The Increasing Financialization of China's Urbanization

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Abstract

This article provides a heuristic framework to address issues about China's ongoing urbanization in relation to the role of land and built environment as triggers for economic growth and to the increasing financialization of urban production. While a dominant field of literature highlights the interrelation between land and capital within a specific institutional setting between central and local governments, it argues to include other key linkages between infrastructures, property development and finance to understand China's recent exponential urban growth. It first places the current consequent local governments' debt into perspective along with the evolution of financial circuits for urban infrastructures resulting from central government policy and regulation changes. Next, and in line with the real estate literature that highlights the key role of demand, it develops an original understanding of the financialization of urban production from the perspective of China's property industry. Besides the role of homeownership policies since 1998, which boosted urban production based on use value, various ways of the transformation of property into financial assets have occurred. Chinese households as the main investors have not only been able to directly invest in housing and in non-housing by purchasing flats or commercial property but indirectly by increasing investments in special purpose vehicles such as trust-bank and funds finance and new kinds of investment platforms. In both cases, central government macro-policies, both stimulating and restricting from 2008-2016, has gone in hand with increasing financialization processes for local governments' debt, urban infrastructure financing and real estate.

Introduction

How has China's urbanization process of last 15 years been financed? A major strand of literature in China's urban geography highlights the interrelationship between land and local finance for China's urbanization and economic growth since early 1990s (Ding & Lichtenberg, 2011; Hsing, 2010; Lin, 2009, 2014; Wu, 2015a). Due to capital shortages, the urbanization of capital has been based on capitalizing land (Lin & Yi, 2011). Based on a fiscal regime introduced in 1994, revenues from land commodification have been local municipal governments' main incentive and source to implement national urbanization policies, which has resulted in the "privatization" of state-owned land at a grand scale, maybe the largest in history. This financial dependence on land has led to other phenomena; the development of urban entrepreneurialism and the formation of some growth coalitions (local governments and real estate companies) to plan and construct cities.

However, urbanization has a cost, which is, in China, mainly carried out by local municipal governments (Wong, 1997, 2013). Due to the imbalance between central and local municipal governments of the fiscal regime introduced in 1994, local municipal governments needed to get into debt by mortgaging land to finance urban infrastructures and collective needs (in education, health, etc.). However, banned by the central government (Budget Law) from raising debt in their own name, local municipal governments have used local financing platforms (LFP) to cope with this bottleneck since early 2000, especially since huge economic stimulus plan of 2008-2009. Acting as "private" companies, LFP could obtain bank loans and increasingly funds from other financial sources, which eventually resulted in a mounting local debt and systemic issue.

While municipal finance has been acknowledged by scholars in China's urban studies as a key mechanism for China's urban growth through land development, another major strand of literature has focused on real estate markets and property development to address China's urban development. Since the late 1990s, China's urbanization has arguably resulted from reforms enabling the commodification of housing as homeownership policies consequently boosted real estate markets and property industries. This went in hand with the increasing financialization of China's housing sector (Wu, 2015a). Housing rapidly became a financial asset for Chinese households due to robust capital appreciation resulted from, both homeownership and local property-led development policies (Aveline-Dubach, 2015; Hu, 2013; Liu, 2014; Theurillat, 2016).

The aim of this article is to address further the issue of how urban growth in China has been financed by placing the financialization process of urban built environment in relation to the specificities of the urbanization of capital in China. The first section of this article posits the debate about the financialization of the built environment outside China, highlighting the actors and processes around the transformation of land and property into a financial asset (Coakley, 1994; Harvey, 1985). The second section develops a heuristic framework for a more comprehensive picture of China's urbanization based on the idea that the land supply, which increasingly relies on increasing debt to finance urban infrastructures and which has triggered China's urban growth these last fifteen years, has been reliant by demand for property, both for self-use and increasingly as a financial asset. However, the linkage with the financing circuits of property development is still missing, as little is known about how China's property development industry finances its operations (Aveline-Dubach, 2015; Theurillat, 2016). Based on empirical evidence, the third section consequently argues for the ongoing financialization of urban infrastructures and homeownership in China. It first highlights the evolution of the linkages between LFP and the financial system, from banks to increasingly non-banking channels by distinguishing three major types of LFP. This brings new insights to understand the current local governments' debt issue and its increasing financialization. Second, it gives an original view of different forms of financializing the property industry financial circuits and urban property at a national scale since 2008. The conclusion highlights the relevance of the proposed heuristic framework introduced for further research to address, conceptually and empirically, issues around the different forms of financialization for China's ongoing urbanization in relation to the circulation of capital surpluses accumulated by the Mainland economy.

In terms of methodology, this article is based on a research project regarding the financing of urban production in China (February 2014-December 2016). It first results from two local case studies in a medium range city (Qujing in Yunnan Province)[1] and Guangzhou. Data were collected from numerous documents and twenty five qualitative interviews were conducted with personnel representing real estate companies, public officials (in urban planning) and commercial banks. Second, it is based on a case study focused on China's property industry. Next to various various quantitative data collected (eg. annual corporates reports, websites; reports from various advising companies for real estate; etc.), 30 interviews were conducted with different real estate companies' managers : ten were made with local real estate companies in the two interior cities of Kunming and Chongqing, respectively in May 2014 and in June 2015, and the remaining 20 were completed with large development companies in China (ranked among the top 50 real estate companies in China), both private and state-owned, in March 2014 and June 2015. Finally, 20 interviews were conducted from June to September 2015 with representatives of private property investment companies and real estate advisors for China's real estate market based in Hong Kong.[2] Furthermore, specific statistical data are used in the third section.

The Financialization of Urban Production at the Age of Globalization

Since the mid-2000s, a growing number of scholars have examined issues around the increasing transformation of "land and property into a financial asset" (Coakley, 1994; Harvey, 1985) through the concept of financialization. Residential buildings (Fields & Uffer, 2016; Theurillat *et al*., 2010), mixed-use urban projects, urban redevelopment projects and major infrastructure (Guironnet *et al*., 2016; Theurillat & Crevoisier, 2013, 2014; Torrance, 2008, 2009), individual property debt (Aalbers, 2008, 2009, 2012; Gotham, 2009) and public tax revenues resulting from land development (Ashton *et al*., 2016; Weber, 2010), all of these may serve as alternative investments for finance capital actors such as special purpose vehicles (SPVs like property funds and real estate investment trusts) and institutional investors.

These works shed light to the various actors, with key ones being financial actors; as well as property development companies, real estate consultancy firms and state actors; and the processes that contribute to deepening the

[1] See Theurillat (2016) for details about the methodology of the case study in Qujing.

[2] See Theurillat and Donzé (2016) about the methodology and business model of Hong Kong based property developers.

interconnections between capital markets and urban built environment (Halbert & Attuyer, 2016; Theurillat & Donzé, 2016). However, some scholars (Fernandez and Aalbers, 2016; Ward and Aalbers, 2016) recently argued that these works about urban built environment financialization mostly used the same analytical framework as scholars did (like Coakley, 1994; Fainstein, 1994/2001; Haila, 1991) in the 1990s They stressed that urban built environment was seen as a distinct sphere of capital investment separated from the production sector (Christophers, 2011; Gotham, 2009). They posit that financialization in terms of pure rent maximization for landowners, and more specifically for financiers, has to be related to the urbanization of capital and the capital switching theory of David Harvey (1978, 1985), i.e. the circulation/transfer of capital between its different circuits as a fix to accumulation crises. For Harvey, the secondary circuit of capital accumulation, that is, investment in the built environment (e.g. infrastructure and housing), gains particular importance due to its function of absorbing shocks generated from the primary circuit of industrial production (goods and services). However, in contrary to Harvey, this scholarship emphasizes that capital switching between primary and secondary circuits of capital are diverse regardless of crises within the primary sector, and that the secondary circuit can also be a driver for the economy.

First, built environment has been politically used to trigger economic growth in various countries (Aalbers & Christophers, 2014). On one hand, urban development has been boosted by entrepreneurial and property-led urban policies (Fainstein, 1994/2001; Harvey, 1989; Healey, 1991, 1994; Leitner, 1990). In Asia, city-states like Hong Kong and Singapore are emblematic of property-led states (Haila, 2000, 2015) or of a property-based regime accumulation in the case of the former (Smart & Lee, 2003). For Doling and Ronald (2014), property development is a significant feature of developmental states across East Asia. On the other hand, these property-led policies have gone in hand with homeownership as a key factor to stimulate the economy (Fernandez & Aalbers, 2016). The general idea of “privatized Keynesianism” (Crouch, 2009) policies is that homeownership is seen as a means to boost demand in the primary circuit as a result of increasing housing prices due to buoyant demand (wealth effect). Facilitated through mortgaged debt, the privatization of homeownership in many countries has reinforced the trend to treat property as a financial asset (Forrest & Yip, 2011). In the US, UK and Netherlands, the financialization of housing went a step further where housing was transformed into a “liquid” asset through securitization which led to credit expansion fuelled by global capital flows that eventually resulted in the Subprime Mortgage Crisis and in turn triggered the Global Financial Crisis of 2008-2009 (Aalbers, 2008, 2012).

Second, built environment has attracted capital flows not only from the production sector, but from variously different dynamic sources these past fifteen years. Fernandez and Aalbers (2016) argue that the built environment played a key role for absorbing the “wall of money” consisting of global capital surpluses that are looking for places to affix. Retirement savings collected from households by institutional investors (such as pension funds and other SPVs), trade surpluses and sovereign funds), surplus money resulting from recent quantitative easing policies and the rise in accumulated profits of transnational companies in tax havens have all created a wall of money that gradually pushed for the financialization of built environment. Their impacts significantly vary due to the heterogeneity of institutional settings between and within countries and cities. In the US and UK contexts, Christophers (2011) elucidates the massive capital switch in the years following the turn of the millennium where private sector spending was increasingly diverted into construction and out of the productive sphere and pension funds started switching investments into property which was seen as a better locus of capital appreciation than equity capital.

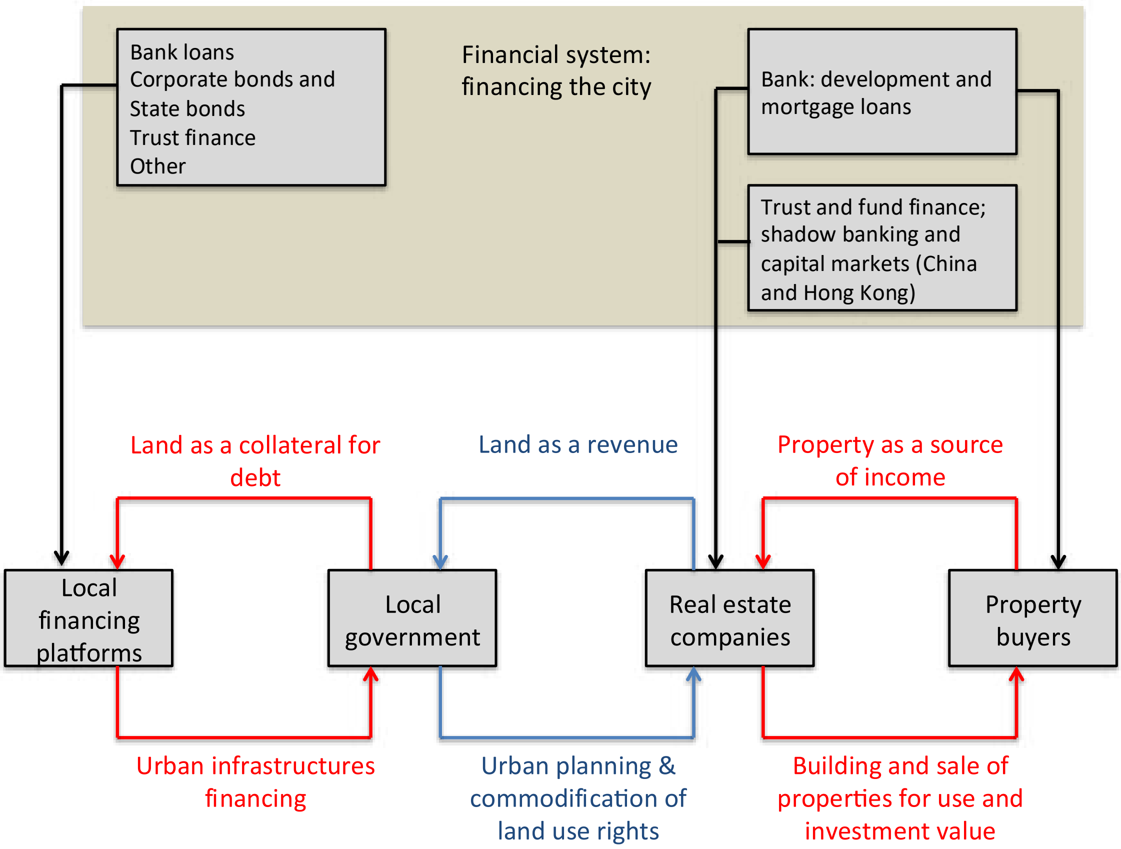
In summary, these studies are useful as they relate the built environment to the wider economy, capital accumulation and state policies. Urban production has become a means used in different contemporary economies and within various forms of neoliberal policies to temporarily boost investment in housing, non-housing sectors and domestic consumption to support the primary circuit of capital. Reversely, built environment has attracted capital flows from various sources and processes of the transforming land and property into financial assets have been variegated between places.

A Heuristic Framework for the Urbanization of Capital and the Financialization of the Built Environment in China

The debate regarding the urbanization of capital and the financialization of urban built environment among scholars has started in China. Some argue that capital,switching theory is not applicable to China or other emerging countries (Lin & Yi, 2011). The reasons being that they suffer from a shortage of capital needed to trigger the engine of economic growth. As a result, land plays a different role because it needs to be used as an important asset to either attract external capital or be converted into funds to finance urbanization. In this regard, a major strand of literature argues that land as a financial mechanism has driven China's urbanization and economic growth these last fifteen years. Others argue for the financialization of the Chinese housing sector (Aveline-Dubach, 2015; Wu, 2015a) where urbanization has been possible due to homeownership policies in China and the privatization of housing which are logically associated with capital appreciation and housing rapidly becoming a financial asset for households. In addition, housing and more broadly the urban built environment became major outlets for the accumulated capital surpluses within China's banking system along with certain manufacturing industries in the 2000s. In other words, it can be argued that a switch has occurred from primary to secondary circuits of capital to aid urbanization and property-led development.

In terms of this paper, neither view is correct or incorrect, but rather complementary to address both issues regarding the urbanization of capital and the financialization of urban built environment within a political economy featuring Chinese characteristics (Peck & Zhang, 2013). Furthermore, they represent two faces of the ongoing process of China's urbanization where land and infrastructures represents the supply side of urban development and the role of land, as the trigger for China's urbanization and economic growth that is contingent upon property development processes and related demand. At the same time, on both the supply and demand sides, land for local governments and increasingly property for households, are treated as financial assets. Consequently, this section gives an overall picture, as a heuristic framework, of China's land-driven urbanization and of financialization of homeownership. It integrates the existing literature to address the linkages between land and infrastructures, property development and the financial system (Figure 1).

Figure 1. China's land-driven urbanization and urban production's financialization.



source: authors

China's Land-Driven Urbanization : Land as a Financial Asset

Since the mid-1990s, scholars have highlighted the role of land in China's urbanization process and the institutional and political changes that have gone along with it (Cartier, 2002; Ding & Knaap, 2005; Li, 1999; Yeh & Wu, 1996; Zhu, 2005). This focus has evolved from competition for foreign direct investment, also known as "zone fever" (Cartier, 2001; Zhang & Wu, 2006) to the relatively new land-driven model (Hsing, 2010; Lin, 2009, 2014; Lin &Yi, 2011; Lin & Zhang, 2015; Wu, 2015a, 2015b). Land has been viewed as the main trigger of capital accumulation since the 1990s due to extending market mechanisms into land development, which has taken place in a rapidly changing political economy. Three main characteristics of China's "land-driven urbanization" are emphasized.

First, land-driven urbanization is based on decentralizing power and responsibilities in land management and urban planning while recentralizing the tax and fiscal regimes. As a result of the former and (quasi) privatization reforms (see Hsing, 2010 for details), municipal governments can lease urban land for private uses[3] on behalf of the state and convert rural collectively owned land into urban land (Wu, 2015b). The conveyance of land user rights from local governments to private developers (primary market), where land is offered at the best price[4], has increasingly provided a significant amount of local government revenues (land conveyance fees), equating to as much as half of their annual total (Ding, 2007; Lin, 2009; Wong, 2013). This dependence on land transfers is due to a recentralized fiscal regime introduced in 1994, consequently increasing the financial burden of local governments to pay for urbanization (Hsing, 2010; Wong, 1997, 2013; Wu, 2007). Local governments are responsible for over 80% of their fiscal expenditures[5] while receiving less than 50% of their locally collected revenue, despite some occasional intergovernmental transfers from the central government (Ye &Wu, 2014). Land plays a key role in overcoming all these difficulties. Integrated into “extra-budgetary funds” (Tang *et al.* 2011; Wong, 2013), land lease revenues empower municipal governments to capitalize on land as an asset to finance urban services and development projects. Under the City Planning Act (1990), local governments, acting as regulators market players and intermediaries, have been able to exploit large profits generated from the gap between the initial farmers’ relatively low compensation and the land conveyance fee received later (Li & Li, 2011; Lin, 2009). As a result, urban planning has gone in hand with the spatial extension and power reinforcement of core cities as smaller cities, townships and villages have been integrated into metropolitan areas for urban development (Wu, 2015b). Overall, this decentralized land management and urban planning along with recentralizing the fiscal system has profoundly shaped China’s urbanization.

Second, this local empowerment based on market-oriented reforms and institutional decentralization around land has been arousing local developmental enthusiasm (Lin, 2014) where local governments play a more proactive role in promoting development. This has gone together with the debate to characterize China’s urban political economy around market principle, based on concepts such as “local state developmentalism” (Zhu, 1999, 2005) or “urban entrepreneurialism” (Cartier, 2011; Chien, 2013; He & Wu, 2005, 2009; Wu, 2015b; Zhu, 2011). Local development and entrepreneurialism has been closely managed by the central State since urban growth (GDP) has been the main tool of promotion for sub-national government officials (Li, 2014; Li & Zhou, 2005; Tao *et al.*, 2010). Therefore, as the

[3] Urban land are respectively leased for 70, 50 and 40 years for residential, industrial and commercial property.

[4] Since 2002, the land management law prohibits the transfer of land by agreement (negotiations) and land must be sold in a regular and market way through bidding, auction and listing. Next to land market, rights to use state-owned land can be administratively allocated (*huabo*) to non-profit users free of charge (typically for public purposes such as infrastructure and real estate projects, including schools, hospitals, economic development zones, roads, etc.).

[5] Urban expenditures are related to urban services, medical care, education facilities, and retirements benefits to a rapidly growing and aging urban population, massive lay-offs of employees of state-owned enterprises, and in certain areas increased rural-urban migration.

most valuable resource on hand, land has become the key for local governments to plan for growth by attracting domestic and foreign investment and by promoting urban development through the construction of new urban districts and large scale real estate projects (Lichtenberg & Ding, 2009; Wu, 2015b). As a result, urban development has increased “place promotion” and reinforced the competition between cities, which also downscaled to urban districts (Hsing, 2010).

Third, China’s land-driven literature refers to specific linkages between land and property. The urban value growth rests upon the assumed “spill over effect” from land leasing and consists of five steps where local governments operate like a land development corporation (Wu, 2012: 241). First, local municipal governments use low-priced and subsidized land to attract investment in manufacturing industries; second, they expand the overall GDP volume through industrial development which in turn raises the land value of the city; third, they lease the serviced land for commercial and residential markets via auction or bidding so as to capture the differentiated rent between pre and post conveyance; fourth, they use the land revenue to replenish the local tax deficiency and invest in infrastructure; fifth, they annex rural land at a lower value and convert it into serviced land so as to raise its value and attract investment, leading to a premium price for commercial and residential development. In this assumed positive cumulative cycle which pushes up land and property prices, property-led development has played an increasing role. Hsing (2010) observes, however, an urban model shift from industrialism to urbanism. In the 1990s, land development first focused on developing industrial districts, then real estate projects; since mid-2000s, especially in the post-Global Financial Crisis era, urban development has been mainly based on property development along with mega-events (Zhao *et al*., 2017) and megaprojects, based on consumption activities like shopping and leisure centers or tourism (He & Wu, 2009; Hsing, 2010; Wu, 2015b). In short, China’s land-driven urbanization has increasingly gone in hand with the implementation of local property-led development policies.

The Financing of Urban Infrastructure: Land as a Debt via Local Financing Platforms

The current fiscal system set up in 1994, which is based, as previously discussed, on fiscal imbalances between central and municipal governments, have pushed local governments to resort to off-budget land lease revenues which have become a major source of revenue. At the same time, booming real estate markets have led to rising land lease fees thus providing municipal governments with collateral to obtain bank loans (Liu & Jiang, 2005) and increasingly from other sources via local financing platforms (LFP) (Lin & Yi, 2011; Lin & Zhang, 2015; Lin, 2014; Pan *et al*., 2017). The latter have been the main form of an “off-budget” mechanism (self-raised funds) to obtain money due to the Budget Law interdiction to get directly into debt. Most scholars studying land phenomena in China are aware of the imbricating two faces of municipal finance, i.e. land as a debt to get funds via LFP for financing urban infrastructures and services, and land leases as major sources of revenue; however, the concrete mechanisms and interrelations have been treated separately (Wu *et al*., 2016).

LFP first refers to public institutes (*shiye danwei*) affiliated with the land and housing department of local governments, usually named Land Development Center (LDC) or Land Use Affair Center (Hsing, 2010; Liu & Jiang, 2005). They obtain almost all of their capital from banks for their operations of land: expropriation, banking, clearance and conveyance. Second, most scholars refer to the second type of LFP where local governments set up investment companies commonly named Urban Investment and Trust Corporations (UITC) or they use existing local state-owned enterprises (SOE) in public utilities (common examples include Urban Investment Company, Transportation Investment Company or Water System Investment Company). All of these entities can obtain bank loans, but they also increasingly borrow from trust companies or the bond market, to finance urban infrastructure by mortgaging land given as assets by local governments. As of 2008, overall local debt in the Mainland, mainly in the form of bank loans, had already reached 5.57 trillion RMB (Tsui, 2011: 698). The economic-financial stimulus plan of 2008-2009 encouraged local municipal governments to use LFP to finance "collective-purposes" urban investment.[6] As a result, within a few years, the number of LFP and the total amount of local debt exploded. By end-June 2013, there were over 10'000 LFP in China and the total debt of local municipal governments was officially estimated at 17.88 trillion RMB, which was approximately 33 percent of national GDP (National Audit Office [NAO], 2013). Meanwhile, this burgeoning local debt has become a major systemic issue for the country and has recently attracted scholarly attention which emphasizes the need to relate China's land-driven urbanization in the post-crisis era with the increasing local debt resulting from recentralizing the fiscal system since 1994 (Lu & Sun, 2013; Pan *et al.*, 2016; Wang *et al*., 2011; Wu *et al.*, 2016).

The Role of Property Development for China's Urbanization: Property as a Financial Asset for Households

The land literature maintains that China's urbanization is land-driven. Urban land has been exploited as a source of capital formation due to fiscal incentives based on land commodification and consequently integrating rural areas by extending the land bank, which rests upon increasing land and property prices. Additionally, China's land driven urbanization has increasingly been based on debt as land has been exponentially collateralized by local governments. Now local debt is viewed as a potential systemic issue on a national scale in regard to the sustainability of the role of land in terms of municipal finance and of urban growth processes. However, we argue that land as a trigger for urban development can be only understood in relation to the role of property development and related demand.

[6] Infrastructure comprised 72% of the stimulus package, or 2.87 trillion RMB of the total 4 trillion (Hsu & Li, 2015).

An extensive line of literature highlights the importance of real estate markets for China's past and continued economic growth and its key overall role in the economy since introducing neoliberal reforms in the 1990s; especially since 1998, where public sector housing allocation was replaced by market allocation and quasi-privatization of property[7] (Cao, 2009, 2015; Fung *et al.*, 2010; Wang *et al.*, 2012; Zhang, 2005). A dominant strand of this literature has focused on the effects of monetary policy and state intervention on real estate price growth on a macroeconomic scale through property prices, savings rates, wages, GDP correlations and econometric modelling (Deng *et al.*, 2012; Li, *et al.*, 2013; Wang & Wen, 2012; Xu & Chen, 2012). The role of demand has been widely acknowledged, and increasing land and property prices have raised discussions concerning the possibility of a potential property "bubble" in China (Yu, 2011; Wu *et al.*, 2012; Dreger & Zhang, 2013). However, these works largely ignore the political economic environment in which price changes and real estate dynamics occur (Wu, 2015a).

By placing property development at the center of China's urbanization process, Fulong Wu (2015a) draws an explicit link between (quasi) homeownership, state macropolicy, financialization and housing cycles. Homeownership policies have been a considerable driving force behind China's rapid urbanization these past two decades. Furthermore, as privatized housing policy has played a significant role in boosting urban real estate demand and therefore increased real estate market values, property in turn has become a financial asset for home owners and housing has rapidly become the main alternative financial asset to bank deposits, debt instruments and capital stock investments (Coulson & Tang, 2013; Hu, 2013; Liu, 2014); thus contributing to market speculation. Multi-property purchases by actors motivated by various purposes, both long-term (retirement) and short-term (surplus value) have boosted China's property sector. Second, urban built environment has been a main outlet for the accumulated capital in China's banking system as well as for manufacturing industries which viewed investment in real estate more profitable than their core entities in the 2000s (Wu, 2012, 2015a). Third, housing, and more broadly built environment, has played a major role in stimulating the economy. For instance, the housing reform in the late 1990s was a direct outcome of the 1997 Asian financial crisis and after the 2008 global financial crisis, the aim of the financial stimulus package was to increase investment in infrastructure and other fixed assets (Wu, 2012). Both policies resulted in a major property booms, which afterward required action by the central government to cool down the market to avoid social and political discontentment. Numerous studies on housing have also pointed out contradictions between social goals such as affordable housing, e.g. for new homebuyers, and privatization within a "market-led or neoliberal" structure that benefits the upper-middle classes (Cao & Keivani, 2014; Logan *et al.*, 2010; Wang, 2005; Wang & Wen, 2012).

The literature emphasizing the role of real estate demand complements the "land-driven" literature that focuses on the supply side, i.e. on the commodification of

[7] Chinese household are not full property owners, but lease property for a certain length, similar to land (70 years for residential ; 40 years for commercial and 50 years for industrial property ; see note 3, page 9).

land. While the increasing financialization of homeownership has been highlighted, the linkages between local property led-development policies and finance are however still missing to further understand how China's urban growth has been financed (Aveline-Dubach, 2015; Theurillat, 2016). While Min Liu (2011) highlights the non-banking circuits for small real estate companies and Theurillat (2016) the various financing circuits at local scale, an important gap still remains regarding how China's property development industry finances its operations at a national scale.

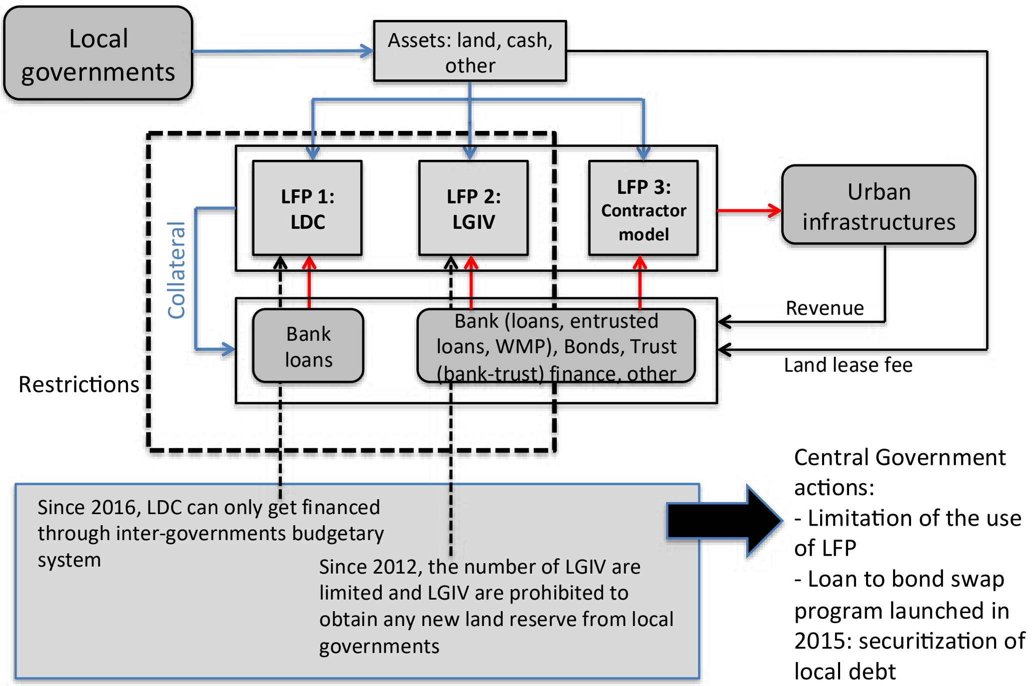
The Forms of Financialization of China's Urban Production

This third section introduces empirical evidence to reinforce the heuristic framework (Figure 1) previously developed, which aims to explain the role of finance for urban growth in terms of land supply and infrastructure, for property development and related demand. It further argues that the understanding of the financing of China's urban growth must be viewed in terms of the various forms of China's financialization of urban production (Aveline-Dubach, 2015), for urban infrastructures, property development financial circuits and for urban property ownership. The first subsection places the current consequent local governments' debt into perspective along with the financialization of urban infrastructures financing resulting from central government policy and regulation changes. Next, we argue that the financialization of homeownership must be completed from the property industry's perspective by focusing on the evolving financial circuits for property development in terms of residential and commercial sector business models. In both cases, central government macro-policies, both stimulating and restricting from 2008-2015, has gone in hand with increasing financialization processes for local governments debt and urban infrastructure financing, and for real estate.

The Financialization of Urban Infrastructures and of Local Government Debt

The financing of urban infrastructures which has been based on LFP in China profoundly changed in the current post-crisis era as result of central government macro-policy and regulation modification (Figure 2). There are distinctly at least three different types of LFP: land development center (LDC), local government investment vehicles (LGIVs) and contractor model (CM). LDC has been long used as a key means for local governments to acquire bank capital to fund urbanization since the early 1990s. This first mechanism, which appears to be a public entity affiliated with local government, can be identified in Table 1 as the two first categories highlighted in dark grey. The second, LGIVs (categorically from third to sixth presented in light grey), became popular due to the massive economic stimulus plan imposed after the Global Financial Crisis of 2008. It provides broader access to capital compared with the prior. The third mechanism is coined "contractor model" and has been somewhat ignored by academics and even difficult for the central government to comprehensively understand; therefore, it is perhaps the most opaque and cannot be specifically identified in any official data at this time. It provides local governments more flexibility to use land to dramatically increase local development and to raise

Figure 2. The transformation of the LFP system and the financialization of urban infrastructure



Source: Developed from Pan *et al.* (2016).

Table 1. The Official Types of Entities Related to Local Government Debt in China, in 2010 and 2013 (billion RMB)

	2010 Report		2013 Report	
Categories of Entities in borrowing Local Debt	**Amount**	**Weight**	**Amount**	**Weight**
Local government financial vehicle	49'710.68	46.38%	69'704.42	38.96%
State-owned sole-proprietorships or holding entreprises			31'355.94	17.53%
Government departments and agencies	24'975.59	23.31%	40'597.58	22.69%
Institutions entitled to financial subsidies	17'190.25	16.04%	23'950.68	13.39%
Public Institute	2'498.28	2.33%	3'280.52	1.83%
Institutions responsible for their own revenues and expenditures			6'025.46	3.37%
Others	12'800.11	11.94%	3'994.06	2.23%
Total	107'174.91	100%	178'908.59	100%

Note. NB: There are five kinds of entities listed in both reports: Local Government Financial Vehicle (which equals to the second type), Local Government Department and Institute (difang zhengfu bumen ji jigou), Revenue Subsidized Unit (jingfei buzhu shiye danwei), Public Welfare Unit (gong gong shiye danwei), and others. In the 2013 reports, there are two new categories: Government Soly-funded SOEs or Government Control SOEs, and Self-Reliance Institute. Sources are from NAO (2011, 2013).

capital from various sources similar to LGIVs. In short, while local government debt has been traditionally based on bank loans, the two other types of LFP enabled its financialization as a result to access to other financial circuits such as bonds and Chinese SPV such as trust finance.

The Original Significant Role of Land Development Center

Land development center (LDC) or land use affair center, names can vary according to locality, are the public office under the leadership of local governments in charge of land expropriation, land banking, clearance and land conveyance. According to China's legal system, including but not limited to the land management law, municipal and county governments (for the most part, but can vary) have the power to expropriate and lease land user rights in land conveyance. Township and municipal district governments do not have this privilege (but can be authorized), while provincial governments don't usually concern themselves with such matters. Therefore, the public institutes affiliated with the former two are the focus as they are the main actors in urban development. These institutions expropriate rural land, bank land, regulate land and finally lease user rights. LDCs have easy access to bank loans to borrow money for land expropriation and these are, for the most part, their exclusive source of capital. They are not formal companies, thus are unable to issue corporate bonds. Moreover, their government background and superior credit ratings dissuades them from accessing other financial markets such as trust companies or the bond market. Though China's banking system is basically state-owned and comprised of five large banks that are expanding their operations throughout China; there are also local commercial banks, originally restricted to operate in specific regions, which act as competitors to the big SOE banks to finance local development. Besides these, LDCs have access to funds from the National Development Bank, a policy bank set up by the central government with the purpose of financing local land expropriation.

From the banks perspective, this kind of lending is profitable for at least two reasons. First, generally speaking, these types of activities run by local governments have both stable and high revenues; based on an interview, the net revenue is believed to be higher than 40%. Second, LDCs are formally connected with local governments and as a result have high credit ratings. In a good portion of local debt cases, the bank loans given are promised to be paid via revenue streams derived from land. In addition, the bank considers them quasi guaranteed; that if a loan goes bad, a higher authority will bail out the local government; therefore, it is quite easy for LDCs to obtain bank loans. The common practice is to use property in their land bank reserve as collateral to borrow against. Usually, the leverage percentage that banks will loan up to is 70% of the market value at most for residential and commercial and 60% for industrial zoned land. Interest rates are at prime or slightly above with amortization periods up to 15 years. In interviews, it was learned that prior to 2010, before the central government tightened the land acquisition regulations,[8] a LDC could obtain a bank loan with a mere zoning map from the city planning department. This map would provide information in regard to what the local government's future development plan was after they expropriated the land. The bank would assess the value of the land by calculating how much land revenue would be generated if the indicated land was sold for residential, commercial or industrial use. The loan terms would be similar to those that were collateralized with land.

These practices have changed a bit since the China Banking Regulatory Committee tightened lending policies with the previous mentioned regulation in 2010. This latter prohibited lending based solely on zoning maps and all loans since have to be secured by collateralized land. The intention behind this is for banking institutions to avoid risks created by "bogus" increases in land value and to monitor closely the development of the securitized land. In 2012, a variety of central government departments[9] imposed several regulations to restrict financing to LDCs. One of the main points that is applicable to this section is emphasis that prohibits local governments' in providing loan guarantees to any entities, including LDCs. Moreover, the entity representing local government to borrow is limited to a specific number of these public institutes in each city. Furthermore, the 2014 regulation,[10] demonstrates the willingness of the central government to control rapidly expanding local government debt across the country. As a result, only a limited number of LFP, which includes LDCs and the remaining two mechanisms that follow are allowed to operate.

The strictest regulation,[11] yet to be directed towards the first mechanism (LDCs) was issued by Department of Treasury and three other ministries on February 16, 2016 and was essentially a death sentence. It stipulates that only one entity for each city is permitted to participate in land banking activities and all others need to consolidate within it or shut down by the end of 2016. LDCs are also prohibited from obtaining financing from banks and other financial sectors. As of now, they can only obtain funds five ways, all of which are through funding transfers within the government's (at all levels) budgetary system.

[8] 2010, Guideline of Risk Management in the Real Estate Loan Releasing of Commercial Banks (*shangye yinhang fangdichan daikuang fengxian guanli zhiyin* 商業銀行房地產貸款風險管理指引). The third chapter of the 2010 regulation in particular focuses on land banking loans (which is one of the main duties of the LDC) and highlights the requirement that commercial banks should take a stricter approach in lending to LDCs.

[9] Ministry of Teasury, Peoples Bank of China, National Development and Reform Commission and the Banking Regulatory Committee.

[10] Regulation 2014 refers to number 43, namely the Central Government's Regulation in Strengthening the Management of Local Government Debt (*guowuyuan guanyu jiaqiang defang zhengfuxing zhaiwu quanli de yijian* 國務院關於加強地方政府性債務管理的意見), issued by the Central Government (the highest administrative regulatory body in China).

[11] The Regulation on Land Banking and Funding Management (*guanyu guifan tudi chubei he zijin guanli deng xiangguan wenti de tongzhi* 關於規範土地儲備和資金管理等相關問題的通知)

The Revival of Local Government Investment Financing Vehicles (LGIVs)

LGIVs are public utility companies or investment companies (see previous section) that operate like LDCs, responsible for land banking and developing new urban areas. They are often referred to as "property management company of a specific region". A prominent example is Shanghai Lujiazui Finance and Trade Area Development Company (*Shanghai lujiazui jinrong maoyiqu kaifa gongsi* 上海陸家嘴金融貿易區開發公司), now known as Shanghai Lujiazui Group, which is responsible for land development, overall operations and coordination of Lujiazui, the central business district of the Pudong New Area in Shanghai (Briefing on Shanghai Lujiazui Development Group Co., Ltd.).

LGIVs usually have a land reserve, which originated from land they have long held before market reforms were implemented in the 1980s and 1990s and to a lesser extent through land allocation from local governments in recent years. However, they are targets of the most recent regulation, as mentioned above, that prohibits any new land banking acquisition. They are registered companies (SOEs); therefore, have more channels to access capital compared to LDCs, the first being bank loans. In order to finance a given project, which are mostly infrastructure related, they would collateralize land in their reserve, and not the subject plot, to obtain a bank loan. The value of this collateralized land is calculated by the potential market value based on its particular zoning. The leverage percentage is similar to that of LDCs. However, the actual operation and fiscal health of LGIVs varies from case to case; therefore, the loan terms they receive are usually not as favourable as LDCs. Noticeably, there are some cases that banks will further securitize these loans and market them to households in the form of wealth management products (WMP). Generally speaking, the banking sector still assumes the majority of the risk from local debt created through this category. Furthermore, bank loans can also take the form of "entrusted loans." Being full of Chinese characteristics, this is a means to obtain a bank loan when a LGIV, as well as any company (see Theurillat, 2016 for details), lacks the qualifications to obtain one. In this case, the LGIV seeks another company that is qualified to obtain financing from a bank and asks them to borrow on its behalf. In turn, the formal borrower receives transaction fees or interest for providing this service. Once again, the banking sector is the main creditor.

As both the result of the 2008-2009 economic stimulus plan and of more restrictive regulations, three other channels have developed next to the bank one. The first is through the issuance of corporate bonds. Unlike local government bonds that are mostly issued by the Ministry of Finance on their behalf, they can be issued in two ways. One way, however less commonly used, is to issue bonds on the Shanghai Stock Exchange, where corporate bonds of listed companies are traded. The other common way is via the three inter-banking corporate bond markets, which are for trading debt instruments of unlisted companies and where banks are ultimately the main buyers and holders. However, since February 14, 2016, individual investors have been allowed to participate in these inter-bank bond markets.[12]

The second is trust finance which is a type of Chinese specific “special purpose vehicles” that has rapidly developed these last few years (see next subsection “The financialization of China’s real estate: a property industry perspective” for details). The third channel is initial public offering on a stock exchange. After several years of successful operations, a certain number of these large LGIVs become established going concerns and are profitable enough to be publically listed. A good example is the previously mentioned Lujiazui Group, which was listed on the Shanghai Stock as 600663.SH in 1993. In addition, listed companies have much easier access to capital and are able to issue corporate bonds. However, these are few and far between as most are unwilling to be transparent enough to operate under a stricter regulatory framework.

A Common Non Regulated Financing Circuit : the Contractor Model

The third kind of LFP is the most financially innovative one and also the most complicated. It could be summarized as the “contractor model.” In this case, a specific company or individual provides contracting services in advance to local governments with all payments promised from future land revenues or by giving the contractor the land at a discounted price. The specific company providing the service is not necessarily a SOE, it could be private. The source of funds for these projects are self funded or in the form of bank loans. If a bank is involved, the local government still plays an active role in the financing process as a formal and informal intermediary. In the past, loan guarantees were contractually made by local governments; however, the Central Government Regulation issued on June 13, 2010 prohibits this activity.[13]

In one case disclosed by an interviewee, a local government wanted to expropriate a rural plot of land that was zoned “zhaijidi” (housing land) and occupied by villagers. This land was technically not used for cultivating purposes as it is very difficult to convert agricultural land to urban land. In order to do so, the current inhabitants had to be compensated and relocated to a new settlement area. However, the government did not have enough capital on hand to fund all these expenditures including land expropriation, compensation to all inhabitants, the construction cost of the new settlement area and the infrastructure investment in the newly developed subject area. This is an ideal contractor model scenario where a developer will provide all these services in advance for future payments. Once the land is marketable, the local government will sell the property, pay the contractor fees and

[12] February 14, 2016 regulation refers to the National Interbank Market Retailing Management Regulation (*quanguo yinhangjian zhaiquan shichang guitai yewu guanli banfa* 全國銀行間債券市場櫃檯業務管理辦法).

[13] Central Government Regulation on Strengthening Management of Local Government Financial Platforms (*guowuyuan guanyu jiaqiang difangzhengfu rongzi pingtai gongsi guanli youguan wenti de guiding* 國務院關於加強地方政府融資平台公司管理有關問題的通知)

obtain additional land revenue. This is a win-win situation for both and those involved find these transactions very productive and lucrative.

In most cases, the developer providing these services needs access to capital and the local government plays a role in this process much like they do for LDCs and LGIVs. These relationships are based on the typical *guanxi* system (tight knit networks) that is constituted on interpersonal relationships to accomplish tasks. As previously mentioned, loan guarantees are prohibited; however, these social arrangements between the government, developer and lending institution are still deeply embedded in the process despite the formal regulations opposing them. Practices vary from project to project. For instance, the developer involved might obtain the property directly from the local government at a highly discounted price and the latter will receive their portion of the land revenue up front. These practices are not limited to just developers, but subcontractors, land consolidation companies and so forth. Also, their channels to access capital are not limited to bank loans, but other instruments that were previously mentioned for LGIVs.

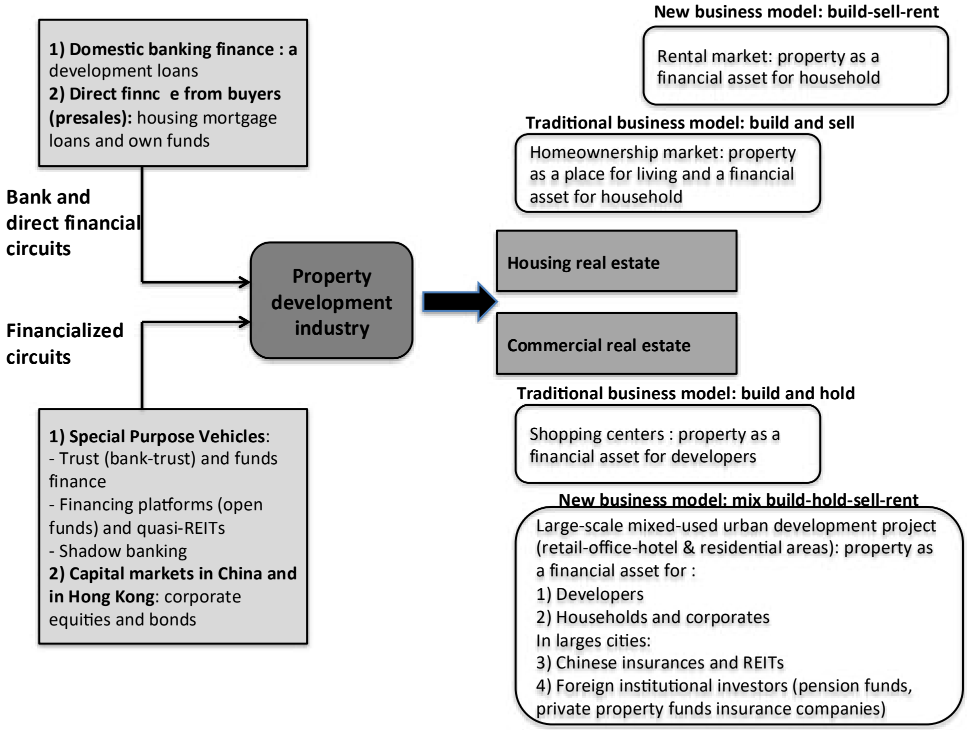
In summary, the transformation of the LFP system over the years, which enabled local governments to take on debt to notably finance basic urban infrastructures needs to be viewed in line with the financialization of local government debt as a result of the financial stimulation plan of 2008-2009 first and then the regulations that follow. Bank loans which have been the main financing channel, reduced drastically as a percentage of overall local government debt, from 79.0% in 2010 to 56.6% in 2013 (Table 2). While LDCs have had a direct relation to bank capital compared to LGIVs and the "contractor model," the regulation implemented in early 2016 basically puts an end to this type of activity. Since then, LDCs were incorporated in the official system of intergovernmental finance. The revival of LGIVs was a direct outcome of the financial stimulation plan. They brought much flexibility for local governments to acquire debt and can be considered as a first step towards the financialization of urban infrastructure since it opened the door to non-bank capital. In this regard, next to trust finance and other WMP, LGIVs have been closely related to the increase of bond issuance between 2010 and 2013. As the central government launched the loan to bond swap program in 2015, it is predicted that bond issues will increase and bank loans decrease in the meantime. However, the banking system might still be the main bearer of risk as the bonds of local debts are only traded in the interbank market, which didn't allow individual investors until 2016. Contrary to LDCs and LGIVs, the central government hasn't however regulated the third type of LFP. Being a very flexible mechanism, local governments can still use any kind of company; in utilities or real estate, state or private, to raise money from potentially the same various sources as for LGIVs.

Table 2. The Main Creditors of Local Governments Debt in 2010 and 2013 (billion RMB)

Main creditors	**2010 Report** Combined Amount	**2010 Report** Combined Weight	**2013 Report** Combined Amount	**2013 Report** Combined Weight
Bank Loans	84'679.99	79.01%	101'187.39	56.56%
Bond Issue	7'567.31	7.06%	18'456.91	10.32%
Local Government Bonds	Not Available	Not Available	6'636.02	3.71%
Corporate Bonds	Not Available	Not Available	8'827.37	4.93%
Trust	Not Available	Not Available	14'252.33	7.97%
Build and Transfer (BT)	Not Available	Not Available	14'763.51	8.25%
Total of main creditors	**92'247.30**	**86.07%**	**148'660.14**	**83.09%**

Sources are from NAO (2011, 2013).

Figure 3. The financialization of the property development industry



Source: authors

The Financialization of China's Real Estate: a Property Industry Perspective

This subsection argues for the financialization of real estate in China from the perspectives of financial circuits for property development and in relation to business models that increasingly rest on considering urban property as a financial asset for both residential and commercial sectors (Figure 3).

The Financial Circuits for Property Development

Bank finance for property development, including housing mortgages loans, approximately comprises one third of the funding sources for China's property industry (Table 3). This suggests that property development companies need to find alternative sources of funding to operate. Two main types of financial circuits are to be differentiated, direct and financialized circuits (Figure 3).

Table 3. Sources of Funding (in Billion RMB) for China's Property Development Industry (2008-2015)

	2008	2009	2010	2011	2012	2013	2014	2015
Direct financial circuits: bank finance and direct finance from customers								
1) Bank finance: property development loans	761	1'136	1'254	1'256	1'478	1'967	2'124	2'021
(in %)	19	20	17	15	15	16	17	16
2) Customers finance (presales)								
Buyers' cash: deposits and advanced payments	929	1'622	1'902	2'161	2'656	3'450	3'024	3'252
(in %)	23	28	26	26	28	28	25	26
Housing mortgage loans (from banks)	389	856	921	836	1'052	1'403	1'367	1'666
(in %)	10	15	13	10	11	11	11	13
Total bank and customers' finance	**2'078**	**3'614**	**4'077**	**4'253**	**5'186**	**6'820**	**6'515**	**6'940**
(in %)	52	63	56	51	54	56	53	55
Financialized circuits								
1) Self-raised funds	1'531	1'795	2'670	3'409	3'908	4'742	5'042	4'904
(in %)	39	31	37	41	40	39	41	39
2) Other	280	323	422	581	519	596	579	647
(in %)	7	6	6	7	5	5	5	5
3) Foreign funds	73	48	80	81	40	53	64	30
(in %)	2	1	1	1	0	0	1	0
Total other financial circuits	**1'884**	**2'166**	**3'172**	**4'071**	**4'468**	**5'392**	**5'685**	**5'581**
(in %)	48	37	44	49	46	44	47	45
Total	**3'962**	**5'780**	**7'249**	**8'325**	**9'654**	**12'212**	**12'199**	**12'520**

Sources are from CEIC Data and China National Bureau of Statistics.

Bank finance and direct finance from buyers: real estate developers first obtain funds from banks as well as directly from buyers in the form of cash and home mortgage loans. Direct finance from customers, representing between 33 to 39% of the total funding sources for the property industry since 2008 (Table 3) is based on a presales system.[14] Property buyers (individuals or companies) often pay cash (averaging 26.3% over the time period), using savings (profits for companies) or contributions from parents and friends in advance for the property they purchase (Coulson & Tang,

[14] The presales system plays a significant role for financing property development in China and during 2000s property could be sold to individuals in the early stages of development. The regulation changed in 2011 to protect buyers from dishonest developers (Leung & Ma, 2013). Since then, presales permit can be obtained after two thirds of the properties have been completed. However, the characteristics of commercial real estate are significantly different from residential real estate. Its operation mode is to develop and have ownership of real estate and it obtains the returns by way of rental.

2013; Li & Yi, 2007). Mortgage loans have also played an important role for both financing the property industry and supporting homeownership. The mortgage market, mainly for residential housing (China's core real estate sector) has consequently become important for banks (Gibson, 2009) and accounts for approximately two thirds of bank finance for real estate (Table 4)[15].

Bank finance, which refers to loans to property development companies and mortgage loans to buyers, are correlated since they are both obtained from the same banks. According to a 2003 banking regulation (China Central Bank Document no 121), real estate developers must invest 30% of the total project cost in the form of a down-payment to obtain loans for a term of three months to three years for residential projects; and a 50% down-payment up to 10 years for commercial ones. Moreover, bank loans can only be obtained after land has been acquired, and are based on mortgaging the acquired plot of land, conditional upon obtaining four certificates regarding land use rights, planning and building permission (Liu, 2011). While land represents a substantial portion of the total cost, the implementation of these regulations varied in the 2000s (Wei *et al.*, 2014); and as a result, restrictions on loans to property developers for the purpose of paying land premiums were reinforced in 2008. Finally, these loans can only be obtained by the property project's company locally set up for every project secured by the matching land title. However, large developers also obtain non-secured bank loans where they are registered for their overall operations. Access to bank loans is easier for national and local SOEs while small and medium size companies tend to be penalized (Allen *et al.*, 2012). Developers would turn to the three large national banks (Bank of China, Industrial and Commercial Bank of China and China Construction Bank), which make up 80% of the bank market (Zhen, 2013) and offer lower interest rates on development loans compared to private and local state-owned banks due to their specialized roles in building and developing the country.

Conditions on bank loans for housing depend on state macro-monetary regulations.[16] After a boosting period from 2008 to mid-2010 in relation to the financial stimulus plan, the central government increasingly tightened liquidity in order to cool down the real estate sector as a result of rapid land and property price increases in large cities. Moreover, the 2010 guidelines restricted bank loans to property companies, next to LDCs (as mentioned earlier). These restrictions forced actors to find alternative sources of funding. As a result, trust finance, which is part of shadow banking (Zhang, 2013) amongst other kinds of SPVs (see below), has increasingly become a main non-banking circuit for China's property industry, especially for small and medium-sized developers, which comprise the majority of the real estate sector (Hsu & Li, 2015).

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[15] Next to mortgages, Housing provident funds (HPF) are another way of financing housing, mainly for public workers. HPF are paid into by both employees and employers, and contribute to the purchase of housing; the remaining funds form part of a retirement scheme.

[16] Interest rates on development and mortgage loans are linked to the People's Bank of China's benchmark lending rate for the corresponding duration. Typically, interest rates, next to the reserve requirement ratio (RRR), increase in cooling off periods.

Special purpose vehicles and capital markets as financialized circuits to invest indirectly in real estate: next to companies' profits,[17] self-raised funds represent another substantial portion for financing property development in China (Table 3), especially for land premium payments. These refer to the various Chinese-style of special purposes vehicles (SPVs) as well as to capital markets. They are part of financialized circuits that enable individuals, companies and institutional investors to indirectly invest Chinese real estate (Figure 3); thus, generating an investment return without formally buying property.

Trust companies are the first type of SPV. They can be affiliated with banks (e.g. Bank of Communications International Trust), insurances (e.g. Ping An Trust) or the state (e.g. provinces: Shanxi Trust; Suzhou Trust; Yunnan International Trust; etc.; state-owned enterprise: China Railway Trust, etc.) (KPMG, 2012). They act as third-party wealth managers serving financial institutions, companies and wealthy individuals, as they are prohibited from taking deposits. As such, they can extend interest-bearing loans, financed through various financial products (trust loans) sold to enterprises and individuals, and then channel these funds into a variety of sectors, including the real estate market, infrastructure, financial instruments and private equity (Hsu & Li, 2015). Trust loans have been often bundled into (bank-trust) wealth management products (WMPs) to recycle risky debt based on cooperation between banks and trust companies. Under this operating model, trust companies sell various WMPs to individuals through banks' retail channels and then use the proceeds to issue loans. Though not guaranteed by banks, WMPs are attractive to individual investors as they offer higher yields than bank deposit rates, which are capped by the central bank. Trust companies have become significant partners by helping banks to work around the limits they faced on maximum deposit rates in order to control risk (loan□to□deposit ratio of 75%) by shifting loans off their books. Trust loans to real estate peaked at 15% of total trust finance, which represented 20% of bank development loans in 2011 (Table 4). Such loans are usually made for 1-2 years in the form of debt (Deloitte, 2013).

Fund financing is another type of SPV that has also developed since 2008; whereas trusts are public financial products, funds are private products for a limited number of (wealthy) investors, individuals and increasingly institutional investors. Such property related private equity funds are mainly independent or affiliated to existing management fund companies, such as private equity or venture capitalist (Deloitte, 2013).

Trust and funds finance – as well as the various locally based financial circuits which refer to shadow banking (Theurillat, 2016)[18] – are a form of private securitization of China's real estate, which through the development of trust and wealth management products, enable to transform land into a more liquid financial asset. The emergence of these alternative circuits is related to changes in the fund

[17] Operating profits were over 8% to 14% since mid-2000s (NBS).

[18] These shadow banking forms at local scale refer either to industrial money (groups' bank loans or entrusted loans/company-to-company finance), or financial institutions money (pawnshops and private lending, microfinance companies and loan guarantee companies) as well as construction companies' money which take the form of loans and fuel the local property industry (see Theurillat, 2016 for details).

Table 4. Bank and Trust Loans to Real Estate (in Billion RMB)

	2'010	2'011	2'012	2'013	2'014	2'015
Bank loans to real estate	**9'421**	**10'730**	**12'237**	**14'610**	**17'370**	**21'010**
Real estate development loans	3'157	3'488	4'001	4'590	5'630	6'560
Real estate housing mortgage	6'264	7'242	8'236	10'020	11'740	14'450
Total real estate loans/total bank loans (%)	21	20	20	21	n.d.	n.d.
Trust finance for real estate	**432**	**688**	**688**	**1'034**	**1'309**	**1'288**
Trust for real estate/total trust loans (%)	15	15	10	10	10	9
Trust finance for real estate/total development loans (%)	14	20	17	23	23	20

Sources are from CEIC data and China National Bureau of Statistics.

management industry environment these last years. In this regard, China's banks played a significant role as they increasingly turned to wealth management business to diversify and increase returns originally based on the interest rate differential between deposits and credits (Hsu & Li, 2015). However, trust finance and funds finance are still short-term oriented as they lend (this can also take the form of equity joint venture) to the property industry in a similar way as banks, i.e. based on revenues from property sales. These vehicles do not however compensate for the lack of real estate investment trusts (REITs) in which investors (individuals, institutional or corporates) can invest (shares) and that would hold assets long-term, typically for commercial real estate (Liu, 2011; Quek & Ong, 2008).[19]

In order to cope with this lack of more liquid forms of real estate investment which are typical in Western countries (Theurillat & Crevoisier, 2014), new types of SPVs recently developed. Based on crowdfunding principles, large Chinese developers (Country Garden, Greenland and Wanda are in the forefront) initiated online investment platforms in the form of open funds that collect money directly from investors, mainly households based on various models. Basically, investors are supposed to get return as a shareholder of a fund just as if they purchased real property. Access to internet is consequently a condition and so far only three companies are permitted to provide online services in China. Therefore, partnerships (through shareholdings) with Tenscent, Baidu and Alibaba are a key element for developers to execute these new SPVs.

This further step of financialization of real estate, through new forms of securitization, is also related to the specificity of China's domestic capital markets. Initial public offerings (IPOs) on the Shanghai and Shenzhen stock exchanges need to have China Securities Regulatory Commission (CSRC) approval and

[19] For the time being, there are only two offshore REITs listed on the Hong Kong Stock Exchange that have their own asset portfolios coming from an externalization of real estate companies (Aveline-Dubach, 2013).

consequently concern mainly SOEs. Moreover, the corporate bond market is still under-developed (Zhen, 2013), and since 2010 up to mid-2014, equity/debt issuance approval for PRC-incorporated developers was delayed. To circumvent the restrictions of domestic capital markets and to expand their access to capital, nearly all large Chinese property developers, increasingly created offshore branches (holdings) to be listed on foreign stock exchanges, mainly on the Stock Exchange of Hong Kong, Ltd.[20] Since 2010, As a result, they could gain access to comparatively cheaper foreign capital, which has even become easier to obtain with the establishment of the offshore RMB market since December 2011 (KPMG, 2011). International capital was mainly collected through corporate bonds issuance in Hong Kong, totalling 49 billion USD during the 2010-2013 period (Bank of America Merrill Lynch [BOAML], 2014). Furthermore, being listed abroad, top developers can also gain access to foreign bank loans often at more favourable terms than domestic ones. While the financial sector is still bank-centered (Allen *et al.*, 2012), the central government has actively encouraged investments in the financial markets since 2014. For instance, Wanda, one of the major Chinese developers, that listed in December 2014 on the Hong Kong Stock Exchange delisted in September 2016 to make an IPO or backdoor listing on the Shanghai market. However, as a result of stock market volatility since 2014, it remains to be seen if households that make up the largest portion of investors in China, contrary to Western countries where institutional investors that collect funds from individuals are the majority, would prefer to keep on directly buying property as a financial asset instead of investing in capital stocks.

Urban property as a financial asset

As mentioned earlier, housing appreciation as a result of rapid urbanization pushed China's urban homeowners to increasingly treat housing as financial asset. Housing mortgage loans developed for individuals purchase second, third and even more homeowners. Moreover, from 2010 to 2014, in order to cool down prices that previously peaked in large cities, housing purchases by non-local residents were restricted in 47 cities (Rhee & Kramer, 2015). This trend has reversed, (there are still restrictions for Beijing, Guangzhou, Shanghai and Shenzhen) especially in medium and small cities (capitals of provinces and counties) that encourage property purchases by non-local residents. Cross-regional/provinces investments in housing now find a new business model coined "build-sell-rent" (Figure 3): typically, a property (flat) is sold to an individual based on guaranteed rental revenue over 10-15 years by the property developer. The emergence of this form of rental market has also attracted a major international bank. In 2013, UBS launched a fund to invest in Shanghai's public rental homes, the first investment product of its kind in China, which is supposed to convert into a publicly listed REIT when regulators permit it (Namgyal, 2014).

Rental revenue has been a main incentive for commercial developers. In

[20] This listing process (IPO) which started in the early 1990s (with China Overseas Land Investment as first IPO) goes together with a fiscal suitable location to register the offshore branch (British Virgin Islands, Caiman Islands or Hong Kong (Deloitte, 2013).

China, the business model of major retail developers has been based on holding retail areas such as supermarkets and shopping centers; consequently, they are both developers and investors. However, for many local developers, the build and hold logic often turned into a sell logic since strata of commercial properties were sold to households as a financial asset. With the increasing interest for non-housing sectors by large developers, Chinese as well as Asian ones (mainly from Hong Kong and Singapore), these last years (e.g. to retail: Shui On, China Resources, Vanke ; to tourism: Fosun along with the purchase of club Med; to theme parks: Wanda), business models became more sophisticated. This more specifically applies to large-scale mix-use urban projects that blossomed in many cities around China (e.g. Wanda Plaza, Xintiandi, MixC, Capitamalls, etc.). Turnover is based both on short term cash by selling assets such as flats to households and in some extent office areas to corporations, and more long term cash by holding assets such as shopping malls and hotels (this latter implies of course hotel management branch). This model has diffused within the property industry throughout the country (Theurillat, 2016), with variations. For instance, some retail (shops) or some hotel (rooms) areas are sold to households based on guaranteed revenue streams (rental income) by real estate companies from operators. More recently, large developers like Wanda and Vanke announced that for the development of new retail or mix-use urban projects, they wanted to implement an asset light strategy, similar to many of their counterparts in Europe and the US (i.e. selling them to investors). This strategy of turning to large investors goes along with the emergence of domestic institutional investors that seek real estate investments, such as insurance companies which were allowed to invest up to 30% of their total assets in real estate,[21] as well as the investment platforms previously mentioned which concretely takes the form of a quasi-REITs. It remains to be seen if the emergence of domestic institutional investors will end up in the development of REITs. Low revenues from commercial investments[22] have delayed the creation of such onshore REITs (Quek & Ong, 2008) and also deterred foreign institutional investors. Up to now, foreign property funds have preferred to make money on property development (debt or equity forms) rather than on property investment.

Conclusion

Financialization of housing and urban production has been increasingly addressed in urban studies since mid-2000s. For some scholars, the transformation of urban built environment into financial assets must be viewed in relation to its role for the wider economy. On one hand, homeownership policies were politically used as an economic trigger based on the fact that homeownership could boost consumption and consequently the production sector (goods and services). At the same time, as a result of property-led urban policies in many countries, housing has become a

[21] However, Chinese insurances are not allowed to develop or invest in commercial residential property as well as to be directly involved in the development and construction of properties (KPMG, 2010).

[22] Low revenues can be related to strata and poor property management, or to uncoordinated leasing/tenant mix and difficulties in repositioning

financial asset for households (direct purchase of properties) as well as for the financial industry. On the other hand, urban built environment attracted the capital from the productive sector as well as from other sources (trade surpluses, corporate profits, households savings) through the emergence of institutional investors (pension funds and insurance companies, sovereign funds) and many types of special purpose vehicles (SPVs).

This article provides a heuristic framework to address issues about China's ongoing urbanization in relation to the role of land and built environment as triggers for economic growth and to the increasing financialization of urban production. One dominant field of literature highlights the interrelation between land and capital within a specific institutional setting between central and local governments. Due to the fiscal incentives based on land use rights commodification and to the extension of the land bank through rural areas integration, urban land is exploited by municipalities as a source of capital formation. Basically, land has been first used to attract domestic and foreign firms in manufacturing industries to export goods in overseas markets and second to build the city around. In this relation where land is a trigger for both economic and urban development, it can be first supplied for free and then be sold for property development. As a result of land value increases expected from spill over effects, urban development consequently rests upon continued land and property price increases. However, and in line with numerous scholars, this paper highlights that in this municipal finance system where land is used as a financial asset, urban governments needed to finance local urban infrastructures and other social services. To do so, urban development has gone along with an increasing local debt based on various types of local financing platforms (LFP) where land functions as a collateral to obtain funds from banks and increasingly from other financial institutions. In line with the mounting local debt, we further argue for the financialization of the LFP system. While bank loans are still the major source of funding for urban infrastructures, these latter have increasingly been a financial asset for households through the development of SPVs such as trust-bank wealth management products. Moreover, bonds traded in the interbank market can be purchased by individual investors since 2016.

While this land and infrastructure perspective is useful to understand China's land-driven urbanization, it is however still focused on the supply side. Land as a trigger for urban development and economic growth should also be understood in relation to demand for property. In line with the real estate literature that highlights the key role of demand, this article develops an original understanding of the financialization of urban production from the perspective of China's property industry. Besides the role of homeownership policy since 1998, which boosted urban production based on use value, various ways of the transformation of land into financial asset have occurred. Chinese households as the main investors have not only been able to directly invest in housing and in non-housing by purchasing flats or shops but increasingly indirectly by investing in SPVs such as trust-bank and funds finance and new kinds of investment platforms. This private form of securitization has compensated for the absence of liquid domestic financial markets and listed SPVs and has facilitated the capital switch to real estate. Besides, the financialization of urban property is not only related to the housing sector and households as property owners. Large-scale and mix used urban projects are increasingly owned by various actors, such as traditional ones like developers for retail and households for housing, but also new ones like institutional investors (insurance companies), corporations and households for hotel and office areas.

This heuristic framework provides a clearer and more complete picture of the linkages between land, property and finance. However, issues around China's ongoing urbanization and financialization must be further addressed. This implies that scholars in China's urban studies deal with the transformation of land into a financial asset in relation to the connections to the various origins of capital, notably from the primary circuit, that are invested into real estate. Three main research directions can be stated. First, the trend to treat land as a financial asset, which is originally based on housing purchases by households in China, is further developing. Now demand for urban built environment are related to new forms of financialized circuits like the emergence of Chinese institutional investors such as insurance companies and sovereign funds next to SPVs that enable capital to be driven from various sources (households, banks and companies) to real estate. Second, urbanization and financialization have to be related to the significance of the property industry. In this regard, Chinese top developers would be a relevant analytical tool to pursue to better understand how China's urbanization is financed in relation to urban entrepreneurialism on the one hand, and central government macro-policies on the other hand. During 2000s, these companies have been major city builders in China in phase with the five-year economic plans initiated by the central government. They first built large housing areas all over the country and increasingly turned to new urban projects related to tourism and consumption-based activities (resorts and leisure parks; mixed-use commercial centers, etc.) or to new economic zones (high-tech and green-tech clusters). Third, China's urbanization is now moving towards overseas investments. This current trend in real estate by developers, insurance companies and individuals would also be a relevant research hypothesis to better understand whether and how China's land-driven urbanization is evolving outside its border as a result of capital circulation limits in Mainland real estate.

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