investor interests” (Keogh and D’Arcy, 1994, p. 216). On the other hand, a mature, sophisticated market can satisfy complex, differing requirements of users and investors through the existence of well-established real estate professions. Furthermore, they outlined six key indicators of market maturity, which are outlined in Table 1.

Table 1: Six key indicators of property market maturity (Keogh and D’Arcy, 1994)

Indicator	Description
Accommodation of a full range of use and investment objectives	The ability for the market to offer wide ranging opportunities to both property investors and users, including the extent to which issues of indivisibility in property transactions are overcome
Flexible market adjustment in the short and long terms	The ability for different stakeholders in the market to react flexibly to new development opportunities given new market conditions
Existence of a sophisticated property profession with its associated institutions and networks	The level of establishment of the property profession, the extent to which it is regulated by at least one professional body and the standards of education and entry for the profession
Extensive information flows and research activity	The quality of information base for the market, influenced by both qualitative and quantitative research by both academics and practitioners
Market openness in spatial, functional and sectoral terms	The openness of the market across the following dimensions: Spatial – openness to national and international stakeholders Functional – availability of opportunities across a broader geographical area, not only a specific area, of the market Sectoral – openness to other asset (i.e. non-property) markets
Standardisation of property rights and market practice	The extent to which property rights and market practice are standardised across the market

Similarly, according to Jones Lang LaSalle (2010), a mature property market is highly transparent from the availability of market information, fair transaction procedures and effective regulatory enforcement. Furthermore, it is strongly connected with international property markets. Although the six market maturity principles of Keogh and D’Arcy (1994) are useful as comparative framework, a broader set of criteria which look beyond economic indicators may be appropriate (Keogh and D’Arcy, 1994). In this regard, the size of the local real estate market and the security and accessibility of tenure could be included as additional indicators of property market maturity (Sweeney, 1993). The extent to which property services are developed and the presence of foreign investors and funds in the market can also influence the level of market maturity (Cohen and Galinienè, 2014; D’Arcy and Keogh, 1998; D’Arcy and Keogh, 1999). Other institutional factors including information retrieval costs, withholding taxes, fees and other regulatory requirements can also affect performance of a property market (Geurts and Jaffe, 1996; D’Arcy and Keogh, 1996).

Lee (1999) analysed and compared the level of maturity across commercial property markets in 13 European countries. To do so, he developed seven indicators of market maturity which are briefly described in Table 2.

Table 2: Indicators of Commercial Property Market Maturity (Lee, 1999)

Indicator	Description
Market transparency	How easily and rapidly investors can obtain information and act based on the information
Standard Lease terms	The minimum or typical length of lease terms, which provides an indication of income security for landlords
Market liquidity	How easily property transactions can be conducted
Lessor obligations	The extent to which property-related costs can be recovered from lessees and the respective level of responsibility of investors and lessees
Tax regime	Transaction costs within the market
Tax efficiency	The extent to which tax liabilities can be reduced from property ownership
Exit liquidity	The rate at which property can be sold, which is dependent on the level of demand for property in the country

Figure 1 synthesises the findings from the literature review above into a holistic, original housing market maturity framework.



Figure 1: Conceptual Framework of Housing Market Maturity (Khanjanasthiti *et al.*, 2017)

As shown in Figure 1, the framework comprises seven key themes, each of which is underpinned by specific factors. The themes and their respective factors, listed and described in Table 3, are not mutually exclusive given that some themes are highly dependent on others to exhibit strong performance.

Table 3: Themes and Factors of the Conceptual Housing Market Maturity Framework (Khanjanasthiti *et al.*, 2017)

Theme	Description	Factor	Description
Opportunities	The market's ability to meet the needs of investors and users	Variety	The extent to which different objectives of property users and investors are satisfied through the variety of available opportunities in the market
		Distribution	Geographical distribution of opportunities for investors and users across the market, which can affect housing demand and affordability
Profession	The extent to which the property professions are developed in the market	Education standards	The level and quality of tertiary education provided for the various professional roles in the property market
		Entry requirements	The standard legal requirements for new entrants to the property professions, which can affect the level of knowledge and skills in the industry
		Professional bodies	The existence of professional bodies which regulate and oversee the property profession to ensure ethical, professional conduct in the industry
Information	The quality of information on various aspects of the property market for all stakeholders	Research activities	The level of research activities undertaken by both the academic and professional industries in the property market to continuously monitor any minor and major changes in market conditions
		Information quality	The reliability, transparency and accessibility of information on the market, which can be influenced by such factors as information retrieval costs and the frequency and channels of information dissemination
Regulations	The extent to which key aspects of the property market, which can impact the level of confidence among all stakeholders, are regulated	Tenure system	The security of the tenure system as well as its accessibility to parties and demographic groups in the market
		Standardisation	The level of standardisation of property rights and market practice across the market, which can affect market efficiency and liquidity
Liquidity	The ease, and consequently, the likelihood, of housing transactions	Resale	The pace at which a dwelling is expected to be sold, which can be influenced by the level of housing demand in the market
		Transaction	The ease with which property transactions

Theme	Description	Factor	Description
			can occur, which can be enhanced by clear, conflict-free regulations and strong information transparency
Income security	The likely level of income security of lessors	Lease structure	The length and other terms of leases, which can affect the level of vacancy of rental dwellings
		Lessor obligations	The relative level of lessors and lessees' responsibility for their rental dwellings and the extent to which maintenance costs can be recovered from lessees
		Tax regime	The range of tax liabilities and benefits from various levels of governments for lessors
Internationalisation	The extent to which the market is open to and involves overseas participants, which can bring additional housing supply and demand to the market	International openness	The extent to which the market is open to foreign participants, which can be influenced by government regulations
		Foreign investment	The level of foreign investment in the market

The paper now applies the housing market maturity framework to the case studies of Australia and China to comparatively analyse their respective housing market maturity.

AUSTRALIA CASE STUDY

Introduction to Case Study

Having been settled by Aboriginal and Torres Strait Islander people for the past 60,000 years, Australia transitioned from a group of British colonies to become the Commonwealth of Australia in 1901. As a relatively young country with a population figure of 24 million and an unemployment rate of 5.6% as at September 2016 (Australian Bureau of Statistics, 2016), With a developed economy, Australia is located in the Oceania region and is the sixth largest country in the world with a total area of approximately 7.7 million square metres (Geoscience Australia, 2016).

The housing market in Australia plays an important role in the country's economy. As the most important asset among Australian households, housing serves dual purposes "as an investment vehicle and a durable good from which consumption services are derived" (Kohler and van der Merwe, 2015, p. 21). Furthermore, it plays a critical role in terms of backing the financial sector's balance sheet given that the majority of mortgages and small business loans are secured against housing. Therefore, changes in housing prices have major impacts on the behaviour of several stakeholders and economic variables (Kohler and van der Merwe, 2015).

Opportunities

Australia's historical settlement pattern has led to a metropolitan primacy structure, in which the capital city of each state is significantly larger than the second largest city in the state (Department of Infrastructure and Regional Development, undated). With larger population centres providing an attractive range of services and employment facilities, metropolitan areas have been and continue to be the centres of population settlement, which results in rapidly increasing housing demand in the capital cities (Australian Government, 2010). Due to the high demand, housing construction and investment activities are mainly concentrated in these capital cities, implying limited geographical distribution of opportunities for both buyers and investors alike.

The housing markets in five major state capital cities in Australia, namely Sydney, Melbourne, Brisbane, Adelaide and Perth, are classified as “severely unaffordable” due to the high housing demand described above as well as limited land availability driven by urban containment policies (Cox and Pavletich, 2016, p. 15). Consequently, the majority of lessees and first-home buyers have been unable to find appropriate housing which meets their needs (Birrell and McCloskey, 2015). The increase in housing prices is being driven by the demand of investors and existing home owners. These market participants have been able to afford housing in these cities due to their relative ease of access to mortgages, driven by a historical increase in average household income. Furthermore, negative gearing and capital gains tax discounts, which will be described further under the income security discussions, have enabled investors to purchase housing in these markets (Birrell and McCloskey, 2015).

Profession

The legal requirements for professionals and property businesses to practise in the property industry vary across all states in Australia. The legislative variance may constrain market efficiency given that a property professional may need to apply for licensing and satisfy different state requirements in order to practise in another state.

The Australian Property Institute (API) is the largest professional body that represents the property professions in Australia with approximately 8,600 members. To become an API member, a property professional needs to meet the minimum level of qualifications and experience set by the organisation. All API members must satisfy annual Continuing Professional Development requirements of the institute (API, undated). As at September 2016, the API has accredited 32 property-related tertiary courses offered by 15 universities (API, 2016a). Furthermore, the Royal Institution of Chartered Surveyor (RICS), a global professional body representing several property professions, has accredited 52 courses offered by 11 universities across the country. These industry accreditations, which specify key graduate outcomes that must be maintained by the tertiary courses, imply a “strong nexus between the academic and the professional content” (Susilawati and Armitage, 2011, p. 2). The Real Estate Institute of Australia (REIA) is another major professional body for the Australian property industry. By becoming a member of a professional body, a property professional is expected to follow the code of conduct of the professional body(s). However, membership of these organisations is not essential to become a property practitioner in most circumstances.

Information

The private sector is highly active in property market research with reports and articles published online on a regular basis by several companies such as Knight Frank (2016a, 2016b) and Jones Lang LaSalle (2016a; 2016b). Furthermore, Australian banks, as lenders, and several government authorities regularly publish housing market reports (e.g. Westpac and Herron Todd White, 2016; Reserve Bank of Australia, 2015). Whilst both the API and REIA regularly publish property-related news on their websites, the API publishes the Australia and New Zealand Property Journal magazine quarterly as well as professional and educational texts. Moreover, 98% of housing market in Australia is continually tracked by RP Data Professional, an online housing database. The database can be used by property professionals and academics to “prepare reports for clients, value estimates, verify information and conduct valuable research and highly targeted marketing” (CoreLogic, 2016).

Australia regularly hosts several property-related conferences. Furthermore, the API (2016b) and REIA branches (e.g. REIV, 2016) organise several events throughout the year. These events can assist in the continual improvement of knowledge base among property professionals in Australia.

Regulations

Land ownership in Australia is predominantly under the Torrens Title system. Introduced in 1862, it ensures “greater surety and protection of the parties involved in land dealings” and simplifies the country’s land tenure system (Donnelly, 2012, p. 7). Under this system, all interests and rights in a land parcel are captured in a single Certificate of Title, which guarantees land owners with “Indefeasibility of Title”, or conclusive evidence of land ownership (Donnelly, 2012, p. 7). In this regard, Torrens Title effectively eliminates grounds for the majority of disputes, reduces costs associated with land transactions and prevents the consequences of lost certificates. Furthermore, the indefeasibility of title provided by the system ensures land

ownership cannot be challenged or overturned (REISA, 2016). As such, the tenure system in Australia is highly secure.

The different states in Australia are governed by their respective state government and legislation. Consequently, property and land title legislation, which impacts property rights and transactions, varies across the states. For example, property rights in New South Wales are protected by the state's Real Property Act 1900 whereas property rights in Queensland are specified in Queensland Government's Property Law Act 1974. This structure implies a relatively low level of standardisation of property rights and market practice across the country, which could inhibit market efficiency although each jurisdiction is interpreting the same range of land tenure principles.

Liquidity

Auction clearance rates, which show the percentage of auction properties being sold at auction in a specific period, can be used to measure resale liquidity. In August 2016, the weighted average auction clearance rate across capital cities reached 76.6%, the highest level seen in over a year, in comparison to the 2015 figure of 72.9% (Scutt, 2016). These figures suggest that the resale liquidity in the Australian market is not only high but also currently on the rise due to a high level of consumers' demand (Duke, 2014).

However, the majority of investors in the housing market are "ordinary mums and dads" (REIA, 2014, p. 12). In stark contrast to other markets such as the United States and the United Kingdom, institutional investors have historically played "a negligible role" in the Australian housing market (Newell *et al.*, 2015, p. 3). Therefore, promoting institutional involvement in the housing market is a potential strategy to increase housing demand and resale liquidity in Australia further.

The strong information availability in the Australian market effectively increases the knowledge base of not only buyers but also sellers. Thus, they are more likely to engage in an exchange of residential property at market value. Furthermore, as discussed previously, all property transactions are regulated by state legislation to ensure security and fairness in property transactions for all parties involved. For example, in Queensland, to protect the rights and interests of property buyers, they are given a five-day cooling off period to consider the offer once they sign a contract to proceed with a property transaction. These factors indicate a high level of transaction liquidity in Australia.

Income Security

The rights of both lessees and lessors are well-protected by the lease law in each state. Discrimination against potential lessees is prohibited in Australia under both Commonwealth legislation and state legislation (e.g. Anti-Discrimination Commission Queensland, 2015; Australian Human Rights Commission, undated; NSW Fair Trading, 2016a). As such, all people have equal opportunities to enter the residential market as lessees regardless of their race, gender, disability, age and marital status.

Lessees are required to pay advance rent and a rental bond, which serves as a security deposit to cover unexpected expenses. Upon a lease conclusion, the lessee must ensure the property's condition, apart from wear and tear, is identical to the initial condition of the property when the lease commenced. On the other hand, lessors generally must ensure that (NSW Fair Trading, 2016b):

- All installations (e.g. electricity and gas) are operational;
- Potentially health-threatening issues such as damp are addressed;
- The property and common areas are maintained in reasonable repairs; and
- The property is secured with locks.

Rental income in Australia is included as part of annual personal income and is therefore subject to the country's income tax rates. However, as previously mentioned, two tax incentives, namely negative gearing and capital gains tax discounts, have acted as major drivers of housing investment activities. Negative gearing occurs when the costs to repay borrowed funds and maintain an investment property exceed the income from the investment. In Australia, such a net loss on a negatively geared asset can be used to reduce the amount of tax payable on other income, thus effectively increasing the investor's wealth through borrowing and investing (Australian Taxation Office, 2015). On the other hand, when assets, except for personal assets including principal place of residence, are sold at a profit, real capital gains are subject to the

country's capital gains tax. Conversely, a capital loss can be used to reduce a capital gain in the same income year. The tax scheme, which initiated in 1985, was modified in 1999 with the allowance for most individuals and small businesses to receive up to 50% capital gains tax discount for assets held for longer than one year. (Australian Taxation Office, 2016).

Internationalisation

In Australia, foreign buyers can purchase dwellings provided they acquire a prior approval from the Foreign Investment Review Board (FIRB). Under the FIRB's foreign investment framework, only dwellings which increase housing stock in Australia, can be purchased by foreign buyers (FIRB, 2016). Figure 2 displays the number of applications for FIRB approvals in the Australian real estate market, which includes both commercial and residential markets, from 2009-10 to 2014-15.

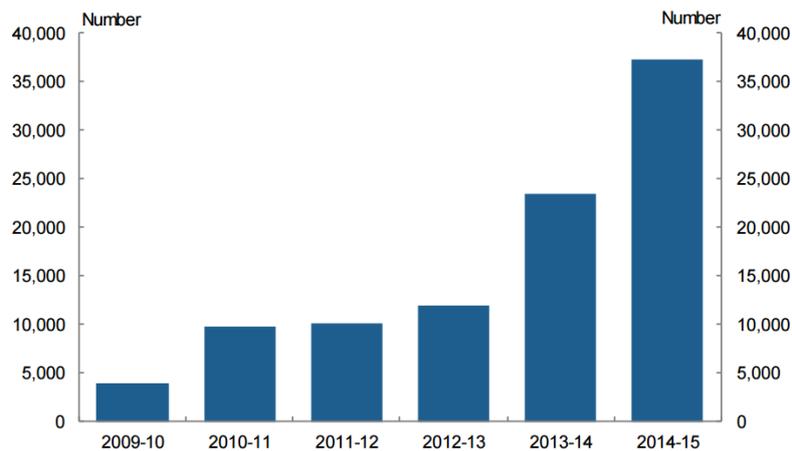


Figure 2: FIRB applications in the Australian real estate sector from 2009-10 to 2014-15 (FIRB, 2016)

As shown in Figure 2, the number of FIRB applications have been increasing substantially, particularly since 2012-13. In 2014-15, a significant increase in FIRB approvals can be observed. In this period, approximately 37,000 transactions, the majority of which were related to dwellings, were approved. Furthermore, foreign investment in the residential sector increased from \$34.7 billion in 2013-14 to \$60.8 billion in 2014-15, an increase of more than 75% (FIRB, 2016). In addition, it has been estimated that foreign investment between 2004 and 2014 accounted for 5-10% and 2.5-5% of the total value and number of dwellings turned over, respectively (Gauder *et al.*, 2014). These figures indicate that the level of foreign investment in housing has been growing rapidly in Australia.

In December 2015, the FIRB implemented the following two key changes to its foreign investment framework:

- Stricter and more flexible penalties for breaching the requirements; and
- Introduction of application fees to foreign buyers.

The fees are progressive and increase according to the value of the dwelling (FIRB, 2016). The penalties could lead to better compliance with the foreign investment requirements. However, the fees represent additional transaction costs and may potentially diminish the future level of foreign housing investment.

Having analysed the maturity of the housing market in Australia, the paper now applies the conceptual framework to analyse the Chinese housing market.

CHINA CASE STUDY

Introduction to Case Study

The People's Republic of China was founded in 1949. China covers a total area of approximately 9.6 million square metres with a population close to 1.4 billion (The State Council of the People's Republic of China, 2016). Between 2014 and 2050, urban population in China will increase by 292 million, the second largest figure among all countries (United Nations, 2015). This illustrates strong momentum for the expansion of housing demand in China over the next few decades (Yang and Chen, 2014).

The Chinese housing market did not transpire until the central government terminated the social housing system in 1998. Since then, the market has grown at an unprecedented rate ([Yang and Chen, 2014](#)). The housing market is currently one of the primary tools the Chinese government utilises to manage the country's economy (Ni, 2012; [Yang and Chen, 2014](#)).

Opportunities

Housing affordability has become a major issue in China (Yao, 2011). The national average dwelling price has increased by at least 50% over the past decade (Cooper and Cowling, 2015). Meanwhile, the wealth gap between homeowners and lessees has been expanding ([Yang and Chen, 2014](#)). Furthermore, the level of income inequality in China is one of the highest in the world, with the bottom 25% of all households owning 1% of the country's wealth (Wildau, 2016). According to Nu and Hu (2016), the rapidly increasing housing prices throughout China have not only stimulated developers to undertake large-scale construction projects for dwellings at a high price point but also reduced the purchasing power of residents. Thus, there is currently an oversupply of unaffordable dwellings for which demand is low. As such, there are limited opportunities for the majority of population in China to purchase or rent a dwelling that meets their needs. Meanwhile, housing supply is geographically uneven across the country. Whilst there is oversupply of housing in smaller cities, larger capital cities such as Beijing, Shanghai and Shenzhen are experiencing a housing shortage crisis (Yu, 2015).

Profession

Three professional bodies oversee property professions in China: China Real Estate Association (CREA), China Institute of Real Estate Appraisers and Agents (CIREA) and China Real Estate Valuers and Agents Association (CREVA). The CREA (2016), established in 1985, primarily comprises businesses and research institutions in the real estate sector. Its main responsibility is to research the country's property market and provide recommendations to both the government and industry accordingly. Meanwhile, the CIREA (2016) and CREVA (2010) have established education standards and entry requirements for different professional roles in the real estate sector. However, whilst these standards have been established to align with international standards, the property profession in China as a whole is still in a relatively infant stage. As such, it has been suggested that the country continues to learn from international standards and experiences in order to nurture the property profession in the country further (Liu, 1999; Wang and Wang, 2009).

Information

Yi (2005) argued that a major issue in the Chinese market is the lack of scientific, transparent and standardised information system. However, CIconSulting (2016) suggested that information transparency has increased in recent years. In this regard, housing market information in the majority of Chinese cities has been listed as 'semi-transparent' whereas larger capital cities are noted to be relatively more transparent in information availability. Nevertheless, significant amount of research on the housing market in China has been undertaken in order to provide suggestions for future government regulations. This is evident from the availability of 154,856 articles which matched the 'real estate market' keywords as at 16 September 2016 on the China National Knowledge Infrastructure website, a major online database of academic resources.

Regulations

Prior to the economic reform in the early 1990s, all land-related transactions were banned and land use rights were allocated to state governments ([Yang and Chen, 2014](#)). In May 1990, the State Council of the People's Republic of China issued the "Interim Regulations of the People's Republic of China Concerning the Assignment and Transfer of the Right to the Use of the State-Owned Land in Urban Area" policy to develop a market for land transactions. Under the current arrangement, the state is the ultimate owner of land in urban area whereas land in rural areas is owned by collective organisations. Furthermore, any land transaction involves transferring the rights to use the land for a specific period (up to 70 years for residential land) (Chen, 2011). In this regard, the time lag between the commencement of a land lease and the completion of a development will affect the total length of homeownership in the Chinese urban communities. Furthermore, the current legislative framework has not clarified the legal outcomes of a land lease conclusion (China Economic Review, 2013).

However, due to the rapid expansion of urban areas, rural land has increasingly become located in urban areas. Ownership on this type of land is not associated with any certificate of title and is regarded as housing with limited ownership title, which has led to several disputes (Huang, 2015).

Liquidity

To curb with the rapidly increasing housing prices, several local governments have recently implemented a Home Purchase Restriction programme to limit the increasing level of housing demand in their cities driven by investors. Such a scheme is associated with a combination or all of the following changes (Li, 2016):

- A limit on the maximum number of dwellings purchasable by one person;
- Increased down payments for home loans, particularly for those that already own a dwelling; and
- More stringent rules for auctions.

Furthermore, Moody's Investors Service (2016) has forecasted that the rapid price growth of dwellings is likely to "attract further regulatory tightening to moderate price growth" particularly in cities experiencing major housing affordability issues. The regulatory reform is likely to significantly reduce liquidity in the Chinese housing market. The Home Purchase Restriction programme in Beijing, for example, has resulted in up to a one-third decline in resale prices and a significant reduction in housing transactions across the city (Sun *et al.*, 2014).

Income Security

Similarly to Australia, lessees in China are required to pay a deposit to their lessors prior to renting a dwelling. The deposit, which typically covers three months of rent (Jones Lang LaSalle, 2014), can be used to cover repairs and unpaid bills after a lease concludes (Scout Real Estate, 2015). Lessees are charged 0.5% interest for each day of rent arrears. Furthermore, lessors can legally terminate a lease and acquire all the deposit if rent arrears remain unpaid for at least 20 days (Global Property Guide, 2006). Meanwhile, lessors are normally responsible for external or structural repairs as well as repairs of common parts such as lifts and stairs. However, the costs for these repairs are occasionally passed to lessees (Jones Lang LaSalle, 2014).

On the other hand, there is limited legal protection for lessees, who also often face discrimination from lessors in their access to rental property due to inadequate legislation (Man, 2011; Global Property Guide, 2006). As such, under the Chinese lease law, lessors' rights and income security are relatively more protected than lessees' rights (Scout Real Estate, 2015; Global Property Guide, 2006).

Investors of dwellings are subject to real estate tax. The tax is levied at 12% of annual rent for leased dwellings with rental income in Shanghai, Beijing and Guangzhou, and 1.2% of the annual rent for leased dwellings with no rental income. Furthermore, investors with more than one dwelling in their investment portfolio are subject to additional real estate taxes in Shanghai and Chongqing. Rental income is also subject to property tax, business tax and income tax. These taxes, which are combined into a 'comprehensive tax' by some local governments, range between 4% and 6.7% of annual rental income in Beijing, Shanghai and Guangzhou (Jones Lang LaSalle, 2014, p. 5).

Internationalisation

Prior to 2015, foreign buyers could purchase only one dwelling as a principal place of residence after working in the country for at least one year. The level of foreign investment in the Chinese housing market has been relatively limited in recent years with foreign buyers accounting for only 0.5% of all dwelling purchases in 2014 (Hewitt, 2015).

However, since 2015, foreign institutional buyers have been exempt from registration fees when acquiring loans for dwellings. In addition, both institutional and individual buyers from overseas are now able to purchase more than one dwelling given that there is no longer any restriction from the national government on the maximum number of dwellings in a foreign buyer's portfolio. However, local purchase limitations, such as Shanghai's single-property cap for all foreign individual buyers, still apply (Yiao, 2015). The relaxed restrictions on foreign purchasers may lead to additional level of foreign investment activities in the Chinese housing market.

Having analysed the maturity of the Chinese housing market, the paper now compares the key findings of housing market maturity in Australia and China.

COMPARISON OF KEY FINDINGS

Two key similarities exist between the Chinese and Australian markets. Firstly, both are experiencing issues of housing affordability in capital cities due to high demand driven by rapid population growth and the inability of new housing supply to keep up with such a level of demand. Secondly, property professions in both countries are overseen by several professional bodies.

However, several differences can be observed between both markets. The wealth of information on the housing market is relatively richer in Australia due to active research activities by various stakeholders across both the public and private sectors as well as a range of conferences in the property industry. On the other hand, in China, research activities have been conducted primarily to inform government regulations and there is a need to establish a more transparent, standardised information system. Regulations for land ownership are also more robust in Australia due to the indefeasibility of land titles granted by Torrens Title. Meanwhile, land ownership in China is under leasehold with uncertainty as to what happens after the leases' conclusion. Due to the high demand, strong information availability and robust legislation on transactions, liquidity is higher in the Australian market than the Chinese market where liquidity is expected to be significantly reduced by Home Purchase Restriction policies. Income security is relatively higher in the Australian market due to two tax incentives for investors, namely negative gearing and capital gains tax discounts. Meanwhile, investors in the Chinese market are subject to a variety of tax schemes from various levels of government. Although the lease law of both countries provides strong protection to lessors, lessees in China are relatively less protected due to lack of legislation against discrimination from landlords. Lastly, the Australian market is relatively more internalised due to the rapidly increasing number of dwelling transactions by foreign buyers whilst the level of foreign investment in China has been low. However, the recently introduced application fees by FIRB may reduce the number of future foreign transactions in Australia whereas the level of foreign investment in the Chinese market may increase due to the less stringent foreign investment policies. Based on these findings, the Australian housing market displays a relatively higher level of maturity than the Chinese market.

CONCLUSION

First conceptualised in the early 1990s, the market maturity concepts have been developed further. However, they remain not only relatively undeveloped in the literature but also applicable only to the context of commercial property markets. To address this gap in the literature, the paper has investigated the concepts of maturity for housing markets. To do so, it has developed a conceptual framework of housing market maturity and applied the framework to analyse the level of maturity of the housing markets in China and Australia.

Housing market maturity can be holistically measured using seven key themes including opportunities, information, profession, regulations, liquidity, income security and internationalisation. These themes, which are not mutually exclusive, are interrelated in nature. For instance, strong information availability and regulations can lead to more secured housing transactions, which increase the level of liquidity in the market.

The housing market in Australia is relatively more mature than the Chinese market primarily due to a more robust information base, stronger regulations for land ownership and transactions, higher liquidity, greater income security for lessors and a higher degree of internationalisation. The Chinese market, on the other hand, is in a transitional phase into a maturity stage.

From the analysis throughout the paper, it can be observed that regulations play an essential role in the maturity process of housing markets. In Australia, robust regulations have led to not only secure, transparent transactions, increasing market liquidity, but also ensured that all lessees have equal opportunity to enter the housing market. Furthermore, land titling regulations can affect the level of legal disputes, and consequently, the level of consumer confidence in the market. The more secure tenure system in Australia has effectively mitigated the likelihood of disputes between land owners and other parties. Conversely, regulatory conflicts have transpired in China as previously rural land, which is regulated differently from urban land, increasingly becomes located in urban areas.

This paper has, for the first time, conceptualised a framework of housing market maturity. Future studies may consider advancing the framework in one of the following ways. Firstly, it can be applied to comparatively analyse other housing markets around the world. Secondly, its applicability can be increased

for other contexts such as industrial property markets through identifying themes and factors specific to these markets. Lastly, the framework can be operationalised further by identifying additional range of factors that are related to each of the seven themes of the framework.

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