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URBAN DEVELOPMENT INSTRUMENTS IN A CONTEXT OF INCREASING **FINANCIALIZATION**:

THE CASE OF **URBAN PARTNERSHIP OPERATIONS IN BRAZIL**

PhD Thesis | Doctoral Program in Spatial Planning

Author: Cláudia Teixeira Alves Affonso

Supervisor: Professor Doctor E. Malcata Rebelo | Co-Supervisor: Doctor António C. Ferreira

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Abstract

Throughout the last decades, there has been a surge in innovations regarding financial instruments for urban development projects. In the same period, new global economic dynamics and increasingly competitive relationship networks have made an appearance. Also in this context, local governments are being pushed to improve their negotiation and investment attraction capabilities.

From the point of view of urban studies, the debates that link the processes of financialization of governance and the built environment with regulatory and institutional changes, policy instruments, varieties of capitalism, hierarchies and types of market economies are still little explored in Brazil. Although there is an expectation that instruments such as CEPAC and UPOs will follow international trends in large-scale urban development projects, such as providing connections between the capital market and the built environment or placing the local government in a favorable position, or unfavorable, with regard to the use of financial instruments to comply with its agenda, this aspect is still unclear to specialists in financialization of governance and the built environment. In addition, although large-scale urban development projects are identified by international literature as a space, physical and institutional, which tends to foster the growth of financialization by placing municipalities in a vulnerable position with regard to meeting the needs of their own agenda and favoring the global financial market, this aspect of analysis is still little explored in relation to countries with the state-led market economy model.

In order to answer these research gaps, this work focuses on multiple cases in Brazil, using a mixed methods approach. The main question of this investigation is: "Is the interaction between urban development instruments, financial instruments and institutions leading to a scenario of increasing financialization in the context of urban partnership operations in Brazil?".

Keywords: *financialization; urban development projects; urban financial instruments; land use planning policies; land value capture instruments*

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RESUMO

Ao longo das últimas décadas, houve um surto de inovações em relação aos instrumentos financeiros para projetos de desenvolvimento urbano. No mesmo período, surgiram novas dinâmicas econômicas globais e redes de relacionamento cada vez mais competitivas. Também neste contexto, os governos locais estão sendo pressionados a melhorar suas capacidades de negociação e atração de investimentos.

Do ponto de vista dos estudos urbanos, os debates que relacionem os processos de financeirização da governança e do ambiente construído com mudanças regulatórias e institucionais, instrumentos de política, variedades do capitalismo, hierarquias e tipos de economias de mercado ainda se encontram pouco explorados no Brasil. Embora haja uma expectativa de que instrumentos como o CEPAC e as OUCs sigam as tendências internacionais dos projetos de desenvolvimento urbano de larga-escala, como propiciar conexões entre o mercado de capitais e o ambiente construído ou de colocar o governo local em posição favorável, ou desfavorável, no que se refere ao uso de instrumentos financeirizadores para cumprir com sua agenda, este aspeto ainda se encontra pouco claro para os especialistas em financeirização da governança e do ambiente construído. Adicionalmente, apesar de os projetos de desenvolvimento urbano de larga escala sejam apontados pela literatura internacional como um espaço, físico e institucional, que tende a fomentar o crescimento da financeirização colocando os municípios em uma posição vulnerável no que diz respeito a atender às necessidades de sua própria agenda e favorecendo o mercado financeiro global, esta vertente de análise ainda se encontra pouco explorada em relação a países com o modelo economia de mercado liderada pelo estado.

A fim de responder a essas lacunas de pesquisa, este trabalho enfoca múltiplos casos no Brasil, usando uma abordagem de métodos mistos. A questão central desta investigação é: "A interação entre instrumentos de desenvolvimento urbano, instrumentos financeiros e instituições está levando a um cenário de crescente financeirização no contexto das operações de parceria urbana no Brasil?".

Palavras-chave: *financeirização; projetos de desenvolvimento urbano; instrumentos financeiros urbanos; políticas de planeamento do uso do solo; instrumentos de recaptura de mais-valias fundiárias*

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ABBREVIATIONS AND ACRONYMS ABBREVIATIONS AND ACRONYMS

Abrapp	Brazilian Association of Private Pension, in Portuguese, *Associação Brasileira de Previdência Privada.*
ANBIMA	Brazilian Financial and Capital Markets Association, in Portuguese, *Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais*.
B3	Brazil Stock Exchange and Over-the-Counter Market, in Portuguese, *Bolsa, Brasil,* Balcão.
BM&Bovespa	São Paulo Stock Exchange, in Portuguese, *Bolsa de Mercadorias e Futuros & Bolsa de Valores de São Paulo*.
CDURP	Urban Development Company of the Port of Rio de Janeiro Region, in Portuguese, *Companhia de Desenvolvimento Urban da Região do Porto*.
CEP	Postal code, in Portuguese, *Código de Endereçamento Postal*.
CEPAC	Additional Building Right Certificate, in Portuguese, *Certificados de Potencial Adicional de Construção.* (It is a financial instrument and an urban planning instrument – land value capture)
CEPAM	Municiaplity's Study and Research Centre, in Portuguese, *Centro de Estudos e Pesquisas da Administração Municipal*.
CRIs	Certificates of real estate receivable, in Portuguese, *Certificados de Recebíveis Imobiliários*. (It is a financial instrument)
Cetip	Private company integrated into B3 named, in Portuguese, as *Central de Custódia e Liquidação Financeira de Títulos*.
CVM	Securities and Exchange Commission, in Portuguese, *Comissão de Valores Mobiliários.*
EFPC	Closed Complementary Welfare Entities, in Portuguese *Entidades Fechadas de Previdência Complementar*.
FAR/ $FAR_{max.}$	Floor Area Ratio and maximum Floor Area Ratio.
FGTS	Guarantee Fund for Time of Service, in Portuguese*, Fundo de Garantia do Tempo de Serviço.*

FIIs	Real Estate Investment Funds, in Portuguese, *Fundos de Investimento Imobiliário*. (It is a financial instrument)
FPIs	Financializing policy instruments.
GDP	Gross Domestic Product.
GFA	Global Financial Assets.
GLA	Gross Leasable Area.
IBGE	Brazilian Institute of Geography and Statistics, in Portuguese, *Instituto Brasileiro de Geografia e Estatística.*
IPOs	Initial Public Offering.
IPPUC	Curitiba's Urban Planning and Research Institute, in Portuguese, *Instituto de Pesquisa e Planejamento Urbano de Curitiba*.
NAREIT	National Association of Real Estate Investment Trusts.
OI	Linked Operation, in Portuguese, *Operação Interligada*. (It is an urban planning instrument)
OODC	Onerous grant of the right to build, in Portuguese, *Outorga Onerosa do Direito de Construir*. (It is an urban planning instrument – land value capture)
PLD	Legal Density Ceiling, in French, *Plafond legal de densité.* (It is an urban planning instrument – land value capture)
PMDB	Brazilian Democratic Movement Party, in Portuguese, *Partido do Movimento Democrático Brasileiro*.
PREVIC	National Complementary Welfare Superintendence, in Portuguese, *Superintendência Nacional de Previdência Complementar*.
PT	Worker's Party, in Portuguese, *Partido dos Trabalhadores.*
PVR	Property Value Rate.
RCMN	National normative, in Portuguese, *Resolução do Conselho Monetário Nacional*.

CCIs	Real estate credit notes, in Portuguese, Cédulas de Crédito Imobiliário. (It is a financial instrument)
REITs	Real Estate Investment Trusts. (It is a financial instrument)
SBPE	Brazilian System of Savings and Loans, in Portuguese, *Sistema Brasileiro de Poupança e Empréstimo.*
TDR	Transfer Development Rights. (It is an urban planning instrument – land value capture)
TIF	Tax Increment Financing. (It is an urban planning instrument – land value capture)
UDPs	Large-scale Urban Development Projects. (It is an urban planning instrument)
UPO	Urban Partnership Operation, in Portuguese, *Operações Urbanas Consorciadas.* (It is an urban planning instrument)
ZACs	Mixed development zones, in French, *Zone D'amenagement Concerté'*. (It is an urban planning instrument)

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INTRODUCTION

PRESENTATION OF THE THEME

The rise of financial market logics, rationalities, and narratives, occurring in various sectors of contemporary societies, has resulted in structural transformations of economies that correspond to the concept of 'financialization'. Financialization has enabled the conversion of land and the built environment into liquid assets, creating pathways for the territory to be traded in capital markets. These logics have also penetrated the institutional and regulatory environment of urban planning. Policy instruments aimed at urban development are often debated for creating conditions that allow connections to be made between the built environment and the capital market, by making use of financial institutions and instruments. Thus, urban development policy instruments, financial instruments and institutions are the object of study of this thesis. This work seeks to understand how financialization processes have occurred through the application of these instruments.

Current studies on financialization try to explain how contemporary capitalism is embedded in societies and how it simultaneously changes these societies. The processes of financialization are conceptualized as complex, multivariate, and multifaceted, which explains the lack of precision and definition of the concept. In relation to the scientific production on financialization, there is a clear concentration of works on the perspectives of analysis and experiences of the Anglo-Saxon axis. This concentration can be justified by the fact that it aggregates the economies at the center of the global capitalist system. Research on experiences in other regions of the world, such as Asia or Latin America, report some differences in relation to Anglo-Saxon cases of financialization. Recently, some works have emerged which adopt the foundations of comparative capitalism, varieties of capitalism, and the hierarchies of the global monetary system to justify these variations in financialization processes. Although still scarce, this line of research emphasizes that

financialization processes vary according to a set of historical, socioeconomic, and political conditions particular to each country.

From the perspective of urban studies, works on financialization address several topics, such as the financialization of the urban built environment and the financialization of urban planning. Furthermore, literature on the built environment addresses real estate property as a physical infrastructure through which financial capital circulates, and studies on urban planning discuss how the calculation methods and practices typical of the financial market have penetrated urban governance and its instruments. Together, these works conclude that due to fiscal austerity measures, municipalities have found themselves cornered to search for new alternatives for budget sources in order to fulfill their agendas, an observation relevant to the context of Brazil. In the search for ways to attract investments into cities, many of these municipalities began to adopt financial sector logics and financialized policy instruments. In this respect, large-scale urban development projects emerge as a fertile environment for the intersection of local spheres, such as the municipality and real estate developers, with global financial capital investors. These projects often feature a financing structure that incorporates financial logics on top of public-private partnerships. This is the case of the formation of public-private partnerships companies for project management or the adoption of financialized land value capture instruments.

Based on the issues described above, the first chapter of this thesis delves into an extensive literature review, organized according to two main sections. The first, on the financialization of land use, introduces the concept of financialization and its historical background, based on the changes experienced in public policy and the capitalist system since 1945. This section introduces state reshoring and the geographies of capital, explores some debates originating in comparative capitalism, land as capital, and the circulation of land in the global financial system; in addition, the implications of financialization processes on urban policy instruments are discussed. The second section presents debates on urban development policies, their instruments, and the current scenario of increasing financialization. This section addresses one of the main issues of the urban financialization process: the conversion of built environment into a financial asset. Furthermore, the restructuring experienced by the real estate market and the role of financial capital investors in these changes is also reviewed, as well as the emergence of intermediary players, their role in the capital market, the most important aspects of urban development projects from a governance perspective, and the dimensions of urban financialization

processes, such as public funds allocated to urban development projects, mortgage distribution and securitization, and land value capture instruments.

The second chapter of this thesis focuses on its methodology, divided into two major sections: research methodology and case study research design. In the first part, the research problem and insufficiencies detected during the literature review are presented, followed by the main question, hypotheses, objectives, and a brief review of research methodologies and their paradigms relevant to this work. The second part, case study research design, presents and explains the selection of the case studies.

In the third chapter, the results of data collection and analysis are presented, divided into two main sections: financializing policy instruments and the territorial distribution of funds in the five large-scale urban development projects that constitute the case studies of this thesis. In the financializing policy instruments section, urban policy instruments, financial instruments and institutions at national and local scales are defined, contextualized, and analysed individually through the quantitative and qualitative data collected during this thesis. In the second part of this chapter, a cross-analysis of collected data demonstrates the interaction of financial instruments in urban development projects.

The fourth chapter of this thesis presents the discussion of the results obtained in the previous chapter. Through an informed narrative, financialization processes pertaining to the case studies are scrutinized and compared with the main contributions on the subject found in Brazilian and international literature, according to the following discussion topics: commercial real estate, the financialization of urban governance, and the particularities of financialization in Brazil. Finally, the fifth and last chapter presents the main conclusions derived from this dicussion, as well as concluding remarks.

PERSONAL MOTIVATION

I still remember sitting in my car, by the 'new' main financial district of the populous city of São Paulo. Standing in the midst of intense traffic, I observed the great change that had occurred in the region in less than two decades. A neighborhood that used to be characterized by low middle-class residences had become one of the most disputed commercial addresses in the city, home to important global names such as BlackStone, Credit Suisse, Facebook, or Google - and their main business partners.

However, the densification of the area, with an increasing number of buildings of imposing architecture and signed by famous international studios, was not limited to this neighborhood. The air of ostentation, characteristic of large business centers, proliferated in other parts of the urban fabric. Less than ten kilometers away, I could see immense lighted cranes emphasizing that other sumptuous constructions were underway.

These buildings and their surroundings reminded me of scenes from Hollywood films, like “The Pursuit of Happiness”, “The Wolf of Wall Street” or “The Big Short”. Through characters representing powerful 'at the top of the food chain', they show who commands and articulates the business world. Engraved, these mysterious entities appear in rooms with glass walls, at the top floors of towers in cities like New York or London. There, they decide the future of people, cities, and economies in complex business plots.

However, this was not fiction. It was my São Paulo, known as ‘the city that doesn’t stop’, due to its economic strength. The buildings there are not scenarios, they are tangible - or rather, in the language of the market, tangible financial assets. And the people who work there are not Hollywood actors, they are market players. That is, ordinary citizens with a name, address, and telephone number, some of which in my personal list of contacts.

Throughout my professional career, I have been involved in actions related to the construction of large-scale and mixed-use ventures. I have often heard from these market players that architecture should be thought of in numbers, baptized by them as 'numerical architecture'. In other words, according to these actors, architecture should be kept in mind with the objective of 'closing the account', so that investments can move forward. This request was always accompanied by an Excel spreadsheet. In it, complex calculations linked, in some way, future buildings to investors in the financial market or to any of the sophisticated mechanisms of this segment.

As a result, in recent decades urban space has come to be understood in numbers. In other words, architecture firms had to learn to meet the needs of clients in the financial market. They transformed numbers into space, in accordance with international standards imposed by the constant search for risk reduction and profit maximization. At the same time, architecture professionals accumulate the task of dealing with urban planning regulations in this role. All these accounts are closely linked to the city's urban regulations. And, with regard to these regulations, other actors enter this scenario: the representatives of the local public power.

In this case, government officials do more than determine 'where', 'how' and 'which' regulations will be used in the city. They also have the role of creating laws and planning instruments that regulate both the city as a whole and its parts. Like architectural professionals, they are actors with multiple roles. On the one hand, they must think of ways to direct urban growth and development. On the other, they must deal with the budget restrictions typical of Latin American cities, and seek ways to attract investments to provide infrastructure, goods, and public services for the city.

I am an architect and urban planner by training. However, throughout my career, issues related to the financial market and the economy have, in some way, been part of my professional life. So, knowing more about this world has always seemed like an exciting challenge...

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1 LITERATURE REVIEW

1.1 FINANCIALIZATION OF LAND USE

A contemporary history of cutbacks, fiscal austerity, and state budgetary constriction, on the one hand, and the increasing prominence of financial markets in contexts of globalizing capitalism, on the other, have escalated debates on financialization, its multifaceted features around the world, and related repercussions on urban dynamics and local governance. Emerging literature on the financialization of the built environment and urban policies stems from debates and concepts dating from before the 1990s. It was only towards the end of this decade that a group of economics authors, affiliated with the Ecole de la Régulation (Aglietta 1998; Orléan 1999; Boyer 2000; Lordon 2000; Chesnais 2001), announced the arrival of a 'new financialized regime of capital accumulation'. The construction of this new regime lies on even earlier debates, with their origins in classical economics. In addition, the concept is also influenced by ideologies pertaining to economic systems, discussions about networks of capital accumulation, and auxiliary concepts such as 'land as capital' and its exchange and circulation in the financial market.

These issues are situated in the sphere of debates about public policy and economics. They are also related to other topics, such as changes in the scales of global and local power or the processes of globalization. Broadly speaking, works on financialization discuss capitalist systems, their complexities, and their effects on the societies in which they are embedded. However, the very concept of financialization presents some dilemmas regarding its definition.

This section introduces the fundamental themes that surround financialization, in order to provide a theoretical background to debates on financialization from the perspective of urban development policies and instruments.

1.1.1 TOWARDS FINANCIALIZATION: THEORETICAL AND HISTORICAL INTERSECTIONS

Similarly to other popular concepts in academic literature, such as globalization or neoliberalism, the concept of financialization seeks to explain contemporary capitalism, the way it is embedded in societies, and how it simultaneously modifies these societies (Aalbers 2015; 2019). It is relevant to say that the very concept of financialization raises debates, comparisons, and associations with the concepts of globalization and neoliberalism (Christophers 2015; Aalbers 2015). Christophers (2015) argues that the popularization and overuse of the term 'financialization' makes vague and overly broad; Aalbers (2015) counterargues that it is exactly in this comprehensiveness, and in its multidisciplinarity, where its strength lies.

In this subsection, an overview of the distinct nuances of the concept of financialization is presented, including its associations with globalization and neoliberalization – which, despite not being the focus of this thesis, require further exploration in how they intertwine with financialization. This work then proceeds to walk through the modern foundations and recent evolutions that led to the consolidation of the contemporary concept of financialization, through the historical intersections of public policy and capitalism, roles of the state, and processes of urbanization.

1.1.1.1 FINANCIALIZATION: DILEMMAS OF A CONCEPTUAL DEFINITION

Although the concept of financialization was originally born in the academic field of economics, it soon spread to other scientific areas. For Aalbers (2015b), the literature on financialization is part of a broader attempt to understand the non-linear, multidimensional, and multi-scale complexity of contemporary societies and economies. Besides the use of the concept of financialization in scientific works in the disciplines of economics and economic policy, its diffusion to the area of urban studies also extends to the subdiscipline of financial geography. As Mosciaro (2021) explains, this subdiscipline goes beyond identifying major financial centers or their repercussions and role in the world economy. Financial geography seeks to understand how finance has altered socio-spatial relations in different contexts and scales. Using the lens of financialization – the rise of the financial market, its logics, rationalities, and narratives – makes it possible to analyse the processes of change that have occurred in various sectors of contemporary societies (Aalbers 2017; Mosciaro 2021).

One possible definition of the term 'financialization', and the one primarily used throughout this work, is the increasing adoption of financial market rationales at various scales of states, institutions, households, and daily life (Christophers 2015; Aalbers 2015). Nevertheless, when defining financialization, one must keep in mind that the concept is neither clear nor precise. The definition of financialization is, instead, presented as a controversial, vague, and imprecise concept due to its multiple and variable aspects (Aalbers 2015, 2019).

Le Heron (2009, 365) loosely poses financialization as "the elaboration of the capitalist financial system following widespread deregulation, beyond that required for international trade and productive investment flows, leading to speculation, fraud, predation, and thievery on unprecedented scales, with major redistributive effects in favour of corporate and elite interests." However, this last definition was presented in 2009, and it refers more to what can be seen as a possible side effect of financialization than to its definition. A decade later, studies on financialization have gained more emphasis and its definition has evolved; Aalbers (2019) defines it as "the increasing dominance of financial actors, markets, practices, measurements, and narratives at various scales, resulting in a structural transformation of economies, firms (including financial institutions), states, and households." As the author states, this is a broad enough definition to encompass the various meanings of financialization put forward by the various areas of science that address the topic. Indeed, and also according to Aalbers (2015b), scholars divide the topic into three conceptualizations: financialization as (i) 'a regime of accumulation'; as the (ii) 'emergence of stock value'; and as (iii) 'the financialization of everyday life'.

Financialization allows for the conversion of land and property into liquid assets, essentially paving a path for their trading in financial markets. Urban financialization, in particular, is generally seen as hand in hand with the intensification of uneven urban development (Prike and Pollard 2010; Gotham 2016), the yielding of local power to global finance investors (Ashton et al 2016), the promotion of land use de-contextualization (Torrance 2008; Savini and Aalbers 2015), and the creation of obstructions to the implementation of equitable policies, amongst other effects. Furthermore, as Savini and Aalbers (2015) argue, it seems that not every municipality is in the position to deal with financialization without falling hostage to financial investors' pressures.

However, urban financialization may also represent an opportunity for local governments to work around budgetary constrictions and to find financial means to push their own

agenda (Weber 2010; Fainstein 2016). Such effects of urban financialization can be more or less varied, as they are connected to complex mesh network of actors from distinct scales and backgrounds (Guironnet and Halbert 2014b, 2015; Theurillat et al 2016). As a multifaceted process, considerable variations in financialization outcomes have been reported in different world regions, such as Global North and South. More recently, this was related with inner characteristics of each national economic model, which reflects in distinct modes of institutional operation in each country (Fernandez and Aalbers 2020).

The concept of financialization has become increasingly popular in academia, but it has also been criticized for being imprecise, vague, and chaotic. Not helping matters, other diffuse concepts in academia appear linked to that of financialization with some frequency. Globalization, neoliberalization (neoliberalism) and financialization are all popular terms and debated topics in academic social sciences, especially in what pertains to contemporary capitalist economies. In an attempt to understand contemporary capitalism and its particularities, the literature on cultural and economic capitalism has explored these terms thoroughly on past decades.

The background of these three conceptual terms and processes – globalization, neoliberalization and financialization – spans the period from 1970 to 1990; by then, significative changes had occurred on governance and market regulation, added to technological development, especially with the advent of the internet. These changes have been deep and, in a way, interconnected the globe. Due to successive regulatory and fiscal reforms, geographical national borders have faded, making interconnections at the planetary scale. Globalization was a trendy word of the 1990s, neoliberalization in the 2000s, and financialization marked the 2010s (Christophers 2015). With the global financial crisis of 2008-09, the concept of financialization gained even more popularity (Aalbers 2017).

Out of the aforementioned concepts, when analysing articles in encyclopedias of social sciences globalization is the term most commonly used, followed by neoliberalism, neoliberalization, and financialization (Kitchin and Thrift 2009; Wright 2015). Curiously, there is more than one definition for globalization and neoliberalism within these glossaries (see Kitchin and Thrift 2009). In encyclopedias, sociologist, anthropologists, political theorists and geographers explore the epistemic knowledge surrounding these three conceptual terms, in different fields: economy, law, religion, health care, technologies, education, politics, language, geography and urban planning.

Broadly speaking and based on encyclopedia glossary definitions (namely Kitchin and Thrift 2009) the three terms are defined as follows:

- ***Globalization.*** As Asthana (2009, 28) states, globalization is "a complex term that captures growing global connectivity – in trade, the flow of capital, the movement of people, and the diffusion of social, cultural, and political values throughout the world." All glossary definitions within this encyclopedia, although from different perspectives of analysis, speak of globalization as the result of a group of events, not only associated to technological development but also to changes on trade and governmental regimes. According to Asthana (2009), in the past four decades the debates on globalization have highlighted the role of market liberalization, and of organizations such as the World Bank and the International Monetary Funds, in this process.
- ***Neoliberalization.*** Speaking of neoliberalism, most authors on this encyclopedia (Kitchin and Thrift 2009), when writing their glossary definitions, classify it as an economic and political philosophy (Williams 2009; Brown 2009; Barnett and Barnett 2009; Conradson 2009; Soja 2009). Yet some also call it as a doctrine (Glassman 2009), economic and political relations (Aitken 2009), ideas or ideology (Barnes 2009; Elliot 2009; Willis 2009), framework (Mackinnon 2009), a model, a strategy, a system, or a form of governance (Gilbert 2009; Mitchell and Staeheli 2009; Ruddick 2009), and so on. These many ways the term is classified underlines the multidisciplinarity of this term as well as its conceptual definition imprecision. As Larner (2009, 374 and 385) quoted, it is a "short-hand term referring to the new emphasis on markets, minimal states, and individual choice in contemporary political–economic formations." He also mentions that, in geography studies, neoliberalism is frequently understood it as a politic that favour markets and the part played by individuals in securing economic and social well-being. This idea is based on experiments made in the decades of 1980 and 1990, especially programs known as Reaganomics and Thatcherism, which also represent a criticism to policies of the welfare state and economic interventionism. Aiming at the shrinking of the public sector, neoliberal approaches were embodied in regulatory contexts benefitting the role of markets, programs of privatization, and fiscal austerity. Larner (2009, 374 and 385) also defines the term neoliberalization as an "analytical approach that emphasizes the contested political processes associated with neoliberalism."

- ***Financialization.*** Beyond the previously presented definition of the concept, it is important to reinforce that, to Christophers (2015), the interlocked processes of globalization, neoliberalization and financialization attributed a highly different tone to capitalism post-1970. Mosciaro (2021) underlines that the financialization concept gained its momentum in the 2000, in particular after 2007, with the frequency of use of the term 'financialization' or 'financialisation' increasing during the last decade.

All these terms have some characteristics in common and a coincident historical path-dependency. When referring to globalization, neoliberalism or financialization, Duménil and Lévy (2004) suggest a causal relationship between them. However, Aalbers (2019) argues that they are independent processes, which might or might not be related. In addition, at times these concepts are the explanans (the object that explains) and at others the explanandum (the event to be explained). Regardless of which of these conceptual terms is quoted, they are frequently referred as either plural or varied and variegated processes (see Amin 2004; Larner 2009; Yates and Bakker 2014; Birch and Siemiatycki 2016; Aalbers 2017; Ward, van Loon, Wijburg 2019) but criticized for their chaotic and limited scope (Peck 2010; Christophers 2015). To Aalbers (2019), these terms, globalization, neoliberalization, and financialization, take over even if implicitly the nonlinear, multi-scalar, and multidimensional complexities of current societies and economies. As Aalbers (2019) stresses, these concepts are imprecise and entangled, making it challenging to define their individual boundaries; but their rapid popularity depends exactly on this conceptual imprecision.

1.1.1.2 THE FOUNDATIONS: PUBLIC POLICY AND CAPITALISM

With increasingly rapid population growth, meeting the needs and increasing pressures for the provision of urbanized land is also increasingly difficult (Smolka 2013; Nixon et al. 2015). Short and medium-term growth trends indicate that this situation will become progressively more acute in the coming decades. According to the report on urban finance published in 2015 by the Overseas Development Institute, the global population will exceed 9 billion by 2050. Most of this population growth will occur in low and middle-income countries, and probably 70% of this population will live in urban areas. With such a challenge to provide infrastructure, goods and public services, local governments have found it difficult to deal with the fiscal and budgetary issues of urban planning.

However, the tendencies for the aggravation of such difficulties are not limited to population growth, local pressures, or demands. Processes of change and globalization of economies have been witnessed in the last half of the century. The reflections of these processes are noticeable in the way cities organize and relate to each other, in this context of new economic configurations (see Sassen 2002; Piketty 2014; Amorim 2016).

Moreover, the regulatory and financial changes experienced in the last decades, together with the weakening of communication barriers, have altered the global scenario and transnational relations. The new guise assumed by capitalism in the last half-century – with an emphasis on the development of the financial industry and regulatory changes – has resulted in altered global investment dynamics (Sassen 2002; Corpataux and Crevoisier 2005) and the emergence of new institutions and actors (Theurillat et al. 2008; Corpataux and Crevoisier 2014; Guironnet and Halbert 2014). As "(...) the territory consensually accepted as the last frontier of sovereignty (...)" (Ferrao 2004, 44), the State, in its various scales (supranational, national, and local) has been articulating and adapting its territorial policies to deal with these new dynamics.

In turn, the development and diversification of public policy instruments, and the accumulation of programs and policies in the different sectors of state intermediation, have gained prominence in scientific debates about public policy. Each stage of state restructuring or development was followed by a wave of innovations related to these new instruments. This was the case during the growth of the welfare state in the post-war period, and it is the case with the increasing proliferation of actors and instruments, noted in various sectors and areas of public policy in the current period. Among this set of sectors and areas of public policy are the areas of market regulation, infrastructure construction, operation of public services, and state or welfare state reforms (Lascoumes and Le Gales 2007).

But how have these new dynamics and the globalization of economies impacted the territory and the construction of its policies in recent decades? How have public policies, urban policies included, been articulated in this context? To what extent, and how, have these policies responded to the unfolding of these new dynamics so far? What types of instruments, alliances and relationships have derived from these changes, and how do these reflect the figure of the State? How has the state responded to these new economic configurations and what new forms of governance have emerged from these changes? How has globalization and its territorial processes affected local and global scales of power? How

have global networks of capital production shaped the circulation of capital in the territory? How do these changes affect urban dynamics, and how do urban policies respond to them? What are the impacts of these changes on the circulation of tangible assets such as real estate? These are some of the questions present in contemporary debates in economic geography, economic policies, urban studies, and other social sciences.

OVERVIEW AND MODERN FOUNDATIONS

One of the best-known definitions of the concept of public policy is that of Laswell (1936). According to him, public policy is the science that seeks to answer the questions of who gets what, when, and how. For Lynn (1980), it is the actions of a government that produce certain effects. Peters (1986, 4) considers that the outcome of government activities, whether by its direct action or through agents, has an influence on the lives of citizens. Thomas Dye (2013, 3), on the other hand, understands that the definition of public policy goes further, that is:

> *"(...)Public policy is whatever governments choose to do or not to do. Governments do many things. They regulate conflict within society; they organize society to carry on conflict with other societies; they distribute a great variety of symbolic rewards and material services to members of the society; and they extract money from society, most often in the form of taxes. Thus, public policies may regulate behavior, organize bureaucracies, distribute benefits, or extract taxes - or all of these things at once."*

Although there is no single conceptual definition for public policy, this branch of political science aims to understand how and why the state takes certain actions and decisions - how its institutions, rules, and models direct the decision making, making, implementation, and evaluation of these policies. It is a science with ample possibilities to address diverse perspectives and issues of debate – such as questions of democracy, social justice, legislation, social participation, provision of public goods and services, questioning the scope of the public sector, among others. The study of public policy relies on fiscal and socioeconomic issues for the analysis and development of policies - be they strategies, measures, or other regulatory actions (Souza 2006). In addition, most policies are related to spending and management issues (Bovaird and Loffler 2009). However, as Dye (2013, 4) writes:

> *"Not everything that government does is reflected in governmental expenditures. Regulatory activity, for example, especially environmental regulations, imposes significant costs on individuals and businesses; these costs are not shown in government budgets. Nevertheless, government spending is a common indicator of governmental functions and priorities."*

Some authors' and economic policy theorists' names - such as Adam Smith, David Ricardo, Karl Marx, and John Keynes - and their ideas, served as the basis for some schools of economic sciences - such as Liberalism, Marxism, Keynesianism and Neoliberalism. Such ideas and theories also marked the development of debates about public policies. With the focus of briefly discussing the recent history of public policies, it is not our place here to go into detail about the work of these authors[1]. However, for a deeper understanding of the theme, it is worth recalling, even if superficially, the intellectual and theoretical context that is frequently referred to in the most recent debates, as will be presented throughout this work.

In the late 18th century, the ideas of liberalism gained strength with the spread of the publication of Adam Smith's "Wealth of Nations" (1776) (see Smith 1996, vol. I, ch. 2). The theories of liberalism advocated private property, the free market, and limited state participation in economic affairs. In his work, Smith advocates the principle of market self-regulation, ideas also figured by the terms 'laissez-faire'[2] and the 'invisible hand' of the market. Later, the classic texts of the English philosopher John Stuart Mill (1806-1873) reinforced liberal thinking, dreaming of restricting state power in favor of autonomy and freedom to take actions without the need for approval from a higher authority. The 'liberal' notion rests on the assumption of the freedom of the individual unless there is a specific and legitimate reason to limit this freedom (Mill 1865; Fawcett 2015; Storper 2016).

At the beginning of the 19th century, capitalism and the self-regulation of markets already had their critics. Through the publication of his body of works named "Das Kapital" (1867) (see Marx 1993, 128), Karl Marx's ideas spread and were the basis for the Marxist school and socialism. The author called into question the capitalist mode of production, presented complex economic concepts, and undermined Adam Smith's labor theory of value (to which he answered with a new theory) as well as other works of classical political economy, i.e., David Ricardo's theories published in 1817, in "On the principles of Political Economy and Taxation."

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[1] For a deeper insight into the ideologies presented by them, we suggest consulting: 'The Wealth of Nations' (Smith 1996); 'Principles of Political Economy and Taxation' (Ricardo 2001); 'Capital' vol. I, II and III (Marx 1993); 'The General Theory of Employment, Interest and Money' (Keynes 1996).

[2] A symbol of economic liberalism, the French term 'laissez-faire' refers to the idea that the market should function freely without state interference, being regulated only to ensure property rights.

After Karl Marx (1818-1883) and the crises that occurred in the 1930s, the ideas of John Keynes (1883-1946) made important contributions to economic theory and planning. Keynes' works were based on the analysis of business cycles. His ideas challenged the premise of the free operation of the market and defended the active intervention of the state. Keynes argued that it is the responsibility of the state to intervene regularly in the operation of economies through the implementation of economic policies. This economist claimed that the expenditure (public and private) should be encouraged once it would allow to improve the economic performance, promoting an increase in Gross Domestic Product (GDP), and an increase in the use of available resources. The development of the Keynesian school gradually evolved, influencing government practices and the opinion of leaders, intellectuals, and academics. These, in turn, have influenced the policies and postures of major economic powers ever since, with emphasis on the United States and Great Britain (P. A. Hall 1989).

At the end of the 1960s, with inflation and economic instability, Keynesianism was challenged. Soon after, Liberal ideas resurfaced, added to an economic reality based on globalization and new paradigms of capitalism. This new drapery of Liberal ideals became known as Neoliberalism[3]. According to Harvey (2005, 2), Neoliberalism proposes that "(...) human welfare can best be promoted by unleashing individual entrepreneurial autonomy and skills through an institutional framework characterized by strong private property rights, free markets, and free trade".

From this perspective, the state holds the role of creating and preserving an institutional framework appropriate to such practices; ensuring the existence of structures and functions necessary to guarantee private property rights and the proper functioning of the market; and creating conditions to foster the creation of new markets. However, the role of the state must be limited. Birch and Siemiatycki (2016, 179) assert that Neoliberalism can be conceived as "(...) the insertion or installation of markets as the underlying institution or mechanism for organizing society". However, as Peck and Tickell (2002) point out, the practice of neoliberalism bears little relation to free market deregulation. In contrast, the practice of neoliberalism is associated with a process of profound deconstruction and reconstruction of institutions, often in the name of (or for the benefit of) markets.

[3] For a broader understanding of the ideas, critiques, history, and transitions between Liberalism and Neoliberalism, as well as some gaps in the literature on the topic, see Storper (2016, 3–24).

According to Harvey (2005), by modifying previously held ethical beliefs to accomodate the idea of valuing the transfer market as an ethic capable of guiding all human actions, Neoliberalism ultimately underlines the relevance of contractual relations in the market. Moreover, Neoliberalism also holds that through maximizing the reach and perenniality of the market, the social good will be maximized. For this, and for human actions to be directed toward market dominance, new information technologies and capacity building are needed to guide decisions in the global marketplace. With this, the process of neoliberalization has not only entailed the creative destruction of previous institutional structures and powers, but also of labor relations, social relations, forms of welfare provision, technological structures, and structures of life and thought. As Peck and Tickell (2002) emphasize, the process of neoliberalization eventually became mischaracterized ideologically, and translated in practice into networks of oligopolies and pseudo-markets.

With this theoretical context in mind, how did public policies develop? In other words, what are the actions, consequences, and unfoldings experienced in the making and implementation of public policies in response to the results, phenomena, and processes unleashed? And what reverberations has this theoretical context had on the financial and urban segments in the last decades? The following section offers a historical-contextual overview of public policies since 1945.

MAIN DEVELOPMENTS SINCE 1945

Historically, changes in the global scenario and in the adoption of policies at national and supranational levels for the regulation of power and ethics - through institutions such as the United Nations and the Organization for European Economic Cooperation[4] - have influenced the development of public policies since 1945. Among them, the development of urban policies figures prominently, as well as a marked evolution in governance paradigms.

[4] The Organization for Economic Cooperation and Development had its roots in the post-World War II setting in Europe. It was created in 1948 to implement the Marshall Plan funded by the United States for post-war reconstruction. The main objective was to avoid the mistakes experienced after World War I. Its creation was seen by European leaders as a solution to encourage peace and reconstruction in the defeated countries, rather than punishment. In December 1960 Canada and the United States joined the Organization for European Economic Cooperation and signed the new Organization for Economic Cooperation and Development convention that came into force in 1961, with a more global vision of uniting for reconstruction. Today, the 35 members of the Organization for Economic Cooperation and Development meet around the world to identify, discuss, and analyze problems to propose policies to solve them. (Organisation for Economic Co-operation and Development 2018).

Before delving into this evolution, however, it is important to remember that the term 'governance' has no single definition. Couch et al. (2011, 16) define governance as "(...) the process of governing an area or policy field". Jonh (2001, 9) defines governance as "(...) a flexible pattern of public decision-making based on loose networks of individuals". Stoker (2000, 3) defines governance as "(...) a concern with governing, achieving collective action in the realm of public affairs, in conditions where it is not possible to recourse to the authority of the state (...)". According to Couch et al. (2011), the term 'governance' is often seen as being broader than the term 'government'. This is because the term governance encompasses not only the formal structures of the state, but also broader networks, where civil society and private sector institutions are included; through these networks the power of a given society flows and is exercised. The network dimensions of governance encompass the following points: (i) the institutions and actors involved (their powers, duties, and capacity for interaction); (ii) the structural conditions (capacities, legal resources, and managerial resources); and (ii) the normative conditions (values, ideologies, and perceptions of institutions and actors). Moreover, as the authors point out, the evolution of governance systems is quite linked to historical processes, which in themselves are quite dependent and specific.

Growth in public spending - calculated as a function of each country's gross domestic product - skyrocketed in most parts of the world after 1945, as the welfare state spread in its various forms. Aiming to solve society's problems, governments grew in size and public policy expanded in scope to encompass almost every sector of the population's daily life. Most of the 20th century was characterized by this growth. Even today, the countries of the Organization for Economic Cooperation and Development[5] continue to suffer from budget deficits and high debt levels. Thus, public expenditure management remains high on the political agenda (Bovaird and Loffler 2009; see also Dye 2013, 5-6). After World War II, Keynesian policies to encourage consumption were replaced by restrictive spending policies, which became part of the political agendas of most countries. Fiscal adjustment implied the adoption of balanced budgets (expenditure and revenue) and restrictions on

[5] According to official Organization for Economic Cooperation and Development data, currently, the member countries of the organization are: Australia; Austria; Belgium; Canada; Chile; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Ireland; Israel; Italy; Japan; Korea; Latvia; Luxembourg; Mexico; Netherlands; New Zealand; Norway; Poland; Portugal; Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Turkey; United Kingdom; United States (Organisation for Economic Co-operation and Development 2018).

state action regarding the economy and social policies (Souza 2006; Bovaird and Loffler 2009).

In the early 1980s public sector reforms in many parts of the world were stimulated by budget deficits. Such reforms, including economic ones, extended to both the content and the way public policies were made around the world. From this period on, several governments, at least in Organization for Economic Cooperation and Development countries, achieved favorable budget positions. Until the 1990s, measures to restrict and control spending were taken with the concern of making the economic sector more efficient. The fiscal crises that broke out in most Organization for Economic Cooperation and Development countries during the 1980s were key to such reforms. As the crises calmed down in the 1990s, pressures for public services to be managed economically and efficiently increased, re-emphasizing the role of policy makers in public policy. These pressures, combined with budget constraints, gave policy-makers little room for maneuvering. This led to privatization, the devolution of responsibilities to lower levels of government, or the simple introduction of market instruments into the public sector (Bovaird and Loffler 2009).

Concomitantly, from an urban perspective, between the 1960s and 1970s a new cycle of urbanizations took place. As Le Galès (2005) emphasizes, urbanization and the growth of cities were driven along with this process of strengthening post-war shaken economies. In this period, cities appeared as an anonymous category within the nation-state. Furthermore, waves of immigration were encouraged by business leaders in search of cheap labor for economic advancement. In the 1960s, immigration became a major political issue with a clear urban bias in most countries. Immigrant communities became part of the urban landscape; policies to accommodate these groups had a distinct urban element.

With this process of migration to the cities and the growth of the population in poverty, in the 1970s, the social issue became a central theme in the debates about the 'new' ways of making urban policies. These policies emphasized issues of social redistribution in favor of the poorer classes, urban regeneration, and urban development. By the 1980s, urban and population growth was a prominent issue in many cities (Le Galès 2005). Synchronous to urban growth, processes of suburbanization and metropolization were also triggering, with fragmentation effects on the urban fabric (Dematteis 2000). These processes brought new conflicts and challenges to be addressed by public and urban policies (Le Galès 2005).

Overall, the scenario experienced in these decades had a mixture of external factors - rapid population growth, an aging society, technological and communication changes - and internal factors - the consequence of actions, planned and unplanned, taken during the 'first generation' of public sector reform. This mix of factors represented new pressures on governments. These pressures have emphasized the consequences of public policies on the quality of life of citizens and on the governance characteristics of public institutions.

Some of the effects of the governmental actions taken in the 1970s, 1980s, and 1990s can also be seen in the financial industry and resulted in altered investment dynamics around the world to this day. In the 1950s and 1960s, tax and currency circulation barriers were more coincident with the geographic limit of each country, which allowed greater control of the circulation of financial capital and trade relations. In other words, regulatory limits kept 'real capital'[6] and 'financial capital'[7] geographically contained and capital circuits were shorter. With the weakening of fiscal and currency circulation regulatory barriers that occurred with the reforms of the 1980s and 1990s, capital circuits became longer and less geographically contained. In this period, the growth of the financial sector was quite prominent[8].

The tendency of capitalist economies to accumulate capital soon found new forms of circuits and capital production (Corpataux and Crevoisier 2014). At the end of the 1990s, some authors (Aglietta 1998; Orléan 1999; Boyer 2000; Lordon 2000; Chesnais 2001) belonging to or sympathizing with the École de la Régulation announced the arrival of a 'new

[6] 'Real capital' is represented by machines, buildings, communication, and transportation infrastructure, as well as skills and branded production. One of the main characteristics of real capital is that it is not mobile or has low mobility. That is, the holders of real capital are subject to the social barriers of proximity. (Theurillat et al. 2008; Christophers 2016).

[7] Unlike 'real capital', 'financial capital' is characterized by its liquidity. Liquidity mitigates the risk that is found in the lack of (or little) mobility inherent in real capital. This is because, this liquidity offers holders of financial capital the possibility of withdrawing their investments at any time (Orléan 1999; Lordon 2000; Theurillat et al. 2008). This increased mobility of financial capital also promotes strategies for relocation and withdrawal of capital (Corpataux and Crevoisier 2014).

[8] With the regulatory changes that have occurred, the developments around real capital and finance capital have been studied by economists, geographers, and other social scientists. For further insight into the economic effects and unfoldings during the development of contemporary globalization processes and public policy measures taken in the 1980s and 1990s, the works of David Harvey (2001b, 2001a) (2001a; 2001 b), Manuel Aalbers (2012, 2015a, 2015b), Corpataux and Crevoisier (2005, 2014); Theurillat et al. (2008), and Brett Christophers (2013, 2014; 2015; 2016) should be consulted.

financialized regime of capital accumulation'. This was a transition from an administratively managed financial system to a liberalized financial system (Aglietta 1998).

This financial liberalization was accompanied by new forms of transactions, which were made possible by the emergence of new technologies such as the Internet. Thus, in the 1990s and early 2000s, a major change in the relationships involving the circulation of capital and the circulation of information was perceived (Walker 1999; Hartwich 2012). It was possible to see that capital was much more mobile than in previous decades. And, also, that this occurred thanks to what Walker (1999) referred to as an 'electronic and institutional revolution in finance'. According to the author, this electronic revolution exposed the monetary policy of all countries to threats from market forces and speculation. As Hartwich (2012) states, this period was characterized by low inflation rates and stable economic growth. These aspects were facilitated by these new forms of electronic communication and consequently by increased trade.

But what is this 'new financialized regime of capital accumulation' that the authors were referring to in the late 1990s as mentioned above? What is financialization and what does it represent? In the next section, the concept of financialization, the emergence of new tools and forms of financial growth, and consequent changes in global dynamics are presented, by addressing globalization, territorial processes, and the changing scales of local and global power.

FINANCIALIZATION: THE RISE OF A NEW CAPITAL ACCUMULATION SCHEME

With its tendency to infinite accumulation of capital (see Harvey 2001b), the financial industry saw the need to create new tools and forms of expansion. Thus, the supremacy of financial actors and the freedom of capital movement also expanded. As a result of this growth, new actors and institutions emerged to meet the financial industry's needs for capital production and accumulation. This influenced not only global and local relations and dynamics, but also the making of their policies (Corpataux and Crevoisier 2014; Guironnet and Halbert 2014; see also: Harvey 2001b; Blackburn 2006; Torrance 2007; Aalbers and Christophers 2014; Aalbers 2015b).

Financial intermediation has also figured prominently in the unfolding results of the policy reforms experienced since the 1980s and 1990s. Strictly speaking, financial intermediation is the process of connecting and mediating between those who supply and demand credit. In general, the class of financial intermediaries can be referred to as a heterogeneous

grouping of actors, agents, and agencies. These are involved, in various ways, in supplying, regulating, and managing credit businesses (Peck and Whiteside 2016). The growth of these industry activities towards financial services has become another point in public sector attention and regulatory challenge around the world (Dickson 2014).

From 1980 to 2010, the value of Global Financial Assets (GFA)[9] grew 16.2 times, while world Gross Domestic Product (GDP) grew 5 times in this same period. This pool of over-accumulation resulted in institutions accumulating profits and emerging economies entering the scene. In this context, there was a growth in the search for new financial logics to be implemented, thus turning more sectors into assets to supply the needs of investors (Rolnik 2015, 27-29). The gap between GFA and GDP grew in search of investment internationalization processes, especially in the 1990s. This was responsible for the emergence of the need to guarantee structures on which financial capital could rely. With this, the creation of a secondary market[10] for financing was an important vehicle for connecting financing systems with international and global markets. Other financial instruments, such as interbank lending, expanded strongly from this time onwards to allow local banks and intermediaries to be leveraged, thereby increasing the availability of credit to these institutions.

This expansion of credit beyond what domestic markets can support has created bubbles in the real estate market. On the one hand, by giving more credit and building credit policies, the state and the market, it allowed the capital structure to expand in all spheres. On the other hand, as these consumers adhered to these credit solutions, they increasingly fell into debt. In other words, the creation of credit is nothing less than the creation of debt, or the transfer of debt to the population - the Subprime crisis is a good example of this process in many ways (Rolnik 2015, 27-29).

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[9] A financial asset is an intangible asset that represents a financial value through contractual rights, e.g., bank deposits, shares or financial securities, that can be traded on the financial market. Therefore, the term 'Global Financial Assets' refers to all financial assets that are traded globally. For further elaboration on the global circulation of financial assets see Frieden (1991) and Dickson (2014).

[10] Secondary market is a generic term that emcompasses the trading of shares and other financial instruments, which can be part (or not) of the stock market (excluding the initial public offering of companies in the capital markets). The secondary market has the potential not only to amplify capital circulation, but also to generalize any organization (public, private, individual) that aim to interveine in the markets. For more about secondary markets, its definition, and the capital circulation thorugh the real estate see Keogh (1994) and Wyly et al (2004).

This rapid growth of the financial sphere, as well as policy challenges regarding its regulation, was also a point of focus in recent decades, especially after the financial and economic crises that erupted in 2008-09 (Dickson 2014; Corpataux and Crevoisier 2014). Public spending began to grow again; the pressure on governments to alleviate society's hardships while reducing public spending has further increased (Dye 2013, 5-6).

Such factors are not isolated from a vast complexity of events that complemented the world scenario in this period, as we will see later in this text. In any case, with such pressures to achieve greater budgetary balance and provide solutions to the population, local governments have developed mediation and negotiation techniques and skills (Corpataux and Crevoisier 2014; Savini and Aalbers 2015). Some of the issues attributed to the scope of the state's role and power are its different scales of action after the changes experienced with globalization processes (e.g., Swyngedouw 1989; Brenner 1998; Robinson 2001). The boundaries between global and local scales, which were once better defined, have blurred with the weakening of regulatory and economic barriers due to such globalization processes (see Friedman 2005; Piketty 2014; Corpataux and Crevoisier 2014; Aalbers 2015b, 2015a; Blakely and Leigh 2013). However, as we will see in more detail later, one of the key aspects of financialization - and one which led to the outbreak of the Subprime crisis – was the proliferation of financial instruments aimed at maximizing the return on financial investments, almost eliminating the underlying risk (Theurillat et al. 2008; Aalbers 2012; Corpataux and Crevoisier 2014).

To understand the complexity and variety of vectors that put pressure on governments and public policies to achieve greater fiscal balance, it is necessary to understand the global and regulatory environment in which they operate. And, above all, to understand the new scales of power and relations that have emerged along with the processes of globalization experienced in the last half century, resulting in changes in the production and accumulation of capital around the world. But what kinds of changes have resulted from the processes of globalization? Beyond the growth of the financial industry, what were the effects due to the measures of weakening regulatory barriers taken in the 1980s and 1990s? How has the state positioned itself, or how is its power seen through this scaling back of global relations? And how have these shifts in scales of power developed territorially? To get an overview of these effects, the next section will present some of the main scholarly debates on globalization, shifting scales of power and their relationship to territory. And then another item will delve into the impacts of the growth of the financial industry on land use.

1.1.1.3 THE NEW SCALE AND GEOGRAPHIES OF CAPITAL

The profound restructuring of the capitalist system, which began in the 1970s, is often associated with the concept of globalization. According to Robinson (2001), in unison with Blakely and Leigh (2013), globalization is not a new process: it is the culmination of a centuries-long process of spreading capitalist relations of production. With globalization, the capitalist system has undergone - and is still undergoing - an intense and radical expansion. The world, under the effects of globalization, has witnessed a repositioning of the forms of relations previously existing in the pre-capitalist world. The globalization of economies has been a recurrent theme in debates about their new forms of organization. According to Robinson (2001), in the global economy, the globalization of the production process has promoted a functional shift from 'national circuits of capital accumulation' to 'global circuits of capital accumulation'. The author (ibid 2001, 159) highlights that:

> *"Globalization, therefore, is unifying the world into a single mode of production and a single global system and bringing about the organic integration of di¡erent countries and regions into a global economy. The increasing dissolution of space barriers and the subordination of the logic of geography to that of production, what some have called ``time-space compression,'' is without historic precedence".*

In this scenario, the electronic revolution was also a protagonist of these changes - both in relation to communication dynamics and global trade. This last half century has seen important technological innovations in relation to communication and global networking - for example the creation of the internet in 1969 and the creation of the 'world wide web' in 1990. In a short time, the internet became the technological basis of contemporary organizational form, that is, the formation of the 'network organization' (Castells 2003, 7-18). At the end of the 1970s, Porter (1979, 1) had already stated that an information revolution was spreading through our economy. Parallel to the results of regulatory reforms that occurred in the 1980s and 1990s, the 1990s and early 2000s saw a major shift in relationships involving the circulation of capital and information (Walker 1999; Hartwich 2012). This new communicational framework is often referred to in the literature as the 'digital age' (Sassen 2002, 2007, 2013; Castells 2013; United Nations 2016), or the 'information age' (Castells 2013, 7-18). Moreover, thanks to these transformations of the communication system and networks, financial actors have increasingly started to act on a global scale (Chavagneux 2007).

In fact, historically, transformations in capital accumulation are attributed to technological changes, wars, or the implementation of new production systems, which have since influenced the global economy across cities, countries, and continents (Sachs 2016). In addition, the system of capital production and accumulation has also undergone intense change, most notably the development of the financial capital system as mentioned earlier. This development of the financial capital production system and the growth of the financial sector has brought about a number of changes - such as changes in the circuits of capital production, in relationships, of network formation, among others (see Piketty 2014; Corpataux and Crevoisier 2014; Aalbers 2013, 2015a, 2015b).

As Rolnik (2015, 27-29) mentions, the impacts that these changes have had on cities are enormous, with an emphasis on policies, market, and regulation of urban land. According to the author, this is a new urban, financial and market set that emerges and impacts the planning and production of urban spaces as well as the daily lives of citizens. However, how has the state coupled with such changes and the globalization of economies? And how are these changes linked to the territory? Has globalization homogenized across the board the relations of capital accumulation and the way in which institutions and firms operate? Do capitalist market economies, if compared around the world, have a similar behavior in terms of regulation and in terms of the functioning of their firms and institutions? What impacts can be perceived on territory and property relations? After all, how do these issues fit into the processes of financialization of the built environment, urban politics and governance?

For a better understanding of these issues, the following items will first address the processes of globalization of economies, the formation of 'new geographies', and the reshoring of the state. In a second moment, the global cities and their roles in global production networks will be presented. Finally, we will present the concept of the variety of capitalism and how the line of research on financialization has adopted this lens of analysis to explain the distinct territorial and regulatory dynamics in different countries.

THE RESCHEDULING OF THE STATE

According to Gotham (2006), most of the literature on globalization conceives the state at the national level, containing within this concept its territorial aspect. In this perspective of limits represented by territory - and using the terminology of Giddens (1987, 120), - the state is conceived as a 'limited container of power'. As a counterpoint, other authors indicate

the emergence of a 'glocal state' (Swyngedouw 1997; Brenner 1998, 1999) or a 'transnational state' (W. Robinson 2001), going against the distinctions between the national and the global, pointing to dualism and links between the local and the global. For Gotham (2006, 237), "an implicit consensus in this research is that globalization bypasses the nation-state or undermines its power (e.g., see Strange 1996; Castells 1996)." In general, state power and sovereignty - referring here to the local scale of the concept - have often been dependent on variables derived from globalization. Thus, for Gotham (2006, 237), " this tendency to view the nation-state as a centralized and national-level actor tends to direct attention away from the ways in which state structures and institutions enable some forms of globalization and discourage other forms." It is worth emphasizing that there are other perspectives of analysis to interpret why these distinct forms and why the role of these state structures and institutions may differ from one country to another. One of the justifications, for example, may be the existence of different capitalist market economies; however, we will further address this topic later on.

The debate about globalization and state power spills over into yet other arguments. Robinson (2001, 159-60) asserts that the disintegration of spatial barriers and their geographical relations to capital production requires that the geography and politics of the nation-state be reconsidered. Nevertheless, the author argues that the need to review the meaning of geography and the politics of the nation-state does not mean that space has become irrelevant with the effects of globalization. According to him, what occurs is that the social configurations of space can no longer be conceived in terms of the nation-state in the current scenario of development of the global capitalist system. But the relations between space and the effects of globalization should rather be seen as unequal development processes, marked mainly by social group relations rather than mere territorial differentiations. Thus, the nature of the global capitalist system is such that it tends to constantly create unequal spaces.

Also, in relation to the trends of the development of the capitalist system under the effects of globalization, its networks of production and capital accumulation and the importance of its relations with territory, Harvey (2001b, 302-3) states that:

> *"When a particular civil society creates fresh productive powers elsewhere to absorb its over accumulated capital, it thereby establishes a rival center of accumulation which, at some point in the future, must also look to its own spatial fix to resolve its problems."*

More than a decade after these statements, Thomas Piketty conducted analyses on the structure of income and wealth and the evolution of its distribution in more than twenty countries for three centuries. This research allowed deepening the knowledge about the role of social actors in unequal development processes, data that reflect this development also in the period of current globalization of economies. Based on this research, Piketty (2014a, 20-35 apud Piketty 2015) states that:

> *"The history of the distribution of wealth has always been deeply political, and it cannot be reduced to purely economic mechanisms. (...) It is shaped by the way economic, social, and political actors view what is just and what is not, as well as by the relative power of those actors and the collective choices that result. It is the joint product of all relevant actors combined. (...) How this history plays out depends on how societies view inequalities and what kinds of policies and institutions they adopt to measure and transform them."*

Thus, as the author emphasizes, the role of policies and measures, and the power of the actors who define them, are relevant during uneven development processes. The effects of changes and reforms in regulatory policies, as well as how these policies have shaped themselves to deal with the new economic and social scenarios that have emerged, have had their prominence from the 20th century onward. One of the examples cited by Piketty (2015a) is that the reduction of inequality in most developed countries between 1910 and 1950 was a consequence of wars, rebellions, and the policies adopted to deal with them. The resurgence of inequality after 1980 is due to changes in the policies adopted, opposite in character to those adopted in the previous decades, especially regarding taxation and finance.

Still on the changes in policies and posture of the State in the scenario of increasing globalization and, returning to questions that relate geographical dynamics and different scales of power, the debate over the last decades has also brought other contributions.

From the standpoint of orthodox neoclassical economics, the general literature assumes that the globalization of economies, combined with the loosening of regulatory barriers, results in the deterritorialization of economies and the preponderance of the global scale over local, regional, and national scales (Wachtel 1990; Ohmae 1991; Ross Levi 1996). In this sense, some authors go to the extreme regarding this process and proclaim 'the end of geography' (O'Brien 1992). In counterargument to this claim, authors from economic geography and politics say that deterritorialization is a simplistic and empirically inaccurate theoretical statement (e.g., Thompson and Hirst 1996; Cox 1997; Hollingsworth

and Boyer 1997; Storper 1997; Scott 1998; Whitley 1998). They argue that the increasing internationalization of economic activities has not replaced the importance of existing local forms of capitalism and economic activities.

Focusing on the observation of these dynamics in urban centers, Sassen (2001) stresses that the processes of globalization have had a particular emphasis on segments of the financial industry. However, this fact does not lead to the 'end of geography', but to the emergence of 'new geographies'. In this new geography, one witnesses a simultaneous movement of deterritorialization and re-territorialization. As Sassen (2001, 34) explains, the increasing mobility of capital results in new ways of concentrating its location. The geography of globalization contains a dynamic of dispersion as well as centralization, that is, there is a tendency for the spatial dispersion of economic activities at metropolitan, national and global levels. This contributes to the search for new forms of territorial centralization of operations and management of these activities. Thus, according to the author, the cities that host these central operations and management activities assume a strategic role in the global economy and market. As a result, new networks and urban dynamics are formed. In addition, Harvey (2001b) points out that the globalization of the financial system has given rise not only to 'new geographies of capital accumulation' but also to 'new geographies of governance'. The question of capital accumulation, governance and their relationship to territory will be developed further below.

However, what is the role of these cities in the scenario of globalization of economies? And what is the role of the globalization of economies in these global cities? What does the literature identify as a 'global city'? These are the aspects that will be addressed in the next section, for a better understanding of the definitions and debates concerning global cities, global networks of capital production, and the processes of financialization of the built environment, governance and urban policies that will be addressed along this document.

THE ROLE OF CAPITAL PRODUCTION NETWORKS IN GLOBAL CITIES

In the early 1980s the 'world city' hypothesis was put forward (see Cohen 1981; Friedmann and Wolff 1982; Friedmann 1986), linking urbanization processes to global economic forces. The dissolution of borders due to the globalization processes of economies was put into spatial perspective (Friedmann 1986) and a wave of studies linking cities and the world economy could be observed in the 1980s and 1990s. There were several contributions relating the dominant socio-economic trends in these cities to the then emerging world

urban hierarchy and global economic forces (see Soja 1989; Ross and Trachte 1990; Sassen 1994; Knox and Taylor 1995; Brenner 1999). With the integration of the scientific fields of urban studies and international political economy, the theory of the 'world city' (Friedmann 1986) has been consolidated as the main framework for critical research on contemporary cities. In a broader aspect of analysis, a new look has been launched at the spatial changes derived from the new structures of the world economy (Knox and Taylor 1995; Hitz 1995). Such issues, coupled with the sub- and supra-state geographical aspects of capitalism, and embedded in the processes of urbanization, have formed unique analytical frameworks (see Agnew 1994; Taylor 1996; Wallerstein 1996).

Due to globalization, the growing network of connections between cities, their strategic alliances, and their financial markets, the boundary distinctions between financial and non-financial societies have become blurred (Piketty 2014b, 2015a). With the growth of international investment and the reduction of the role of government in regulating international economic activities, systems of connecting networks between these strategic cities have emerged. These connecting networks, further developed due to the growth of the global economy, are established not only in the realm of business, but also at the level of social, professional, political, and cultural networks that connect particular groups of cities. According to Sassen (2001, 2010), a 'global city' is not seen as a single, isolated entity, but rather as a large center of international business. In turn, these large business centers form 'new geographies of centrality'. It is therefore these new geographies of centrality that link the major international financial and business centers. The networks that form from these cities make them the stage where it is possible to observe the multiplicity and complexity of these relationships between the financial market, societies, institutions, globalization, and territory. Brenner (1998, 3) argues that:

> *"Global city formation is linked both to the globalization of capital and to the regionalization/localization of state territorial organization. As nodes of accumulation, global cities are globalization of capital and to the regionalization/localization of state territorial organization. (…) This re-scaling of the state is a key 'accumulation strategy' (Jessop, 1990) through which cities throughout the world economy are being promoted by their host states state is a key 'accumulation strategy' (Jessop, 1990) through which cities throughout the world economy are being promoted by their host states as locational nodes for transnational capital investment."*

According to Amin and Graham (1997) and Parnreiter (2010), the development of debates linking these cities and globalization can be divided into two main arguments. The first

argument states that global cities operate as points of high command concentration of the organization of the world economy (see Sassen 2001). This is because, producer services are seen not only as necessary technical inputs for the smooth functioning of production networks but are also seen as means through which the capacity for global control is formed. According to Amin and Graham (1997), in this first phase, the intensification of global-scale flows and processes were seen as negating the identity and autonomy of the local scale. If on the one hand, in this first phase of debates the city was 'rediscovered' as a powerhouse of the globalized economy, in a second phase, some strands of research point out that cities have assumed an increasingly important role within global economic, cultural, and social dynamics. The second argument that Amin and Graham (1997) and Parnreiter (2010) refer to is that global cities link local, regional, and national economies in the world economy by providing producer services (e.g., finance, accounting, consulting, legal or real estate services) to other firms operating at different geographic scales. Amin and Graham (1997) add a third argumentative perspective, based on the concept of 'creative cities' as measures that generate economic movement.

These three strands of research derive from different readings of cities. They offer varied representations of the wide multidimensional range of urban change processes currently underway. For the authors, these different perspectives deal with the rediscovery of cities or specific parts of cities, such as central areas. In view of the changes taking place in the contemporary global context, they highlight the role that their environments play as inherent assets of built capital and services. Cities and metropolitan regions offer, in this era of globalization, a contemporary life based on the heterogeneity of economic, social, cultural, and institutional assets.

Amin and Graham (1997) and Parnreiter (2010), mostly from the point of view of the Anglo-Saxon world, sought to reassess the importance of large metropolises as key centers of command and control within global dynamics that link financial markets, high-level manufacturing industries, corporate headquarters, and other associated service industries-such as visual communication services, audio and data, and real estate development services, among others. Works such as those of Saskia Sassen, Manuel Castells, and John Friedman were prominent in this argumentative group, where cities were pointed out as urban nodes in global networks. From the perspective of these authors, international financial centers and global cities reiterate local power and centrality. This is because they combine a large concentration of support services and infrastructure with highly

specialized work cultures that support high-level financial and business operations in a global and volatile world economy (see Amin and Thrift 1996).

1.1.1.4 EXPLORING DEBATES FROM COMPARATIVE CAPITALISM

As seen previously, globalization debates underscore a blurring of the boundaries between geography and governance, emphasizing the role of firms and institutions in networks of capital accumulation. Generalizing the debates from an economic perspective, Hall and Soskice (2001, 55) comment:

> *"(...) (globalization is) a term summing up the hopes of some for global prosperity and the fears of many that their way of life will be lost to international forces beyond the control even of their government."*

According to the authors, for political economy the main issue brought about by globalization refers to the stability of regulatory regimes and national institutions in the face of increased competitive pressure. There is an idea, 'built into' the concept of globalization, that international integration will lead economies to a kind of standardization of market models (Hall and Soskice 2001, 55):

> *"For political economy, the main issue raised by globalization concerns the stability of regulatory regimes and national institutions in the face of heightened competitive pressure (...). Will institutional differences among nations of the sort we have identified remain significant or will the processes of competitive deregulation unleashed by international integration drive all economies toward a common market model?"*

The concept of varieties of capitalism disputes this, and defends that the contextual, historical, and regulatory differences of each country will in some ways shape the capitalist system which will result in distinct variants around the globe. The book 'Varieties of Capitalism' (Hall and Soskice 2001) questions some aspects that sustain the conventional view of globalization. This work, rooted in political and economic science, emphasizes that firms are not essentially similar across nations and that they develop distinct strategies and structures to capitalize according to the institutional and regulatory context available in the market economy in which they find themselves. The book highlights that firms in different economies react to similar situations in different ways.

Hall and Soskice (2001) identify two main types of capitalist market economies with capitalization strategies and structures: Liberal Market Economies, typically represented

by the United States, and Coordinated Market Economies, typically represented by Germany. From this work on, Varieties of Capitalism (VoC), or Comparative Capitalism literature (Jackson e Deeg 2006), followed the presentation of other typologies which discern national models of capitalism and compare national institutional systems. More recently, Nölke and Claar (2013) and Nölke et al. (2015) propose four national models of capitalism, which imply in distinctive institutional outstanding characteristics of countries' economies on different regions: the 'coordinated market economies' and 'liberal economies', which are characteristic of the so called developed economies; the 'dependent market economy', conceptualized to explain the relation of East-European countries' subordinated integration into the European economy; and the 'state-led market economies'. In this last model, the foreign direct investment or foreign control over domestic industries are lower than in developed economies. Additionally, in state-led market economies, national financial institutions and domestic banks are the pivotal credit providers. As these authors argue, this model of capitalism is characteristic of large emerging countries such as Brazil, China and India. Although not the primary focus of this work, this subject has demonstrated its relevance through the rising number of studies on the Varieties of Capitalism and comparative capitalism with financialization processes (Becker et al. 2010, Rodrigues et al. 2016, Kaltenbrunner and Painceira 2018; Büdenbender 2017; Büdenbender and Aalbers 2019; Fernandez and Aalbers 2020).

As derivative of such comparative approaches, terms such as peripheral (Becker et al. 2010), semi-peripheral (Rodrigues et al. 2016), or subordinated (Kaltenbrunner and Painceira 2018; Büdenbender and Aalbers 2019; Fernandez and Aalbers 2020) started to be more commonly used by the financialization literature strand. They use the structuralist idea of capitalist economies hierarchies and the monetary flows world structure to emphasize how these macroeconomic relations together with contextual factors, such as historical, institutional, regulatory, and socioeconomic backgrounds, affect and produce variations on financialization processes around the world.

In other words, a growing body of literature pertaining to financialization research has unitized the concepts of VoC and hierarchies of capital, among others; it emphasizes that there is a difference between financialization processes from one country to another and attributes these differences in financialization to factors related to the hierarchies of capitalism, using terms such as 'peripherical', 'semi-peripherical', or 'subordinated' to typify this financialization in countries that are not at the center of the financial and economic structure. Although the terms are different, in general their meaning is coincident, as they

are synonyms; but these assigned hierarchies emphasize the vulnerability of countries in crisis situations.

From economic and applied sciences perspective, Becker et al. (2010) asserts that highly financialized regimes of accumulation are extremely prone to crisis and that financialization literature often focus on analysing economies at its centre. However, the peripheral ones are gaining rising attention. The authors refer to peripheral countries the ones characterized by high degree of exports and import dependence in key areas and substantial socio-economic disparity. Through regulation theory[11] perspective and keeping in mind the cases of Slovakia, Serbia, Chile and Brazil, Becker et al. (2010) analyse different forms of financialization and its repercussions throughout crisis processes. The authors highlight that peripheral financialization is diverse between countries according to both, the international context and the plethora of domestic interests. According to Rodrigues et al. (2016), some characteristics of peripheral and semi-peripheral countries, such Portugal, overlaps. External agents are the main driving force in promoting financialization either in the periphery and semi-periphery. However, in semi-peripheral ones, the bank capital loan represents the most prevalent and critical role shaping recent changes towards financialization. Becker et al. (2010) underline that to have in focus factors such as the Estate, international enterprises and social forces formulating policies and regulations are essential to a policy-making analysis. In addition, policy changes are key to both financialization processes, and the agents involved on it.

Following a similar idea of capitalist economy at the core and subordinated relation of peripheral economies, Kaltenbrunner and Painceira (2018) approach financialization through a monetary hierarchy perspective. Unlike other existing works, these authors center their analysis on the recipients of capital, as well as international financialisation and its impact on domestic financial and economic structures. The case of Brazil appears again, but this time under the category of 'emerging capitalist economy' (ECE). Kaltenbrunner and Painceira (2018, 290) argue that:

> *"(…) in ECEs these recent financial transformations, which reveal tendencies akin to the financialisation phenomena observed in core capitalist economies (CCEs), are fundamentally*

[11] Jager (2003, 238) claims that "An adequately specified regulation theory offers a proper framework for dealing with the specific forms of land-related institutions against the background of their relation to other institutions which stabilize capitalism and to the process of accumulation.". For more about regulation theory see Jessop (2001).

shaped by their subordinated integration into a financialised and structured international monetary and financial system. Moreover, it is these same financialisation tendencies which reinforce ECEs' subordinated financial integration and asymmetries with CCEs."[12]

Also, in contrast to other contributions from this line of investigation, Kaltenbrunner and Painceira (2018) focus on the financial integration of such economies into the international monetary system and what are its implications to financialization. According to these authors, but also Kaltenbrunner and Painceira (2018), contemporary changes in financial practices and relations of economic actors in Brazil have been shaped by their subordinated integration into world economy, as has financialisation, exacerbating uneven development.

Recently, these debates have overlapped within geography and urban studies fields. Büdenbender and Aalbers (2019) and Fernandez and Aalbers (2020) addressed global economic hierarchies to explain the diversity of financialization processes of housing and urban development. These authors argue that acknowledging the varieties of capitalism is an important step to understand that different countries do respond distinctly to capital flows as well as particular national strategies and national political and economic realities. In line with Fernandez and Aalbers (2020), Büdenbender and Aalbers (2019) stress that, through considering the particularities of historical legacies, local dynamics, and the interaction of global hierarchies, it is possible to fully grasp the specific dynamics that shape (real estate) financialization in distinct places.

Büdenbender and Aalbers (2019) analysed the case of Służewiec Business District in Warsaw and its neighbourhood growth, which they classify as chaotic and 'de-contextualized'. The authors underline Służewiec as a case of real estate financialization, arguing that the semi-peripheral position of Poland in the global economy together with the legacies of a socialist state were the key factors shaping these characteristics of neighbourhood. Fernandez and Aalbers (2020) adopted the global hierarchy perspective to analyse financialization (of housing) in a macro-comparative aspect. They compare contexts of countries at Global South (GS) and at what they call peripheries of Global North (GN). Fernandez and Aalbers (2020, 16) emphasize that "the financialization of housing in the GS

[12] Subordinated financialization, according to Fernandez and Aalbers (2020, 16) "(…) is a contemporary form of uneven and combined development." Büdenbender and Aalbers (2019, 666) highlight that "a key function of subordinate financialization is to absorb globally mobile capital–the product of financialization in the core." To Fernandez and Aalbers (2020, 17) "the type of integration of the periphery in hierarchical global monetary structures is the key mechanism shaping the process of subordinated financialization."

and peripheries of the GN develops in different ways than in the core of the GN" since the underlying mechanism is different, based on the uneven relations between countries and their different financial and financialization trajectories.

It is worth mentioning that, although Fernandez and Aalbers (2020) assumed a macro-comparative approach to analyse the financialization of housing, when describing processes of countries in the GS the case of Brazil receives a certain amount of attention, especially the housing program known as "Minha Casa Minha Vida". It is interesting to note how Brazil once again is mentioned as a research interest within this line of enquiry.

1.1.1.5 LAND AS CAPITAL

In addition to the issues exposed so far, the development of the concept of financialization from the point of view of the built environment and urban policies relies on two main auxiliary concepts: land as capital, and the exchange and circulation of urban space in global networks of production and capital accumulation.

The relations between land and capital, its value, markets, and actors have divided opinions and been the subject of much debate amongst economists, geographers and urban planning specialists. The word 'land' is often used in debates around the 'land question'(Christophers 2016) and its relations to capital production networks. As Elden (2010) highlights, land is a finite and scarce resource that is distributed, allocated and owned. It is also a resource that generates competition. Land represents a form of property, that is, something that is owned and potentially capable of being bought and sold. Its distribution and redistribution are an important political-economic issue (Christophers 2016).

Ever since feudal times, land has been an integral part of the political economy of the mode of production. At this time, society was structured around the land that was held or used under the concession of a social authority, such as the feudal lord, in exchange for services, products or revenue. However, during the transition to capitalism, land lost its socially structuring function, yet it did not lose its political-economic significance (Christophers 2016). Referring to the real estate markets of most European countries in the 1980s, Haila (1991) argues that the capitalization of real estate markets meant a gradual corrosion of feudal restrictions on land ownership. According to her, this corrosion of several special features of the relationship between land and property brought into academic debate terms such as 'land trading as commodity', 'land becoming commodity' and 'land as fictitious capital'. Haila (1991, 362) also points out that:

"The tendency towards the erosion of special characteristics of land and property fails to show that land is similar to capital. On the contrary, it proves that there is something unique in land".

Private or public, urban or rural, land has long aroused diverse and plural debates on social sciences. In geography and urban studies, the subject engaged theoretical approaches on the political economy of land, such as the role of land and property' in capital accumulation and as fictitious capital (Karl Marx and David Harvey) or a commodity (Karl Polanyi) or embraced questions of taxes and justice (Henry George). Land and property have also been the object of wealth measurement through the centuries, and the basis for taxation, as Piketty (2015) described regarding a classical economy historical timeline.

Historically, it was with capitalism and the rise of the modern state that the notion of land as a taxable asset was consolidated (Elden 2010; Christophers 2016), and it is common among authors of classical economic theory - such as Simon Kuznets, Adam Smith, Karl Marx, and Karl Polanyi – to regard land is a multidisciplinary and universal unit of measurement. In more recent works, such as those by Piketty (2014a) and Stiglitz (2015), land is also used as a unit of measurement of wealth and inequality. According to Christophers (2016), the work of the 'two Karls' - Marx and Polanyi - are the main conceptual references guiding the work of geographers and other social scientists when examining the role of land in capitalist political economy. Marx, through Harvey's reinterpretation and conceptual re-articulation, has proven to be the more influential of the two.

But what kind of relationships exist between the role of land in the capitalist political economy and contemporary processes of globalization? From Harvey's (2001b) perspective, the production, reproduction, and reconfiguration of space has always played a key role in understanding capitalism from a geographical perspective. For the author, contemporary globalization represents nothing less than another cycle of capitalist production and reconstruction of space. The restructuring of capitalist activities around the world has had the following main developments: (i) new geographical dynamics of inequality development; (ii) recalibration, or even a new centralization of global power; and (iii) a shift in the geographical scales of the organizational form of capitalism - which, according to Harvey, are symbolized by the growth of supra-state organizational forms (such as the case of the European Union), or the growth of global institutions of governance (such as the World Trade Organization, International Monetary Fund, among others).

From 1975 onwards, Harvey developed the concept of 'spatial fix', as previously explored. As previously explained in this text, for the development of this concept the author drew on Marx's work on the geography of capitalist accumulation, relating the temporal spatial dynamics of capitalism. In his formulation, the author mentions the following characteristics of capitalism (Harvey 2001a, 25):

> *"(...) capitalism has to fix space (in immoveable structures of transport and communication nets, as well as in built environments of factories, roads, houses, water supplies, and other physical infrastructures) in order to overcome space (achieve a liberty of movement through low transport and communication costs)."*

In other words, the capitalist system needs a physical and immobile infrastructure (e.g., built buildings, industries, transport infrastructure, homes, etc.) to have the freedom to circulate and move capital. As Harvey (2001a) explains, this is a cycle of the system functioning through this infrastructure. However, like other infrastructures (Edwards 2003), the financial one remains invisible to most except in cases of major disruptions - as an illustration, one can mention here the case of the 2008-09 financial system crises. However, as Halbert and Attuyer (2016) warn, this relative invisibility should not make the importance of financial circuits in the design, construction, use and ownership of the urban built environment, or what the authors refer to as 'urban production', any less evident.

According to Harvey (2001a), capitalism has a need to build a fixed space through which the system can function. After reaching a certain point of maturity, the capitalist system itself enters into a process of functioning in reverse, acting to destroy space in order to devalue much of the investment made in that space. Such a devaluation process occurs up to the point where capitalism can create space for a new spatial fix to flourish there. Thus, recreating new paths for a new process of capital accumulation through new territories and spaces. The author argues that this cycle of construction, destruction and reconstruction is one of the contradictions of capitalism. In his paper entitled "Spaces of Capital: Towards a Critical Geography" (D. Harvey 2001b), based on the results of his research, Harvey makes the following points:

(i) Capitalism cannot survive without being geographically expansionist.

(ii) Technological innovations in transportation and communications were necessary conditions for expansion to occur. The evolution of capitalism in the environment of new technologies facilitated not only the acceleration of its own

evolution, but also facilitated the progressive lowering of spatial barriers in relation to the movement of commodities, people, information, and ideas over space.

(iii) Capitalism's modes of geographic expansion depended crucially on the search for new markets, new labor forces, resources, or new investment opportunities where, above all, the formulation of new capital production environments were at stake.

However, what other kinds of concepts link the issues of land and capital? If the capitalist system needs to create physical structures for capital to circulate, how does physical space circulate within this structure? How has the academic literature specific to these issues developed from the contributions of the two main authors of classical economic theory, Marx, and Polanyi?

Although both Marx and Polanyi deal with the same main subject - land and capital - the authors have different focuses when approaching the 'land question' from the perspective of capitalist economics. While Marx focuses on relating land to the production of commodities, Polanyi focuses on the markets where the exchange of these commodities takes place. Both develop the concept of 'fiction' to theorize the question of land: Marx (through Harvey's interpretation) argues that land is conceived in the form of 'fictitious capital'. Polanyi (1944) argues that land is a 'fictitious commodity'.

The arguments of Marx and Polanyi have informed the development of other terms and concepts around the relationship between land and capital. The term 'commodification of land' or space (Soja 1985), for example, is perceived as the universalization or globalization of its exchange value (Lefebvre 1992). Moreover, as Haila (1991, 361) states, "(...) the increased development of an abstract space has allowed for more flexible change in the use of space." The abstraction of land as fictitious capital or as fictitious commodity had its unfoldings not only in the land market, but also in its forms of use, regulation, and trading. However, the trading of land as commodity has taken on different mechanisms, significance, and different market structures in recent decades (Elden 2010).

In the 1980s and 1990s, several empirical works were conducted to investigate interactions between land and capital. Discussions presented at this time included analyses on theories of urban rent (Ball 1985; Haila 1988), on global geographic dynamics in capitalist economies (Harvey 1985), on changes in the property market and changes in property patterns (see Elliott and McCrone 1982), on the changing role of investors and institutions

on the property market (Fraser 1993; Coakley 1994; Scott 1996), among other contributions.

On concepts around the relationship between land and capital, Harvey (1982), Haila (1988, 1991) and Coakley (1994) agree that in capitalist economies, property functions as a commodity. The authors point to the nature of property and the existence of increasing links between the financial market and the property market. All three authors argue that property should be viewed as a commodity. However, Coakley (1994) does not see property as a pure financial asset, but rather as a 'quasi-financial asset' as we will see below. He argues that property has been affected by changes in services (especially financial services) and the waves of deregulation experienced since the tax regulatory reforms and the lowering of currency circulation barriers.

Some of the main characteristics and changes in the urban land market, as highlighted by Haila (1988), are: (i) the integration of the financial market with the real estate market (which were previously separate), and the emergence of a new type of real estate market; (ii) and the increased role of public authorities and financial capital in the development of urban space and the allocation of land use. Sympathetic to the concept of spatial fix and the argument of the cycles of the capitalist system put forward by Harvey, Haila (1988) argues that the economic life of a building (which is different from the physical life of the building) has become shorter and the forces of destruction of usable urban space tend to prevail. The author emphasizes that the way space is built has changed.

In this sense, Coakley (1994) goes further, pointing to the duality of the built space. According to the author, a property has aspects of 'use value' and 'exchange value'. The use value refers to the value of the built space to the end users (considering here the diversity of users, residents, workers, businesses, etc.). Whereas the exchange value of the built space refers to the exchange made by financial investors (such as insurance companies and pension funds, etc.). Still in relation to the economic life of buildings, as Haila (1988) emphasizes, there is a tendency to increase the displacement of use values to develop abstract space.

According to Coakley (1994), understanding this dual characteristic inherent in the property market is crucial to unraveling the processes that have flourished between real estate and financial markets in advanced capitalist economies. As the author explains, although the real estate product is considered a fixed asset, it also possesses many characteristics of a financial asset.

Coakley (1994) postulates that land or built space, as a product of real estate, is a 'quasi-financial asset'. According to the author, the product of real estate is a quasi-financial asset because it possesses some, but not all, of the characteristics of other financial assets. According to the author, one of these differential characteristics can be explained by the nature of rent, referring here to urban rent theory[13], and by the structures of building provision (see Ball 1985). An implication of property as a quasi-financial asset, particularly in the case of commercial properties, is price volatility. If property is a quasi-financial asset, then its price is potentially speculative in nature, which exposes it to sudden changes with a focus on keeping this quasi-financial asset in the market, according to the ups and downs of the market.

However, according to Christophers (2016), the economic-geographical literature on commodities in recent decades has connected them to the global economic landscape through the 'Global Commodity Chain', the 'Global Value Chain', and the 'Global Production Network'. Such concepts explore the origins of commodities, the economic transformations exerted on commodities, and the wide range of economic actors involved in these relationships. However, this particular literature leaves aside the role of land in commodity markets. Some works focused on understanding housing markets (see Bourdieu 2005) draw on the sociology of markets proposed by Polanyi. While there are studies linking the topic of land with global production chains, Christophers (2016) stresses the importance in getting more in-depth contributions relating the topics.

While such lines of enquiry look at the relationships between capital mobility and land as real and financial capital (since the works of Harvey and so on), other studies focus on understanding the development of its markets (e.g., Adair et al. 1999, 2000; Mcgreal et al. 2000; Squires et al. 2016; Guironnet and Halbert 2014; Corpataux and Crevoisier 2014), and the development of urban policies, instruments, and strategies when dealing with the challenges of budget constraint (e.g., Smolka and Amborski 2000; Amborski, Smolka, and Smolka Martim 2003; McGreal et al. 2002; Aalbers 2007; Lord 2009; Weber 2010; Squires and Lord 2012; Smolka 2013; Savini and Aalbers 2015; Squires et al. 2016). Land markets have also suffered from the impacts of fiscal regulatory changes, new dynamics of currency circulation, the growth of the financial market, the emergence of new actors; and the challenges of new forms of budgetary provision and forms of regulation (Guironnet and

[13] For a greater understanding of the definition and debates on rent theory, see Ward and Aalbers (2016).

Halbert 2014; Corpataux and Crevoisier 2014). Furthermore, while cities are seen as centers of social interaction, commerce, and innovation, the challenges they face in sustaining economic decline, social injustices, and environmental degradation deserve attention. Urban planning is a fundamental instrument of public policy to deal with these challenges. In a constant exercise of projecting desirable futures for the city, planning and decision-making are increasingly geared towards achieving such goals (John et al. 2015).

The relationships between neoliberalism, globalization, and the financialization of land use are considered popular themes in academia. However, they are also challenging and controversial topics (Aalbers 2015b). Their relationship to urban development projects, to concepts of land as a commodity, and as places where capital or real estate assets are exchanged during financial capital market trading have been recurrent themes in debates presented in recent decades (see Christophers 2010; Aalbers and Christophers 2014; Birch and Siemiatycki 2016; Fernandez and Aalbers 2016). These debates have gained even more momentum after the Subprime events and the US Global Financial Crisis.

As Christophers (2011) suggests, this is an appropriate and vital time to look at how urban production processes occur under the influences of the capitalist system, what its effects are on land issues, and to understand what responses are still needed to be made in this new context. The author bases his argument on two reasons: 1) it is widely accepted that the development and financing of the urban built environment played a key role in triggering the ongoing economic crisis in major Western economies (see Aalbers 2009); 2) building on Harvey's beliefs, Christophers (2011) stresses the importance of the absorption of surplus capital through urban transformation. According to the author, the term often used in the literature for this absorption of surplus capital through urban transformation is 'capital-switching'. But how does this exchange and circulation of urban space/land take place in the global networks of capital production? This is precisely the topic that will be addressed in the following section.

1.1.1.6 FINANCIALIZATION: THE CIRCULATION OF URBAN LAND IN GLOBAL PRODUCTION NETWORKS

According to Marx (1993) and Harvey (1974), one of the distinctive logics of capital accumulation is its tendency to eliminate spatial and temporal barriers by creating possibilities for exchange of value. One of the main barriers to making a profit through the exchange of commodities is the time involved in this operation - that is, the time to produce, get the product to market, and exchange it for profit. In the case of land as capital, these

barriers and the time involved in these operations are even more evident because of its intrinsic physical characteristics. That is, it takes time to transform the land, or the urban space (e.g., construction of infrastructure, works, services, among others). Thus, the time to circulate it as capital can last months or years and, therefore, this investment cannot return immediately in the form of profit (Gotham 2009). This characteristic immobility of land and real estate assets aggravates the risk involved in urban production (which, in turn, are also subject to external variables and market volatility). However, to overcome these difficulties, these real estate assets are now tradable through the 'financial circuits' that exist in global markets as liquid financial assets (Gotham 2006; Aalbers 2008; Rutland 2010).

Thus, according to Guironnet and Halbert (2015), current property trading processes have increasingly transformed property into tradable income assets. A financial asset is, by definition, a tangible net asset whose value results from the contractual claim it represents. Stocks, bonds, bank deposits, and the like are examples of financial assets. However, financial assets do not necessarily have physical value, unlike land, property, raw material commodities, or other tangible physical assets. Such assets circulate, in turn, in 'financial circuits', which, according to Halbert and Attuyer (2016), are understood as socio-technical systems that channel investments in the forms of bonds and debt to leverage urban production. In other words, to leverage the design, construction, utilization, and ownership of the urban built environment. This process of property market transformation, characterized by the hegemony of finance, fictitious capital, and increasing rent extraction over productive capital, is also recognized as a process of financialization of the built environment.

For Corpataux and Crevoisier (2014) the dynamics of the current financial industry can be described by three main characteristics: (i) the increasing mobility/liquidity of capital and the principle of diversification combined in favor of the internationalization of investments; (ii) the emergence of new sectors, such as real estate or urban infrastructure, which require new skills compared to the skills required for traditional financial industry investments; and (iii) a process of standardization of its products/services at the same time that these same products/services become more innovative and complex.

Since the urban environment is formed by intensive capital - buildings, airports, transport networks and others - and represents a financial infrastructure - through which not only data, services or people circulate, but also capital more or less fixed in the urban built environment - cities also occupy a place as a financial product. In this way, capital

accumulation strategies of the financial market can be perceived in urban land. Along with these new dynamics, a restructuring of the property market has occurred. In this sense, the relationships between the built environment and the financial market must be reconsidered and analyzed (Corpataux and Crevoisier 2014; Halbert and Attuyer 2016). In this scenario, according to Halbert and Attuyer (2016), the urban studies literature points out that the capital market has played an increasing role as a source of financial resources in the last three decades. This process of deep interpenetration between the built environment and the financial market is also described by this literature as a process of financialization of the built environment (Guironnet and Halbert 2014).

Broadly speaking, this line of research highlights the existence of a financialized capitalism, as a result of changes in institutional structures, regulation, and the role of the state. But in what aspects have these changes taken place, and how are the relationships between capital markets and property markets viewed in this literature? What does the financialization of the built environment consist of? What do these studies say about such processes of financialization of the built environment and their impacts on the various segments of the property markets? How have these markets developed? How have urban policies and institutions (public and private) shaped themselves to this context to finance spaces, urban services and regulate the market? How have these and the other actors involved in the process of urban production intertwined local and global land markets? What financing techniques and instruments have been developed in the face of these interactions between capital markets and urban space? These are some questions under debate to be addressed in the following sections.

1.1.1.7 URBAN POLICY INSTRUMENTS AND FINANCIALIZATION

Part of this literature on financialization aims to understand specifically how logics and practices associated with capital markets are impacting urban dynamics. They dedicate their studies to examine what will be referred to here after, borrowing Sanfelici and Halbert's (2018) term, as financializing policy instruments (FPIs). A policy instrument is considered as financializing when it presents a perspective based on capital finance, as well as assuming its valuation techniques and calculation methods. Basically, as a policy instrument, FPIs are sociotechnical devices which arrange specific social relations between the state and the entities to whom it is directed (Lascoumes and Le Galès 2007). As Sanfelici and Halbert (2018) emphasizes, FPIs are "government devices" which succeed in merging

the different "ecologies" of financial markets and government. In addition, in certain circumstances, they can drive to an "ecological dominance". This is to say, when the goal of FPIs is to fund the urban built environment, they create institutional arrangements which adjust and pave the particular ways that lead land and property to be financialized.

FPIs can be used in funding structures of large-scale urban development projects, which is recognized as a stage where interactions between local government and global capital markets frequently take place. The role of financial market in providing capital to fund urban built environment on these projects has already been highlighted by many authors, especially from North American and European perspective (Rutland 2010; Theurillat and Crevosier 2012; Guironnet and Halbert 2014; Savini and Aalbers 2015). They emphasize an increasing reliance of municipalities' budgetary capacity on capital markets (Savini and Aalbers 2015; Halbert and Attuyer 2016). Additionally, at some cases, this interdependence occurs by the government own proactivity, for instance, by using FPIs in funding structures of property-led development projects, such as the case of Tax Increment Financing (TIF) (Weber 2002, 2010). By analysing projects in Europe, specialists in urban development projects funding structure have recently reported some trends arousing from financial market strangeness into urban governance ecologies (Squires and Lord, 2012; Squires et al. 2016). Yet not from financialization perspective, Squires et al. (2016) underlines that such projects' funding structures has: a bias towards instrument blending, which include FPIs, a use of partnerships involving private money and foreign institutional funds, and a reliance on future value uplifts which attributes different phases of funding. The increased level of complexity of these funding structures focuses financial sustainability, aiming raising returns and to dealing with risks more efficiently. Additionally, Squires et al. (2016) suggests that instrument blending, just as a good planning, may help to define and mediate any conflicts to encourage value-for-money and quality of urban built environment. However, as Savini and Aalbers (2015) call attention, the increased trust of cities in returns expectation of risky projects driven by finance-led rationales may be a burden for its governance.

Policy instruments are commonly addressed as financializing when they assume the perspectives, calculation methods, and valuation techniques from financial markets (Theurillat et al 2016; Sanfelici and Halbert 2018). When related to urban built environment, FPIs can be described as: (1) particular Public-Private Partnerships through which regulatory and institutional arrangements shifts urban infrastructure into investment products; (2) securitized real estate debt such as Mortgaged-Backed Securities

and securitized property ownership, as private equity or real estate or Real Estate Investment Trusts (REITs); and (3) schemes that in order to finance urban re-development are based, for example, on tax increments or additional building rights sold to investors. All these three FPI types are part of the financial structure of the Brazilian large-scale urban development project to be further analysed in this article.

Geography and urban studies frequently report cases in which, to finance urban built environment, FPIs are not neutral devices promoting, at least at certain level, financial markets rationale dominance (Allen and Pryke 2013; Savini and Aalbers 2015; Peck and Whiteside 2016). It happens when these instruments establish mechanisms that conform the specific ways in which land and properties are turned into an asset class (Harvey 1982, see also Torrance 2008; Leyshon and Thrift 2007; Aalbers 2012; Guironnet and Halbert 2014a and 2014 b; Savini and Aalbers 2015; Van Loon and Aalbers 2017). Amidst analysis of FPI cases several contributes had evidenced the following outcomes, especially when finance markets rationale dominance happen: the intensification of uneven urban development (see Smith 1979; Strom 2009; Gotham 2016; Rouanet and Halbert 2016; Crosby and Hannebery 2016), the local government power yielded to finance capital investors emphasised by fiscal austerity and municipal budgetary constriction (see Gothan 2009; Kaika and Ruggiero 2013; Guironnet et al 2014; Savini and Aalbers 2015), the occurrence of planning and land uses de-contextualized from local needs with focus on turning land and property into financial assets (see Torrance 2008; Savini and Aalbers 2015; Guironnet et all 2014; Guinorret and Halbert 2014), the role of financial actors as urban policy-makers (Weber 2010; Guironnet et all 2014; Theurillat et all 2016; Sanfelici and Halbert 2018), among others. It is common in this branch of literature to assume, even if implicitly, that the use of FPIs tend to result in a city with the characteristics above mentioned (Gothan 2009; Savini and Aalbers 2015; Crosby and Hannebery 2016; Peck and Whiteside 2016).

1.1.2 SOME CONSIDERATIONS

The debates presented on public policies and capitalism, in this first section of the literature review, are the basis for understanding a context of increasing financialization, which is the perspective adopted for the analysis of urban policies and instruments proposed by this thesis. Such debates demonstrate a sequence of ideas and phenomena that occurred mainly between the 1950s and the 1980s.

With emphasis on the occurrence of globalization phenomena and the emergence of new technologies, they present factors that have modified, worldwide, the structure of social, economic, and cultural relations between countries, cities, and citizens. The growth of the financial sector led to innovations that have impacted not only the dynamics inside and outside this sector, but also other sectors. This reconfiguration of relations and markets, in different sectors, has had profound effects on society and its daily life at the most diverse scales.

As several contributions from the fields of urban studies and urban economics highlight (Corpataux and Crevoisier 2014; Guironnet and Halbert 2014; see also: Harvey 2001b; Blackburn 2006; Torrance 2007; Aalbers and Christophers 2014; Aalbers 2015b), the period between the 1970s and 1990s was marked by many changes, which were relevant to the triggering of a new context of increasing financialization. These contributions mainly refer to changes in regulatory policies, the emergence of new technologies (as the example of the internet and the 'www') and the processes of globalization of economies, information, cultures, and people.

The search for the internationalization of investments, intensified mainly in the 1990s, was responsible for the emergence of the need to create guarantee structures that could serve as a basis for financial capital. An important vehicle for connecting financing systems with international and global markets was the creation of a secondary financing market. These connections included the creation of some housing credit policies and some of the consequences of the growth of finance capital based on these policies could be observed during the Subprime crisis in 2007.

In parallel to these issues, some authors (Haila 1988, 1991; Coakley 1994; Christophers 2016) present the evolution of the financial sector's view towards land or built space. These works underline that land, or built space, has a dual value characteristic, and can be characterized as a 'quasi-financial asset' (Cokley 1994). In other words, land is characterized as a scarce and finite asset, of little mobility, with a use value and social function. In this sense, it fits the characteristics of real and tangible capital.

However, the land, or built space, when represented by financial securities (traded or not by the stock exchange) takes on another form and function in the market that trades it. In the form of securities, the land also has the characteristics of a financial asset, with greater liquidity/mobility. In addition, it is a physical infrastructure through which capital circulates. With this, this good represents a financial asset class that differs from other asset

classes, such as bonds based on oil, soybeans, or shares of any institution traded on the stock exchange.

It is interesting to note that the change of attitude in public policy decision-making has triggered a series of processes and outcomes. These, directly or indirectly, have affected the now global cities. But they have also left these cities exposed to the financial sector that sees them as an agglomeration of goods and, therefore, a large sum of capital. Imbued with its typical thirst for risk reduction and profit maximization through sophisticated mechanisms, the financial sector quickly found ways to exchange and circulate this capital in its global networks of production and accumulation.

Yet how have cities reacted to these needs of the expanding financial sector? Which parts of the urban fabric are most attractive to the financial sector? To what extent is this sector free to act on the future of this capital? What attitudes have municipal governments adopted towards these new demands? Are these demands in the interest of the local government? And to what extent are they structured to provide answers to these questions?

Thus, from the perspective of financialization and its incidence both on the built environment and on urban policies, the following section will present some possible answers to these questions.

1.2 URBAN DEVELOPMENT POLICIES AND INSTRUMENTS IN A SCENARIO OF FINANCIALIZATION

As presented earlier, in the last four to five decades, the issues of urban crisis, poverty, and social exclusion have taken a prominent place in the field of public policy. In this sense, urban growth and subsequent economic, social, political, and institutional transformations have become central agendas of debates in geography, planning and urban studies (Pan et al. 2017). In processes of globalization, economic deregulation, decentralization and privatization, social, economic, and spatial fragmentation and polarization also occur. With this, metropolitan regions and urban districts have increasingly gained relevance in terms of levels of governance. In the face of this reality, cities around the globe have sought to readjust forms of governance and urban policies (Hohn and Neuer 2006; Torrance 2005; Crevoisier and Theurillat 2009; MacLeod and Jones 2011).

It was mainly between the 1980s and 1990s that a change in pattern was noticed, as well as a growing variety of projects for: urban renewal of deprived neighborhoods, revitalization of districts for business improvement, and flagship projects. For the most part, new policy models and instruments to foster urban economic development were based on: relaxing land use laws, enacting tax incentives to attract private investment, establishing public-private partnerships, and adapting and innovating urban policy instruments in an attempt to anchor financial capital in cities (Hohn and Neuer 2006; MacLeod and Jones 2011; Guironnet and Halbert 2014, 2015b, 2015a).

However, as Hohn and Neuer (2006) emphasize, such urban economic 'development' policies can lead to opposite sides. Even under threat of leading cities to increasing social, ethical, and economic polarization. According to the authors, there is a difference in concepts, norms, and guiding principles in these policies, as well as strategies of action and ways of controlling actors.

With this, with the fostering of such policies, there is a disparity of forces between the actions of the actors in disadvantaged urban districts. As well as in areas where entrepreneurial, competitive, and growth-oriented policies based on public-private partnerships and urban development contracts are applied.

In these same decades, debates submerged pointing to a paradigm shift in relation to urban governance and policy models, which occurred after the geographic-economic

transformations of the previous decades. This break is depicted in some academic works such as the 'New Urban Governance' and the 'New Urban Policy' (for an overview of these debates, see Peterson 1981; Markusen et al. 1987; Harvey 1989; Leitner 1990; Jessop 1997; Hall and Hubbard 1998; Pierre 1999; Brenner 1999; Salet and Faludi 2000; Hackworth 2007).

Many of these contributions stressed that such changes were aimed at meeting the needs of elites, select interest groups and the market, adopting an entrepreneurial logic.

From a general perspective, Hohn and Neuer (2006) emphasize that contributions in these decades put on the agenda for discussion issues such as:

> (i) the degree of freedom of urban policies in confronting global economic forces (from a North American perspective see Fainstein and Fainstein 1983; for a comparative perspective between North America and Europe see Smith and Feagin 1987; Logan and Swanstrom 1990).
>
> (ii) the formation of political-economic alliances to transform economically powerful landscapes into urban centralities and suburbs (see Logan and Molotch 2007).
>
> (iii) urban privatization and intensification of commercial interests in the management of urban political affairs (see Barnekov and Rich 1989).
>
> (iv) the generic shift from managerialism to entrepreneurship in urban governance and the demonstration of how mechanisms for competition between cities, can shape outcomes and generate macroeconomic consequences (see Harvey 1989).
>
> (v) the way in which the sphere of urban politics is closely linked to a transition to new regimes aimed at capital accumulation (see Harvey 1989; Soja 1989; Swyngedouw 1996).
>
> (vi) the way in which economic growth, development, and investment in the built environment have become dominant in the practice of urban politics per se (see Cox 1993; Leitner 1990; Tim Hall and Hubbard 1996); among others.

Some authors - for example Smith and Feagin (1987), Harvey (1989), John Logan and Swanstrom (1990), Leitner (1990), Cox (1993 and 1995), Hall and Hubbard (1998) - argue that municipal governments, and urban policies adopted, were dominated by the goals of achieving economic growth, development, and investment through the built environment.

That is, according to these authors, the central logic of the new forms of urban governance and policies were formed by the eagerness of cities, and communities, to attract ever more mobile capital and capital investment resources.

In this respect, urban regeneration and revitalization projects, urban development projects, large built environments, and large infrastructures, have been singled out as a 'model' of the 'mass reproduced' built environment (Harvey 1989). These are taken as arenas where negotiations between different scales and dynamics, the mobilization of public and private actors, and a diversity of models and partnerships often take place (see Home 1990; Turok 1992; Kris Olds 1995; B. Williams 2006; González 2009; Breda-Vazquez et al. 2009; Oliveira and Breda-Vazquez 2010; Cook and Ward 2011; Couch et al. 2011). Other works (see Harvey 2001b; Mayntz 2002; Brenner 2004; Cochrane 2006; K. R. Cox 2011; Ancien 2011; among others), emphasize urban governance and politics, their interrelationships with both globalized market dynamics and global and local reshoring, as well as their influences on the built environment[14].

More recently, particularly after the Subprime crisis and the Global Financial Crisis and subsequent financial collapse of cities, societies, and public and private institutions, new debates on governance policies have gained new breadth. With this, from the perspective of the increasing processes of financialization, new voices and contributions have taken place (Pan et al. 2017).

Such analyses have focused on the emergence of new relationships between urban governance - through urban policies, development strategies and instruments - and the financial sector - through new financial policies and instruments for and circulation of capital.

This strand of research emphasizes strong relationships between the global process of increasing financialization of economies and the built environment, focusing on the following main aspects: (i) the evolving roles of local and global power in policy formulation

[14] According to Hohn and Neuer (2006) and (MacLeod and Jones 2011), the vast multidisciplinary aspect of the new forms of urban governance and policies served as a foundation for the structuring of studies and debates around related and underlying issues and themes - such as the processes of gentrification and social segregation; of urban sprawl; problems of mobility and traffic; issues of environmental, social and economic sustainability; justice and democracy; among others. However, because they do not belong to the central focus of this thesis, these topics will not be addressed here in greater detail.

and implementation; (ii) globalization and its territorial processes; (iii) and the concepts of circulation of urban space/land in global networks of capital production.

As will be presented later in this thesis, most of these contributions give special emphasis to 'large-scale Urban Development Projects' (UDPs). These are placed as the main arena and instrument for the development of the relationships that cause the built environment to be transformed into financial assets (Theurillat et al. 2014; Halbert and Attuyer 2016).

Under the theoretical umbrella of financialization, these debates also spread in a wide variety of directions and address themes such as: the impacts of the growth of the financial capital sphere on real capital (Theurillat et al. 2008; Corpataux and Crevoisier 2014); land use and new urban planning instruments adopted to capture greater capital value for local governments (Weber 2010; Medda 2012; Pacewicz 2013; Savini and Aalbers 2015; Peck and Whiteside 2016; Gotham 2016); new policies, funding sources, and emerging partnerships (Torrance 2008, 2009; Weber 2010; Pacewicz 2013; Aalbers 2009, 2012, 2013b, 2017); the impacts of these new policy and instrument arrangements on urban development projects (Weber 2010; Attuyer et al. 2012; Pacewicz 2013; Theurillat and Crevoisier 2014; Guironnet and Halbert 2015b; Savini et al. 2015; Savini and Aalbers 2015; Theurillat et al. 2016; Pan et al. 2017); among others.

To get an overview of these debates, some of these approaches will be presented in the continuation of this thesis. But before further elaborating on concepts and debates about financialization, what does this literature say about the transformation of large areas of built environment into financial assets? What are large-scale Urban Development Projects (UDPs) and how do they represent new relationships between urban governance and the financial sector? Which actors are involved in these processes? The items in the following section (1.2), are intended to elucidate issues surrounding these and other questions.

To this end, we first chose to set out the debates surrounding the conversion of large areas of built environment into financial assets (1.2.1). Next, item (1.2.2) and sub-item (1.2.2.1) are intended to clarify the issues surrounding UDPs - concepts and some issues related to these projects from a governance perspective.

Following, item 1.2.3, will explain the concept of financialization of the built environment. It presents what Guironnet and Halbert (2014) identify as the three main approaches for analyzing the processes of financialization of the built environment. These approaches gave rise to the following items: public financing aimed at urban development (1.2.4); innovation

in mortgage distribution and securitization (1.2.5); and the restructuring of housing markets and financial capital investors (1.2.6).

The section on urban development finance also has a sub-item (1.2.4.1). This one, will address in particular land value capture instruments, as they are pointed out with some frequency in debates of financialization of the built environment and urban policies as part of the process (Weber 2010; Pacewicz 2013; Guironnet and Halbert 2014, 2015a; Guironnet et al 2015; Peck and Whiteside 2016). This subitem is also intended to clarify concepts, applications, and some examples of these instruments, with a view to complementing the main discussion on financialization. And last but not least, the topic of the role of key players in property and financial capital markets will be addressed (in section 1.2.7).

1.2.1 CONVERSION OF URBAN BUILT ENVIRONMENT INTO FINANCIAL ASSETS

According to Fainstein (2008), urban megaprojects were developed in parallel with, but also somewhat associated with, the development and innovations of mortgage distribution and securitization. As Clark et al. (2009) and Theurillat and Crevoisier (2014) point out, the financing and ownership of these projects (stadiums, hospitals, airports, university centers, etc.) have traditionally been concentrated in the hands of public authorities. And in the case of other large urban objects (large shopping centers, business centers, etc.), investments were concentrated in the hands of private actors.

There are several studies (Fainstein 2001; Swyngedouw, et al. 2002; Wolf-Powers 2005; Theurillat and Crevoisier 2013; Guironnet and Halbert 2014; Savini and Aalbers 2015) that point out that some large urban areas became spaces of contact and negotiation between capital investors, the local market, and cities. According to these authors, large-scale Urban Development Projects (UDPs), occupy key urban spaces where the globalized market and socioeconomic demands clash. Moreover, in them the connections between the built environment and financial capital investors are often established.

By transforming the built environment into a financial asset category, UDPs are traded as a space through which (in addition to their spatial characteristics) more or less temporarily fixed capital circulates (Halbert and Attuyer 2016). According to some authors (Brenner 2004a; Jones and Evans 2006; Klink 2013; Ashton et al. 2016), in many respects this seems to represent the adaptive structures of finance capital as a mechanism to consolidate

stronger connections to the ground to circulate and capitalize capital (Brenner 2004b, 2004a; Ashton et al.2016).

According to Savini and Aalbers (2015) and Squires et al. (2016), the complex financial constructs structured to assemble a PDU, the growing appetite for innovative financing mechanisms, and the positioning of the regulatory entities involved all play a key role in the outcomes achieved by each project. However, Savini and Aalbers (2015) stress that the processes of increasing financialization, characteristic of the contemporary capitalist system, lead to a 'decontextualization of land use planning'.

But first, what are large-scale Urban Development Projects? How have these urban spaces been adapted over time to establish this connection with the capital market? What is the role of the state in establishing these connections and how have local policies developed to adapt these urban spaces to attract such global investments? How are these spaces seen from the point of view of urban governance?

In the following section the concepts surrounding large-scale Urban Development Projects will be presented. In this item, we sought to clarify the differentiations between the definitions of UDPs and Megaprojects; and some issues that involve them from the perspective of governance. It is understood that these definitions are fundamental to understand the processes of financialization of the built environment that will be dealt with in the next section.

1.2.1.1 THE FINANCIALIZATION OF THE BUILT ENVIRONMENT

When referring to built environment, the concept of financialization builds on capitalism's tendency to treat land as a financial asset (Harvey 1982). As Guironnet and Halbert (2014, 6-7) state, regarding the built environment, the concept of financialisation seeks "(...) to capture the deepening interpenetration of the urban environment and financial markets in the post-Fordist era (...)", and that "(...) suggests that financial actors and their market finance techniques have acquired a greater prominence in the financing, ownership and management of parts of the built environment. (...)". Furthermore, according to Webber (2015, 31), "(...) the circulation of capital is at the root of most physical changes in the built environment. (...)".

The literature related to the financialization of the built environment is geographically located in the United States and Europe, in particular the United Kingdom. In recent

decades, especially in the 1990s and 2000s, the main reports on ways of making cities in a context of regulatory change, globalization, neoliberalization and financialization of economies, have focused on understanding the logics, dynamics and strategies assumed by the actors (public and private) involved in these interventions. Many of these studies point out that the policies of welfare provision have given way to corporate logic (Harvey 1989; Moulaert et al. 2003; Tasan-Kok and Baeten 2011).

The debate of the financialization of the built environment looks at how, beyond local-scale demands, financialized agents, logics, and metrics have impacted urban and regional planning (Aalbers 2015a). The discussion aims to observe how these factors can be determinants not only in planning instruments, but in the production of local space and everyday life. Guironnet and Halbert (2014), identify three main aspects in the interpretations of the literature on the financialization of the built environment:

(i) the evolution of public financing for urban development.

(ii) the development and innovation in mortgage distribution and securitization.

(iii) the restructuring of real estate markets through the acquisition of large tracts of built environment by financial capital investors - either through the stock market or unlisted circuits.

According to Harvey (1985), to circumvent the perception of risk due to the permanent eminence of crisis characteristic of the capitalist system, finance capital is constantly creating new strategies to promote 'capital-switching' (see also Christophers 2011; Aalbers 2012; Ward 2020). Through this behavior, the system makes the connection between financial strategies (global scale) and the production of urban spaces (local scale). Thus, as French, Leyshon and Wainwright (2011, 798) state, from a territorial perspective the literature in general refers to financialization as "(...) a deeply spatial phenomenon, representing the search for a spatial-temporal fix or quasi-resolution of the crisis tendencies of contemporary capitalism. (...)".

Although the broader concept of financialization was already a topic explored by other fields of knowledge as set out above, the literature concerning the financialization of the built environment has gained great emphasis since the Subprime crisis and the Global Financial Crisis (Feindt 2010; Aalbers 2015b). As Feindt (2010) states, these crisis episodes challenged primary assumptions about the position of markets, public policy, and planning in the provision of wealth and public goods.

Considering such a scenario, within debates on financialization processes, crises are often directed at global financial command centers. And, furthermore, to the relationships - unscrupulous, according to Rolnik (2015) - between financial institutions and their clients. According to Aalbers (2015b) and Rolnik (2015, 26-27), geographers and political economists who dwell on the analysis of this theme seek with their analyses to go beyond the political question 'where'. That is, to go beyond these financial-hypothecary crises that shaped international finance between 2007 and 2009, intending to bring light to the multiple contexts and developments that the subject implies.

In a general overview, debates about the financialization of the built environment and urban policies point to issues from two distinct perspectives:

> (i) the importance of territorial planning in distinguishing the contextual factors of capital markets that shape the urban fabric, and how urban policies should take advantage of these markets (Savini and Aalbers 2015; Weber 2010 and Theurillat et al. 2016).
>
> (ii) the relevance in understanding how financial actors and institutions intervene in decision making, both through the sharing of real estate data and through transactions in this market (Guironnet and Halbert 2014).

As seen in sections 1.1 and 1.2, with regard to public policy, financialization processes are perceived from the global to the local scale of governance. Moreover, the degree of market penetration is reflected in many different aspects of public policy - ranging from increased public borrowing, privatization and securitization of public assets, size, and scope of financial services available to municipal governments, to investor-driven critical decision-making concerning collective consumption (Weber 2010).

Thus, in addition to traditional means of public borrowing, municipal governments have come to depend on financial markets to be able to deliver public goods. The relationship that integrates these various sectors has on one side financial capital - which is represented by its dynamism and constant search for expansion - and on the other, institutional, and instrumental structures - structures through which capital is anchored to the territory. Academic evidence produced so far on the way financial capital operates demonstrates its strong imposition on these institutional and instrumental structures. As a result of this imposition, these have been given little room for agency and maneuver. However, these

integration relations still need to be examined further (Weber 2010; Savini and Aalbers 2015; Halbert and Attuyer 2016).

According to Halbert and Attuyer (2016), even though these lines of research have made discoveries on the topic, they nevertheless do not constitute an integrated body of work. The authors point out that for a comprehensive understanding with depth and breadth about the changes derived from the financialization of the built environment, there is still a need for further work, including empirical studies, on the topic. According to them, this statement is specifically true for non-Anglo-American cities and regions, which have received less attention; nevertheless, they offer opportunities for essays through 'comparative urbanism'[15] (Robinson 2015a, 2015b).

An in-depth reflection on the remaining methodological and conceptual challenges is equally crucial. The gains derived from this reflection will not only be a further confirmation of the changing logic of the state and its modes of operation, as pointed out by leading urban economic policy theorists in the 1980s, 1990s and 2000s; this analysis can also broaden the understanding of the varied processes and actors that contribute to the interconnections between capital markets and the growing number of urban objects and themes, as well as improve the perception of the material, social and political consequences of this growing interdependence (Guironnet and Halbert 2014; Halbert and Attuyer 2016).

According to Fainstein (2016), most of these studies indicate that the financialization of property development has worsened inequality and prevented the implementation of equity-promoting policies. However, the author highlights that there is potential for progressive policymakers to make use of financial instruments directed at achieving greater justice. From Fainstein's (2016, 1503) perspective, "(...) the recent intensification of

[15] According to Robinson (2015a, 2015b), comparative urbanism resurges driven by the desire of some authors (e.g., Parnell 1997; Roy 2009; Wu 2010; Robinson 2013; among others) to develop new practices of global urban theorizing and generate new concepts for thinking about contemporary cities. In the current context, old core areas of urban theory are displaced under the influence of economic and geopolitical shifts; changing resources and power relations; redefinition of global geography and urbanization trends. As the author emphasizes, a variety of new currents of thought aimed at providing answers to these questions have been proposed in this field, ranging from ethnographic theorizing to new analytical and methodological agendas inspired by regional insights, readjustment of political economy approaches; methodological innovations in comparative urbanism, and revisiting some of the analytical and philosophical questioning associated with the definition of the urban. As the author argues, the emergence of a new generation of theories is needed, and to this end, she proposes to draw inspiration from the openness to conceptual revision offered by comparative urbanism and thereby achieve new methodological and conceptual bases for a new repertoire of comparative methods and more holistic thinking. For more details on comparative urbanism and proposals see (Robinson 2015a, 2015b).

financialization in itself does not produce unequal development, since unequal development has always been a characteristic mark of property development under capitalism." (...)". And, what produces unequal urban development is "(...) the combination of financialization with neoliberal ideology, globalization, and the constriction of state-sponsored social welfare and housing affordability programs underlying the inequalities produced by real estate investment. (...)".

However, Fainstein (2016, 1507) concludes that: "(...) Financialization, by increasing flexibility in approaches to new construction and regeneration, could allow for a better distribution of the benefits of urban development. It is the ideology and associated austerity policies that prevent this potential from being realized. (...)".

But what does the literature on financialization of the built environment and urban policies have to say about the use of financial instruments and what types of instruments are these that Fainstein (2016) refers to? And while further reflection on the theme of financialization of the built environment is claimed by the literature, what are its contributions so far?

As mentioned earlier, Guironnet and Halbert (2014) suggest that one of the three aspects on which these contributions focus relates to the evolution of public financing for urban development. Among these contributions, the instruments of land value capture are mentioned with some frequency in relation to processes of financialization of the built environment and of urban and land use policies. The concept of these instruments, applications, and some examples with a view to complementing the main discussion on financialization will be presented on sub-item 1.2.2.3. However, before that, this section will keep presenting few other topics concerning to urban financialization and the processes of conversion of urban built environment into financial assets. Such as processes of restructuring of real estate markets, the role of financial capital investors (1.2.1.2), its key actors of financial property assets (1.2.1.3), and concepts, some aspects from governqance perspective, and strategic debates on large-scale urban development projects (1.2.1.4).

1.2.1.2 RESTRUCTURING REAL ESTATE MARKETS AND THE FINANCIAL CAPITAL INVESTORS

According to Guironnet and Halbert (2014), one perspective of analysis of the debate on the financialization of the built environment is based on the restructuring of property markets as a function of global investment mechanisms, through the trading of investment securities or securities of unlisted companies, developed by the financial industry in recent decades. As the ownership of urban space has become increasingly involved and valued by financial

actors, some authors suggest that financialization has shaped the urban landscape[16] (see Torrance 2006; Clark e Wójcik 2007; Aalbers 2009; Guironnet e Halbert 2014).

As Halbert et al. (2014) point out, on the one hand property per se represents a vital and integrated component of corporate business, impacting the aggregate capital of the companies that own it. On the other hand, the 'creative destruction' of property investment and development also provides an impact on the physical and social structures of the cities and metropolitan regions, in which such properties and businesses are embedded.

This factor, in turn, affects the ability of real estate investors to cope with long-term changes (see Turok 1992). Furthermore, the value of property (capital value) - to which property developers are focused on responding - is determined by the combination of user demands (rent) and investment demands (income). That is, two elements of demands belonging to groups with different sets of influences.

Halbert et al. (2014) further emphasize that such buildings, when designed and constructed, tend to come more in line with financial interests and criteria than with users' expectations and needs when it comes to their choice of forms, locations, and quantities. This means that, on a collective level, they also do not meet the needs of the cities and metropolitan regions in which they are located.

As Halbert et al. (2014) point out, such processes are spatially selective and influence competition between places and may, thus, contribute to an uneven development of national and international urban systems. Moreover, the authors point out that "(...) the ways in which corporate ownership is reproduced are as important as the outcomes, because they shape those outcomes. (...)". Halbert et al. (2014, 422) argue that:

> *"(...) the changing relationship, between finance capital and the urban built environment, affects both the productive capacity and productivity of urban firms and economies, and the physical form of the city and the ways in which its reproduction can be governed. (...) ".*

[16] That is, according to these authors, as Clark and O'Connor (1997) had already mentioned, still in the 1990s, it was confirmed that the financial intermediation and evaluation of cities has been done by the financial market. In this intermediation, the actors establish a monetary value of the securities that, in turn, are linked to the built environment. To this end, these actors take into account not only the physical characteristics of the building, but also its financial characteristics and earning expectations. Thus, according to Theurillat and Crevoisier (2014, 504), "(...) the qualities of a city (income level, quality of urban governance, social stability, etc.) and of a nation (macroeconomic conditions, currency strength, etc.) where the object is located are also implicitly, but effectively, evaluated. (...)".

As real estate investment has been transformed - through the logic of 'portfolio management', i.e., into a form of 'financial engineering' - investors have begun to compare 'financial' risks and returns of real estate investment funds (anchored in office buildings, residential apartments, infrastructure, etc.) with other financial asset categories (Theurillat et al. 2016). In other words, according to Guironnet and Halbert (2014), in order to diversify their portfolio, financial capital investors have penetrated the real estate market as owners, turning real estate into a 'quasi-financial asset' (Coakley 1994), converting land capital into financial capital as mentioned earlier in this text.

The analyses from this perspective of financialization of the built environment cover a variety of cases, ranging from: (i) real estate - with some work on the housing market (Uffer 2011; Fields 2015) and a greater number of cases on the commercial property market (Coakley 1994; Ball and Wood 1996; Scott 1996; Henneberry and Roberts 2008; Halbert et al. 2014b; Ashton et al. 2016); (ii) infrastructure (Lorrain 2008; Torrance 2009) - such as energy services (Lorrain 2008; Allen and Pryke 2013), highways (O'Neill 2009), and tolls (Torrance 2008); (iii) to urban policies, their instruments and strategies (Weber 2010; Savini and Aalbers 2015; Ashton et al. 2016).

In the words of Savini and Aalbers (2015, 3), "(...) real estate is a commodity in tension: the risk of investment in the production of urban space is related to the fact that this commodity is immobile, but today tradable on global markets as a liquid asset (...)".

Real estate is, as these and other authors (Gotham 2006; Aalbers 2008; Rutland 2010) point out, one of the main commodities that strengthen corporate portfolios by expanding their ability to leverage capital. Investment strategies in developing land have come to be closer to the production/leveraging/production/change cycle. With the expansion of the real estate economy over the last two decades, this cycle has been institutionalized through: (i) a regulatory framework that encourages economies of scale of land; (ii) the availability of 'cheap money'; (iii) long-term investment guarantees; (iv) and flexible land use regulations for large-scale projects. Savini and Aalbers (2015) explain that urban and regional development trends have three main characteristics:

(i) A tendency to reallocate investments throughout the region.

(ii) A growing ability to bundle projects and link different investments.

(iii) A tendency to approach planning as instrumental in facilitating the inflow of financial investments.

But broadly speaking, what does the specific academic literature on this topic identify as changing ownership patterns and institutional and spatial contexts? What else do these contributions say about the unfolding of the contexts presented above and their consequences on ownership patterns? What types of actors present themselves as key in this process? What institutional and spatial consequences can be pointed to?

As Halbert and Attuyer (2016) state, analyses of ownership patterns, especially in the case of commercial real estate, report that there is a certain resistance to fixing capital in buildings by institutional investors, such as pension funds, insurance companies, and real estate funds. These studies highlight that such investors have changed their behavior and migrated to investing in rentals (for a UK perspective see Coakley 1994; Scott 1996; Henneberry and Roberts 2008; for an international perspective see Halbert et al. 2014a, 2014b).

Halbert et al. (2014a), point out that this shift in the property market, especially that of commercial real estate, has two striking effects:

(i) Leasing relationships became more important than ownership relationships.

(ii) Property development and investment (activities other than property construction) emerged as economic activities.

Along with these rent-derived processes, the actors involved have differentiated and separate relationships and roles. Thus, a system of interconnected sub-markets emerges with the figure of new actors (see Keogh 1994 for a perspective on the British real estate market; and Guironnet and Halbert 2014 for an international view of market development), in addition to a change in supply and demand relations. In this scenario, capital regulators, (re)intermediaries and investors are identified by several authors as key actors, which are intertwined during the process of financialization (Corpataux and Crevoisier 2014; Guironnet and Halbert 2014; Byrne 2016a, 2016b).

However, the relationships between capital markets and land use are not restricted only to the private property market. As Halbert and Attuyer (2016) emphasize, such changes are also reported in cases of urban infrastructure and services (Torrance 2005, 2009; Allen and Pryke 2013). These studies have focused on understanding how privatization waves transform publicly owned assets into financial commodities as a way to attract investment bank-led consortiums.

According to Torrance (2008, 4), urban infrastructure can be defined as "(...) those essential services that an urban society cannot do without. (...)". As Graham and Marvin (2001) emphasize, private ownership of infrastructure is not new, since before World War II, many of them were built and financed by private actors. However, as Torrance (2008) and Graham and Marvin (2001) point out, the financing, construction, and maintenance of urban infrastructure were for four decades under the responsibility of the public sector in the United Kingdom, and in some countries in Europe, Latin America, Africa, and Oceania.

According to Torrance (2008), recently, private financing models for such infrastructure have re-emerged in the developed world, spreading rapidly across urban landscapes worldwide. In the process, infrastructure provision has increasingly become a financial product. By selling infrastructure, through equity stakes, not only to companies but also to financial institutions, governments also transfer the ownership and responsibility they have for this infrastructure to these companies and institutions. With this change in ownership patterns, the operation of infrastructure systems has been organized in new institutional and spatial contexts: Cities and urban regions have come to be analyzed along the lines of financial product valuation, through quarterly earnings reports, like any other capital market product (see Babcock-Lumish and Clark 2006).

Although the urban landscape is socially and politically the responsibility of the state (Clark 2006), in this new context of ownership the global infrastructure market has become responsible for producing, operating, and reshaping this space, thus generating spatial consequences.

As Clark (2006), and Torrance (2008) point out, governments have decreased financial support for infrastructure works as they consider issues relating to (i) the 'value for money'; (ii) the allocation of risk to the public sector; (iii) budget constraints; and (vi) the needs for capital gain improvements. And by making the various infrastructures available to private owners through concessions and direct sales, local governments have slowly allowed these to be removed from the local, regional, and national political and regulatory spheres. Thus, they turn these infrastructures into properties of international private entities.

Local disaggregation added to global interconnectedness has also changed the governmental structures of infrastructure. Moreover, as several authors point out (Torrance 2009; Allen and Pryke 2013; Guironnet and Halbert 2014), with the transition of ownership patterns from a public good to a private good, infrastructure has gone through a process of financialization.

In other words, according to Torrance (2008) urban infrastructure has become 'glocal' property products - that is, products that are owned by global owners and regulated by local actors. These new ownership patterns, in turn, have forged new forms of 'glocal' governance. By fulfilling contractual obligations, non-local owners play an increasing role in the governance of urban-scale infrastructure projects. Global players access local markets through legal regulations. These financial institutions in turn become owners and managers of urban infrastructure assets in various countries - assets that are pooled and managed as part of a portfolio.

It is worth noting that this growth of infrastructure as a private capital asset result from the political decision to eliminate public provision of infrastructure (Torrance 2009). Moreover, as Allen and Pryke (2013) demonstrate through their analysis of the British case of the privatization of Thames Water, the consequence of these decisions and changing relationships between local governments and the capital market reverberate not only in the lives of citizens, but also place them as key players in the constant extraction of profit characteristic of this market system.

That said, Guironnet and Halbert (2014) stress that, the conversion of the built environment into financial assets is aimed at financial capital investors, who seek to diversify their investment portfolio according to risk diversification strategies. The supply of these products, once concentrated in 'developed' countries, has recently grown in 'developing' countries. But in general, what are the characteristics of the built environment that attract these equity investors? As mentioned earlier in this text, regulators, (re)intermediaries, and investors are considered key actors that interconnect during the process of financialization of the built environment. Who are the (re)intermediaries and investors, and what is their role in converting the built environment into financial assets? Some works approaching these topics will be summarized presented next.

1.2.1.3 KEY ACTORS OF FINANCIAL CAPITAL PROPERTY MARKETS

As previously mentioned, capital investors are often the ultimate buyers of the developed real estate products. These products, in turn, are not marketed in the traditional real estate product form, but rather in the form of financial capital securities, credits and other forms of representation of the built environment (as more or less fixed capital) on the financial market (Corpataux and Crevoisier 2014; Guironnet and Halbert 2014).

Due to this new end-customer profile, property developers have also adapted over time and have come to have a relationship of dependence on the financial market. With this, the financial market, which has a paradoxical behavior in itself, came to represent an important support for the growth strategies of these companies. This has made the relationship between the investor as the end customer and the property developer as the producer of the real capital even more complex (Guironnet and Halbert 2014).

In this relationship, investors and financial actors seek transparency so that they can compare different asset classes, as well as access return and risk estimates. In other words, they need transparency in information so that they can make such comparisons and reallocate capital according to the best profit opportunities, a transparency that can be achieved through public market information.

However, close bilateral relationships, or even private relationships, mean that part of the exchange of this information is not public. Because not all information is available to all, this process becomes paradoxical, concomitantly opaque and challenging in terms of regulation[17].

Thus, because of the complexity of this information and the process of accessing it, there is a demotivation on the part of investors to know the objects of their investments in depth - including investments in products that relate to the urban built environment (Corpataux and Crevoisier 2014).

Exercising the role of translators of the needs of these stakeholder groups - financial capital investors, regulators, and property developers, (re)intermediary actors have emerged in the private sector and are represented by property consulting firms, specialized professionals, and asset management firms. The (re)intermediaries make the connection between the financial industry and urban regulators, taking on the role of facilitators/formatters of financial market information and strategies for anchoring capital in the urban built environment (Feindt 2010; Guironnet and Halbert 2014).

According to Guironnet and Halbert (2014) and Byrne (2016a, 2016b), (re)intermediaries contribute to the 'market making' process by defining cognitive categories and pooling market data, which are disseminated among key stakeholders. In other words, by enabling

[17] For a legal overview of the challenges of financial and asset management market regulation, see Dickson (2014).

the liquidity of the built environment, such actors continue and extend the extraction of value from urban space, supporting the global financial sector to rely on the built environment to anchor its capital.

According to Guironnet and Halbert (2014), the information produced by these firms - e.g., data, scenarios, economic development, and property market forecasts - are widely used by key actors (including the state). They are used in the development and implementation of UDPs, strategic planning solutions, real estate investment, and the implementation of urban policies.

However, according to the authors, in the case of UDPs, the complex articulations and management of tensions between the key actors involved do not by themselves guarantee the successful implementation of such projects. Moreover, by intensifying the linking circuits between the local property market and the global financial capital market, (re)intermediary actors reinforce the process of financialization of the built environment.

However, as highlighted by Corpataux and Crevoisier (2014), Guironnet and Halbert (2014) and Byrne (2016a, 2016b), these actors, their interconnections, mechanisms, instruments, and strategies adopted during the process also need clarification.

1.2.1.4 URBAN DEVELOPMENT PROJECTS

According to Guironnet and Halbert (2014), there are several definitions of the concept of large-scale Urban Development Projects (UDPs), which are sometimes also presented as Megaprojects - e.g., objects such as large-scale complexes and/or real estate (see e.g., in Orueta and Fainstein 2008; Lehrer and Laidley 2008). But the definitions and debates about UDPs and MPs will not be fully covered in this thesis since they are not the main focus of this work.

As Guironnet and Halbert (2014) stress, not all MPs - such as transport infrastructure development - can be considered synonymous with UDPs. This is because although UDPs depend on infrastructure projects, they do not necessarily include them. Moreover, over the past few decades there has been not only a conceptual development of this type of project, but also a development of its complexity. As the authors point out, the urban renovations of the 1950s to 1970s are considered the 'first generation' of UDPs, followed by a new generation starting in the 1980s.

According to Lehrer and Laidley (2008, 788), the term 'Megaproject' is commonly used to describe "(...) large-scale capital investments focused on a single purpose, particularly in the case of infrastructure projects, such as transportation networks and power plants, that have historically been undertaken under public goods provisions. (...)".

When comparing the evolution of MPs, (see Table 1) the authors state that such projects became relevant with industrialization, not only because they are large-scale capital investments, but also as an ideology. In North America, for example, they appeared first in the form of urban beautification movements, and later as urban renewal policies.

Table 1 - Old and new megaprojects (Lehrer and Laidley 2008, 799)

	Former Megaprojects	New Megaprojects
Dominant model in	1930s-1980s	1980s - today
Initiated by	State.	State and Private Sector.
Costs	Large $$$.	Large $$$.
Financed by	State.	public-private partnerships / state investment facilitates private sector investment.
Focus	Unitary - infrastructures such as transportation, energy, water.	Flexibility and diversity - many uses, many types of construction.
Ideology	'Progress'.	'Competitive City'; 'Neoliberal Urbanism
Physical appearance	Monolithic singular structures extended via networks, connectivity.	Complexs/districts.
Public benefits	Democratization of public goods (water, electricity, roads, etc.).	The emergence of democratization of public space through large-scale improvements designed primarily to catalyze, and thus ensure, a return on private investment.
Resistance	High	Low.
Criticisms	Megalomania, cost overrun, environmental impact, social impact.	Relatively absent[18].

Lehrer and Laidley (2008, 788) state that this first generation of MPs often relied on "(...) the ideal of democratizing society and distributing a 'fair share' of their benefits, such as electricity, job security or housing. As such, they stand in the tradition of modernity, being

[18] According to Lehrer and Laidley (2008) criticism is relatively absent, however, some academic debates regarding this type of projects present divergent perspectives (some of them will be presented later in this text). Some authors denounce such projects and development policies for assuming Neoliberal logics and fostering speculation by the real estate market (see Swyngedouw et al. 2002; Hall 2006; Orueta and Fainstein 2008); and for triggering processes of financialization of the built environment and land use policies (see Guironnet and Halbert 2014, 2015a, 2015b; Savini and Aalbers 2015).

deeply inculcated in prevailing ideologies of societal progress and improvement." However, starting in the 1960s (a period when Keynesian policies were undergoing a strong contestation), MPs became a symbol of a destructive approach to development, due to the impacts that such projects exerted on communities and the environment.

Also, according to these authors, it was from the late 1980s onwards that works in the specific academic literature on MPs expanded their concept, adding the variety of large-scale mixed-use developments. Early work on this new perspective, such as that of Home (1990, 119), referred to these spaces as "(...) huge private sector commercial development incorporating all types of land use, usually associated with a central business district. (...)".

According to Olds (1995), this new generation of projects consisted of vast mixed-use complexes, structured by varied financing techniques, and the combination of public and private sector developers. Moreover, the massive transformation of urban space through these projects takes place both in the form of built space and through changes in land use. As Lehrer and Laidley (2008) point out, these projects consequently also modify social practices in these urban areas.

Another relevant point of difference between the MPs of the 1950s to 1970s and the new generation of projects from the 1980s onwards is that the state is no longer the only actor in the lead, as mentioned by Salet (2008) and Lehrer and Laidley (2008). Moreover, often UDPs or MPs are associated with 'mega-events' (e.g., Moulaert et al.2003; Vanwynsberghe, Surborg, and Wyly 2013; Raco 2014), for example the Barcelona 1992, London 2012, and Rio 2016 Olympics, or the European Capital of Culture event of Marseille 2013. However, as Guironnet and Halbert (2014) point out, although mega-events are usually based on UDPs, these are not necessarily a condition for the implementation of these development projects.

Regarding the analysis of debates on '(re)urban production' processes and their outcomes built through UDPs, Guironnet and Halbert (2014, 6) argue that such projects can be characterized by: "(...) (i) complex uses, within the same large objects (e.g., megacomplexes) or neighborhoods (e.g., mixed-use master plan); (ii) a shift in the fate of land use-rights and markets; (iii) various funding streams, usually both public and private; (iv) and the rescheduling of the state concomitant with the emergence of new strategic urban actors (e.g., urban governments, developers, consultants, citizens, etc.). (...) ".

Moreover, according to these same authors, UDPs involve a continuity of situations that derived from the integrated projects of the 1990s (Verpraet 1991; Menez 2006) - which

were complex urban objects, occupying the extension of large lots or blocks, such as stadiums, commercial and entertainment complexes, etc. Over time, this concept transmuted to large objects such as real estate complexes (Lorrain 2002; Theurillat and Crevoisier 2014), and large-scale urban (re)development projects implemented in global and regional metropolises - occupying several blocks, 'macro lots', neighborhoods, or a continuous zone being (re)developed through a comprehensive plan, with buildings such as business centers, mixed-use neighborhoods, etc. (see Table 2).

Table 2 - Typology of urban development objects, including UDPs (Guironnet and Halbert 2014a, 6)

Object	Unit	Characteristics	Examples
Operation	Plot of land.	Real estate.	Office tower, social/municipal housing, etc.
Integrated project (*)	Large land area or block.	Complex object (size, business structuring, functions).	Stadium, retail and entertainment complexes, malls, etc.
Urban project (*)	Multiple blocks or large-scale lot (macro lot), neighborhood, contiguous revitalization area.	Comprehensive redevelopment plan.	Business center, new mixed-use neighborhood, etc.

(*) Denotes what is considered an Urban Development Project according to the authors' definition

SOME ASPECTS FROM A GOVERNANCE PERSPECTIVE

As noted above, while there has been a wide and varied range of contributions regarding the reshaping of the urban fabric through UDPs in recent decades, some theoretical controversies can be noted, as such contributions result from interpretations built on divergent theoretical bases (Guironnet and Halbert 2014a).

Some of these contributions, based on neo-Marxist theories (Moulaert et al.2003; see also Savini and Aalbers 2015), adopt a critical perspective looking at the extent and effects of neoliberalization on the restructuring of urban planning policies and practices for city building. According to this critical line, the restructuring of cities via UDPs tends to result in increasing socio-spatial differentiation. Contributions based on neoweberian theories, on the other hand[19] (Pinson 2009) counter-argue that these processes are not only reduced to

[19] According to Lynn (2008), the term 'neoweberian' has been used since the 1970s in the scientific literature from the fields of public administration, sociology, and political science. The term is based on Weberian theory and draws on the comparative methodologies of analysis created by Max Weber. Neoweberian analysis is often used in the study of organizations, with emphasis on the "machinery of government," power relations in

the effects of capitalist transformations, but that political relations are an essential factor for understanding regulatory policies such as those of UDPs.

Guironnet and Halbert (2014a, 9) stress that UDPs are often considered by this literature as "(...) Emblematic illustrations of the recent restructuring in policy and practice planning (...)". According to the authors, this 'recent restructuring' refers to two main shifts: from comprehensive planning[20] to strategic projects, and to a transformation from vertical hierarchies of power to more horizontal and collaborative practices. As the authors point out, these movements from project to plan are indicators of a larger shift in urban politics and democracy, summarized by Le Galès (1995) as a movement from government to governance.

In the early 2000s, contributions of comparative perspectives among major UDPs emerged (see Moulaert et al.2003; Salet and Gualini 2009; Pinson 2009; Couch et al. 2011). These studies have highlighted the multiplication of key actors (such as citizens and private companies, including real estate developers) in urban development processes. However, Guironnet and Halbert (2014, 9) stress that:

> *"(...) some planners argue that despite the ideological emphasis on public-private partnerships in strategic planning discourses, private sector involvement has often been problematic (...), while coordination with other public actors remains an equally important issue (...)."*

As is pointed out by the aforementioned contributions, policy and economic elites in renewal often make use of UDPs to establish their power through governance networks (Guironnet and Halbert 2014).

Halbert and Attuyer (2016) point out that, although researchers on the topic draw attention to financial circuits incidentally, they can be noticed in most accounts of 'city-making' under the neoliberal regime between the 1990s and 2000s. In this scenario in which welfare

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administrative or instrumental rationality systems. For more details on definitions of Neo-Weberian theory and theoretical classifications, see Lynn (2008)

[20] Although it is not the focus of this thesis to discuss the debates surrounding comprehensive planning, some of its characteristics are highlighted here according to Innes (1996): (i) it is an extensive physical plan for a city; (ii) it involves the city geographically; (iii) it refers to every urban use that makes the city function as a physical entity and is related to its physical form; (iv) it is a policy statement rather than a particular program of actions; (v) and it has a guiding role for the city council regarding future actions. The author further states that this planning model can be sumarized as a package of policies designed to provide responses to conditions in a timely manner that work together with the city as a whole. And in this scenario, the responsible city officials evaluate this package, according to their own methods.

provision policies gave way to entrepreneurial policies. Such studies have as their focus on the evolution of the logics of public interventions and the effects resulting from the way public actors operate (see Harvey 1989; Moulaert et al.2003; Tasan-Kok and Baeten 2011).

However, according to Halbert and Attuyer (2016), both the importance of private investments and the reconfiguration of public spending are recognized by many contributors as a contextual factor. However, Savini and Aalbers (2015) classify these changes as a process of decontextualization of land capital and urban planning, and postulate that contemporary urban development is characterized by: (i) the clustering of investments; (ii) the choice of their location, which tends to meet market logics (rather than local needs); and (iii) having an instrumental approach to planning. According to authors Savini and Aalbers (2015, 1), these trends are expressions of "(...) a change in the development process, characterized by the increasing distance between land use planning processes at the local level and the logics of financial investors located at other scales. (...)".

As Halbert and Attuyer (2016) emphasize, issues concerning private investors and international finance capital remain in the background of analysis. According to the authors, there is a gap in the design and production of evidence on how private investors and financiers, collectively or individually, shape or adjust to this new context and the role played by actors acting at the interface between public and private entities. Authors Halbert and Attuyer (2016, 1348) emphasize that: "(...) It is therefore important to go beyond simplistic analytical distinctions, such as 'public subsidies' versus 'private investments' and examine financial circuits as relevant factors in explaining urban dynamics. (...)". In addition, Theurillat and Crevoisier (2013) and Savini and Aalbers (2015) emphasize that the way these processes are organized and operate remains unexplored, which is necessary to build a greater body of knowledge on the subject.

That said, from a general perspective, what do academic contributions say about the financialization of the built environment in UDPs? What are the main aspects that can be identified in the interpretations of this literature on the financialization of the built environment? How do these debates develop, how and why are they related to UDPs? These are some of the questions that will be answered in the next section. First the concept of financialization of the built environment and some of the influences of this process identified on land use policies will be addressed.

For the exposition of the debates on the financialization of the built environment and urban policies the proposed structure that divides the debates into three main groups was

adopted: (i) the evolution of public financing for urban development; (ii) the development and innovation in mortgage distribution and securitization; (iii) the restructuring of real estate markets through the acquisition of large tracts of built environment by financial capital investors - either through the stock exchange or unlisted circuits.

STRATEGIC DEBATES

As exposed in the previous items, there is an extensive rosary of connections between UDPs, financial instruments, and the financialization of the built environment and urban policies. In this respect, Guironnet and Halbert (2014) argue, UDPs are positioned as a node between the property market and land use planning. For Guironnet and Halbert (2014) and Van Criekingen (2010), most case studies are still superficial regarding the analysis of the processes between land use planning and the property market. The authors emphasize that the mechanisms aimed at urban development and incited by the property market remain insufficiently analyzed.

As Van Criekingen (2010) points out, and presented throughout this text, in the 1960s public investments for UDPs fell on the state budget. Already in the 1990s these mechanisms changed considerably. The way of financing these projects became structured based on the extraction or recovery of value surplusses from the land by public authorities to finance the public authority itself. Comenting the engineering of the urban (re)development process, Van Criekingen (2010) highlights a shift from public representatives' responsibility to a a structural dependence towards real estate markets and actors.

Gotham (2016) points out that in general, the specific literature on financialization processes has focused its analysis on the importance of credit, securitization, and entrepreneurship policies to attract investors to the financial capital market. However, according to the author, there is a disagreement between the arguments present in these studies. This is due to the different theoretical bases adopted by the authors, their empirical indicators, and their different views on financialization. Thus, as seen throughout this thesis, the discourses present in this segment of literature are divided.

On the one hand, one group of authors (Rolnik 2015; Savini and Aalbers 2015) direct their argumentation to demonstrate how the forces of the neoliberal capitalist system override the needs of the local scale and decontextualize both urban planning and territory. On the other hand, a different group of authors (Weber 2010; Theurillat and Crevoisier 2013;

Theurillat et al. 2016) emphasize the relevance of the contextual aspects of each municipality, even if it is immersed in or being transformed by a process of financialization. Thus, even if the urban environment, planning instruments, and institutions involved in planning are modified as a function of financialization processes, these changes do not necessarily occur in the same way or with the same intensity.

According to Weber (2010), the degree of financial market penetration in urban policy development is reflected in: (i) the growth of municipal debts; (ii) the privatization and securitization of public assets; (iii) the size and scope of financial services available to municipal governments; (iv) and investor-oriented decision-making on important municipal spending.

As Guironnet and Halbert (2014a) argue, in the case of UDPs, financialization processes can be identified in the analysis of investor strategies and demands, among the main key actors for project design and development. The authors emphasize that (2014, 1), contemporary UDPs are "(...) an attempt to transform land use by leveraging resources (including capital) transacted on real estate markets. (...).". In addition, as Savini and Aalbers (2015, 14) emphasize, "(...) cities tend to rely more on strong regulation to create binding conditions for mobile capital. (...) ".

According to Savini and Aalbers (2015), UDPs follow strategies that tend towards reallocation of investments, clustering, and instrumental land use planning. As they state, local government is being shaped and constrained by financial capital, without being able to shape the financial market. However, Weber (2010) argues that local governments may actually be both, shaping and being shaped by financial markets.

As Weber (2010) emphasizes, on some occasions this dependence of the local sphere on the global one has even been achieved by the government's own proactivity to access credit through new and sophisticated financing instruments, such as, for example, Tax Increment Financing (TIF). In other words, in the case of TIF, with the help of financial brokers and capital market advisors, local governments have created a means to finance the development of certain urban areas by securitizing future tax revenues (see Weber 2002, 2010; Pacewicz 2013; Strickland 2013).

The city of Chicago made use of the TIF to leverage capital to fund its development project. In her analysis, Weber (2010) demonstrates how the city took advantage of the market to its benefit. The author argues that local governments should make use of the financial

market to drive their own agenda. Savini and Aalbers (2015), however, counter argue that the case of Chicago may only be an exception. And they ponder that many local governments may not be prepared to take benefits from financial markets.

Weber (2010) points out that cities, in building mechanisms to connect local governments, global financial circuits, and local property markets, adopt different positions. According to the author, some cities, with entrepreneurial characteristics, have been able to generate wealth through space more independently of the market. Others make use of the market to leverage capital through loans, thus becoming even more dependent on the market. According to the author, in the latter the processes of financialization are more evident. Theurillat et al. (2016) expands Weber's arguments and pose that there is a difference between the positions adopted by cities. The authors underline three different outcomes in the processes of financialization of the built environment can be detected: the 'financialized city', the 'entrepreneurial city', and 'negotiated city', as they illustrate in Figure 1.

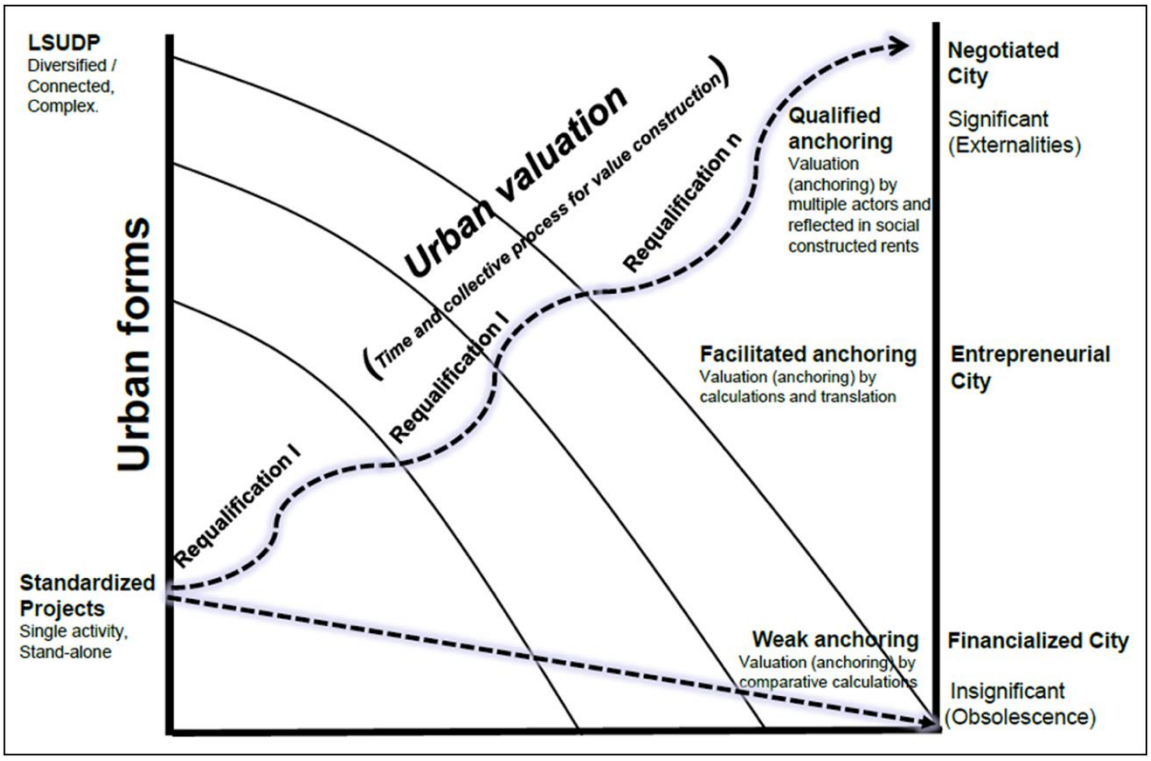


Figure 1 - Three types of capital anchoring and urban valuation (Theurillat Vera-Buchel, and Crevoisier 2016, 4)

As they argue, the ways in which financial capital is linked to the city and transformed into real capital, and vice versa, can vary according to context. Some of these contexts will allow the financial market view to be absorbed into the city without any adaptation. As the figure shows, in these contexts, the calculations for capital anchoring are basically comparative. The value of the city corresponds to the negotiation of financial market operators and their

criteria, with a weak anchoring of capital in the city. This produces what the authors call a 'financialized city'.

However, other contexts can achieve a more tangible and grounded vision of the city, less tied to financial market operators, which requires greater interaction between intermediary actors and their partners. Thus, 'urban value' at the same time is translated into real profits and poured into meeting tangible urban objectives and mobilizes market finance. This is what the authors refer to as the 'entrepreneurial city'.

Finally, the authors classify contexts in which cities can promote debate among actors, the creation of interdependencies, and the birth of multiple externalities, particularly regarding the development of UDPs. The authors define these cities as 'the negotiated city', and emphasize that "(...) urban value depends much more directly, and more exclusively, on more or less complementary interactions between local and non-local actors, users, consumers, public actors, tourists, etc." (Theurillat et al. 2016, 2). In this analysis, the authors assume that different contexts and variables produce different conditions for dealing with financialization processes. These variables consist of: (i) initial situation; (ii) calculations and normatives; (iii) objectives; (iv) actors involved; (v) urban characteristics; (vi) nature of space; (vii) temporality; (viii) nature of urban value; (ix) and management of obsolescence processes (see Figure 1).

1.2.2 DIMENSIONS OF URBAN FINANCIALIZATION PROCESSES

1.2.2.1 PUBLIC FUNDING ALLOCATED TO URBAN DEVELOPMENT

As mentioned earlier in this thesis, public finance has undergone significant transformations in recent decades, both in developed and developing economies. With a growing population, cities around the world have faced difficulties in providing basic services and infrastructure to meet the demands and needs of their population (Ingram and Hong 2009; Smolka 2012).

In this scenario of globalization of economies, cities, countries, and all local entities have, as a challenge and as an opportunity, the power to create their own economic destinies, regardless of whether it is a poor or a richer place. However, the action of external forces - such as nature, demographic characteristics, technologies, and industries - are such that no local economy is guaranteed to achieve stability or security. However, in the contemporary setting, local economic development is confronted by its own trends of increasing inequality

and the very increasingly transient characteristics of local economies in the face of the forces of globalization (Blakely and Leigh 2013; United Nations 2016).

With this, urban policies, their instruments, and the way they are constructed, managed, and articulated have been rapidly reshaping, especially in the last twenty years, in an attempt to respond to these challenges with the aim of promoting urban development (United Nations 2016). As set out in sections 1.1 and 1.2, local governments have developed new negotiation and mediation capacities by effecting a reorganization of their regulatory and institutional structures (Savini and Aalbers 2015; Halbert and Attuyer 2016). In addition, drawing on diversified funding sources has become indispensable (Jerphanion et al. 2014). As Hackworth (2002, 722) points out:

> *" By regulating the connection that municipalities have with the wider bond market, rating agencies affect more than just the immediate ability to access credit. They influence local autonomy by controlling the interaction that cities have with markets."*

As the real estate segment plays an important role in the economy, its instruments and forms of financing started to be more deeply analyzed, both by public and private institutions and by various social science disciplines, after the recent financial crises of 2008-09 (Aalbers 2015a; Squires et al. 2016). Since then, according to Adair et al. (2011), government institutions, regulators, and the real estate industry have mostly focused on understanding: (i) the role of lending institutions; (ii) the combinations of financial instruments; (iii) the issues surrounding risk versus return; (iv) the requirements for achieving this return; (v) and the nature of public-private partnership structures in urban development projects.

According to Guironnet and Halbert (2014a), in this context of shaping mechanisms and structures for establishing connections between financial markets, property, and land use, contemporary UDPs receive prominence in governance, policy, and urban economics debates. According to authors Guironnet and Halbert (2014a, 1), these projects are taken as "(...) an attempt to transform land use by leveraging resources (including capital) transacted in real estate markets. (...)".

As a response to trends in global investment dynamics - dynamics characterized by the decontextualization of financial capital and mobile/liquid assets, as well as the emergence of new spaces of governance (Gotham 2006; Pike and Pollard 2010; French, Leyshon, and Wainwright 2011; Aalbers 2012), - economic and urban development policies are often designed to anchor mobile or liquid financial capital in cities (Turok 1992; Taşan-Kok 2007;

Weber 2010; Savini and Aalbers 2015). This urban targeting of finance has transformed urban policy and structured its functions, which is framed by some authors by the term 'financialization of urban policy' (Weber 2010; Pacewicz 2013) or 'financialization of land use planning' (Savini and Aalbers 2015).

According to Guironnet and Halbert (2014a), since the 1970s, as the availability of financial resources from the central state decreased, municipal budgets have increasingly relied on capital markets, with special emphasis in the case of North American municipalities (Kantor and Savitch 1993; Hackworth 2002). According to Hackworth (2002), this scarcity of financial resources was exactly what drove local governments to devise new ways of raising funds. According to the author, from the 1980s onward, the budgetary capacity of some municipalities became increasingly dependent on the dynamics of global investments. Moreover, in this same decade, Peterson (1981) pointed out that 'development policies' left little room for the implementation of 'distributive policies' that could provide social services and collective goods to meet the needs of the working and low-income class.

As Weber (2010) emphasizes, such dependence on governments did not only develop through traditional means of municipal indebtedness for the provision of standard public services. In the late 1990s, a wave of financial capital emerged in search of investment opportunities that spilled over into municipal debt instruments. However, not all cities or instruments were equally successful in attracting this capital. These investment streams went to local governments that readily offered to convert capital from their public assets into income streams with minimal default risks through new financial instruments.

In this context and over these decades, a variety of financial instruments aimed at property development/or the built environment have emerged - such as real estate investment trusts, mortgage-backed securities, adjustable-rate mortgages, tax-increment financing, collateralized mortgage obligations, collateralized debt obligations, and Real Estate Mortgage Investment Conduits. According to Gotham (2016), these instruments have not only transformed the financial products market, but have also increased the dependence of local political institutions on securitized equity investment financial markets.

While a major challenge for public authorities is the limited budget to finance local public assets (see Ingram and Hong 2009), on the other hand, often financing the built environment represents a higher risk curve for the private investor, both domestic and international. With this, the challenges of attracting investment and financing urban development become even more significant (Squires et al. 2016). Such a situation is

worsened in the present context of intense capital movement (Hackworth 2002). And it is in this context that the appetite for financial innovation to structure urban development projects has been driven, formulating innovative financing mechanisms for the development of large-scale projects (Bartke 2013; Squires et al. 2016).

According to Squires et al. (2016, 56), based on the analysis of European and some North American cases, such innovative financing mechanisms aimed at the development of large-scale projects can be defined as:

> *"(...) those measures that provide financial support to address one or more policy objectives through the use of loans, guarantees, equity or quasi-equity investment, or other risk-taking tools-which may be combined with grants and involve risk sharing with financial institutions to increase investment in large infrastructure projects."*

However, as Squires et al. (2016) warn, innovative financing instruments should not be seen as an alternative to traditional financing instruments, but rather as complementary instruments. According to Carter (2006) and Squires et al. (2016), to some extent, innovative financing is directed at sharing risks, and possibly providing greater flexibility. Squires et al. (2016) argue that innovative financing for the development of large-scale projects can be done through the following mechanisms:

- *Developer contributions and planning gains:* these contributions can be levied through development charges or infrastructure charges (see Lord 2009).
- *Business rate supplements:* taxes levied on businesses in addition to national business rates. Funds raised are retained and used locally for development projects identified by the local government in conjunction with the private sector (see Harrison and Marshall 2007).
- *Land Value Capture:* mobilization and part of the increment in land value achieved by the collective effort represented by the public authority, which are converted into public revenue through the collection of fees, taxes, and other fiscal means (see Weber 2010; Squires and Lord 2012; Squires 2012; Smolka 2013) – see 1.2.2.3 for more detail.
- *Bonds:* these can be linked to land value capture instruments, or others. They are used in real estate development aiming to attract private capital market investors (see Squires and Lord 2012; Squires 2012) - the application of these bonds linked to a land value capture instrument will also be presented along this document (see 3.1.3.1).
- *Some tax incentives:* particularly, those that incite financial combinations for real estate development, such as those that are spatially targeted like offering incentives to

enterprise zones to support startups or the expansion of pre-existing businesses (see Squires and Hall 2013; Squires 2013; Birch and Squires 2014).

- *Partnership collaborations:* these are partnerships between the public and private sectors that primarily aim to provide greater 'value for money'. At the same time, they encourage innovation and optimize risk transfer. Partnership collaborations can take the form of public-private partnership agreements, Private Finance Initiative, joint ventures and concessions, outsourcing, and equity sales (see Adair et al. 2011; Liu and Wilkinson 2014; Krabben and Heurkens 2014).

As Squires et al. (2016) highlight, among these development projects are the mechanisms of land value capture, bonds and shares, and partnership collaborations (in this case public-private partnerships). As the authors emphasize, the use of land value capture instruments to finance public goods through urban rent has a long tradition in public finance. Such instruments are increasingly being adapted to the core of urban development project structures (see Starrett 1981; Roukouni and Medda 2012).

As for bonds and shares, Squires et al. (2016) state that these have become relevant in financing infrastructure projects and real estate development - among them are Tax Increment Financing and Accelerated Development Zones instruments. These bonds are offered to institutional investors such as pension funds with limited risk and stable yields. The amounts raised by the government through these mechanisms can fill financial gaps between some municipal borrowing and equity.

Regarding public-private partnerships, the authors emphasize that these have been the most frequently used form in countries that have considerable private sector initiative and have a balance of obligations owed (liabilities) in the long term with the need to adapt to long-term goods and rights (assets).

Moreover, several authors (Weber 2010; Smolka 2013; Maleronka 2015; Squires et al. 2016) point to different successful cases in the application of innovative financing instruments (in Europe, the US, and Latin America), with emphasis on the instruments of recapture of land capital surplusses and bonds and shares. Cases in which, in different contexts, the application of these instruments in UDPs have been able to produce important financial sums for the respective municipalities. Squires et al. (2016) also point out that in UDPs (mainly in Europe and the US), there is an increasing use of innovative combinations of financial instruments. These are structured to attract and capture domestic and

international funding sources through consortia and partnerships; and furthermore, they draw on multiple sources of bank financing.

Focusing on land value capture instruments, Smolka (2013) makes a comparative study between the North American and Latin American regions. According to the author, in Latin America, the budgetary challenges experienced by most municipalities is even greater than in other regions. Urbanization is strongly associated with pressure for the provision of urbanized land. This provision, in turn, results in changes in land value; a value, however, that is unevenly distributed among stakeholders. As the author argues, conventional fiscal policies and instruments largely neglect the socialization of charging for the costs of providing urban infrastructure and services, and the unequal way in which the benefits from these improvements are absorbed by the private sector. However, the adoption of land value capture policies constitutes a powerful financing mechanism to implement a variety of tools that can be adapted to local needs.

But what do the instruments of land value capture consist of? The following subsection will briefly present the main concepts, types and uses of these instruments, and some examples of application framed within the debates of financialization of the built environment and financialization of urban policy.

1.2.2.2 THE INNOVATION IN DISTRIBUTION AND SECURITIZATION OF MORTGAGES

According to Weber (2002), the connections between the real estate market and the financial capital market originated with the creation of secondary markets in the United States. To Theurillat and Crevoisier (2014), in a first moment, in the 1960s, these connections emerged with the (i) securitization of mortgage loans and the creation of semi-public institutions, and (ii) with the securitization of real estate and the emergence of a new type of financial institution known as Real Estate Investment Trusts (REITs). In a second moment, during the 1980s, several of these institutions were created in several countries in Europe and Asia, and this expansion resulted in the modernization and creation of new real estate funds. As a result, increasing demands from financial institutions arose for investments in the built environment. Thus, as van Loon and Aalbers (2017, 224) stress:

> *"Since the 1990s, institutional investors have set in motion the securitization of real estate ownership via the rise of Real Estate Investment Trusts, transforming sizeable stacks of global investment property into listed and non-listed shares (...)."*

As a result of the stock market crisis in 2000-2001, which affected technology companies in the United States with shares in the stock market, the connections between the financial market and the built environment were further strengthened (Theurillat and Crevoisier 2013). Later, the Global Financial Crisis of 2008-2009 confirmed that higher financial regimes are highly crisis-prone (Becker et al. 2010). Moreover, these events challenged core assumptions about the role of markets, public policy, and planning in the provision of economic growth and public goods (Feindt 2010).

As already exposed throughout this text, financialization is evident in public policies from the international to the sub-local scale (Weber 2010). In this context, local governments in recent decades have developed a set of instruments to involve the private sector in the provision of public services and the development of public infrastructure (Birch and Siemiatycki 2016). This process of incorporating market logics into institutional, political and instrumental structures is a representation of what some authors (Harvey 2014a, 2014b; Rolnik 2015) have called the 'era of finance', in which the transformation of space into fictitious capital has the function of extracting value and constantly continuing the unlimited production of capital.

According to Immergluck (2011), the Subprime crisis that began in the US in 2007 - which the author calls the 'second' Subprime crisis[21] – was the result of regulatory changes and adjustments over twenty-five years, promoting changes in the mortgage market. This market, once limited by risk, became a market in search of risk. As mentioned above, the change that began in the early 1980s gained momentum in the 1990s and continued to grow rapidly until the mid-2000s. This change in market structure and regulation also resulted in the development of a fragile housing finance system.

As some authors emphasize (Immergluck 2011a; Aalbers 2012; Harvey 2014b; Harvey and Low 2014; Rolnik 2015; Sanfelici and Halbert 2016), systemic risk was neglected[22] when analyzing the origin of such crises, which involved an exhaustive speculation of securitized mortgage bonds traded in the capital market, a large part of which were derived from housing assets. Thus, as outcome of this intense market trading, financial institutions

[21] The first Subprime crisis occurred in the late 1990s, with severe effects in several small North American neighborhoods, but the crisis reverberated with smaller proportions in the financial markets (Immergluck 2011a).

[22]According to Konings (2016), the political-economic literature defines systemic risk as when risks taken by large institutions come to compromise the financial system at large, as occurred in the 2007-08 crises.

(directly or indirectly related to the trading of these securities), went bankrupt in a cascade effect. This economic shakeout affected not only the financial institutions, but the market as a whole - including real estate and urban production, property developers, intermediary dealers, builders, technicians, and final consumers such as property investors and citizens.

Referring to the reflections of neoliberal logics on the institutional and instrumental structures operating in the urban territory, Rolnik (2015, 26) argues that recent economic crises have consisted in "(...) converting the political economy of housing into a structuring element of a process of transformation of the very nature and form of action of capitalism in its contemporary version. (...)". And in line with Harvey's (2014b) argument, (Rolnik 2015, 26-27) defines this context as the "(...) era of hegemony of finance, fictitious capital and the increasing dominance of rent extraction over productive capital. (...)".

Such financial crises, which have dragged on since 2008 generating shortages of resources and unemployment, also triggered a social crisis accompanied by protests that emerged in several global cities from 2011 onwards[23], against the political structures of parties, banks, corporations, and unions. In this scenario, not only the roles of the state and private institutions were questioned in relation to the development of the global crisis, but also highlighted, the need for more organized political options (Harvey et al. 2012). In any case, these crises revealed the interconnectedness between family mortgages and capital markets. As Halbert and Attuyer (2016) warn, although there is a relative invisibility between these relationships, understanding financial circuits in the design, construction, operation, and ownership of the urban built environment should not have their importance diminished.

Such economic, political, and social crises have put urban development in question. In this context of critique, the following points have been raised as problematic (Hackworth 2002; Savini and Aalbers 2015): (i) the relationships and negotiation processes between large real estate developers and cities; (ii) the financial risk that land development poses to local government; (iv) public risk assumed when carrying out planned projects; and (v) the restriction of municipal budgets for their realization.

[23] As for example the protests experienced in 2011: '*Indignados de la Puerta del Sol*' in Spain, '*Geração à Rasca*' in Portugal, 'Occupy Syntagma square' in Greece, or 'Occupy Wall Street' in the United States.

Moreover, according to Halbert and Attuyer (2016), housing studies have linked the changes in the economic policy of housing, which have occurred in several countries, to a double financial transformation. These changes range from (i) the provision of direct public subsidies directed at housing production that have shifted to a greater reliance on private investment, (ii) to the shift from traditional forms of credit and financing, such as savings and bank loans, to more innovative forms of credit, such as financing through securitized mortgages (Schwartz and Seabrooke 2008), represented by the 'Subprime City' (Aalbers 2012).

But in what other ways have these changes in the financial and property markets converted the built environment into financial assets? What points are highlighted by the debate on the restructuring of the property market as a function of global investment mechanisms? In the next item, some answers to these questions of how the property market has restructured as a function of these new realities presented in the previous items, and what is the role of financial capital investors in this restructuring, will be analyzed. Subsequently, the role of key players in the property market and the capital market will be addressed.

1.2.2.3 LAND VALUE CAPTURE INSTRUMENTS

The inspiration for the concept of land value capture instruments is based on Henry George's (2006) ethical argument of efficiency, equality, and sustainability. In his speech on the flat tax in 1879, George argued that the increase in land value should be attributed to society rather than to the owners. It was based on the principle that the increase in value refers to an effort of the collectivity and not the owner; and since labor must be remunerated [24], it is only fair that this value be returned to the community. According to Smolka and Amborski (2000, 1), the concept of land value capture is defined as:

> *"(...) the process by which all or part of the increase in land value attributable to 'community effort' is recovered by the public sector either through conversion into fiscal revenues, through*

[24] The labor theory of value assumes that economic activity is fundamentally a collective activity. To produce a given good, a quantity of labor is required and, therefore, labor time must be part of the price composition of that good. Thus, labor is seen as the value-creating element (see works by Adam Smith, David Ricardo and Karl Marx). Once well incorporated by classical economists like Ricardo or Marx, the labor theory of value is not as well accepted today, according to Fainstein (2012). However, the concept that the community shoud accrue property profits can be seen in more recent arguments.

taxes, contributions, fees, or other fiscal mechanisms, or more directly, through local improvements for the benefit of the community."

In other words (Smolka 2013, 8), "(...) the recovery of land value capture refers to the return to the community of increments in land value (undue gains or plusvalues) arising from actions unrelated to the owners' direct investments (...)." As shown in Figure 2, land becomes of increased value because of the construction of infrastructure and services, or other actions external to the owner (Smolka 2013; Maldonado 2017).

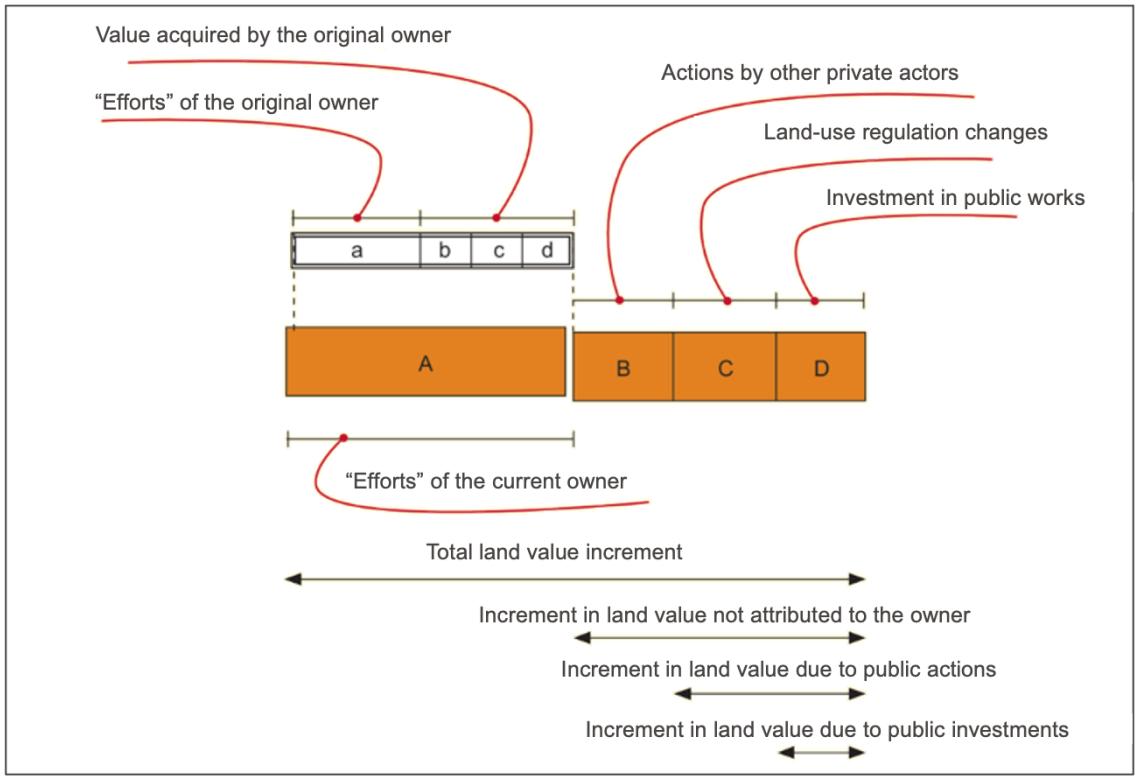


Figure 2 - Components of urban land value (Smolka 2013, 8).

Thus, this added value - the highest price achieved by a piece of land without the owner's effort, work, or investment - is the result of a collective investment, through the payment of fees and taxes, and, therefore, it would be fair that it be returned to the collectivity as a return for their efforts (Smolka 2013; Maldonado 2017).

That is, although a landowner may take certain actions that promote the increase of its value, in general, the increase of land value occurs through the actions of people or institutions other than the landowner. For example, the government can give permission for certain land uses that were not previously allowed in a certain area, change the density of land that is allowed, or even invest in infrastructure in a certain part of the city, and thereby increase the value of the land in that region. The growth of the city can also lead to

an increase in land value. In none of these cases is the increment in land value the result of an action or investment by the landowner; and for society, represented by the public sector, it may be desirable to recover at least part of this increment (Ingram and Hong 2012; Smolka 2013; Rebelo 2017).

Based on these principles, land value capture instruments establish that this unearned increment is paid by the landowner when a change of land use is effected - that is, when parceling out or deciding to build on the land. Whenever a change of land use occurs, the owner pays the collectivity the surplus value of the land (Doebele 2002; Smolka 2013).

As Smolka and Amborski (2000) emphasize, land value capture instrument policies encompass three broad categories of instruments: (i) taxes; (ii) fees; (iii) and regulatory instruments. Taxes and fees are fiscal instruments and require payment by the owner as a form of value capture by the government. In the case of regulatory instruments, the results will lead to some form of public benefit that is financed by the owner, through the increment in the value of his land. This can be done through some form of landowner contribution 'in kind' to the benefit of the public sector[25].

Regarding the definition of the classification of value capture policies, Alterman (2012) argues that there is little clarity in the academic literature, leaving doubt as to whether they should be based on their purpose their outcome. Thus, the author proposes classification into three distinct categories of instruments:

> (i) macro: these are not stand-alone instruments; they are embedded in a broader land policy regime and are motivated by ideological reasons[26].
>
> (ii) direct: they seek to capture all or part of the increase in the value of real property, by explicitly basing themselves on the argument that it is a legal and moral obligation for owners to return the wealth derived from community effort to the public coffers.
>
> (iii) indirect: they do not seek to capture the value added per se because it is not derived from the effort of the owner like the previous two classes, but rather to generate revenues for specific public services; moreover, they are generally used at

[25] For a deeper understanding of these categories, it is suggested to consult Smolka and Amborski (2000).

[26] Unlike Alterman (2012), Smolka and Amborski (2000) consider these macro policies as instruments for recapturing land value surplusses as can be seen in Table 3.

the local government level and have more pragmatic and less ideological objectives than the other two classes.

Based on these classifications, by Alterman (2012) and Smolka (2014), some examples of land value capture instruments are shown in Table 3.

Table 3 - Land value capture instruments (own authorship, based on Alterman 2012 and Smolka 2013)

Land value capture instruments: Types and examples		
Macro (*)	**Direct**	**Indirect**
Nationalization of the whole land	Betterment Contribution	Property Tax
Land lease (public) (**)	Land lease (public) (**)	Special Districts – Business Improvement Districts
	Land readjustment (**)	Expropriations
Land bank (**)	Urban property tax - including progressive	Exactions
Land readjustment (**)	Participation in Plusvalias	Tax Increment Financing - TIF
	Impact and development charges and fees	Interlinked operations
	Fees for additional building rights, Outorga Onerosa do Direito de construir, PLD (Plafond legal de densité)	Transfer of development rights
	Urban operation, ZACs, etc.	Land bank (**) – e.g., territorial reserve
	Certificados de Potencial Adicional de Construção - CEPAC	Development priority statement
		Right of preemption
		Annoucement of the project
		Special licence negotiations

(*) Proposed by Alterman (2012).

(**) Classification divergence between examples from Alterman (2012) and Smolka 2014.

As Rebelo (2017) emphasizes, in the last two decades several authors have addressed the question of the application of these instruments, as well as the impacts of investments and provision of public services, or public use of private land from the perspectives of Europe, North America, and Latin America (see for example Furtado 2001; Huerta 2014; Haughwout 2002; Weber et al.2003; Moreno and López-Bazo 2007; Weber 2010; Walters 2012, 2013; Rebelo 2014; Maleronka 2015). Some of these works raise disparate or controversial points of the use of these instruments.

In a broad comparative overview Smolka and Amborski (2000) report that while the apparent basis and structure of land value capture instrument sets are similar, when applied in different regions (such as North America and Latin America) they have significant differences. In addition, the authors report that there is a more or less favorable environment for their application according to the region.

Fainstein (2012) highlights some controversial features of land value capture instruments. One of them refers to the collection of taxes on unoccupied or underutilized areas, expecting the owner to invest in the property. The objective is to stimulate the use of these areas, and consequently the use of infrastructure, in a more efficient way, thus avoiding the conservation of vacant land by owners who aim for higher sales values. On the other hand, the social function of vacant plots intended for agricultural production or environmental functions may be undermined by excessive taxation.

In addition, encouraging the development or use of a given redeveloped area can lead to the forced displacement of families and local residents present there before the intervention. This phenomenon is known as the 'urban gentrification' process (see Smith 1979, 1987). When land values increase, changes of uses occur and demand for the area grows, it is expected that rents will follow this growth. However, the income of the residents present there before the development does not necessarily follow this growth; consequently, they are forced to look for cheaper places to live. Thus, measures such as protecting the permanence of lower social classes and less profitable trades is one of the great challenges for urban development programs not to reinforce social and economic inequality (Maldonado et al. 2006; Fainstein 2012).

From the perspective of implementing the instrument, Fainstein (2012) emphasizes the complexity and imprecision of its calculation. Since land value varies according to multiple local and contextual factors - be it the functioning of the real estate cycle, the changing perception towards this particular area as a function of investments, the level of investment made in infrastructure and development - there is no clear metric to measure the effects of such factors on land value after a few years of interventions.

In the last decade land value capture instruments have come to be observed from the perspective of financialization (e.g., Weber 2010 and 2015; Ashton et al.2016; Pacewicz 2013; Savini and Aalbers 2015; Muldoon-Smith and Greenhalgh 2015; Peck and Whiteside 2016).

Certificados de Potencial Adicional Construtivo (CEPACs) came into force in Brazil in 2004 in an attempt to provide answers to such calculation complexity mentioned by Fainstein (2012). The instrument was formatted as a financial security and is traded through public auctions on the stock exchange as a way to obtain counterparts from the densification incentives granted in urban legislation (Sandroni 2011; Maleronka and Furtado 2013). However, although in little empirical and theoretical depth, according to Sánchez and Broudehoux (2013) this instrument has been criticized and pointed out (Rolnik 2011) as a form of financialization and speculation of the real estate sector.

Among this set of debates, Tax Increment Financing (TIF) is mentioned with some frequency (Weber 2010 and 2015; Ashton et al.2016; Pacewicz 2013; Savini and Aalbers 2015; Muldoon-Smith and Greenhalgh 2015; Peck and Whiteside 2016) as a controversial instrument prone to financialization processes. As Peck and Whiteside (2016) argue, the instrument has been characterized as the synthesis of 'financialized urban policy' (Weber 2010; Pacewicz 2013) and represents the most prevalent local manifestation of this financialization process.

TIF is an instrument for recovering value surplusses gained from land use, classified by Alterman (2012) and Smolka (2014) as indirect. According to Weber (2010), this instrument is often applied in local economic development projects that (i) consents to the municipality electing a 'degraded' area for redevelopment; (ii) and allows the expected increase in taxes to be securitized in order to cover the expenses necessary for urban redevelopment to take place[27]. Taxpayers, within the perimeters of the intervention area, pay real estate taxes on the value of their property, prior to the creation and entry into force of the intervention. For the life of the intervention, which typically lasts 20 years, all taxes collected on the new values are directed to a fund to cover the expenses of public redevelopment.

As the author states, this policy can be seen as financialized in the following aspects:

> (i) it is a governance mechanism that allows income flow generation from the conversion of fixed assets (property) into financial instruments to be exchanged in the global market.

[27] For more details on the mechanics of the particular instrument, see Weber et al. (2003).

(ii) although the instrument has existed since 1955, the interest in the instrument coincides with the same period the expansion of capital markets and global capital surplus in the late 1990s and 2000s.

(iii) the instrument places local governments, and their powers to control the value of assets underlying these bonds, at the heart of a structure that relates financial combinations surrounded by a variety of risks - risks related to the completion of the projects planned for the area; valuation (estimation) risks; and taxation risks - that can have serious consequences for the municipality should the project fail to materialize.

The chain of capital market relationships has come to play a decisive role, albeit at a distance, in the political economy of urban governance. Devices such as TIF, give prominence to the means by which both developing areas and the very patterns of governance at the local level are driven by credit and financial innovation, becoming the stage for speculation (Peck and Whiteside 2016).

As Savini and Aalbers (2015) argue, the decontextualization of land through the conversion of fixed assets (properties) into financial instruments has important repercussions for public governments. It leads to an instrumental and corporate planning practice focused on attracting investments in specific urban areas. In contexts geared toward real estate development, public authorities seek to coordinate local needs and the perceptions of developers and major investors regarding business opportunities. The concept of value capture can shed light on the challenge faced by local governments in this negotiation process. However, the disconnect between land use decision makers and investors makes the negotiation process more problematic.

The authors emphasize that, in practice, each municipality has its own set of mechanisms, instruments, and techniques to meet the challenge of dealing with budget constraints and capturing and attracting investments. As the authors warn (ibid., 6),

> *"(...) in either case, value recapture practices carry a risk to the public viability of urban development. When investment decisions are detached from local land use processes, cities have a poor understanding of economic calculations and are therefore unable to define what a viable and feasible program might look like. Over-regulation can disengage investors, generate long periods of urban voids, or promote speculative behavior."*

1.2.3 SOME CONSIDERATIONS

In response to the political, economic and technological changes that occurred in the previous decades (presented in section 1.1), a profound restructuring of economies, public and private institutions, states and households has been observed. These derive from the increasing dominance of financial actors, markets, practices, measures and narratives, at various scales. This, according to Aalbers (2015), constitutes the general concept of financialization. Against this backdrop of increasing financialization processes, section 1.2 presented some of the impacts of these issues on policies and instruments aimed at urban development.

According to these discussions, it is in this context, in seeking to provide solutions to issues of budget constraints and provision of urbanized land, public goods and services that municipal governments have developed new capacities. It is the role of municipal governments, as representatives of the population, to identify local needs. They also have the role of developing policies and instruments to respond to the challenges of providing infrastructure, goods, and services to the population.

However, city council representatives have started to seek information to better compose their investment plans and forecasts. As some authors emphasize (Attuyer et al.2012; Guironnet et al. 2015; Guironnet and Halbert 2015a; Savini and Aalbers 2015), local government began to rely on intermediaries between the local and global spheres with the contracting of services provided by the private market. That is, they began to hire proprietary consulting firms to compose their urban development plans and adjust financing instruments. These companies in turn interpret information and demands from asset management companies, which identify the needs of global financial capital investors.

With this, the real estate market, in the form of property developers, has also found itself having to reinvent to survive in the midst of such competition and to meet the frantic demands of the financial sector. The latter, in turn, is constantly changing to find new ways to overcome obstacles in order to produce and accumulate capital.

From the urban point of view, complex and multiple challenges emerge from this relationship. According to this stream of literature, the main arena for these dynamics to manifest themselves are the UDPs. Such current emphasizes that, besides being an instrument of urban policy, UDPs are characterized as cutouts defined in the urban fabric for economic and urban development. Since the real estate sector accounts for an important

portion of the economy, it is also relevant for economic and urban development. And, therefore, for the UDPs themselves.

It is worth noting that the time span for these changes has become increasingly compressed. Therefore, the key actors of the financialization process are in a constant race against time to meet their interests and objectives. It is also a consensus among this literature that, when compared to the time it takes to design and implement urban policies and instruments, financial actors have greater control of information and, therefore, efficiency in response time. Although this data control is quite opaque, even among the financial market players themselves, the information share of the whole is still greater than that of the other actors. Therefore, experts and academics who investigate this issue stress that there is an imbalance of forces among the key players.

As an illustration of these connections, the relationships between the key actors and the context of new dynamics presented during this literature review, seem to form a vicious circle (see Figure 3). Municipal planners rely on financial instruments of policy, which are thought-out by international real estate management consultants while making their calculations to ensure the financial attractivity of real estate assets to capital investors. At the same time, these calculations and market data hold by consuntants is provided to both municipalities - to aid their own calculations that shape their policy instruments - and developers - to guide them to shape their projects in a way that can attend the investors needs. Thus, consultants assume the position of intermediaries between the real estate developers, municipality, and the capital investors. Although these relationships continue to occur in unclear ways, the key players seem to relate to each other in a crazy dance of connections in various directions and scales. Thus, to see the points of convergence among these actors seems a difficult task. It becomes even more difficult to know if these points are in fact designed to meet local and citizens' needs.

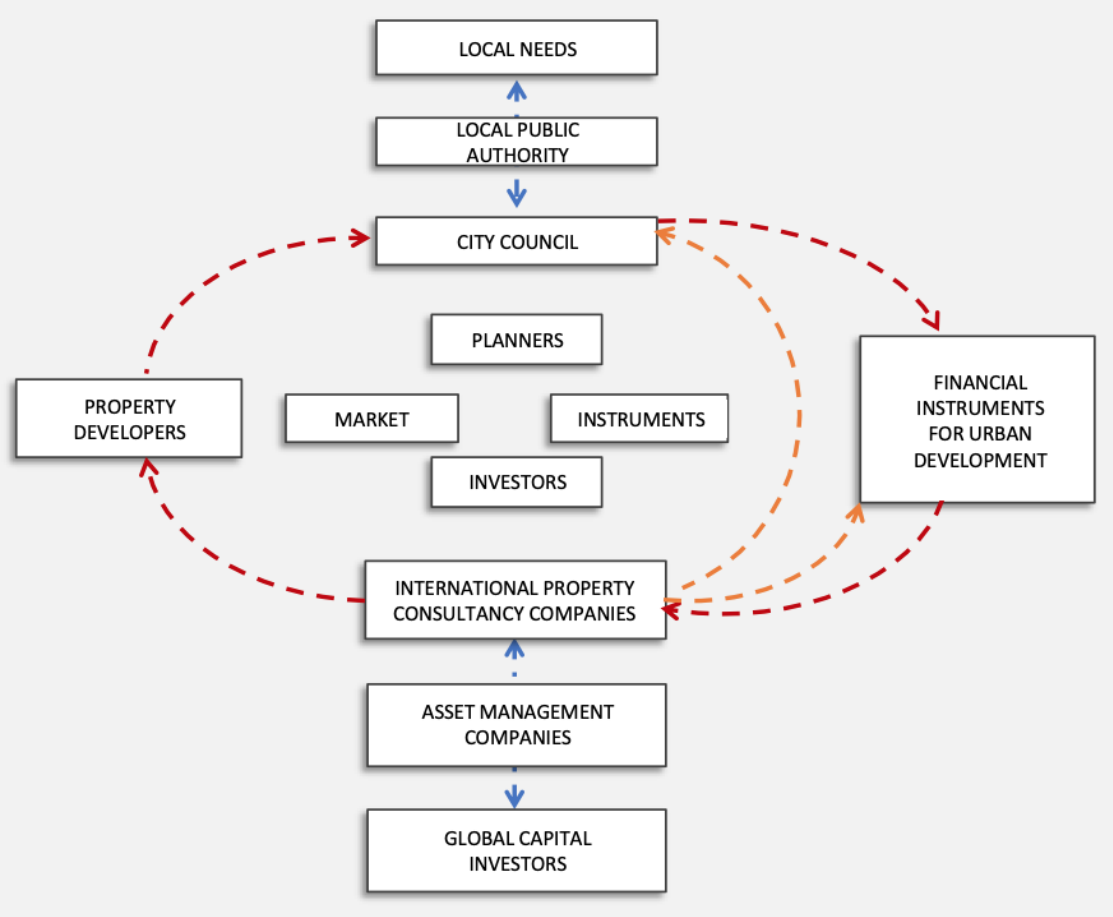


Figure 3 - Vicious cycle of dynamics among key players in the process of financialization of the built environment and urban policies (own authorship)

Also in this sense, as Halbert and Attuyer (2016) underline, although some important findings have been made by this stream of literature, they do not yet form an in-depth and integrated body of work. Therefore, there is a latent need to strengthen research, including empirical and in non-Anglo-American cities (which have received less attention), to cover the topic of the financialization of land use and urban policies. According to the authors, it is crucial to reflect on the methodological and conceptual challenges on this topic.

There is consensus among most of the authors consulted that, from both an economic and an urban perspective, having these relationships and dynamics between key actors completely clear is an impossible task. So far, authors such as Rachel Weber, Thierry Theurillat, Manuel Aalbers, Antoine Guinorret, Ludovic Halbert (and his collaborators), among others, have produced very relevant contributions by mapping and analyzing, from different perspectives, a small fraction of these dynamics that interconnect the local and

global scales. Thus, some of these considerations involving UDPs, financial instruments, and financialization processes will be presented in the following item.

Some of the contributions presented above show that the processes of financialization can have, according to the posture of governments, local and global actors, variable and uncompensated incidences. Thus, the production of more knowledge on the subject is justified. In addition, knowledge about the triggering of such processes may flesh out the emerging literature on financialization processes.

Moreover, this subject of study may offer a possible break of paradigms, both on the formation of these processes, and on how urban policies and instruments should be thought in the current context. And so, research from the perspective of financialization may contribute to demonstrate possible ways to avoid, or soften, processes of decontextualization of the built environment and urban policies.

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2 METHODOLOGY

In the previous literature review chapter, the focus was on the debates pertaining to the development and implementation of instruments and policies. This chapter provides a detailed research methodology which crystallizes the different issues and gaps derived from the literature review. It is divided in two parts: the first presents the fundamental components of the research methodology, such as the main research question and the hypotheses, as well as a deeper look into the methodological choices of this thesis based on relevant research methodology literature; the second part presents the selected case studies and the data collection methods undertaken for this work.

2.1 RESEARCH METHODOLOGY

2.1.1 RESEARCH PROBLEM AND INSUFFICIENCIES

The previous chapter presented debates pertaining to the development and implementation of urban instruments and policies, in the current context of increasing financialization processes. However, several insufficiencies are highlighted since existing contributions to this theme do not yet constitute a consolidated and meaningful body of knowledge.

Throughout the last decades, there has been a surge in innovations regarding financial instruments for urban development projects. In the same period, new global economic dynamics and increasingly competitive relationship networks have made an appearance. Also in this context, local governments are being pushed to improve their negotiation and investment attraction capabilities.

However, there is still a lack of clarity regarding the interaction between local public authorities, private investors, and international financial capital investors when implementing policies and attracting capital. Furthermore, it urges to analyse how private financial backers and investors – collectively or individually – adapt and adjust to the positioning of agents at the intersection of public and private institutions. It is necessary to invest in the identification of, and reflection over, the methodological and conceptual challenges of land use planning in the current context. Thus, the study of instruments and policies for land use is essential to build this emergent body of knowledge, especially in what pertains to countries with developing economies.

Although existing literature approaches several different perspectives on financial instruments for urban development projects, their intrinsic connections to the local and global markets have yet to be clarified. In a context of increasingly rapid changes in market dynamics, a more multidisciplinary and holistic form of analysis becomes necessary to understand how these financial instruments for urban development projects act amidst such dynamics. Moreover, there is a further insufficiency in existing literature pertaining to how both urban instruments and institutions relate to the logics of the global finacial capital market, and how this process of adaptation – and learning – occurs. The same logic is valid concerning the understanding of how financial instruments geared towards urban economic development, in the context of financialization, foster new economic cycles. These concepts are subjective and obtaining concrete results regarding these instruments' application demands a long-term analysis, through market-related data. Three main insufficiences are highlighted in this thesis.

- First insufficiency: a need to explore the role of intermediary actors

The increasing role of intermediary actors between the financial capital market and the territory has been highlighted by scholars of the financialization processes of governance and the built environment (Weber 2010; Savini and Aalbers 2015; Guironnet and Halbert 2014, 2015). In this sense, Theurillat et al (2016) highlight that to understand these processes, it is necessary to identify and understand how various intermediary actors - developers, real estate consultants, city councils, etc. - interpret market needs to anchor investments from the financial capital sector in the city. In other words, the interaction between these actors and their views on value play an important role in the process of interpreting urban valuation, which are reflected in distinct types of financialization processes. Theurillat et al (2016, 1510) state that:

> *"(…) on this anchoring process under the general proposition that different forms of value both arise and receive varying degrees of recognition and legitimation within particular local urban contexts based on negotiations between different actors, including financial actors and/or their intermediaries."*

This highlights the role of actors who mediate and interpret the values that support financiers and large real estate developers. Moreover, contextual elements cannot be ignored, especially when it comes to large-scale urban development projects, and this is a valid issue at various stages of the evaluation, such as the design, implementation, and operation of these projects (Theurillat and Crevoisier 2013).

The role of intermediary actors and their interaction in pursuit of attracting investment to the city has been explored to some extent by some authors specializing in financialization in Brazil (Fix 2009; Rufino 2017; Royer 2016; Klink and Stroher 2017; Stroher 2018). Some of them highlight peculiarities of financialization in Brazil, which in some ways seem to be characterized as more local than global processes. Fix (2009) and Rufino (2017) address the growth of the real estate sector fostered by national financing systems, which came to influence the initial public offerings (IPOs) of some real estate development and development companies in the country, which changed the culture and operational logic of these institutions as well as their way of structuring their developments, including those located within UPOs. Royer (2016), meanwhile, mentions the participation of the FGTS (Guarantee Fund for Time of Service, in Portuguese, *Fundo de Garantia do Tempo de Serviço*), a semi-public fund that functions as a kind of social security where the source of capital derives from the compulsory collection of contributions from formal workers in the country, as the sole investor in CEPACs in the Porto Maravilha UPO. In the case of this UPO, the fund took a controlling position of the types of buildings to be built, its business strategy and margin of return on investment. Perhaps the works that go into the most depth in analyzing the actors involved in interpreting values and efforts to attract market investment in UPOs are those by Klink and Stroher (2017) and Stroher (2018). By comparing operations in different municipalities, underway and in plan, the authors are dedicated to analyzing the CEPAC and seek to clarify, from the perspective of the calculation of sale value and the discourses of the intermediary actors to justify it, what were the narratives that underlie the imagined instrument and its actual application. The authors emphasize the absence of the involvement of global financial capital market players and conclude that financialization in Brazil is a process truncated by a series of contextual factors. Among these are, for example, the low maturity of the domestic financial market and, as also

explained by Royer (2016), the characteristics of the financing structure aimed at the real estate sector in the country. While these studies bring important information on the role and context of intermediaries in UPOs projects, in line with Theurillat et al (2016), Klink and Stroher (2017) argue that there is an urgent need to explore the role of actors, such as non-financial ones, in the socio-technical constitution of financialization.

- Second insufficiency: a lack of research on peripheral economies

In the last four decades, and especially after the global financial crisis of 2008-09, several research fields in economics, public policy and interdisciplinary areas of urban studies have been warning about the increasing development of financialization processes (Aglietta 1998; Orléan 1999; Boyer 2000; Lordon 2000; Chesnais 2001; Harvey 1989, 2001, 2002, 2017; Corpataux and Creivosier 2005; Cetina and Preda 2005; Gotham 2009; Christophers 2011, 2016, 2019; Aalbers and Christophers 2014; Kaltenbrunner and Painceira 2018; Aalbers 2017, 2019a, b). Described in various parts of the world, these processes reflect the absorption of financial sector logics by non-financial actors, including public and private institutions and households, in varied socio-economic contexts. Most of these studies analyze financialization processes from the perspective of Anglo-Saxon countries. However, some of these authors draw attention to the variety of financialization processes across the globe (Aalbers 2017; Fernandez and Aalbers 2016, 2019). In this sense, more recently, economies considered as periphery of the capitalist system have drawn the attention of some experts (Becker et al 2010; Bonizzi 2013; Nolke and Claar 2013; Rodrigues et al 2016; Pósfai and Nagy 2017; Budenbender and Aalbers 2019; Aveline-Dubach 2020). These papers draw on the concept of 'varieties of capitalism' developed by Hall and Soskice (2001) who, in analyzing the institutional behavior of countries, propose models of capitalist economies grounded in the debates of comparative capitalism (Schmitter and Lehmbruch 1979; Bergert 1981; Alvarez et al 1991; for a review of these concepts see also Hall 1999; Porter et al 2003; Nolke and Vliegenthart 2009). Nolke and Vliegenthart (2009, 671) define the concept as: "the idea that the basic institutions of capitalism differ from one country to another and that these differences are not accidental but linked to strong institutional complementarities, has led to a very sophisticated, holistic, and easily understandable picture of the institutional complexity of advanced capitalism." This line of research suggests different typologies based on the different models of market economies followed by different countries. Initially, there were two typologies, 'liberal market economies', such as the US, and 'coordinated market economies', such as the German one. Nolke and Vliegenthart (2009) proposed a third type, the 'dependent market economies', pointing to

the subordinate position assumed by central-western European economies such as Hungary, Poland, Slovakia and the Czech Republic in relation to larger European economies. This body of work suggests a subordinate relationship of economies located in the periphery in relation to those at the center of the capitalist system. Another model identified by this literature is that of 'state-permeated economies', such as those of China, India, and Brazil, also considered to be large emerging economies (Nolke and Claar 2013; Nolke et al 2015). Nolke et al (2015, 543) argue that in this model of economy, the action of the State

> *"(...) rests on a close cooperation between various state and domestic business coalitions at the national and sub-national level, which gives rise to the notion of a rather fragmented, yet dynamic, state-permeated market economy. This model is coordinated by reciprocal mechanisms of loyalty and trust between members of these (competition-driven) state–business coalitions, based on informal personal relations, family ties and shared social backgrounds."*

In addition, Nolke et al (2015) argue that from an institutional point of view, emerging economy countries, such as Brazil and India, seek to follow a non-liberal path of development. They also point out that the firm-state relationship in these economies is much closer than in liberal economies and that this configuration allows these countries to focus on their own individual strategies with less emphasis on liberal principles.

In the field of political economy, Kaltenbrunner and Painceira (2018) analyze this issue of hierarchies between center and periphery from the perspective of financialization with Brazil as their object of study. The authors discuss subordinate financial integration and financialization processes in emerging capitalist economy countries. According to Kaltenbrunner and Painceira (2018), financial transformations in these countries is a result of the financialization phenomena experienced in countries at the center of the capitalist system, which leads them to subordinate financialization. In this analysis, the authors underline the asymmetric relationship inherent in the international monetary system. That is, if on the one hand the system guarantees the country with the strongest currency, in this case the American dollar, a privileged position and financial power, on the other hand, countries such as those with emerging economies assume a position of financial subordination which, in turn, causes several limitations. These countries are subject to underprivileged issues such as greater vulnerability to foreign economy issues, cannot assume obligations based on the national currency, structural balance of payments crises (Prates 2002; Belluzzo and Carneiro 2004; Bresses-Pereira 2015). In this regard, Budenbender and Aalbers (2019) point out that the key function of subordinate

financialization processes is to absorb global mobile capital, resulting from financialization processes in economies at the center of the financial hierarchy.

In the field of urban studies and from the perspective of financialization, among the works analyzed within this thesis, the contributions of Fernandez and Aalbers (2016, 2019) and Budenbender and Aalbers (2019) are perhaps the ones that most employ the themes of varieties of capitalism and hierarchical center-periphery relations as a perspective of analysis. Fernandez and Aalbers (2016) discuss housing finance and its relations to processes of financialization, as well as the role of financial globalization in the growth of housing finance. The authors stress the need for further research that connects issues of global economic policy with urban economic policy. Budenbender and Aalbers (2019), through an analysis of the Polish case of the Sluzewiec business district in Warsaw, discuss how subordinate financialization has shaped urban development. In this analysis, the authors emphasize two points related to financialization processes in urban development projects: the role of historical legacies in uneven capitalist development, and the role of local politics in negotiating the financialization of the built environment. The authors argue that in urban development projects, whether policies act as limiting or facilitating foreign investment in the built environment will depend not only on the positioning of local policies, but also on a broader institutional regulatory context.

Of these, the work by Fernandez and Aalbers (2019) is the only one to focus on comparing the development processes of (housing) financialization between economies located in the Global North and Global South. The authors emphasize that the differences between these processes can be explained by the mechanisms that highlight and stimulate financialization. According to Fernandez and Aalbers (2019), financialization practices can coexist with non-financialized institutional contexts. However, over time these practices can become an enabling environment for the development of further financialization of the economy, extending to various sectors, places, and distinct social classes. In line with Nolke and Claar (2013) and Nolke et al (2015), Fernandez and Aalbers (2019, 16) emphasize the varied responses of different countries that derive from their global contexts, such as their position in the monetary hierarchy and liquidity flows, and local contexts, such as national economic and political realities. In this sense, the authors point out that in order to understand the specific national strategies adopted in countries of the Global South, it is necessary to study these countries both in a comparative institutional perspective and individually. Fernandez and Aalbers (2019) highlight that much remains to be explored to understand not only the varieties of capitalism, but also how national policies shape (coshape) the patterns of

financialization. The authors highlight the urgent need to advance research to understand financializing policy instruments, such as REITs and other forms of financialization grounded in real estate development. For Fernandez and Aalbers (2019), the key mechanism shaping subordinate financialization can be explained by the type of integration between peripheral economies and the global monetary system.

Although they do not address financialization through the debates on subordinate capitalism, the contribution of other works presented in the previous section that analyze these processes in Brazil seems to corroborate the above arguments. In general, Royer (2016), Klink and Stroher (2017), and Stroher (2018), suggest a process of financialization that, although incipient, is marked by a domestic market-driven economy and state-directed capitalism. According to Klink and Stroher (2017, 527):

> *"(...) the absence of deep and consolidated capital markets suggests that more attention should be given to the variegated patterns of financialization in general, and its relationships with the state spatial organization and intervention at multiple scales, in particular."*

Still on contributions that explore the Brazilian context, as far as the author of this thesis is aware there are only three works that conduct an individual study of the national institutions and strategies adopted by the country, and the forms of financialization of the built environment such as REITs (Fernandez and Aalbers 2019). In analyzing issues on housing financialization, Pereira (2017) focuses on noticing the reflections of Brazil's peripheral positioning and integration into the global financial system on the country's financing strategies and change in regulatory frameworks. Sanfelici and Halbert (2018) study REITs in Brazil and highlight the role assumed by financial market actors as urban policymakers. Although they do not make this analysis from the perspective of the varieties of capitalism and subordinate financialization, the authors characterize and evaluate the socio-technical evolution of the financialization policy instrument in the country.

- Third insufficiency: lack of research on financialization outcomes in peripheral economies' UPOs

In the field of urban studies, several financialization experts classify the CEPAC as a financializing policy instrument (Fix 2009; Klink and Stroher 2017; Stroher 2018; Mosciaro et al 2018; Aalbers 2019). As already explained in the first chapter of this thesis, it is a land value capture instrument. As such, the instrument is grounded in Henry George's principles of justice which holds that increments in value acquired by the landowner due to investments made by public authorities should return to the community (George 1879, see

also Alterman 2011). In the case of CEPAC, the instrument has its roots in the ideas of created land that began circulating in the country from the 1970s (Maleronka and Furtado 2013). That is, the owner of a lot has the right to build up to a limit determined by the municipality and the additional must be granted by it. Since this additional area, or created ground, is owned by the municipality and its citizens, it is understood that the granting of the additional right to build must be done upon payment of financial consideration (Smolka 2013; Smolka and Maleronka 2018). However, the Certificate of Additional Construction Potential (CEPAC) has some peculiar features in its financial and negotiating structure that characterize it as a financializing policy instrument. It is a financial security issued by the municipality and sold in public auctions by the São Paulo stock exchange and regulated by the securities commission (or CVM – *Comissão de Valores Mobiliários*), Brazil's version of the 'Stock Exchange Commission' (Klink and Stroher 2017; Stroher 2018; Mosciaro et al 2018; Aalbers 2019).

In addition to these inherent design and operational characteristics, CEPAC is an instrument designed to finance large-scale urban development projects in Brazil. There are five projects implemented to date that make use of CEPACs. They are known as Urban Partnership Operations (UPOs – in Portuguese, *Operações Urbanas Consorciadas*) and are located in three Brazilian municipalities: São Paulo, Curitiba and Rio de Janeiro. These projects raise controversial debates. UPOs, like most urban development projects, are based on narratives of promoting territorial transformation and development in areas considered obsolete. Among critical debates, these projects are considered one of the symbols of the neoliberal and entrepreneurial city (Aalbers 2019; Mosciaro and Pereira 2019). It is argued that large-scale urban development projects, like UPOs, are spaces of exception and speculation of territory through rent extraction, fostering socio-spatial segregation and uneven development (Fix 2001, 2003; Mosciaro et al 2018; Mosciaro and Pereira 2019).

- Wrap-up

Insufficiency 1: from the point of view of urban studies, and particularly within peripheral economies, there is little exploration of the relation between the financialization of governance and built environments, and regulatory or institutional changes, policy instruments, varieties of capitalism, hierarchies, and type of market economies.

Insufficiency 2: it is expected that the use of financially driven policy instrument, e.g., CEPAC, follows international trends in large-scale urban development projects, promoting new dynamics in the real estate market that provide connections between the capital

market and the built environment. However, in the Brazilian case, it is not yet clear whether UPOs are in fact capable of promoting these new dynamics, nor whether the use of CEPACs does foster the transformation of the built environment into a financial asset.

Insufficiency 3: large-scale urban development projects are often singled out in international literature as spaces, both physical and institutional, that foster the growth of financialization, placing municipalities in a vulnerable position when trying to meet their own agenda and favouring the global financial market instead. However, there is still a lack of research regarding this line of enquiry, in relation to countries located on the periphery of the global financial system.

2.1.2 MAIN RESEARCH QUESTION

According to Bryman (2013), the main research question has a guiding role in the research process; thus, it must be clear and objective, constituting an explicit declaration regarding the answers sought. As a focus for the investigative work, the research question is also essential in directing the literature review, the decisions about the type of project to be adopted, and the structuring of debates, data collection, and writing. Denscombe (2014) and White (2017) also highlight the importance of the research question to the following methodological categories: (i) result prediction; (ii) explanation of causes and consequences of phenomena; (iii) evaluation of phenomena; (iv) description of phenomena; (v) development of good practices; and (vi) empowerment (Denscombe 2014) or (vii) comparison (White 2017).

Keeping these considerations in mind, the previously presented debates and their insufficiencies, explored in the literature review, led to the formulation of the following main research question:

> *Is the interaction between urban development instruments, financial instruments and institutions leading to a scenario of increasing financialization in the context of urban partnership operations in Brazil?*

Local governments have been increasingly compelled to develop their negotiation and global investment attraction capabilities, thus being exposed to financialization processes. This main question takes into consideration the innovative instruments used to seek solutions for budget restriction issues, while identifying, and reflecting on, the methodological and conceptual challenges faced when land use planning occurs in the

context of financialization. Thus, this question seeks an innovative and relevant contribute to the scientific community.

2.1.3 THE HYPOTHESES

Bryman (2013) defines the hypothesis as an initial prediction which is configured, based on previously collected information, to be tested and determine the possible relationships between two or more variables. Specially in the case of qualitative research, the test of hypotheses is closely connected to their foundational theory, or to the theories generated thoughout the research work. Hypotheses can be inductive or deductive, fundamented by intuitive or direct obervation, or both.

In the context of the previously presented literature review, the research gaps identified, and the research question(s) established above, the following hypotheses were formulated:

GAP: available literature does not provide a comprehensive view of the reality of financialization in Brazil.

Hypothesis 1: Recent regulatory changes which limit institutions, such as pension funds, when investing in real estate assets through REITs are a sign of increasing state-fostered financialization.

Hypothesis 2: The Brazilian Urban Partnership Operations (UPOs) implemented to date with the use of CEPACs do not always possess the strength to promote real estate market dynamics, especially the one related to finance capital, within their boundaries.

Hypothesis 3: Large-scale urban development projects lead to the financialization of the urban environment.

Hypothesis 4: Large-scale urban development projects place municipalities in a position of subservience to financial power of capital markets.

2.1.4 THE OBJECTIVES

The general objective of this work is to identify and conduct a reflection on the methodological and conceptual challenges faced during the implementation of urban development instruments, and policies, in a context of increasing financialization.

Such knowledge is sought under a critical analysis perspective, focused on the formulation and application of land value capture instruments in several different large-scale urban development projects in Brazil. To shed light upon the issues found in existing literature, and as specific objectives, this work also proposes to:

1. Identify and explore the context of financial markets with portfolio based on property assets to analyse if it is undergoing on crescent of decrescent process of financialization.
2. Identify and and explore if the financial markets performance is being fortered by the State, especially on these institutions with portfolio based on property assets.
3. Explore the performance of real estate portfolio of financial market institutions in the territory of the analysed cities and UPOs to clarify if those projects possess the strength to promote this especific niche real estate market dynamics.
4. Identify and explore CEPAC use in the production of the built environment, throughout the UPOs period of implementation, and check if its outcomes match with the real estate profile seeked by capital market investors.
5. Identify and explore if the UPOs are exposing municipalities to the power of financial capital markets.

2.1.5 RESEARCH METHODOLOGIES AND PARADIGMS

In a scientific field of research, defining the methods to be applied helps ascertain the suitability of ideas and questions to empirical research. Research methodologies are the means through which knowledge is acquired and conceived within a discipline; these methodologies need to be relevant and rigorous in order to be accepted as legitimate to a specific area of knowledge (Harvey and Myers 1995). Research methodologies within the social sciences are closely linked to different visions on how social reality ought to be studied. And because they depend on the vision of the researcher regarding how society is to be perceived and examined, they are not stricly neutral instruments. Thus, such methodologies include a variety of considerations to be considered in the definition of a research strategy, independently of its format and chosen methods (Bryman 2013).

Rapid social change, the diversification of the realities of contemporary life, and an increasing degree of complexity have been challenging to social science researchers. Therefore, traditional methodologies of a deductive nature – in which empirical evidence is tested based on research questions and hypotheses derived from theoretical models – fail to provide answers in the face of such a range of differentiation between research objects.

The use of inductive approaches, in which theory is the result of empirical research, is becoming more frequent. The study of subjective concepts and of practical and everyday experiences can now be considered as important as the observation of narratives and theoretical discourse (Flick 2009).

There is a necessary level of abstraction when developing theories. Nevertheless, research derived from that process should be well adjusted to reality, even though the quantification and definition of the connection between theory and research, and between these and reality, is not completely straightforward. It depends on the theoretical frameworks used, and whether collected data is meant to test or build a theory. Be that as it may, theory always assumed the role of providing a backgound and justification for the research being conducted, as well as a framework in which social phenomena can be understood and results interpreted (Bryman 2013).

For all this, the nature of research methodologies must be pondered when defining the research strategy. Research methodologies are based on a set of premises on the nature of reality, and comprise the techniques and topics used to research that reality. These assumptions are based on the positions defined as 'paradigm' for the field of research methodology, which determine how research ought to be conducted (Punch 2006). In other words, they are philosophical suppositions about the phenomena under study, about how they can be understood, and about the purpose and product of a research work. There are three main dimensions to the paradigms under study, in a research work: onthology - the nature of the phenomena researched; epistemology - the way or frame of reference within which such phenomena can be understood; and methodology - the methods used to study such phenomena (Hammersley 2012). However, paradigm cathegories are diverse and imprecise, as they lack a standard of definition and thus possess fuzzy boundaries (Punch 2006; Hammersley 2012).

Until the 1960s, research methodologies in social sciences were influenced by natural sciences and mainly composed of quantitative methods, which conceptualize the world in terms of variables (Bryman 2013; Hammersley 2012; Punch 2006). Researchers who used qualitative methods mostly did so within a positivism paradigm, using a deductive reasoning and seeking preexisting or concurrent causes for the effects seen; these causes are expected to be objective, measurable, oriented by hypotheses and independent of values. Quantitative methods have, as a main strength, a high level of external validity and the possibility of generalizing results according to sample representativity. On the other

hand, the low level of internal validation is pointed as a weakness since the research might lack in-depth knowledge of the context (Teddlie e Tashakkori 2009; Graff 2017).

As social phenomena became (or were recognized as) more complex, a propensity developed for the use of qualitative studies. Works under a constructivism or interpretivism paradigm were on the rise, making use of qualitative methods and, often, studying cases and processes (Punch 2006; Flick 2009; Graff 2017). Qualitative methods follow an inductive reasoning, and work data towards a theory. The existence of multiple realities is accepted as a starting point, with a gradual comprehension of such realities being constructed individually and socially as the researcher works with the participants. The observation of these realities is influenced by the values of researchers, who defend the importance of the description of reality. Because using this method means that researchers focus more on the study's particularities, the characterization of natural contexts becomes easier and closer to the essence of the problem and the perceptions of actors involved in research. On the other hand, the qualitative method also presents some fragilities, considering that the samples of reality are limited by the context and temporal window of the study. Generalizations are also limited, depending on the possibility of transference of results from one context to another (Teddlie e Tashakkori 2009; Bryman 2013; Graff 2017).

In recent decades, mixed methods have emerged and gained representativity. Mixed methods combine quantitative and qualitative methods, focusing on the collection and analysis of both numeric and narrative data. Pragmatism, the paradigm proposed by Howe (1988), emphasizes the compatibility and affiliation between the two methods. First, this approach allows the researcher to explore and examine problems and questions according to a more consistent perspective, taylored to the nature of the study; in other words, the research can explore and examine identified issues that are closer to their own beliefs and worldviews, as per their own biography, and more relevant to their academic community (Stake 1995; Graff 2017). To pragmatist researchers, a sole truth does not exist, but rather multiple explanations of reality, and thus it is possible to elect the most coherent one considering the reality under analysis (Teddlie e Tashakkori 2009; Graff 2017). As argued by Günther (2006), more than one method can (and sometimes should) be applied to a research work, considering that research questions are increasingly multifaceted.

Mixed research methodologies possess six central characteristics, as defined by Creswell e Clark (2017): (1) collection and rigorous analysis of both qualitative and quantitative data; (2) integration, interpolation, or incorporation of both forms of data simultaneously; (3)

emphasis on one or both forms of data as demanded by the research focus; (4) use of these procedures in a single study; (5) contextualization by philosophical frameworks and theoretical perspectives; and (6) combination of procedures in order to allow the research plan to steer the study.

Keeping all the aforementioned aspects in mind, as well as the complexity of the questions proposed for this research project, the research strategy includes the adoption of the pragmatism paradigm and the application of a mixed methodology. Even before deciding the specific strategies and methods relevant to this work, it is accepted that not settling for either method in exclusivity but instead using them simultaneously can improve research results, even if these two approaches may seem antagonistic (Günther 2006).

2.1.5.1 MIXED METHODS RESEARCH

A research method can be defined as the technique or strategy used in the collection, organization, and analysis of data. It can include a specific instrument, such as a survey, an interview cronogram, or even a participant observation (Bryman 2013). Experimental, quasi-experimental and correlational research methods are those most frequently used in quantitative research. Qualitative research, on the other hand, includes case studies, ethnographies and fundamented theories (Punch 2006).

The choice of research methods for this work is guided by the literature review conducted, as well as by the research question and hypotheses. Amidst the set of works reviewed, within the context of 'urban development policies and instruments' and 'increasing processes of financialization', the case study approach is prevalent, focused on just one or more than one cases. Authors also tend to apply a mixed methods approach, albeit with some emphasis on qualitative methods. As previously mentioned, a case study research design is often associated to a qualitative approach, although the combination of qualitative and quantiative methods is also common.

From among the various qualitative methods used in these works, we can highlight those based on narrative languages (textual/documental analysis) and fundamented theory. Fundamented theory is a method for the generation of theory from data, which is usually qualitative, but can also be based on other types of data. Data is systematically collected and analysed during the research process, which means that the stages of data collection, analysis, and eventual formulation of theory are closely linked. Nevertheless, works that use this approach often generate concepts, instead of a whole new theory (Bryman 2013).

Such methods aim to understand, and even explain, the way a specific group of people experiences and interprets their own cultural and social contexts (Mason 2002; Handwerker 2006). Beyond these methods, both these authors also mention the use of discrete methods, both through a qualitative (i.e., simple observation) and quatitative approach, for the analysis of archived materials available in databases, and official reports (Bryman 2013). The resulting data is used for integrating, supporting, and validating the qualitatively collected data, thus enriching and strenghtening its contributions.

According to Stake (1995), in research with a marked qualitative focus, the researcher's biography and background knowledge are important to access people and information. In other words, it is precisely this experience that leads the researcher to know how to recognize good sources of data. It also leads them to test the veracity of their viewpoint and the robustness of their interpretations consciously and unconsciously. As the author emphasizes, such a task requires sensitivity and skepticism.

In mixed methods research with a strong emphasis on qualitative methods, it is still possible to implement quantitative methods. In fact, the application of quantitative methods in qualitative research can provide a meeting point of two or more research methods. Regarding the combination of qualitative and quantitative methods of research, Bryman (2013) emphasizes the following observations:

I. In the analysis of a given theme, the criteria adopted during the transcription of field research themes or notes may not be clearly identified; also, quantification may be implicitly influenced by themes of interest, to the detriment of other themes that can also be important. In this sense, the recommendation for identifying themes is to seek repetitions.
II. To refer to quantity, the qualitative researcher must avoid the quasi-quantification of the investigated phenomena. Alternatively, a limited quantification sample can be used.
III. Quantification methods applied to situations and speeches can be useful in order to inject more precision into the frequency estimates detected by the researcher, emphasizing the ideas identified as evidence. This prevents secondary questions from being placed on the same level as primary questions, thereby corrupting the strength of the evidence set.

2.1.5.2 CASE STUDY RESEARCH

As mentioned in the previous section, the research strategy is at the center of the methodological design of the research work. It translates the internal logic or set of ideas through which it answers to the research questions sought. Once the approach adopted for research (quantitative, qualitative, or mixed) has been defined, the strategy must be planned in general terms and procedurally (Punch 2006). The research design refers to the criteria used in the evaluation of a social investigation. It is the structure developed for the generation of evidence, adjusted to both the research question and a set of specific criteria. The choice of this structure expresses decisions about the priority given to each of the varied dimensions of the research and to data collection (Bryman 2013). As Bryman (2013) points out, there are five categories of research design: experimental, transversal, longitudinal, case study, and comparative. Amongst these, for the purpose of this work, the case study category was chosen, in accordance with another research works conducted in the same field.

One of the distinguishing characteristics in the choice of a case study research methodology is the desire to understand complex social phenomena, in which a social phenomenon limited in time and space but inscribed in the unity and totality of a system is analysed. This approach is preferentially adopted in investigations where: (i) investigation questions are postulated to answer the 'why', or 'how', a certain event occurs; (ii) the researcher has little control over the events surveyed; (iii) the focus of research is related to a contemporary phenomenon within a real case. Case studies allow the researcher to gain insight into the significant and holistic characteristics of a given social event (Yin 2003).

The term ‘case’ is usually associated to a location, such as a community or organization, and its study tends to be an intensive examination of a scenario. Case studies tend to be associated with qualitative research; however, this perception is not entirely appropriate, since a mixture of quantitative and qualitative evidence can be used to conduct the research (Yin 2003; Bryman 2013). In this way, the understanding of a social phenomenon is facilitated by its contextual analysis (Yin 2003).

Case studies can be associated both with generating a theory and testing that theory. Furthermore, as Williams (2000) argues, in case studies researchers are often in a position to generalize when their findings can be compared to other authors' investigation of different cases. The study of multiple cases has become very common in certain fields of the social sciences. The main argument is that, in this format, once the researcher is in a better

position to establish the circumstances under which a theory will or will not be sustained, there is potential to improve the construction of the theory. In addition, this format can contribute important concepts to a developing theory. Single and multiple cases studies can thus play a crucial role in understanding causality (Yin 2009; Bryman 2013).

2.2 CASE STUDY RESEARCH DESIGN

2.2.1 SELECTION AND PRESENTATION OF CASE STUDIES

This thesis adopts as its object of study the case of Urban Partnership Operations that have made use of CEPACs in Brazil. These are large-scale urban development projects that rely on a land value capture instrument to raise funds for total or partial project financing. At the time of writing this thesis, there are five UPOs in which the municipalities have chosen to use CEPAC as the main source of financing. The UPOs Faria Lima, Água Espraiada and Água Branca, are in the municipality of São Paulo, the UPO Porto Maravilha is in the municipality of Rio de Janeiro, and the UPO Linha Verde in Curitiba. Figure 4 shows some population and economic data released by IBGE (Brazilian Institute of Geography and Statistics, in Portuguese, *Instituto Brasileiro de Geografia e Estatística*) with reference to the last census conducted in 2010. São Paulo is the densest city, with 11.25 million inhabitants and a population density of 7398.26 hab/km2. Rio de Janeiro has a population of 6.32 million inhabitants and a density of 5265.82 inhabitants/km2, while Curitiba has 1.75 million inhabitants and a demographic density of 4027.04 inhabitants/km2. São Paulo also leads regarding representativeness in relation to the national GDP, with 10.7%, while Rio de Janeiro represents 5.3% and Curitiba 1.5%. Figure 4 also shows which are the UPOs in each of these municipalities and their respective laws of creation. Additional information about these projects is presented in Table 4.

Of the three, the municipality of São Paulo has the most experience with UPOs and is where CEPAC was first conceived. The financial instrument was born out of the municipality's search for alternative resources to enable it to fulfill its urban agenda. As we will explain in more detail in chapter 3, CEPAC was born in an environment of interaction between urban planners, politicians, and private sector representatives. They conceived the instrument under the logic of partnership between the public and private sectors.

The instrument was first applied in UPO Faria Lima, in 1995. At that time this model of urban operation was a municipal instrument, exclusive to São Paulo. However, it was precisely from the experiences in São Paulo that both policy instruments, CEPAC and UPO, were included in national legislation through the City Statute (10.257/2001).

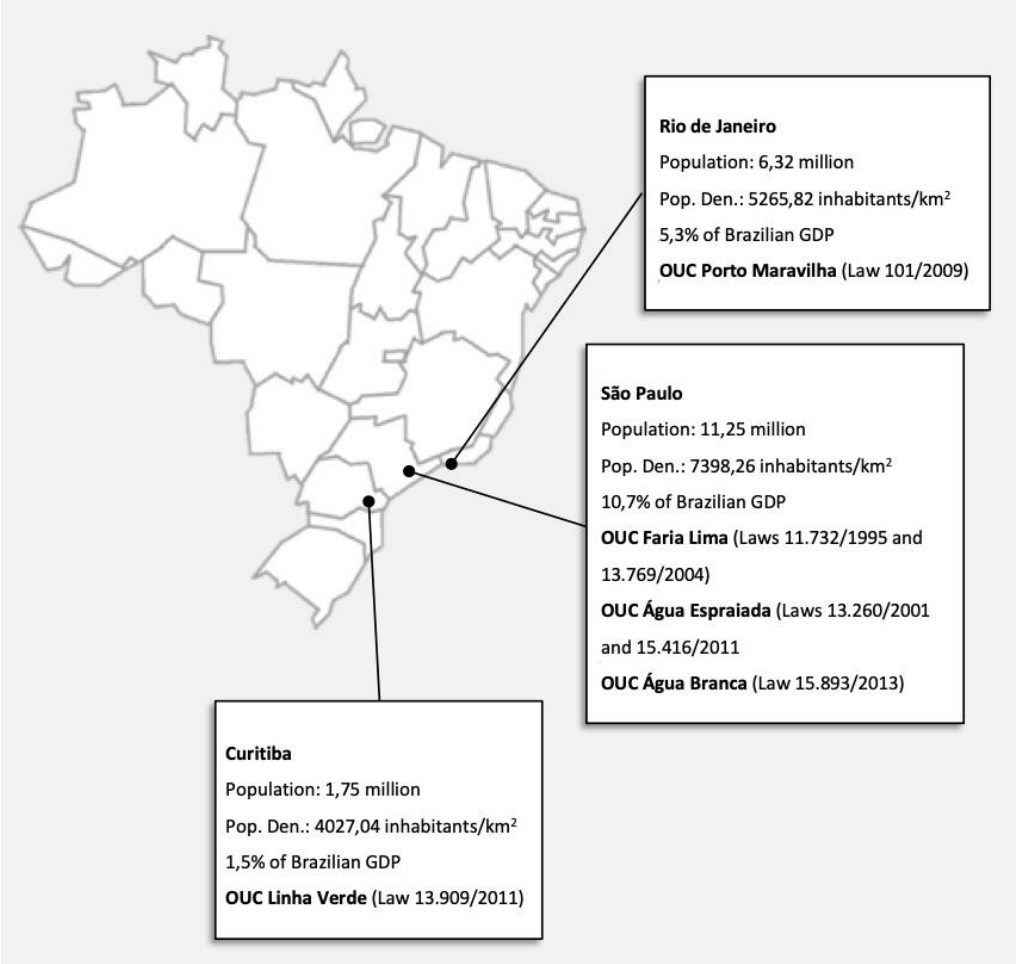


Figure 4 - Brazilian cities and UPOs: Population and economic overview (own authorship)

Thus, beginning in 2001, CEPAC and UPO became available in the toolbox of Brazilian urban planners. Of São Paulo's experiences, the UPO Água Espraiada was the only urban operation that was born as a consortium. As Table 4 shows, its creation law is dated from 2001. The experiences of Rio de Janeiro and Curitiba came later, in 2009 and 2011 respectively. The estimated period for the implementation of each project is variable, ranging from 12 to 30 years. Each UPO's estimated value for its interventions also varies. For example, the forecast

for Porto Maravilha in 2009 was R$8,147,000,000 and for Linha Verde R$1,655,000,000 in 2011; in 2014, a cost of R$4,954,000,000 was predicted for Água Branca, while the expenditure for Água Espraiada was expected to be around R$1,125,000,000. In terms of financing structure, virtually all UPOs rely on CEPAC as a financial instrument, apart from Porto Maravilha, which has also integrated into its structure instruments such as real estate investment funds and public-private partnership. As shown in Table 4, the main urbanistic incentives resulting from the implementation of an UPO are related to regulatory flexibility regarding the right to build.

Although all UPOs are large-scale urban development projects, their characteristics vary not only from city to city, but also from project to project. This variation between cases is one of the challenges in studying these instruments and perhaps the reason why there are few works comparing UPOs to each other (Mosciaro and Pereira 2018; Maleronka and Hobbs 2017; Klink and Stroher 2017). Of the works that have sought to explore UPOs from the perspective of financialization, some mention that pension funds played a relevant role during the design and implementation of these projects (Fix 2003, 2009; Santoro and Rolnik 2017). Some of these works also mention the presence of real estate investment funds as owners of properties within the perimeter of UPOs (Santoro and Rolnik 2017, Stroher 2018). However, this is information with little clarity; in the same way, the ways in which financialization occurs in projects such as these in Brazil still remains unclear.

As presented throughout the literature review, large-scale urban development projects receive criticism for being instruments that promote socio-spatial segregation, increase in real estate values, and for being directed to private interests at the expense of the needs of the population. These issues are also debated by financialization experts (Savini and Aalbers 2015; Mosciaro et al 2019). However, as financialization processes in Latin American countries have yet to be comprehensively explored (Klink and Stroher 2017; Fernandez and Aalbers 2019), there are few certainties in this regard. Thus, analyzing and comparing the five cases of UPOs in Brazil seems important to bring some light to knowledge about how financialization processes occur in Brazil.

Table 4 - Case study presentation: the five UPOs and their general characteristics (own authorship)

Case studies presentation: general information							
City	UPO	Created by law/date	Implementation period	Estimated cost	UPO perimeter	Main urbanistic incentives	Funding structure instruments
São Paulo	Faria Lima	11.732/1995, 13.789/2004	21 years	R$715,000,000 (1995) / R$2,561,000,000 (2011)	650ha	• Higher coefficient of use within the UPO perimeter • Merging of plots • Areas open to the public at street level • Alteration of urbanistic parameters	CEPAC
	Água Espraiada	13.269/2001	15 years	R$1,125,000,000 (2014)	1,300ha	• Higher coefficient of use within the UPO perimeter • Change of urbanistic parameters of use • Merging of plots	CEPAC
	Água Branca	11.774/1995, 15.893/2013	12 years	R$4,954,000,000 (2014)	505ha	• Higher coefficient of use within the UPO perimeter • Change of urbanistic parameters of use • Transfer of the Right to Build for listed buildings • Building regularization	CEPAC
Rio de Janeiro	Porto Maravilha	101/2009	30 years	R$8,147,000,000 (2009)	489ha	• Higher coefficient of use within the UPO perimeter	CEPAC, REITs (FIIs), public-private partnership.
Curitiba	Linha Verde	13.909/2011	25 to 30 years	R$1,655,000,000 (2011)	2,000ha	• Higher coefficient of use within the UPO perimeter • Change of urbanistic parameters of use	CEPAC

2.2.2 DATA COLLECTION AND ANALYSIS

In this section is presented the overall process of data collection and analysis employed in this thesis. It is worth noting that a more detailed explanation is provided in the next chapter. Bearing this in mind, we divided our data collection into two large sets, one at the national scale and the other at the municipal scale. The first refers to the analysis of financial instruments and institutions on a national scale, namely Real Estate Investment Funds (FIIs or, in Portuguese, *Fundos de Investimentos Imobiliários*) and pension funds. The second refers to the instruments of urban development policy, the Urban Partnership Operations (UPOs) and the Additional Construction Potential Certificates (CEPACs).

Firstly, in order to better understand the level of information available on our research objects, we conducted a process of information gathering and sorting. To this end, we performed an exhaustive analysis of legal documents, reports, and materials available in the written and audiovisual media, official government and corporate websites, reports, and all sources of information we could find on pension funds, FIIs, UPOs and CEPACs. Once this was done, we identified the official bodies responsible for each of these objects of study and, through the transparency law (LC 131), we requested the official data they had available.

In relation to the first group of data, which includes pension funds and FIIs, we obtained varied quality of information, both incomplete. In the case of pension funds, PREVIC (National Complementary Welfare Superintendence, in Portuguese, *Superintendência Nacional de Previdência Complementar*) provided us with a structured database with information on all the properties in pension funds' portfolios from 2006 to 2018. However, this base only contained the post code of each of the properties and the value they represented in the fund's portfolio (property value rate). We subsequently completed this data to compose our structured base with indicating the type and address of most of these properties. In the case of FIIs, we did not have access to a structured base, but to the official site of the B3 (Brazil Stock Exchange and Over-the-Counter Market, in Portuguese, *Bolsa, Brasil, Balcão*). In order to compose our database with the FIIs' real estate portfolios we conducted an individualized and exhaustive analysis of the reports of each one of the funds. The details of this collection and structuring are presented in greater detail in section 3.1.1.4 of the next chapter.

With regard to the second group of data, which includes information on the different UPOs and CEPACs, we noted that the quantity and quality of information varied according to each municipal prefecture. The municipality of São Paulo, which has the largest number of UPOs, had the most complete and structured database, including details on the use of CEPACs and OODCs. In the case of the municipality of Curitiba the database with information on the use of CEPACs was partially available and contained information on CEPACs which was subsequently completed by us by analysing the property records on a case-by-case basis. These are available on the IPPUC (Curitiba's Urban Planning and Research Institute) website under the name 'fichas amarelas'. In the case of Rio de Janeiro, the municipality did not have any control database for CEPACs, and the data was provided to us by CDURP (Urban Development Company of the Port of Rio de Janeiro Region, in Portuguese, *Companhia de Desenvolvimento Urban da Região do Porto*) in an incomplete and outdated spreadsheet. During this survey we relied on the tireless support of technicians from the municipalities or UPOs management institutions who helped us to clarify and locate all the information that made up our database. The details of this collection and structuring are presented in more detail in section 3.1.3.3 of the next chapter.

3 RESULTS OF DATA COLLECTION

3.1 FINANCIALIZING POLICY INSTRUMENTS

During the last decade, a considerable body of work on urban studies and geography has underlined ongoing financialization processes in Brazil (Fix 2009; Pereira 2015; Santos and Sanfelici 2015; Royer 2016; Santoro and Rolnik 2017; Rufino and Royer 2017; Sanfelici 2017; Sanfelici and Halbert 2014, 2018; Stroher 2017, 2018; Mosciaro et al 2018; Santoro et al 2018; Mosciaro and Pereira 2019; Shimbo and Rufino 2019; Stroher and Dias 2019). They note a tightening of ties between finance capital and territory through instruments and institutions in what pertain to converting land into financial asset (Fix 2009; Pereira 2015; Rufino and Royer 2017) and the role of finance actors as urban policymakers (Sanfelici 2017; Sanfelici and Halbert 2014, 2018). Yet, the Brazilian case seem to be not quite following so far, all the trends identified in developed countries by the international academic literature. As presented on the first chapter of this document, international contributions have identified connections between local level representatives such as municipalities and local developers, and global finance capital market investors (Savini and Aalbers 2015; Guironnet and Halbert 2014, 2015). These studies often refer to urban redevelopment projects as a space where these connections between local and global levels are prone to happen. The literature of Brazilian experiences with financialization points to a participation of funds and finance capital investments in the conversion of land into finance assets (Royer 2016; Santoro and Rolnik 2017; Storher 2018; Sanfelici and Halbert 2018). A clear effort to find straighter lines connecting the influence of global level markets and urban built environment financialization can be perceived in many of these works (Fix 2009; Rufino 2017; Santoro and Rolnik 2017; Stroher 2017, 2018; Mosciaro and Pereira 2019).

However, the participation of global capital and its players is still a blurred subject (Santoro and Rolnik 2017; Stroher 2018). It is to be noted that, simultaneously, a rising number of works is pointing to a relevant role of State and actors at local level in the Brazilian urban financialization processes (Klink and Denaldi 2014; Royer 2016; Klink and Stroher 2017; Sanfelici and Halbert 2018). Curiously, such works report these local actors occupying positions that supposedly would be the place of global market players. These actors are not only the usual municipalities and local real estate developers, but national finance market players, as well as funds and institutions, which are often controlled or directly regulated by the State; e.g., financial institutions such as pension funds, or the parastatal fund known as Fundo de Garantia do Tempo de Serviço (FGTS) formed by compulsory savings (see Royer 2016; Santoro et al 2018), or national REITS (Pereira 2015; Sanfelici 2017; Sanfelici and Halbert 2014, 2018). This makes the Brazilian urban financialization processes an intriguing subject of study.

This section delves into financializing policy instruments (FPIs) in Brazil, which underpin the financialization of the urban built environment. Funds are important to understand the progression of urban financialization in Brazil; it is thus necessary to look at their role as financializing policy instruments, and their influence on land use policies. When looking at the accumulated body of knowledge in this field, however, it is still unclear how urban financialization happens in Brazil. It is, thus, necessary to shed light to this topic and fill this research gap unveiling the aspects of the real estate-finance complex in Brazil. To do so, this research propose to analyse FPIs which are financial instruments based on real estate development and applied at two distinct scales of governance: nationwide, such as Fundos de Investimento Imobiliário (the Brazilian version of REITs), and at municipal level, as the CEPAC. The analysis of pension funds was also added to complement this investigation. This choice was made once this type of institutional investor was frequently pointed by the specialists on financialization in Brazil (Fix 2003, 2011; Rufino 2017; Santoro and Rolnik 2017; Stroher 2018) as influential players on real estate-finance complex and on large-scale urban development projects.

As explored in this section, in practice, the REITs are policy instruments considered financializing, and pension funds are the result of institutional investors making use of such FPIs. Both belong to the financial sector and constitute important real estate market players in Brazil. The CEPAC is also a financial instrument that doubles as an FPI but applied to the local level; it financializes the additional building rights being traded at capital markets,

accumulating the functions of capturing land value to fund UPOs, an urban development policy instrument, and of regulating real estate market.

The research is based on collected data regarding these FPIs and financial institutions which are ultimately interplaying at UPOs. The compilation, organization and analysis of this data is directed not only by the methodological framework of this thesis, but also by a conceptual lens determined through a confrontation and comparison of the works of established authors in this field, informed by the previously conducted literature research. The last part of this section is dedicated to merging the collected data from REITs, pension funds, and CEPAC; their overlap aims to unveil their influence over each other.

3.1.1 NATIONWIDE INSTRUMENTS

In this subsection, the focus is on a financializing policy instrument (FPI) which can be applied to the nationwide territory, whether urban or rural, and on institutional investors in Brazil, which underpin the financialization of urban built environment. To better understand urban financialization in Brazil, this work investigates crucial aspects of the real estate financialization context: the geographical development of both REITs, as an FPI, and pension funds, as an institutional investor. The last is not only is addressed as important player in real estate markets but will have REITs as its only chanel of investment on real estate assets in the near future. Both REITs and pension funds are analysed, supported by collected data. Thus, this subsection tackled **Hypothesis 1** of this work: Recent regulatory changes which limit institutions, such as pension funds, when investing in real estate assets through REITs are a sign of increasing state-fostered financialization. Moreover, these data and analysis also aided, together with data from CEPACs, to resove the **Hypothesis 3 and 4** of this work - **Hypothesis 3**: Large-scale urban development projects lead to the financialization of the urban environment. **Hypothesis 4**: Large-scale urban development projects place municipalities in a position of subservience to financial power of capital markets.

3.1.1.1 OVERVIEW

As shown in the literature review chapter, a policy instrument is classified as financializing when it presents a perspective based on capital finance, as well as assuming its valuation techniques and calculation methods. As Sanfelici and Halbert (2018) explain, such

instruments set out institutional arrangements which adjust and pave the financialization of land and property. These authors list the following examples of financializing policy instruments (FPIs): public-private partnerships which turn urban infrastructure into investment products, securitized real estate debt such as mortgaged-backed securities and securitized property ownership like private equity real estate or Real Estate Investment Trusts (REITs), and some schemes which use tax increments or additional building rights sold to investors to fund large-scale urban development projects.

Recalling chapter 1, scholars often relate urban financialization processes with the role assumed by institutions, which take over financial logics to deal with real estate assets when making use of instruments such as FPIs (Theurillat et al 2008, 2010, 2017; Weber 2010; French et al 2011; Guironnet and Halbert 2014; Guironnet 2016; van Loon and Aalbers 2017; Sanfelici and Halbert 2018). Such institutions manage and treat the urban built environment like any other asset, seeking to maximize income and mitigate risks. However, as Sanfelici and Halbert (2018) emphasize, although FPIs are often highlighted as a key component they are rarely considered itself. In limited cases, FPIs were placed under close scrutiny, this, usually because they were framed and/or applied by the local governments itself.

This is the case of funding instruments such as redevelopment bonds (Gotham 2016), municipal bonds (Hackworth 2002), or Tax Increment Financing (Weber 2010), or even some Public-Private Partnerships, in dealing with the provision of public urban services (Torrance 2008; Allen and Prike 2013; Ashton et al 2016). Although these studies concentrate on cases mainly from an Anglo-American background, it does not mean that such instruments are less important in other parts of the world, as shown by Aveline-Dubach (2016 and 2020) when discussing the relevance of REITs in Asia; or Chen (2019), on the case of air building rights in Taipei. In Latin America, a large share of studies on urban financialization involving FPIs originate in Brazil (Fix 2009; Klink and Stroher 2017; Stroher 2018; Sanfelici and Halbert 2017).

These studies report the use of additional building rights sold to investors to fund urban redevelopment projects, namely the case of CEPAC (see Fix 2009; Klink and Stroher 2017; Stroher 2018), the relations of REITs with urban property ownership and their role as urban policymakers (see Sanfelici and Halbert 2017), the participation of institutional investors, such as pension funds, in policy UPOs making process (see Fix 2009), or the relations between the parastatal fund, Guarantee Fund for Time of Service or FGTS, and FIIs

which are the Brazilian version of REITs (see Fix 2009; Royer 2016; Mosciaro 2017). Similar to the Anglo-American literature, this group of works about Brazil underline the key role of FPIs and institutional investors in processes of financialization of urban governance and of the built environment. However, as these works report, such processes are happening in slightly distinct manners.

Some authors even express some awkwardness in relation to urban financialization processes in Brazil. For instance, Stroher (2018) headed her article with the following question: "Urban financialization without financial investors?" Klink and Denaldi (2014) define property financialization in Brazil as a truncated process and argue that it is a result of the national institutional and real estate finance system background. Both Sanfelici and Halbert (2017), Klink and Denaldi (2014), and Klink and Stroher (2017) argue that the status of financialization in Brazil is related with its financial market's size, which these authors claim to be small.

However, how exactly this financialization occurs still calls for an in-depth analysis of topics such as securitized real estate debt and property ownership FPI, such as REITs. This instrument is often used by institutional investors around the world once they offer liquidity and numeric figures, enabling the comparison of real estate with other asset classes. Institutional investors are companies or organizations investing on behalf of other people, such as mutual funds, pension funds and insurance companies. They have become important actors in global finance (Clark 2000; Theurillat et al 2008; Dixon and Monk 2009), and their impact on governance and ability to influence businesses and their managers, including in the real estate sector, are often highlighted by scholars (Mcgreal et al 2000; Theurillat et al 2008; Weber 2015; van Loon and Aalbers 2017). Some urban financialization studies highlight that, since 1990s, pension funds assumed a relevant role as real estate market player around the world (Theurillat et al 2008 and 2010; French et al 2011; van Loon and Aalbers 2017). Real estate investment strategies started treating real estate as just another asset class, as explained by van Loon and Aalbers (2017). In this sense, their management target is to combine future liability, risk minimization, and optimal asset performance. Brazilian scholars also report that pension funds, as well as REIT companies, have a salient role both in real estate market dynamics and influencing large scale urban development projects (Fix 2009; Santoro and Rolnik 2017; Stroher 2018; Shimbo and Rufino 2019).

Thus, the geographic patterns of institutional investors are a relevant object of critical analysis, in order to better understand the development of financialization of urban built environment, especially in world regions out of Anglo-American axes.

3.1.1.2 PENSION FUNDS AND REAL ESTATE INVESTMENT TRUSTS: A PRESENTATION

Funds are also important to understand the progression of urban financialization in Brazil. In 2018, a change in regulations suspended the direct acquisition of property through pension funds until 2030. This fact alone led to a change in investment behaviour. Until then, real estate properties were acquired directly, and their fate decided by the pension fund managers. From then on, REITs became a mediator between pension funds and real estate assets, creating an interesting situation in which an investment vehicle needs to make use of another investment vehicle.

The new legislation (RCMN 4661/2018) also changed the limit of investment – while pension funds could only have 8% of their portfolio allocated to direct real estate acquisition, they now are allowed to go up to 20%, but indirectly – through real estate investment trusts (Estadão Conteúdo 2018; House of Representatives 2018). Therefore, it can be said that 2018 constituted a turning point for financialization in Brazil, with investment allocated to real estate assets increasing, and thus urban financialization garnering more interest, to the point of managers and developers involved in these funds influencing decision-making and thus urban space. Although not addressed in this thesis, the use of REITs seems to be permeating not only the Brazilian financial market modus operandi but government as well. As an example, the State of São Paulo recently created its own state REIT (State Law 16388/2016) as an instrument to pool, manage and explore the state's property to be sold.

Based on the presented above, the study of these instruments is essential to this work. It is important to study this type of fund in order to understand financialization characteristics and patterns - specifically in what concerns the territorial distribution of investments and the patterns of ownership, such as the type of rent acquisition and type of real estate property. As this thesis research how financialization, under urban development and governance perspective, occurs through real estate development, one needs to take some steps backwards. When studying urban planning instruments and their interaction with instruments from financial sector, before going any deeper into this analysis, it is crucial cover the basics of financial sector. Thus, to study financialization, the following questions

need to be clarified, namely what financial institutions, asset management and pension funds actually are in the first place, what is meant by channels of investments, how Real Estate Investment Trusts are defined and used, and how real estate property assets are classified by management companies.

FINANCIAL INSTITUTIONS AND ASSET MANAGEMENT

As Theurillat et al (2010, 189) mention, "The actions of property market players are widely responsible for the way the built environment develops and evolves." In the contemporary structure of global capitalism, property market players frequently coincide with large-scale institutional investors or other financial institution and their role as investment vehicles representatives. In the book "Institutional Investors", Davis and Steill (2001, 1) underline that:

> *"Undoubtedly one of the most important developments in financial markets in recent years has been the "institutionalization of saving"[28] associated with the growth of pension funds, life insurance companies and mutual funds. This has entailed an increasing proportion of household saving being managed by professional portfolio managers instead of being directly invested in the securities markets, on the one hand, or held in the form of bank deposits, on the other."*

Davis and Steill (2001) point to two aspects: institutional investment and asset management (or fund management). Although these aspects often appear as one pack, the authors emphasize that they are distinct. Davis and Steill (2001,1) define institutional investors as "specialized financial institutions which manage savings collectively on behalf of small investors, towards a specific objective in terms of acceptable risk, return-maximization and maturity of claims." In turn, "asset management defines the process whereby assets collected by institutional investors are actually invested in the capital markets" (Davis and Steill 2001,1). However, the authors underline the fact that, in legal sense, asset management can be or not be part of the institutional investor. This is since management of their assets can be either internal or external to the institution. This piece of information is helpful to understand the distinct roles some financial institutions can assume when managing their investments and their assets, which also applies for the real estate assets. This can be seen described in many financialization research which point

[28] For more about 'institutionalization of saving', the development and performance of institutional investors, the industry of asset management, its implications for the financial sector and economy, and institutional trading, see Davis and Steill (2001).

financial institutions, like pension funds and REITs, managing their real estate assets internally and externally. But what else do we know about pension funds and REITs?

Both pension funds and REIT are pooled investment vehicles, meaning that multiple investors pool their capital to gain specific advantages aiming positive returns which they would be unable to have as individual investors. These advantages are mainly related to tax exemptions and capital distribution to shareholders. In spite some similarities their structures differ. While pension funds can have distinct types of assets in their portfolio, including property assets, Real Estate Investment Trusts are fundamentally composed by investments in assets of property sector. Once these institutions are property market players, recalling Theurillat et al. (2010, 189) quotation above, the way how such financial institutions deal with their portfolio will reflect on the way the built environment develops and evolves.

PENSION FUNDS

Pension fund are pools of savings gathered during the professional lifetime of individuals and meant to provide retirement income. At any point of its timeline, a pension fund equals the sum of the flow of employer and employee contributions, investment income, and eventual benefits paid to its members. The definition of pension funds varies according to each country's specific pension plan[29] arrangement, legal systems, traditions, and labour market structures. Since each country has different regulatory structures for pension supervision, the adopted models may also differ. This is related to the development stage of pension sector and institutional arrangements for pension provision as well as each country historical and cultural circumstances (Davis 1993; Queisser 1998; Impavido 2012). Different types of pension firms are typically the entities involved in the governance of pension arrangements: the pension plan or fund manager, the custodian, and the external auditors. Basically, the pension managers are the ones making decisions regarding the fund's assets, in which, how or where to invest, and the custodian and the external auditors have more supervising and monitoring tasks[30] (Impavido 2012). Pension funds comprise

[29] A pension plan is not the same as a pension fund. As Impavido (2012, 524) explains, "Pension plans, or schemes, are the legally binding contracts that allow individuals to save with the explicit objective of financing consumption during retirement."

[30] For more about the distinction among pension 'plans', 'funds', and 'firms' or further details about them consult Impavido (2012, from 523 to 526).

significant amounts of money around the world. According to Impavido (2012), in the 13 largest pension markets in the world[31], which includes Brazil, pension fund assets have reached 70% of average GDP or nearly US$23 trillion. A significative amount of pension funds portfolio is invested in assets from the property sector, for instance, between 1992 and 2004, 15% of Swiss pension funds capital was invested in property (Theurillat et al 2010). Real estate assets are a common acquisition amidst the assets acquired through pension funds.

CHANNELS OF INVESTMENTS: FINANCIALIZED AND NON-FINANCIALIZED ONES

As Theurillat et al (2010) highlight, property assets can be acquired through two channels of investment. One is named as traditional or direct, meaning that property investments are made directly by the pension funds as well as its management. In other words, a fund holds the property rights and is responsible for the operationality of its real estate investments. This is a non-financialized channel of investment, and its decision-making process is made either by an in-house team or by specialists contracted directly by the pension fund.

The other channel is known as indirect or financialized. The investments are made through a collective property investment vehicle. As a characteristic, investments are made indirectly and through a delegated management, which means that property rights and management are granted to the investment vehicle. In this case, pension funds act as common investors, passing all property management responsibility to another institution. Thus, as Theurillat et al (2010) emphasize, pension fund decisions are equivalent to any other financial investor; financialization allows spaces, projects, and players to be compared, but makes the relationship between the capital holder and the real investor distant and opaque. To van Loon and Aalbers (2017) the conversion from property direct ownership into real estate shares, in form of fictitious capital, removes the relations between the investors and the geographies in which their investments are located in. This financialized approach towards property assets is not exclusive pattern of pension funds, but a general pattern of financial investors when adopting their channel of investments.

[31] Australia, Brazil, Canada, France, Germany, Hong Kong, Ireland, Japan, Netherlands, South Africa, Switzerland, the United Kingdom, and the United States.

REAL ESTATE INVESTMENT TRUSTS (REITS)

A Real Estate Investment Trust, commonly known as REIT, is a corporation which owns, operates, or finances income-generating real estate. Being an investment vehicle, these companies pool the capital of numerous investors and enable an individual investor to earn dividends from a real estate asset without directly owning, operating, or financing it. REIT shares enable investors to see real estate as a way to invest in property but as an asset class which can be compared to others in their portfolio. It targets returns and diversification goals as well as investment liquidity characteristics (Corgel et al 1995; Zietz et al 2003; Liu 2010; Feng et al 2011).

REITs have evolved since their creation in 1960 in the United States, expanding to other parts of North and South America, Europe, Africa, and Asia. According to National Association of Real Estate Investment Trusts, NAREIT (2019), REITs are in place currently in 39 countries. Davidow's (2014) analysis based on the FTSE EPRA/NAREIT Global Index (Figures 5 and 6) give us a general parameter of REITs' markets through the percentual of investment allocation until 2014. Around 60% of REITs investments are concentrated in real estate holding and development (23,40%), retail properties (19.89%), and office properties (17.59%). Regarding the allocation of REITs investment by country, the United States lead with 44.91% of total investments worldwide, a considerable gap if compared with the following country (Japan with 11.78%). In terms of corporate governance, although the regulations to qualify a corporation as REIT are particular of each country, they follow similar rules. Basically, a REIT firm pay less on corporation tax and capital gains tax, but to be qualified as REIT they need to meet certain regulatory requirements dictated by each country legal system (Liu 2010; Feng et al 2011). Tradition and the market share prominence of North American REITs place them on a position of reference, leading to evident similarities in other countries.

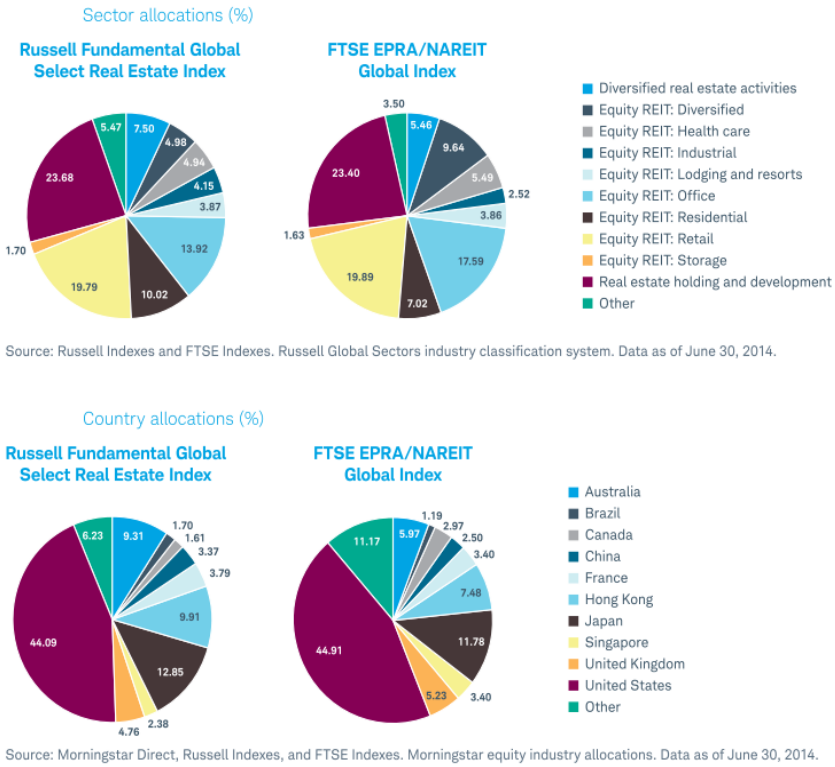


Figure 5 - REIT global overview: sector allocations (%) and country allocations (%) (Davidow 2014)

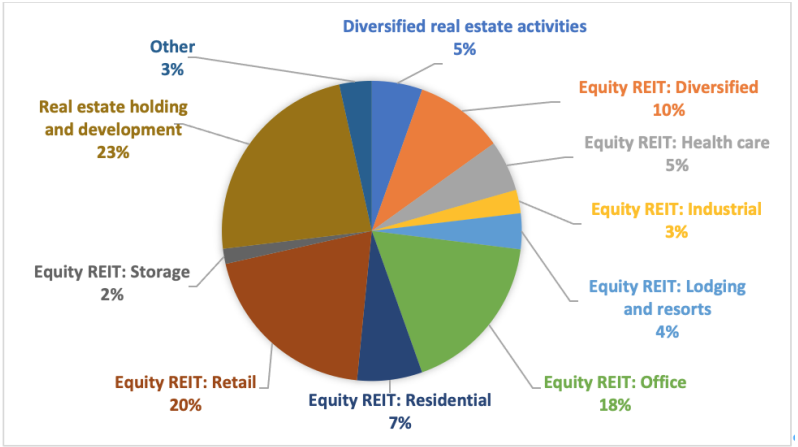


Figure 6 - Sector Allocations (%) based on FTSE EPRA/NAREIT Global Index (Davidow, 2014)

Based on the US regulations, Liu (2010) proposes to divide them in four categories of requirements: 'distribution', 'asset', 'income', and 'ownership'. The first is regarding the distribution of 90% of REIT's annual taxable income to shareholders as dividends. The second requirement is that 75% of value of REIT's assets must comprise real estate properties, mortgages, cash, and government securities. The income category requires that at least 75% of REIT's gross income is generated from real estate income (rents, mortgage, other REIT holdings dividends, and sales). The ownership category requires that a REIT

corporation is not closely held. Their shares must be transferable and held by one hundred individuals at least. In addition, no more than 50% of its shares must be held by five or less shareholders. These categories provide us a greater idea on what is required from a firm to qualify as REIT once the differences between the US regulations and other countries are mainly regarding the percentages and not on the objects abovementioned.

According to Liu (2010), there are three categories of REITs: 'equity', 'mortgage', and 'hybrid'; the first two are also popularly called 'brick' and 'paper' by the capital market. The equity (brick) REITs invest directly on real estate physical assets - for instance, multifamily, industrial, hotel, office, retail, or other property types. The mortgage (paper) REITs invest in or lend to mortgage or mortgage-backed securities. The hybrid type is a combination of both equity/brick and mortgage/paper type. It is interesting to note that, similarly to pension funds, REIT managing staff increase the distance from the physical asset when investing in shares of other REIT firm or mortgage securities, thus transferring their responsibilities, and making their decisions based in numbers.

This detachment between the investor and the built environment, prioritizing asset liquidity and no longer exercising control over it, is a feature recurrently highlighted by many scholars specialized either in real estate (Corgel et al 1995; Zietz et al 2003; Henneberry and Roberts 2008; Liu 2010; Feng et al 2011) or in both urban and geographies of financialization (Attuyer et al 2012; Sanfelici and Halbert 2017; van Loon and Aalbers 2017; Waldron 2018; Wijburg 2019; Aveline-Dubach 2020). The information and classifications that financial institutions use to manage their property assets is also a feature often highlighted by these financialization scholars. This topic will be clarified in the next section.

3.1.1.3 FUNDS IN BRAZIL: A CONTEXTUALIZATION

BRAZILIAN PENSION FUNDS

In Brazil, pension firms are technically known as Closed Complementary Welfare Entities[32]. According to the Brazilian Association of Private Pension (Abrapp)[33] statistics report

[32] Entidades Fechadas de Previdência Complementar (EFPC), in Brazilian Portuguese.

[33] In Brazilian Portuguese, known as Associação Brasileira de Previdência Privada (ABRAPP).

(Abrapp, Sindapp 2019), in December 2019 they comprised 248 entities, holding on their portfolio R$986 billion, which represents 13,6% of the Brazilian GDP for the same year (Figure 7). This number tends to grow (Pacheco 2019).

A modality which extends the participation of the household on pension funds is being supported by Abrapp, aiming to enlarge the number of pensioners in Brazil. In 2019, around R$36 billion, or 3,8% of the total Brazilian pension funds' portfolio, were assigned to property assets, while 3,4% were held in directly owned property, 0.3% in REITs, and 0.1% in property financing (Figures 8 and 9). Making use of Theurillat et al (2010) definition, 3.4% of property ownership belongs to direct channels of investment and 0.3% to the financialized one. From 2018 on, this proportion tends to change due to a new national normative, RCMN 4661/2018, which revoked the previous one, RCMN 3792/2009. As explained in the next section, this law has banned direct ownership, prioritizing instead the financialized channel of investment.

According to van Loon and Aalbers (2017), there are works who translate financial goals into the built environment (O'Neil 2013; Weber 2015; Savini and Aalbers 2016; Halbert and Attuyer 2016); however, they do not contribute much towards an understanding of how these financial goals have come to dominate the real estate investment strategies and how this affects the built environment. Nevertheless, they analyse institutional investors, showing the effects of financialized real estate investment strategies (Hennebery and Roberts 2008) and how and why this process takes place (Corpataux et al 2009, Theurillat 2009, and Theurillat et al 2010 and 2016).

Stroher (2018) underlines that the Faria Lima and Água Espraiada UPOs has foundations on a municipal and private actor's coalition, which included construction companies, contractors, developers, and pension funds. Both Fix (2009) and Stroher (2018) agree that the main target of such projects was to build new luxurious centralities in an area which concentrates a major part of city investments. Fix (2009) stresses that from 1990 on a wave of real estate product was delivered, being some funded by big national pension funds through REITs. According to Stroher (2018), the area where Faria Lima and Água Espraiada UPOs is where a major part of REITs properties in São Paulo concentrates, this author is based in a study presented by Santoro and Rolnik (2017).

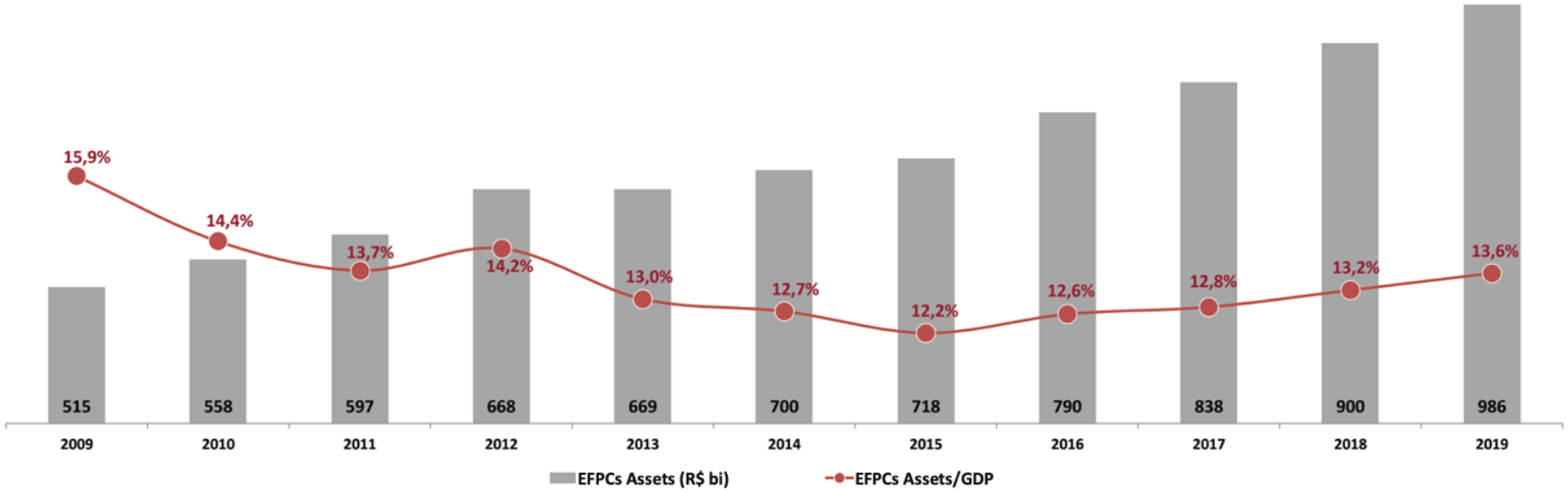


Figure 7 - Evolution of pension fund assets vs Brazilian GDP percentage (in 'Consolidado Estatístico', ABRAPP, Sindap 2019)

Note: assets include 'available + realizable + permanent'; GDP for Q1, Q2, Q3 and Q4/2019

Discrimination	2012	%	2013	%	2014	%	2015	%	2016	%	2017	%	2018	%	2019	%
Fixed Income Fund	396.046	61,7%	386.773	60,4%	431.140	64,2%	483.907	70,7%	546.764	72,4%	592.735	73,6%	635.113	73,4%	692.121	72,9%
Public certificates	98.639	15,4%	67.446	10,5%	83.351	12,4%	105.949	15,5%	131.273	17,4%	142.564	17,7%	155.420	18,0%	157.503	16,6%
Private loans and deposits	32.619	5,1%	26.672	4,2%	27.099	4,0%	24.473	3,6%	23.843	3,2%	21.341	2,7%	17.897	2,1%	19.063	2,0%
SPE	213	0,0%	186	0,0%	160	0,0%	142	0,0%	139	0,0%	130	0,0%	84	0,0%	73	0,0%
Investment Funds – RF[1]	264.575	41,2%	292.469	45,7%	320.530	47,7%	353.344	51,6%	391.508	51,8%	428.700	53,3%	461.712	53,4%	515.482	54,3%
Variable Income Fund	183.621	28,6%	185.755	29,0%	166.267	24,7%	126.869	18,5%	137.014	18,1%	142.703	17,7%	159.742	18,5%	186.531	19,6%
Shares	89.404	13,9%	84.213	13,2%	77.026	11,5%	58.445	8,5%	71.536	9,5%	66.706	8,3%	62.999	7,3%	74.668	7,9%
Investment Funds – RV[2]	94.217	14,7%	101.542	15,9%	89.241	13,3%	68.425	10,0%	65.478	8,7%	75.997	9,4%	96.743	11,2%	111.862	11,8%
Structured investments	17.282	2,7%	19.355	3,0%	22.467	3,3%	19.706	2,9%	16.574	2,2%	13.116	1,6%	12.613	1,5%	12.756	1,3%
Start-up companies	359	0,1%	346	0,1%	304	0,0%	258	0,0%	326	0,0%	340	0,0%	234	0,0%	207	0,0%
Shareholdings	15.016	2,3%	16.819	2,6%	19.546	2,9%	17.422	2,5%	14.342	1,9%	10.963	1,4%	10.575	1,2%	10.122	1,1%
Real estate fund	1.908	0,3%	2.191	0,3%	2.617	0,4%	2.026	0,3%	1.906	0,3%	1.813	0,2%	1.803	0,2%	2.427	0,3%
Real estate	25.811	4,0%	28.988	4,5%	31.450	4,7%	32.798	4,8%	32.485	4,3%	31.740	3,9%	32.100	3,7%	32.061	3,4%
Transactions with stakeholders	16.352	2,5%	17.291	2,7%	18.705	2,8%	19.423	2,8%	19.969	2,6%	20.105	2,5%	21.019	2,4%	21.220	2,2%
Loans to stakeholders	14.593	2,3%	15.685	2,4%	17.217	2,6%	17.950	2,6%	18.546	2,5%	18.746	2,3%	19.632	2,3%	19.882	2,1%
Real estate financing	1.760	0,3%	1.606	0,3%	1.488	0,2%	1.473	0,2%	1.424	0,2%	1.360	0,2%	1.387	0,2%	1.338	0,1%
Others[3]	2.613	0,4%	2.165	0,3%	1.901	0,3%	2.213	0,3%	2.289	0,3%	4.405	0,5%	4.605	0,5%	5.263	0,6%
Total	641.725	100,0%	640.328	100,0%	672.054	100,0%	684.916	100,0%	755.096	100,0%	804.803	100,0%	865.191	100,0%	949.953	100,0%

Figure 8 - Consolidated portfolio by type of investment (in 'Consolidado Estatístico', Abrapp, Sindapp 2019)

Notes: 1) Includes Short Term, Referenced, Fixed Income, Multimarket and Funds of Credit Rights; 2) Includes Stocks and Market Index; 3) Includes Foreign Exchange, Foreign Debt, Shares - Publicly Traded Companies - Overseas, Other Realizables, Derivatives, Other.

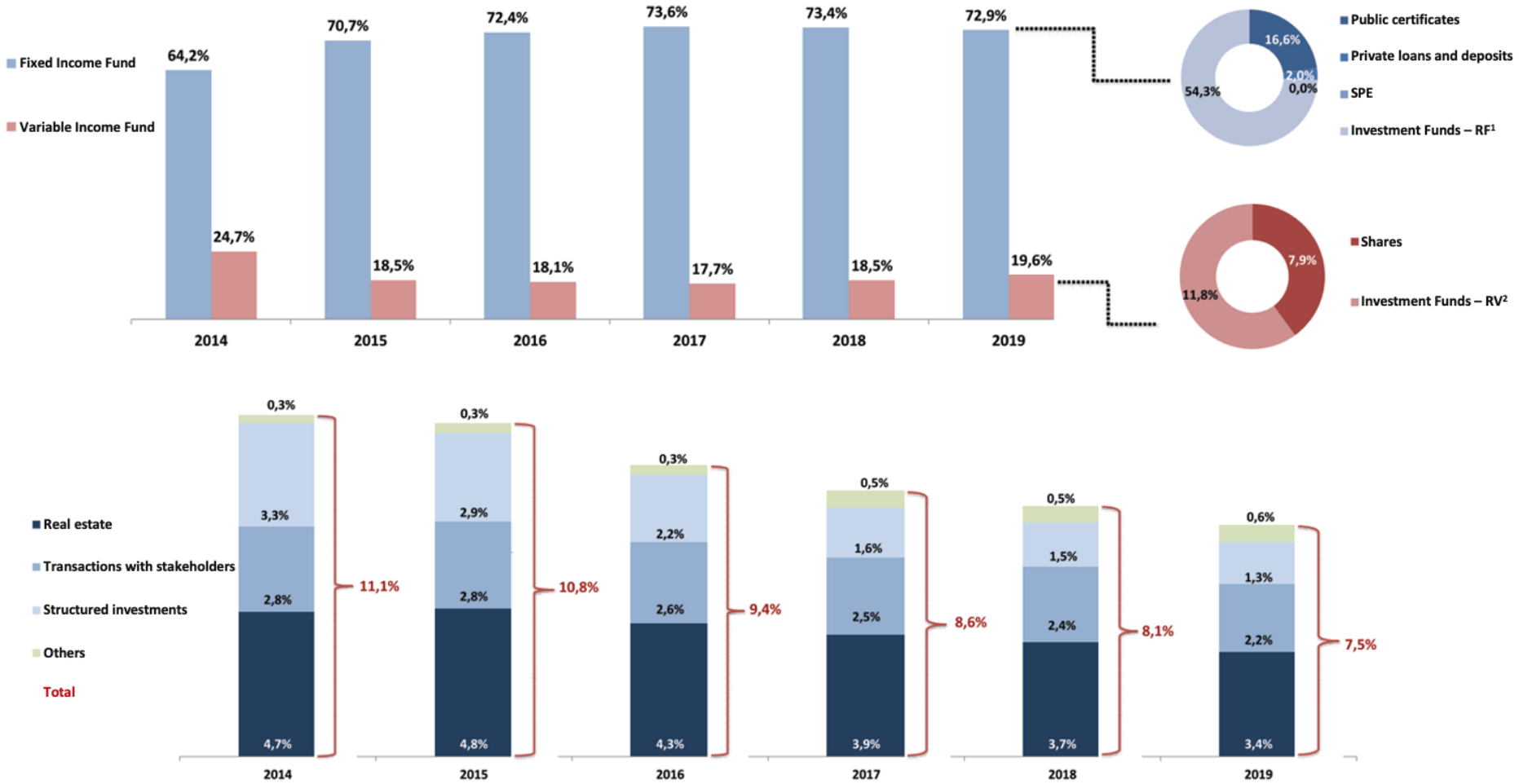


Figure 9 - Evolution of assets per type of investment (in "Consolidado Estatístico", ABRAPP, Sindap 2019)

GUARANTEE FUND FOR TIME OF SERVICE (FGTS)

Royer's (2016) article researches the relationships between the Guarantee Fund for Time of Service (*Fundo de Garantia por Tempo de Serviço* – FGTS) and real estate-based securities from the perspective of financialization. The author highlights the importance of the use of resources from parafiscal funds, namely the Brazilian System of Savings and Loans (SBPE) and the FGTS, for the debate on financing urban development in Brazil [34]. Royer (2016) places special emphasis on the FGTS since the fund has recently undergone changes in its investment strategies. Historically, the resources from the FGTS have played an important role in providing access to housing credit for low- and middle-income families. In addition, the fund has been an important resource for investments in urban infrastructure. However, Royer (2016) emphasizes that since 2011, due to regulatory changes, the fund began to direct its resources also to the real estate-based securities market in Brazil.

Created in the 1960s, the FGTS was constituted as an alternative to employment stability, until then mandatory in Brazil, as well as a possible funding resource solution for part of the country's urban infrastructure. It was a financing solution for the construction sector, a problematic issue on the agenda at the time. It should be noted that (Royer 2016, 36), "the FGTS is a financial fund formed by the monthly contribution of employers to their employees by depositing 8% of wages in a linked account, private in nature and under public management, forming a compulsory savings of the worker that the employer collects at source". As Mosciaro and Aalbers (2017) argue, the FGTS is an instrument comparable to an asset-based welfare policy, based on the relocation of social responsibilities from the state to its citizens.

TURNING POINT TOWARDS REITS

Until 2018, in terms of investments on property sector, Brazilian pension funds had two choices. First, they could directly own properties, being responsible for their management which would be part of their portfolio. As mentioned above, this option required professionals with specific expertise of property markets in the pension fund team. The second option would be to invest in investment vehicles, such as REITs, or REITs' shares, certificates of real estate receivable (certificados de recebíveis imobiliários – CRIs), or real estate credit notes (cédulas de crédito imobiliário – CCIs). In this second option the pension fund would assume the position of mere

[34] For a historical approach on the development of the housing finance system in Brazil see Royer (2016, 35-38) and Sanfelici (2020, 130-133).

investor, making comparisons with other financial assets and seeking for diversification in relation to risk and liquidity.

Historically, Brazilian pension funds has dedicated 3% to 5% of its portfolio to the acquisition of directly owned properties, bellow the limit of 8% established by regulator entity. In 2016 four of Brazilian major pension funds were involved in a corruption scandal. Known as Greenfield Operation and carried by the Federal Police and Public Federal Ministry, the investigation focused on money embezzlement by pension funds and public and private banks (Ministério Público Federal 2016). This fact led to the change of the national normative (Resolução do Conselho Monetário Nacional, or RCMN, nº4661/2018) regarding pension funds managing rules in 2018. According to Brazilian House of Representatives (2018), these measures were taken aiming for more transparency, management expertise and accountability, better management, and less political-partisan influence in the decision-making process.

These changes have raised the participation of pension funds in property sector from 8% to 20%. This percentage increase is justified by the following: in the former normative, RCMN 3792/2009, real estate assets belonged to a category named as 'property'. Once this category was extinct by RCMN 4661/2018, it proceeded to be called a 'real estate sector', and is now composed of REITs, shares, certificates of real estate receivable (*certificados de recebíveis imobiliários* – CRIs), and real estate credit notes (*cédulas de crédito imobiliário* – CCIs). These have migrated from the 'structured investments' category, where they were previously placed. Thus, 8% were extended to 20%, now including both the real estate assets to be sold or converted to REIT, previously placed under 'property' category, and the existing REITs investments. However, regarding investments in this sector, two relevant novelties were brought forth by such normative changes of pension funds property patterns, in light of urban financialization: the traditional channel of investment, direct ownership, was banned and all current assets in portfolio need to be sold or pooled into a REIT portfolio until 2030; furthermore, the only allowed channel of investment for real estate assets is the financialized one, owned though shares of investment vehicles, financial titles such as REIT, CRI, or CCI. Thus, REITs turned into an essential instrument for pension funds.

Brazilian Real Estate Investment Trusts (REITs)

The Brazilian version of REIT is known as Real Estate Investment Funds (*Fundos de Investimento Imobiliário* – FIIs) and was set in 1993 (Law 8668/1993). According to B3, in 2020 there were 311 FIIs listed, with the number of investors growing quickly. Figure 10 presented by Sanfelici and Halbert (2017) corroborate this comment by showing the growth evolution of both number of FIIs listed on Brazilian stock market and the size of their portfolio. As Gómez (2020) underlines, a decade ago FII counted on 20 thousand investors. In 2018, this number grew to 208 thousand,

in 2019 to 957 thousand, and in July 2020 B3 declared that FIIs had 957 thousand investors. From this universe, 952.435 were private individuals. This data supports the point made by Davidow (2014) and AMBIMA (2015): until 2014, just a few FIIs were driven to qualified financial investors, as their majority (77%) was intended for the general public. However, as Sanfelici and Halbert (2017) stress, these characteristics are also related to FIIs' historical background.

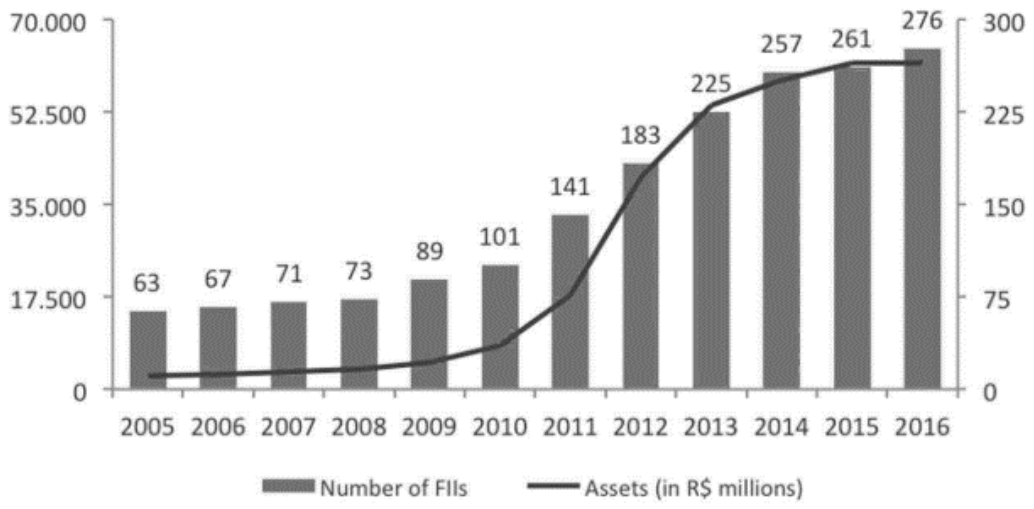


Figure 10 - Number of FIIs and value of property assets (data source: CVM, in Sanfelici and Halbert 2017)

Although if compared to the North American this background is small, in less than two decades it has faced a rapid growth. As Sanfelici and Halbert (2017) explain, FIIs were created in a context of state companies' privatization, liberalization of trade and deregulation of international financial transactions. Inspired by North American and European initiatives under similar claim, to attract foreign investors and to enhance Brazilian financial markets. Despite similarities with US REITs, the main differences when comparing them to FIIs concern their corporate governance. A property investment vehicle, when qualified as FII, has its shares traded in the stock market or secondary market. As Reis (2018) underlines, while REITs function as an enterprise, FIIs are corporately organised as a fund management company.

In this section, topics of financial market which concern financialization and financial intermediation are again emphasized: the role of institutional investors and their role as investment vehicles in urban development. The reason for this emphasis is that financial institutions are frequently highlighted in financialization processes due to their participation in both the property sector (Theurillat et al. 2010, Aveline-Dubach 2020) and on the transformation

of real estate into 'just another asset class'' (van Loon and Aalbers 2017). Theurillat and Crevoisier (2013) and Guironnet and Halbert (2014) also highlight the role of financial institutions such institutional investors, as pension funds and insurers, or other investment institutions, as REITs. These works underline the way how financial institutions deal with the management of real estate assets in their portfolios, especially in large-scale urban development projects. In this sense, from both financialization (Fix 2003, 2009, 2011, Weber 2010; Theurilat 2010; Guironnet and Halbert 2014; Theurillat et al 2016; Aveline-Dubach 2020) and non-financialization perspective (Hagerman et al 2005; Saruê 2016, 2018), pension funds and REITs are often mentioned as important players with a role in designing and implementing projects like large-scale urban development ones. Thus, to know what financial institutions are and which relations they stablish with real estate as investors and as portfolio management, it is important to grasp the nuances of financialization processes. As Davis and Steill (2001) underline, pension funds are long-term institutional investors with a large share of tradable assets in their portfolios.

3.1.1.4 DESCRIPTION OF DATABASE COMPILATION AND ANALYSIS

An in-depth analysis of Brazilian REIT development in 2018 is undertaken in this work. The choice of REITs as object of analysis was based on guidelines given by academic works, which analyse the geographies of finance and their impact when financializing a given space. They underline the relevance of financial institutions like REITs and institutional investors in processes of urban financialization (see Weber 2010, 2015, 2016 and Guironnet and Halbert 2014 for international perspective and Sanfelici and Halbert 2014, 2018 for Brazilian contextualization). In short, these authors highlight that when such financial institutions act as real estate players, their decisions take into account aspects like the asset land use, its location, and financial features.

This information was the foundation of this work's choice of categories, to be analysed in both REIT and pension fund data. The work of Sanfelici and Halbert (2017), which unveiled some features of Brazilian REITs based on data available in 2015 on both regulator website, legislation, academic and grey literature, was also considered. The authors used similar guidelines to design their research. In 2018, Daniel Sanfelici also shared his experience and research challenges as well as the database produced to build their article (Sanfelici and Halbert 2018), which demonstrates how Brazilian REITs has evolved and territorially chanelled their property investments in 2015.

This material helped frame some parts of the data collection and served to spot possible challenges in advance, giving space of manoeuvre to adjustments in order to achieve the goals of

this work. When analysing Brazilian REITs, this work is very much a continuation of Sanfelici and Halbert (2017). Nevertheless, some criteria were expanded in order to refine the analysis, towards meeting the research question proposed in this work.

This same framework was considered in the pension funds analysis. However, the pension funds analysis was lacking in light of Brazilian financialization, and material from 2006 to 2018 had to be included, enlarging the period of analysis. This provided a greater panorama of Brazilian pension funds' patterns and development during this period. Pension funds were brough to this research for two reasons: their relevance as a real estate market player and changes on their regulatory mark (Resolução do Conselho Monetário Nacional nº4661/2018). These changes forbid Brazilian pension funds to directly own real estate assets, requiring them to get rid of their current assets or migrate them all to REITs until 2030. The pension funds are recurrently pointed as relevant real estate market actors and in financialization processes by international literature (Theurillat et al 2008, 2010; Weber 2015; van Loon and Aalbers 2017), yet only a few works are exclusively directed to them (Theurillat et al 2008 and 2010). Additionally, Brazilian scholars often underline the pension funds relevance in some cases of Urban Partnership Operations design and their role influencing local real estate market (Fix 2003, 2009; Stroher 2018). Thus, an in-depth analysis of Brazilian pension funds and its real estate asset portfolio is appropriate and possibly complementary to the REIT data overview.

In order to look into the particularities of pension funds, data was collected through a request, using the Law of Transparency (Lei nº12527/ 2011), to the Superintendência Nacional de Previdência Complementar - PREVIC, the Brazilian regulatory entity for pension funds. To trace the development and geographical patterns of Brazilian pension funds' investments into property sector assets, complete physical addresses were essential. This information, in PREVIC's database, was incomplete and fragmented, which means that the first step of research was to complete and restructure it. This was the only way to identify, using the data provided by PREVIC, the real estate properties in pension funds' portfolios located in Brazil and in the three cities of these case studies. Such information was also crucial to understand if the UPOs had, throughout the years, the potential to cluster pension funds investments inside their perimeter.

Additionally, this task was essential to unveil how pension funds have evolved, channeled their investments, managed their real estate assets in their portfolios, or were financialized. To grasp their operation in real estate markets, it was crucial to understand how they were developing their portfolio and their asset preferences through the years and detect any change on strategies of investment during its growth. Furthermore, considering the regulatory changes enacted by RCMN 4661/2018, by identifying the assets in pension funds' portfolios it was possible to foresee REIT growth trends for the next decade. This allowed us to verify if there is an increasing

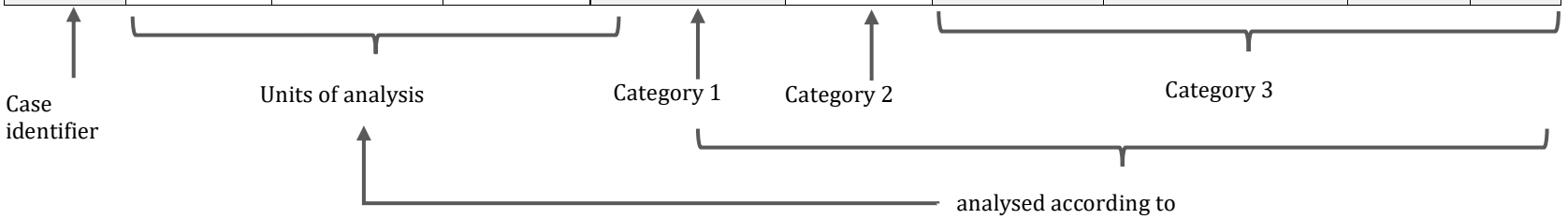
financialization process in Brazil and how it is happening under the perspective of urban, and rural, built environment. Considering that this research aims to unveil how financialization processes are taking place in Brazil, these factors are important to answer **hypothesis 1** of this thesis: Recent regulatory changes which limit institutions, such as pension funds, when investing in real estate assets through REITs are a sign of increasing state-fostered financialization.

Through this restructuring, two products were obtained. The first is a database of physical property assets which are included in the portfolio of different Brazilian pension funds. Each entry pertains to a different physical asset, which means that one same pension fund might be represented through several different entries. Data was provided for December of 2006 to 2017, and September of 2018. The database did not include the identities of the pension fund owners. It rather contained the type of real estate, type of rent acquisition, the property value rate (in R$) of the investment for each physical asset, the postal code (CEP) with incomplete and disjointed location data. This information was organized as shows Table 5. In addition to this information, to compose the final database of property sector assets registered in Brazilian pension fund's portfolio was used a post code tracking spreadsheet[35] which consult data directly in the Brazilian post official website. This tool helped to speed up the tracking process of street and city names, yet not all the data were completed by such. Thus, was made a cross check through Google Maps for each address which eventually presented inconsistencies or was still incomplete. A wide range of addresses were also checked on Google Maps to identify if the property use declared by the pension funds were compatible with the reality. After that, the final database contained most of the addresses complete or, at least, the city where it is located. As a result of this extensive work, from the 161,024.00 property assets declared to PREVIC from 2006 to 2018 the location of only 1,24% remained unidentified. A sample of this final database can be seen bellow, in Table 5. It is important to highlight that this database structure was also applied to the REIT data collected and will be further detailed in this section. To follow the same design was crucial for comparing both data as shown in sections 3.2.1.2 and 3.2.1.3.

[35] This spreadsheet was bought in January 2019 from a Brazilian online company named "Guia do Excel". Further description of the tool which can be found in https://www.guiadoexcel.com.br/planilha-rastreamento-correios-e-consulta-cep-3-0/

Table 5 - Sample of structured database listing the property sector assets registered in both Brazilian pension fund's portfolio from 2006 to 2018 and REIT in 2018 (own authorship)

Database organization									
ID	**Units of analysis**			**Categories of analysis**					
Asset Name	Date	Property Value Rate (R$)	Area ('m²') [36]	Source of Income	Property Use	Location			
						Postal Code	Address	City	State
Birmann 20	200612	R$63,438.84		Rent/ Rev. management	Commerce	4795000	Av. Nações Unidas, 17891, Vl. Almeida	São Paulo	SP
'Null'	200612	R$476,009.09		Private use	Commerce	20040030	Rua do Ouvidor, 121, Centro	Rio de Janeiro	RJ
Internacional Trade Mart	200612	R$7.091,975.68		REIT	Shopping	5307190	Av. Eng. Roberto Zuccolo, 555, Jd. Humaitá	São Paulo	SP
Cond. Resid. Europa	200712	R$61,400.72		Development	Residential	91215089	R. Marina Sirângelo Castello, 54, Jd. Itu	Porto Alegre	RS



[36] The unit of analysis 'area' was only filled in regarding the REIT assets once this information was lacking in the pension funds original database.

Both databases were organized according to three main groups: case identifier, units of analysis, and categories of analysis. In the pension funds database, the 'case identifier' contains the asset name provided by the pension fund to PREVIC or completed when possible, according to the other available information. The REIT data followed the same logic, yet its information was collected from distinct sources, such as the B3[37] website and REIT analytics and search engines[38]. The B3 website has shown to be very unstable and often out of service during this research; thus, the REIT search engines available were the most important resource of the two. In an interview with one of these websites' owner, namely Clube do FII, it was learned that their available data is collected directly from B3 through algorithms, and then reviewed, organized, and made available to their customers. Clube do FII kindly provided the REITs information of 2018 already semi-customized to attend the needs of this research, which helped speed up the analysis. This information was later verified and complemented by crossing it with the data available at B3, namely REIT management and annual and quarterly reports, to ensure that the data matched what was available from the official entity.

In terms of database organization, the 'units of analysis' group are composed of the 'date', applied as 'year', and 'property value rate', applied as 'R$'. In the case of pension funds, data remain exactly as provided by PREVIC. In the case of REITs, data was organized according to the reports available on B3 and respective search engines. The 'categories of analysis' group contain the 'source of income' category (1), 'property use' category (2), and 'location data' category (3). Category 1 suffered minor changes from the original database and official reports and was organized as shown by Table 6. However, category 2 and 3 called for additional work as shown in Tables 7 and 8, followed by the description and justification of analysis choices in attending to research goals. The group 'categories of analysis' was analysed according to the units of analysis, namely date and property value rate.

[37] As described in its official website (http://www.b3.com.br/pt_br/b3/institucional/), B3 is the name of a financial market institution and synonym with the Brazilian stock market. This institution is a fusion of two companies, BM&Bovespa and Cetip. All the transactions of the variable and fixed income markets go through B3 systems, which register transactions of assets and buying or selling trades pertaining to the financial market, as well as related processing data and custody.

[38] Investors on Brazilian REIT market count on several websites to aid in their portfolio decision-making, for instance the Fundsexplorer (https://www.fundsexplorer.com.br/), the Clube do FII (https://www.clubefii.com.br/), FIIs (https://fiis.com.br/), and so on. With the aid of algorithms, these websites gather and organize information available in the B3 website, offering REITs analytic reports, a clearer overview of its behaviour, and advantages and disadvantages of investments. They also provide information on the real estate assets and investment securities of each REIT and provide its reports of previous years.

Table 6 - Categories and types of rent acquisition and real estate property used to organize the database (own authorship)

Category 1: Source of Income	
Type	**Description**
Management	Income is acquired through management of property rent which consist in the revenue from the administration and rent of a pool of properties, excluding income payed through the REIT revenues.
REITs	Income is payed through the REIT revenues, which can be either from equity/brick, mortgage/paper, or hybrid type. As popularly called in the capital market they can be *brick*, *paper*, or *hybrid* fund types. The *brick* ones are based directly on physical asset direct management. The *paper* type is based in the management of credits/debts shares related to rent, ownership or development of a physical property asset. The *hybrid* type is a combination of both brick and paper type. This differs from the 'management' type because they are not managed directedly by the pension fund but by the REIT company. The same is valid in case of a REIT owning other REIT shares. This is to say that managers of REIT may decide to invest in shares from another REIT, thus, not directly owning the real estate asset. Summary, a REIT may sell shares of real estate assets, or securitized titles of asset debts, to investors such as pension funds or other REIT.
Private use	Income is acquired by deducting the rental costs from the fund's payroll.
Development	Income source through property development (return can be either from rent and management of future unities or from sale).
Unspecified	Source of income is unspecified by the pension fund or REITs to the regulator. It can be any of these types above, individually or a combination of them.

Table 7 - Channel of investment types used to organize the database (own authorship)

Category 2: Channel of Investment	
Type	**Description**
Non-financialized	In this channel of investment type, the real estate property asset in portfolio is operated and managed directely by the institution that owns it. Example: real estate property directly managed and owned by a pension fund.
Financialized	In this channel of investment type, the asset in a company portfolio is owned through an investment vehicle, being traded, and compared as any other asset class. It is to say that such assets are owned, operated, managed and traded by other institution, such as a REIT company, which pays dividends from the property yield to the shareholders.

In the original database, the addresses pertaining to category 3 contained only the postal code, the door number and complement. The assets street name, city and state were lacking. Thus, the mentioned 'Guia do Excel' spreadsheet was used as search engine to locate the lacking address information, street, city, and state. The asset name (case identifier) and full location data (category 3) were crossed with the property use data (category 2).

From this cross analysis, it was possible to phase out mistakes regarding property use in the PREVIC original database. The major category of property use in the original database was identified as 'commerce', which was quite generic. In an effort to detail it further, data between

categories 2, 3 and the case identifier was intersected, enabling the placement of assets in new categories such as 'social', 'financial', 'parking', 'logistics', 'educational', and 'entertainment'. Furthermore, subtypes for the commercial category type were created, such as 'unspecified' and 'retail', which can be either 'general retail' or 'supermarket'. The category 'shopping' was also placed here as a subtype of the commercial type. The original category 'hotel' was renamed as 'tourism' and some assets repositioned in the category 'entertainment', such as museums and thematic parks. Additionally, the original category 'industry' was split into 'industrial' and 'logistics', once it was understood that these assets accomplish distinct uses and fit into different economic activity sectors.

Thus, this task was an opportunity for taking a further step in determining these assets' property use. Reorganizing such categories helped portray how Brazilian pension funds are channeling their investments into real estate, throughout over one decade. This information also provides a scenario of how pension funds are used up until the regulatory changes (Resolução do Conselho Monetário Nacional nº4661/2018). As these changes affect pension funds' real estate asset ownership, this information is a starting point for a follow-up on either migration of these assets to REITs or their sale, expected to be happening from 2018 onwards.

In this sense, category 3 – 'property use' was organized as detailed on Table 8. Property use was sorted into types and subtypes, when applicable. Then, each was organized according to its respective economic activity sector. The category type commercial, subtype unspecified contains all the assets originally classified as 'commercial' which were not placed under the categories named supermarket, parking, financial, social, or education, which were only attributed to the assets explicitly named as such. These were split into its own individual category for the sake of finding the order of magnitude in such assets. The unspecified category may contain assets from office room to corporate spaces and convention centres, flats, and mixed uses. However, we were unable to identify these as it would require even more in-depth analysis on each asset. The category type 'office' present cases that were either originally identified as office or that we managed to identify as such. For this research task we consulted and crossed the information found between several sources. They consist in real estate specialized websites, consultancy reports, real estate brokers, real estate magazines, real estate search tools such as CBRE, Webescritorios, 123uol, Zapimoveis, Casamineira, or Buildings Magazine, AcesseCRE-Tool, Real Estate Lauching campaings, developers' websites and other websites concerned to real estate.

Due the high sum of asset name entries indicating similar land use we felt a need to split in exclusive categories 'finance', 'parking', 'social', and 'supermarket' to clarify its representativeness in financial sense.

Table 8 - Property use categories by economic activicties, types and sub-types used to organize database (own authorship)

Category 3: Property Use		
Type	**Subtype**	**Description**
economic activities: primary sector		
1S: Agricultural	_	Farms and rural areas which can be dedicated or not to agro-industrial production.
economic activities: secondary sector		
2S: Industrial	_	From industrial plans to energy, water, gas supply or waste treatment.
economic activities: tertiary sector		
3S: Commercial	Unspecified	Original classification which could not be further specified into other types or subtypes. That is to say, these assets may include any of the uses mentioned in this table, but the available information were not consistent enough to place them under other typification, thus, unspecified commercial activities.
	Retail: General	From small local or individual shops or commerce to store chains or department stores. They can also be located at street, mall or shopping center.
	Retail: Supermarket	Supermarket chains, the assets can be mini, super or hypermarket.
	Shopping/ Mall	Shopping center or mall.
3S: Office	_	From buildings of individual rooms (small offices - ex: dental clinic) or coworking spaces to corporate spaces (ex: triple A corporate buildings). They can be integrated to convention centres or other activities, such as cases of a mixed-use development where offices are dominant.
3S: Logistics	_	From sheds to logistics centre and logistics facilities (ex: back offices).
3S: Tourism	_	From aparthotels or flats, lodges to hotels and resorts.
3S: Entertainment	_	Leisure areas such as a club, a thematic park or a museum (in case of REITs portfolio).
3S: Financial	_	Bank branches.
3S: Social	_	Social security institutions.
3S: Health	_	Hospital or health institutions.
3S: Educational	_	Educational institutions, from nurseries, schools to universities.
non-economic activities		
NE: Residential	_	From individual houses to residential buildings and condominiums.
unspecified activities		
U: Parking	_	Multi-storey car park, which can be individual or franchising, as well as a parking plot or even a car place in commercial, corporate, and residential buildings.
U: Plot	_	From individual plot (urban or rural) to urban allotment (residential), and graves in a cemetery (in case of REITs portfolio).
U: N/A (Other)	_	Use type unspecified by the pension fund or REITs to the regulator. [39]

[39] Some of these assets were identified during this research: bank branch, multi-storey car park, building material shops, day-care, sheds, etc. Yet, it is not possible to assure that this was their actual use during the pension fund management, thus the category 'other' as provided by PREVIC was kept.

3.1.1.5 RESULTS

After organizing the database, and even before starting the analysis, it was possible to notice that some types of use were repeated in greater numbers than others, such as the office and parking categories. However, these properties seemed to present individual values associated of different magnitudes. Since this fact could interfere with the analysis, a comparative study was conducted, observing the % of number of cases for each type of use and the % referring to the sum of the values attributed to each type of use, indicated as 'property value rate' (PVR). Through this analysis, it was possible to observe that the number of cases per type of use did not reflect the representativeness of the assets in the portfolio of pension funds and REITs in Brazil.

As can be seen from the graph in Figure 11, the properties belonging to the office category are in fact quite representative: both in number, 47% of the portfolio, and in value, 42% of the total value of real estate assets in the portfolio. However, there are other types whose difference between number of cases and value is discrepant. For instance, the parking category properties include 29% of the total number of cases in the portfolio, but the representativity of the value of these properties in the pension funds portfolio is quite low, at less than 1%.

This study also revealed that the properties categorized as 'shopping/mall', although representing only 3% of the portfolio's cases, are actually equivalent to 29% of the funds' portfolio value. Properties in the 'commerce' category also present a discrepancy, representing 15% of the portfolio cases, but only 7% of their value. Furthermore, Table 9 shows that most cases in our database possess PVR: 98% units out of a total of 161,829 cases. Therefore, this analysis only considers the cases with PVR.

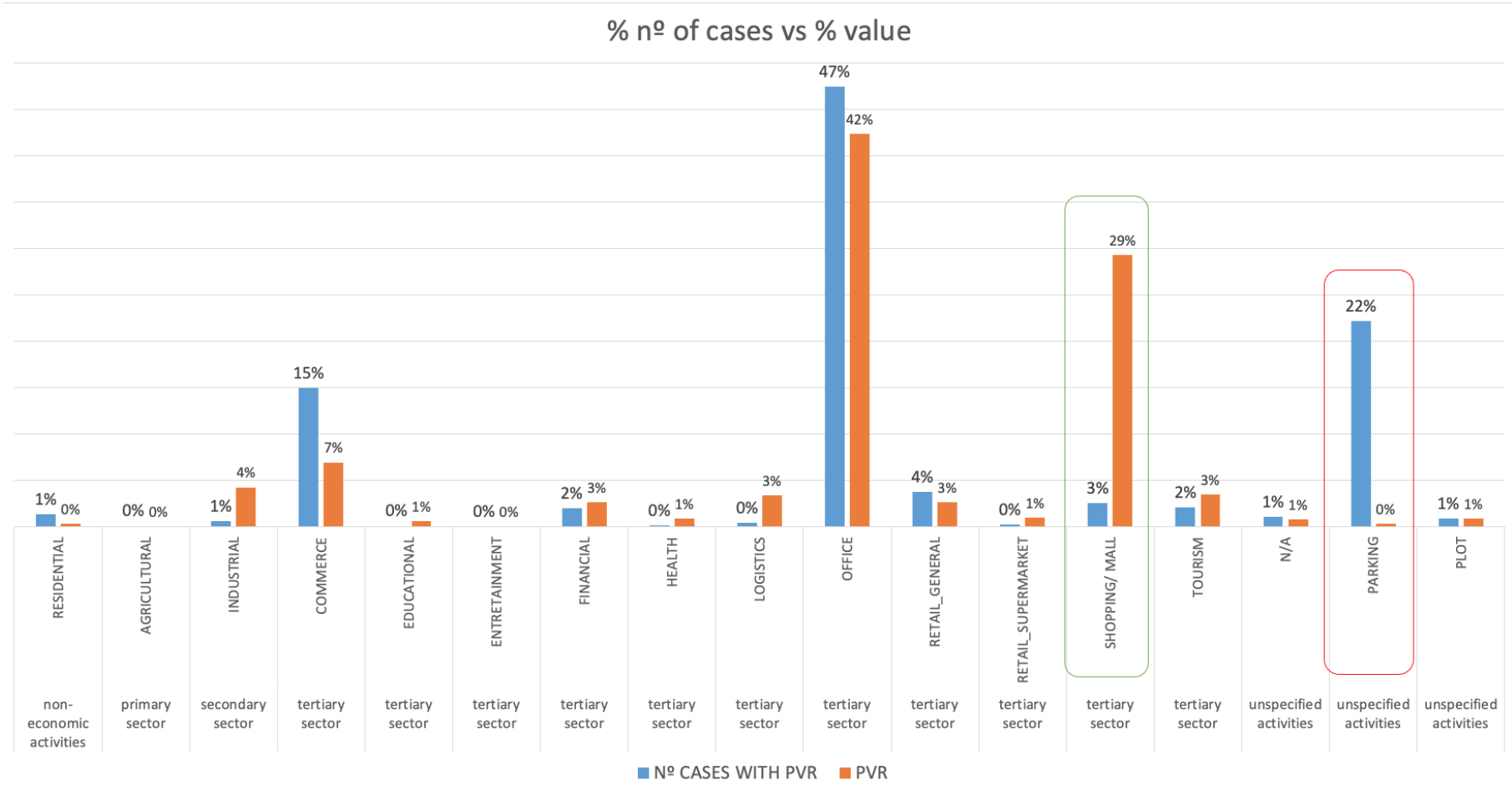


Figure 11 - Total number of cases and total of value rate by use and economic activity comparison (own authorship)

Table 9 - Pension funds and REIT cases with presence of property value rate per year (own authorship)

Data Analysis: Cases with PVR per year				
	Year	Absent PVR [nº cases]	With PVR [nº cases]	% With PVR
Pension Funds	2006	81	15,553	99.5%
	2007	117	14,833	99.2%
	2008	122	14,087	99.1%
	2009	87	13,098	99.3%
	2010	137	13,029	99.0%
	2011	89	12,853	99.3%
	2012	115	11,739	99.0%
	2013	467	11,145	96.0%
	2014	492	11,358	95.8%
	2015	390	9,997	96.2%
	2016	385	10,147	96.3%
	2017	334	9,883	96.7%
	2018	331	10,154	96.8%
REITs	2018	131	675	83.7%
Nº total [all years]		3,278	158,551	_

PENSION FUNDS AND REITS IN BRAZIL: REAL ESTATE ASSETS PORTFOLIO

From this point onwards, entries without PVR are excluded. The chart in Figure 12 shows the sum of the values of real estate property assets in portfolio, for each year. In the case of pension funds, it shows the evolution of the portfolio from 2006 to 2018. However, in relation to the REITs' portfolio, collected data refer exclusively to the year 2018. It should be noted that the portfolios of pension funds and REITs in 2018, with regard to the value of real estate assets, present a similar size, both above R$30billion. The charts presented in Figure 13 and 14 compile information about the management of these assets, and show how funds exploit their real estate assets, namely how these funds guarantee capital flows through these properties over the years. The income types identified are development, private use, REITs, or rent revenue management.

In the case of development, either the fund participates in the financing of the development, focusing only on the business side and receiving interest and dividends for the loan, or the fund participates in the financing of the development as a partner and receives in return some fractions of the properties in question. The private use type is one in which the fund owns the property in portfolio, while using it for its own operation. This way, instead of paying rent for its facilities to a third party, the institution pays for the fund itself. The REIT type designates instances when the fund invests in real estate via a REIT as a channel of investment. In this thesis, we consider this to be a financialized channel of investment. The rent revenue management type

happens when the fund rents the property to a third party, thus ensuring a flow of capital and usually favoring long term contracts.

Figure 15 and 16 show that the latter type is the most exploited by both pension and REIT funds. In the year 2018 (see Figure 14), rental properties in pension funds' portfolios accounted for 93.1% and in REITs accounted for 55.5%. It was also observed that, although shyly, some REITs invest in other REITs (1.6%), using them as an investment channel. REIT funds also invest in development (7.7%). Part of the REIT funds' income is obtained through the sale of their real estate portfolio (8%). Figure 15 shows the distribution and representation of the type of use of the real estate in the portfolio of both pension funds and REITs. The types of use were presented and described previously in Table 8. Figure 15 demonstrates the profile of the real estate product, or built environment, that attracts investment from these funds. These investments are concentrated in the office use type, followed by shopping malls in an almost similar proportion. It was also possible to verify the representativeness of pension fund investments via the financialized investment channel over the years. Figure 16 shows us that among the investments made through this channel from 2006 to 2018, the years 2008 and 2016 stood out. No specific reason for this growth was identified in these years.

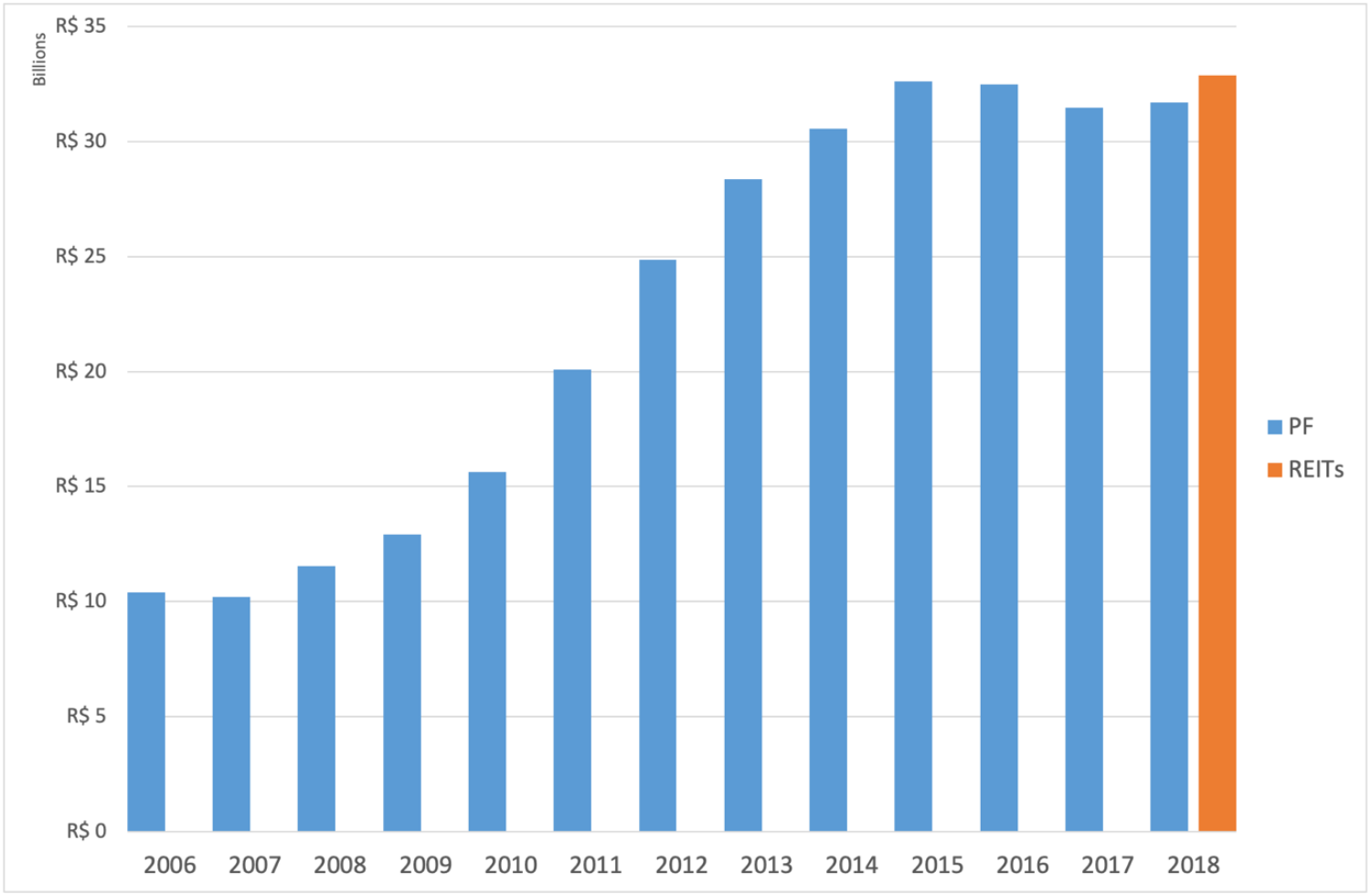


Figure 12 - Development of real estate assets in pension funds portfolio by PVR per year, and comparison with REITs (own authorship)

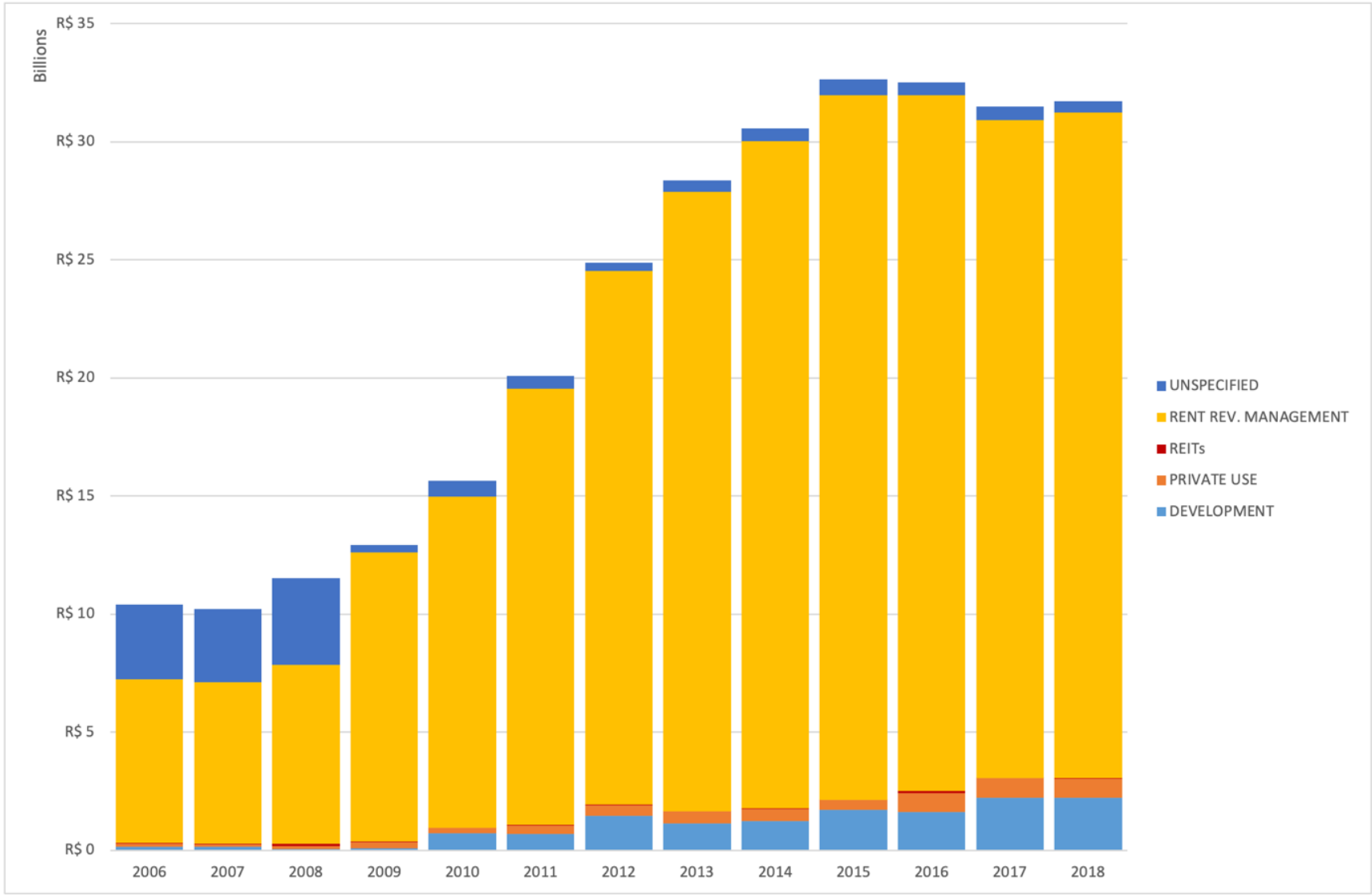


Figure 13 - Real estate assets in pension funds portfolio per property value rate and its income type distribution (own authorship)

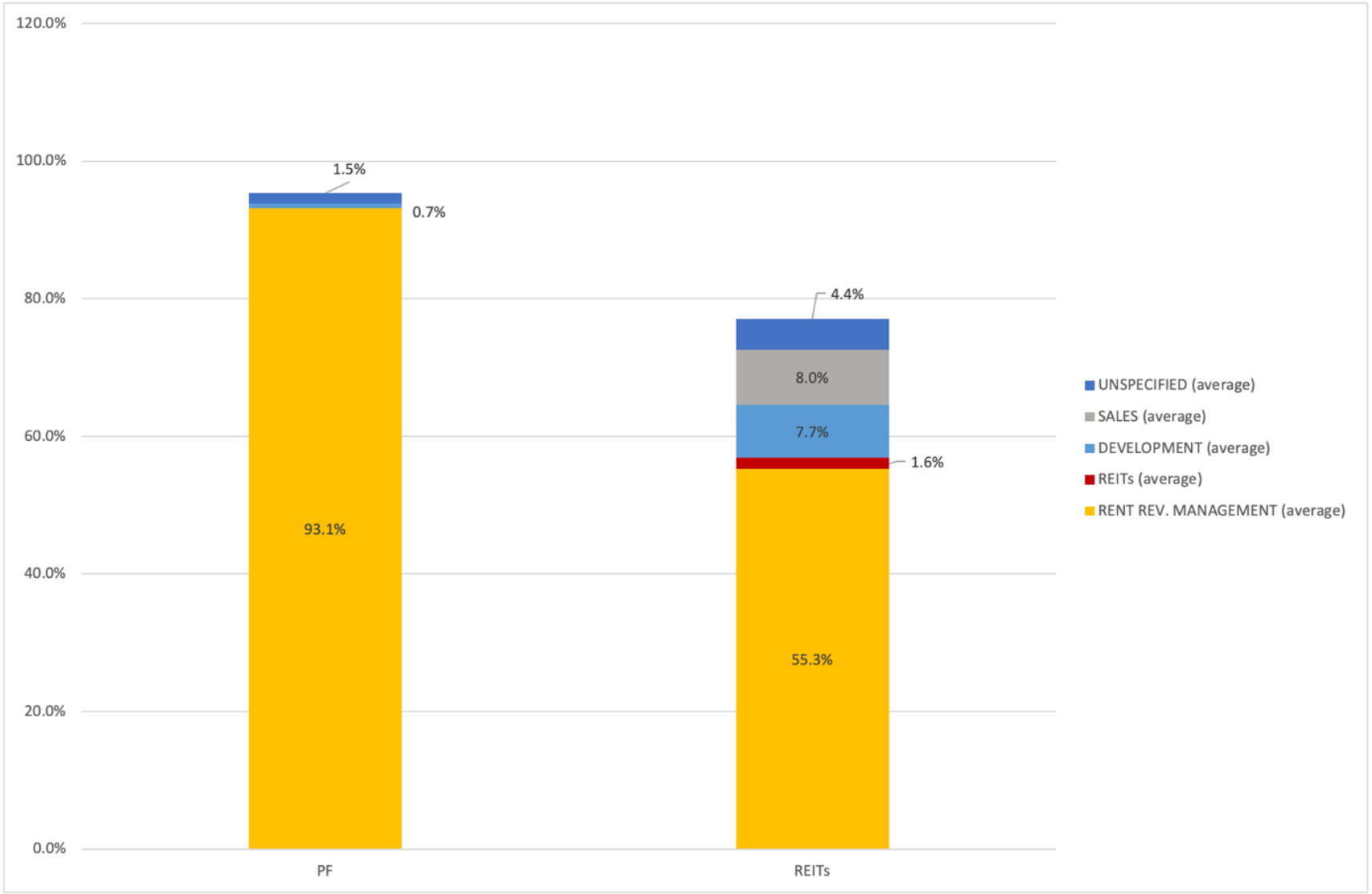


Figure 14 - Real estate assets in pension funds and REITs portfolio in 2018 per property value rate, and income type distribution (own authorship)

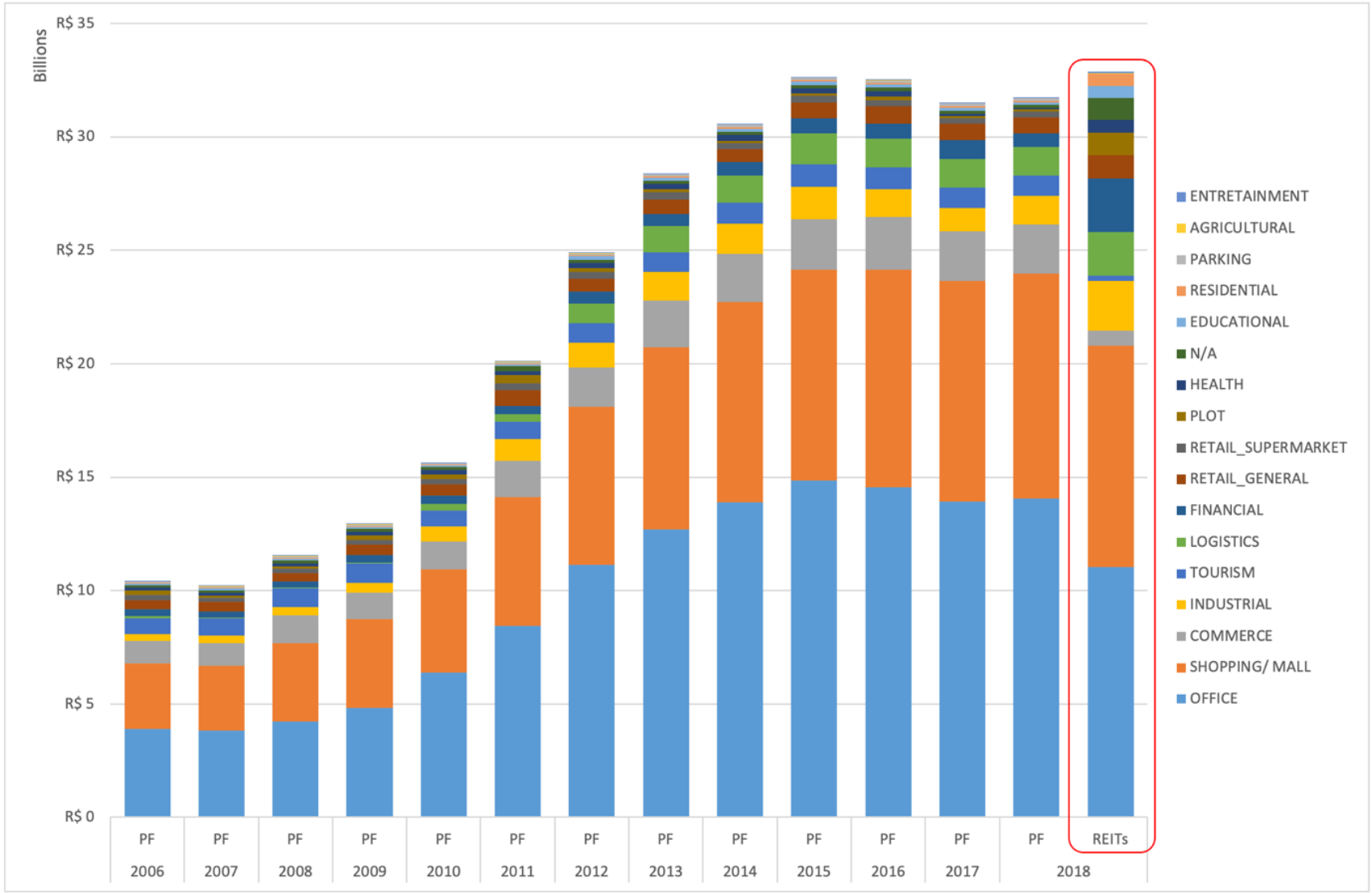


Figure 15 - Real estate assets in pension funds and REITs portfolio per property value rate, and land use type distribution (own authorship)

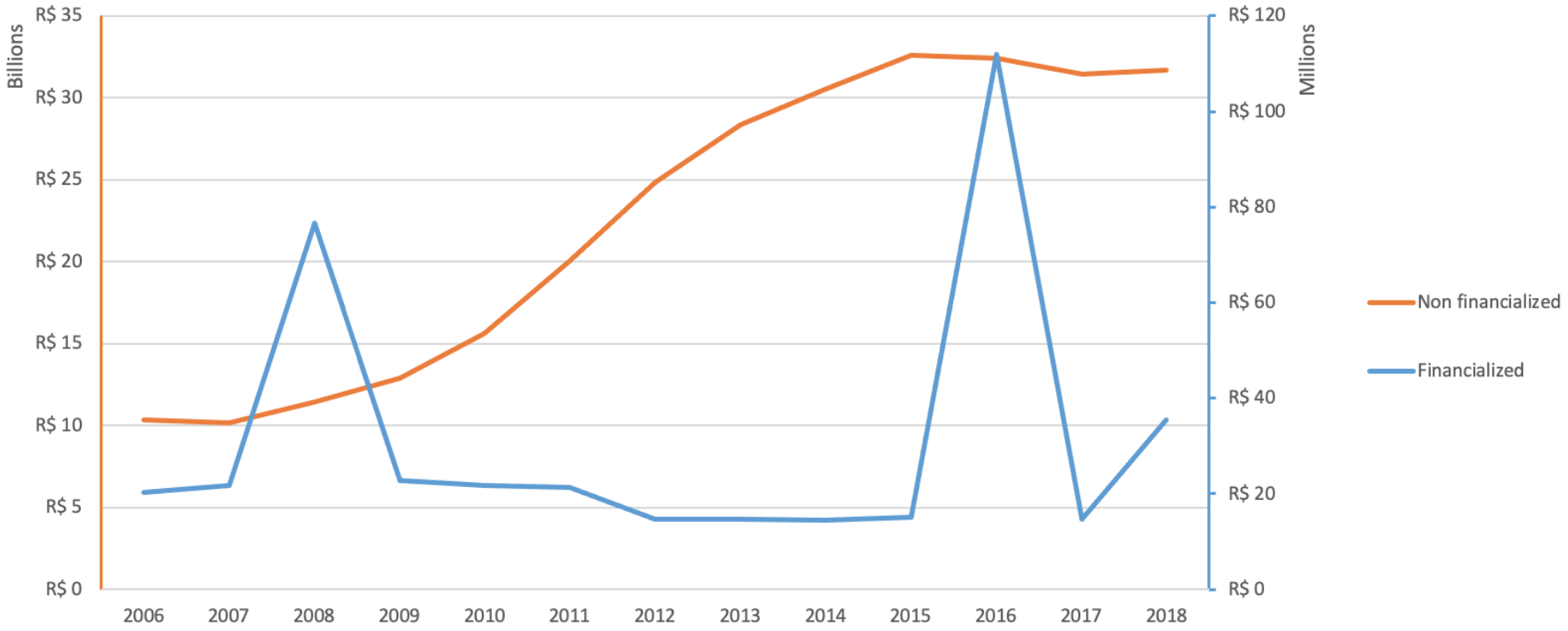


Figure 16- Pension Funds: property value rate distribution per channel of investment (own authorship)

LOCATION: MUNICIPAL SCALE AND THE GEOGRAPHICAL DISTRIBUTION OF PORTFOLIOS

Figure 17 and Figure 18 present the geographical distribution of the assets in the portfolio of both pension funds and REITs. Figure 17 also shows the distribution of real estate assets by type of use. Additionally, Figure 19 and Table 10 provide the reader with an overview of the division of the Brazilian states, their respective acronyms and capitals, a basic set of geographic and politico-administrative information to help in the interpretation of this section.

Through these figures, it can be seen that the real estate assets in these funds' portfolio are spread throughout the Brazilian territory. However, there is a concentration of values in some state capitals, such as São Paulo (SP), Rio de Janeiro (RJ), Brasília (DF), and Belo Horizonte (MG). It is also notable that in these cities, the most prominent types of use are 'office' and 'shopping/mall'. Figure 17 also shows the evolution of the pension funds portfolio over the years. It can be seen that in 2006 there was a greater spread of the values in the portfolio throughout the territory. One of the main changes over the years, with the growth of the values in portfolio (PVR), is that these investments started to concentrate in large cities. Although assembled data do not present the historical evolution of the REITs portfolio, it is possible to notice similar characteristics regarding the allocation of investments and types of use (Figure 18).

Through a comparative analysis of the value rate of REITs and pension funds by location, it was also possible to assess the geographic distribution of these values by state. Figure 20 shows that the state of São Paulo is the leader in property value rate for both pension funds and REITs, followed by the state of Rio de Janeiro. Soon after, the states of Minas Gerais and Distrito Federal appear pratically sharing the same position. The state with the lowest PVR in both funds is Piauí. Figures 21 and 22 confirm this information, the first one showing the evolution of the PVR of pension funds and the representativeness of these values according to each Brazilian state. The second shows the evolution of these values in portfolio, in each of the states over the years.

It was identified that, in some states and even in a whole region of the country, the investment is decentralized from the capitals (see Table 11). This is the case of the state of Goiás (48%) and of the entire southern region of the country, Paraná, Rio Grande do Sul, and Santa Catarina, all with a concentration of investment in the capital cities below 58%. The state of São Paulo, the leading state in PVR of both pension funds and REITs, stops at 60%, which means that the investments are not concentrated in the capital. In the case of the state of Rio de Janeiro, the situation is different, as 89% of investments are located in its capital.

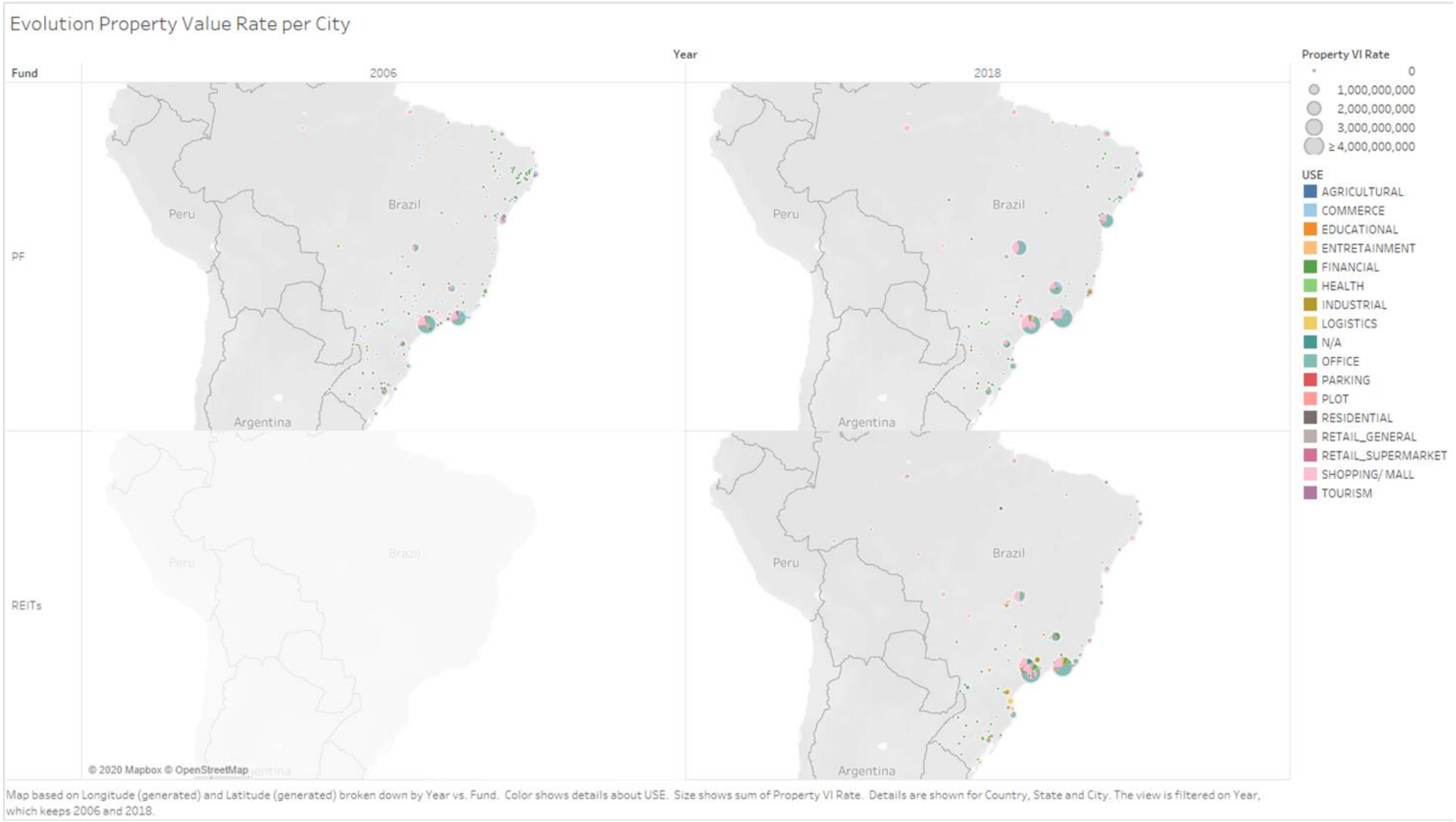


Figure 17- Pension funds and REITs: evolution of property value rate per city and its distribution by land uses (own authorship)

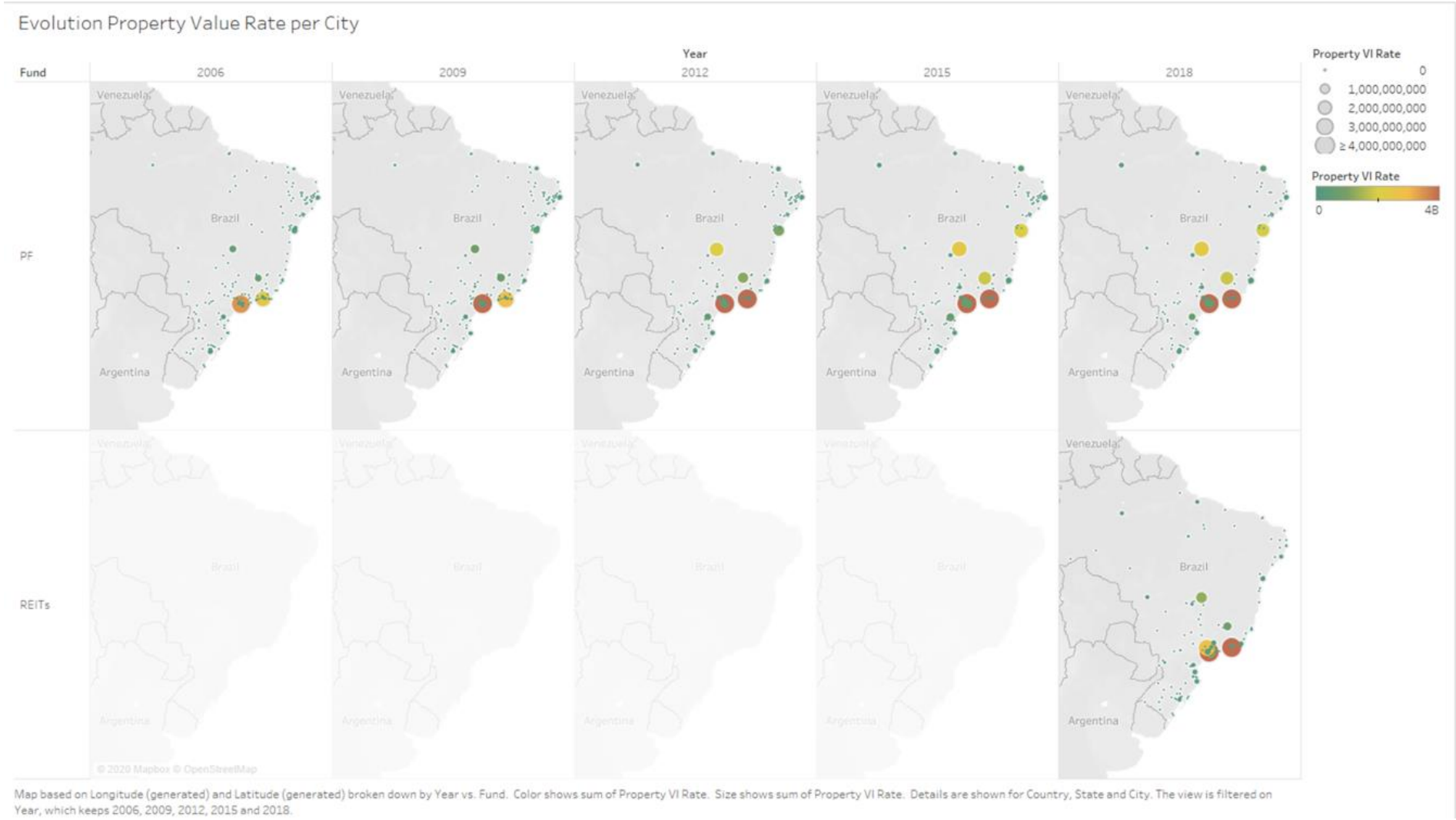


Figure 18- Pension funds and REITs: geographic evolution of property value rate per city (own authorship)



Figure 19- Political map of Brazil: states' distribution.

Table 10- List of Brazilian States, abbreviations, and capitals.

Brazilian states	Abbr.	Capital city
Acre	AC	Rio Branco
Alagoas	AL	Maceió
Amapá	AP	Macapá
Amazonas	AM	Manaus
Bahia	BA	Salvador
Ceará	CE	Fortaleza
Espírito Santo	ES	Vitória
Goiás	GO	Goiânia
Maranhão	MA	São Luís
Mato Grosso	MT	Cuiabá
Mato Grosso do Sul	MS	Campo Grande
Minas Gerais	MG	Belo Horizonte
Pará	PA	Belém
Paraíba	PB	João Pessoa
Paraná	PR	Curitiba (UPO Linha Verde)
Pernambuco	PE	Recife
Piauí	PI	Teresina
Rio de Janeiro	RJ	Rio de Janeiro (UPO Porto Maravilha)
Rio Grande do Norte	RN	Natal
Rondônia	RO	Porto Velho
Roraima	RR	Boa Vista
Santa Catarina	SC	Florianópolis
São Paulo	SP	São Paulo (UPOs F. Lima, A. Branca and A. Espraiada)
Sergipe	SE	Aracaju
Tocantins	TO	Palmas
Distrito Federal	DF	Brasília (the national capital

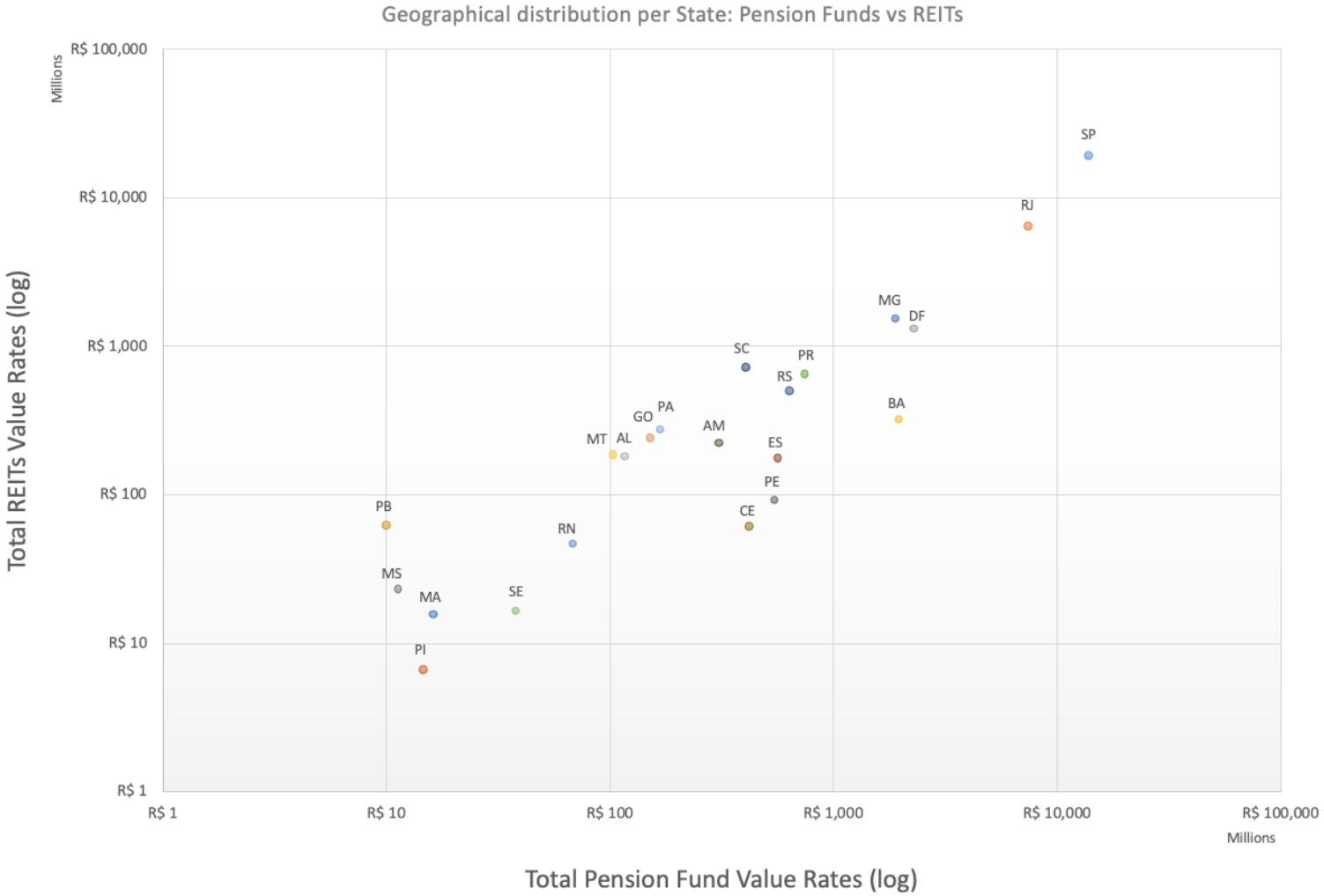


Figure 20- Geographical distribution per State: Pension Funds vs REITs portfolio in 2018 (own authorship)

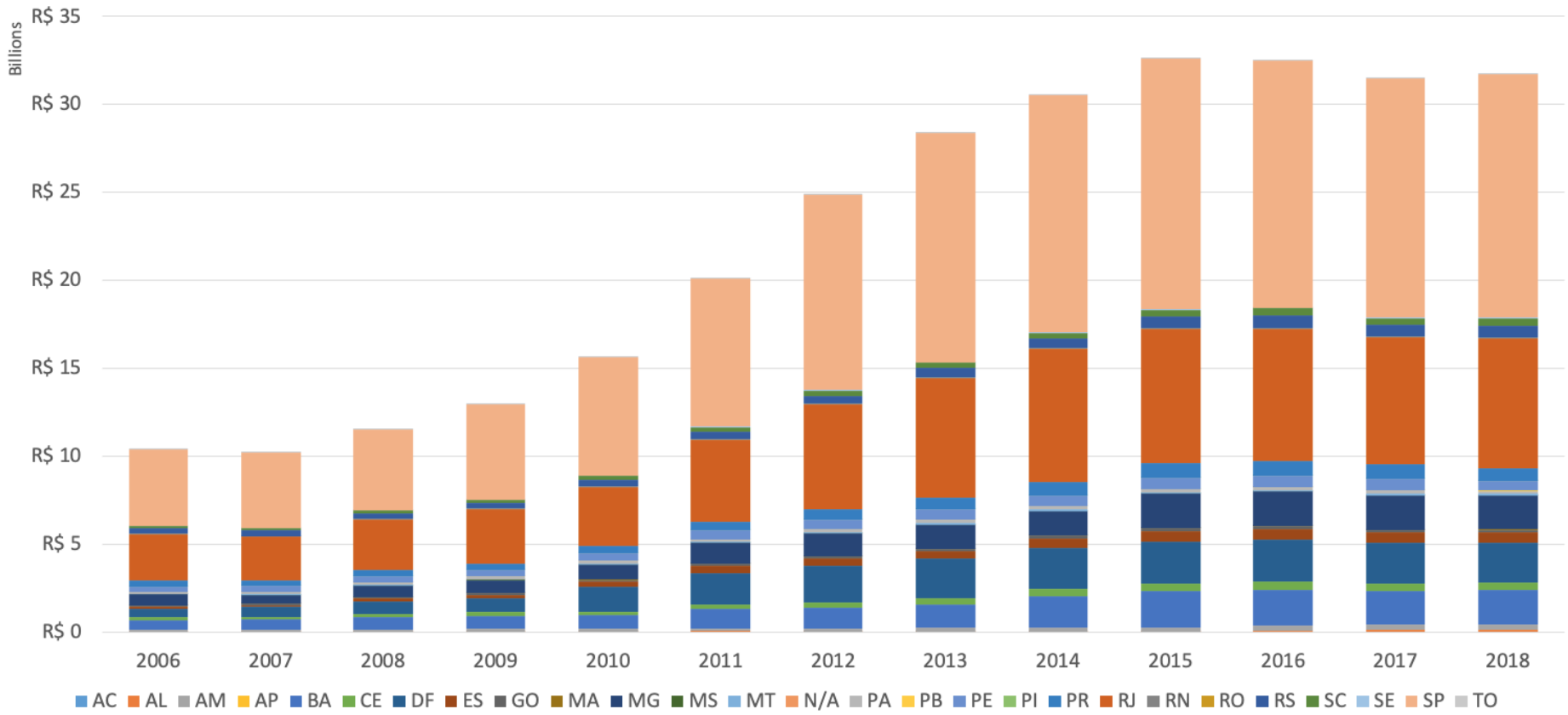


Figure 21- Pension Funds portfolio evolution: state representativity per year (own authorship)

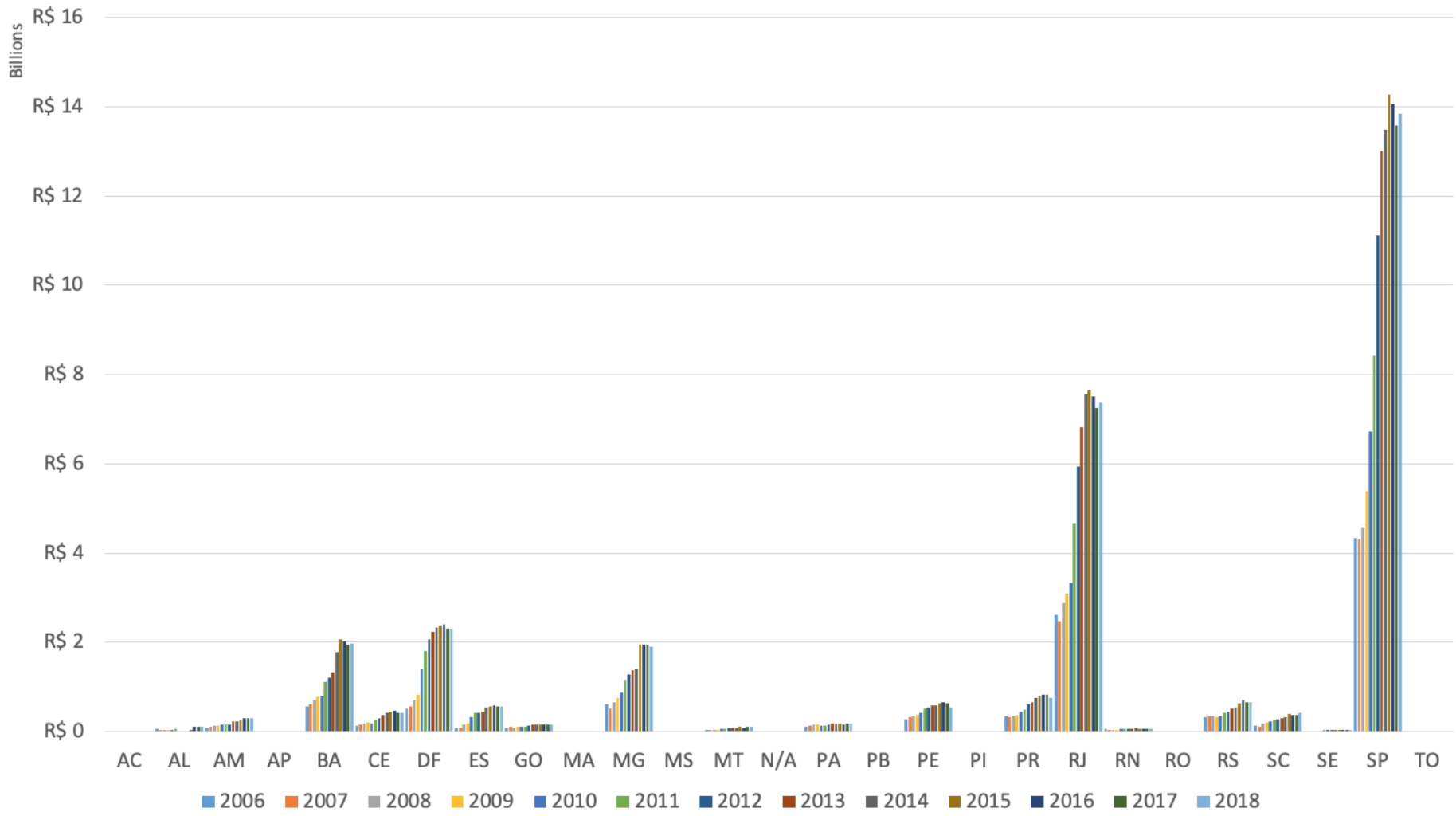


Figure 22- Pension Funds portfolio: property value rate evolution per state (own authorship)

Table 11- Region, state, capital and representativity of state by PVR (own authorship)

Data analysis: State capital representativity of State PVR (2018)			
Region	**State**	**State capital**	**Representativity of State PVR total (%)**
Central west	DF	Brasília	100%
	GO	Goiânia	48%
	MS	Campo Grande	83%
	MT	Cuiabá	94%
Northeast	AL	Maceió	100%
	BA	Salvador	96%
	CE	Fortaleza	99%
	MA	São Luís	100%
	PB	João Pessoa	93%
	PE	Recife	68%
	PI	Teresina	87%
	RN	Natal	100%
North	AM	Manaus	100%
	PA	Belém	80%
Southeast	ES	Vitória	69%
	MG	Belo Horizonte	76%
	RJ	Rio de Janeiro	89%
	SP	São Paulo	63%
South	PR	Curitiba	54%
	RS	Porto Alegre	45%
	SC	Florianópolis	58%

→ Pension funds and REITs investments more decentralized from state capital.

} In this region, pension funds and REITs investments are decentralized from state capitals.

LOCATION: MUNICIPAL SCALE AND THE GEOGRAPHICAL DISTRIBUTION OF PORTFOLIOS

Considering that the Urban Partnership Operations, the object of study of this thesis, are located in three state capitals, data presented in this section refers to these municipalities: São Paulo (SP), Rio de Janeiro (RJ), and Curitiba (PR). The maps presented in the following figures show the location of real estate assets in pension funds' and REITs' portfolios and indicate the location of UPOs in each of these cities. The maps in Figures 23, 24, 25 and 26 present the evolution of the pension funds' portfolio in 2006, 2012, and 2018, through the location of their assets in these years. The maps in Figures 27, 28, 29 and 30 present the portfolio of both pension funds and REITs in 2018. The city of São Paulo is the largest of the three; since real estate in the portfolio of pension funds and REITs is clustered in the region where the UPOs are located, the maps in Figures 24 and 28 present a zoom in of this area. Through these maps, it can be seee that pension funds and REITs distribute their investments across municipalities, tending to cluster them in

certain specific regions. It was determined that these assets are typically located along major and important avenues, and near transportation infrastructure.

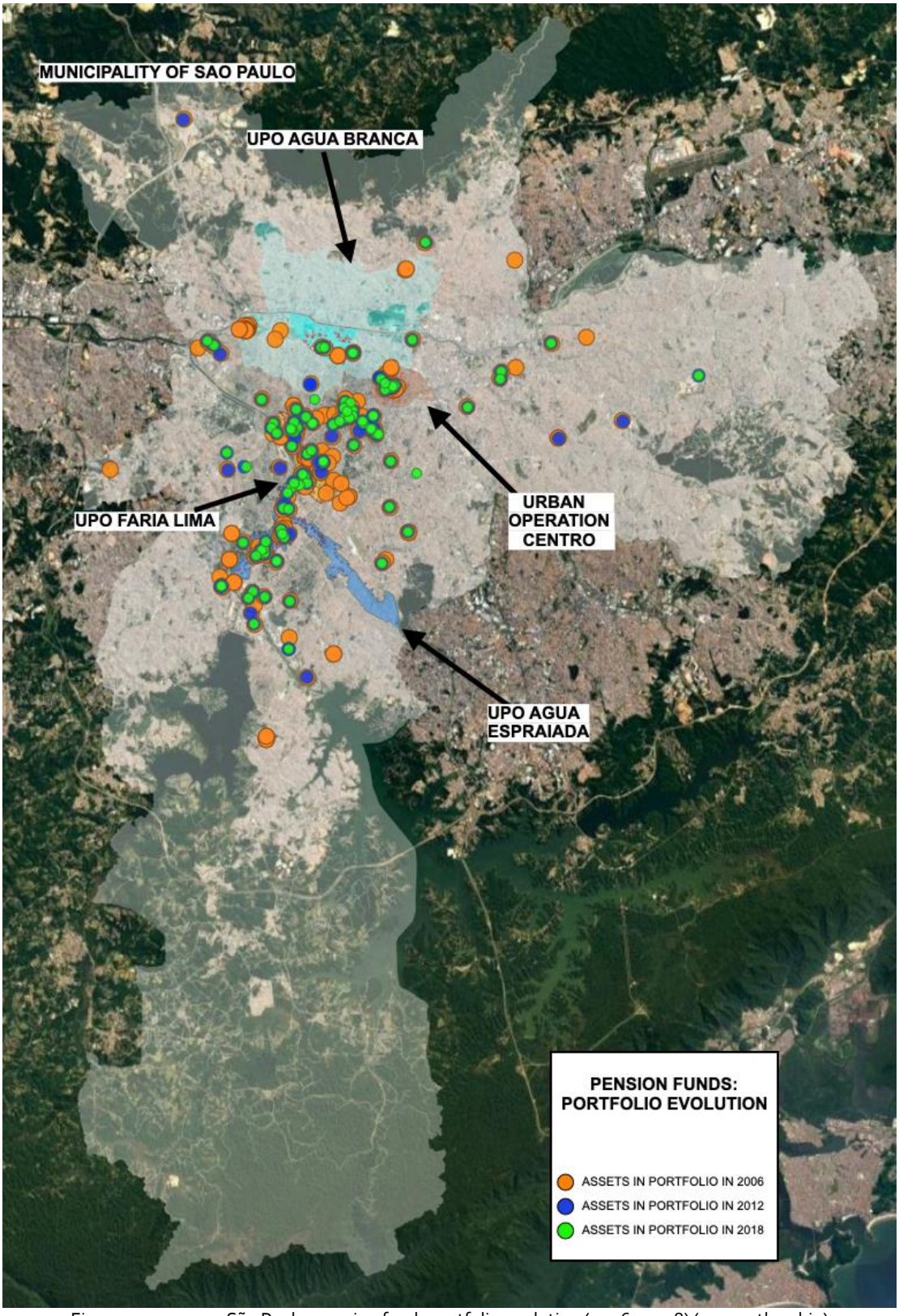


Figure 23- São Paulo: pension funds portfolio evolution (2006 - 2018) (own authorship)

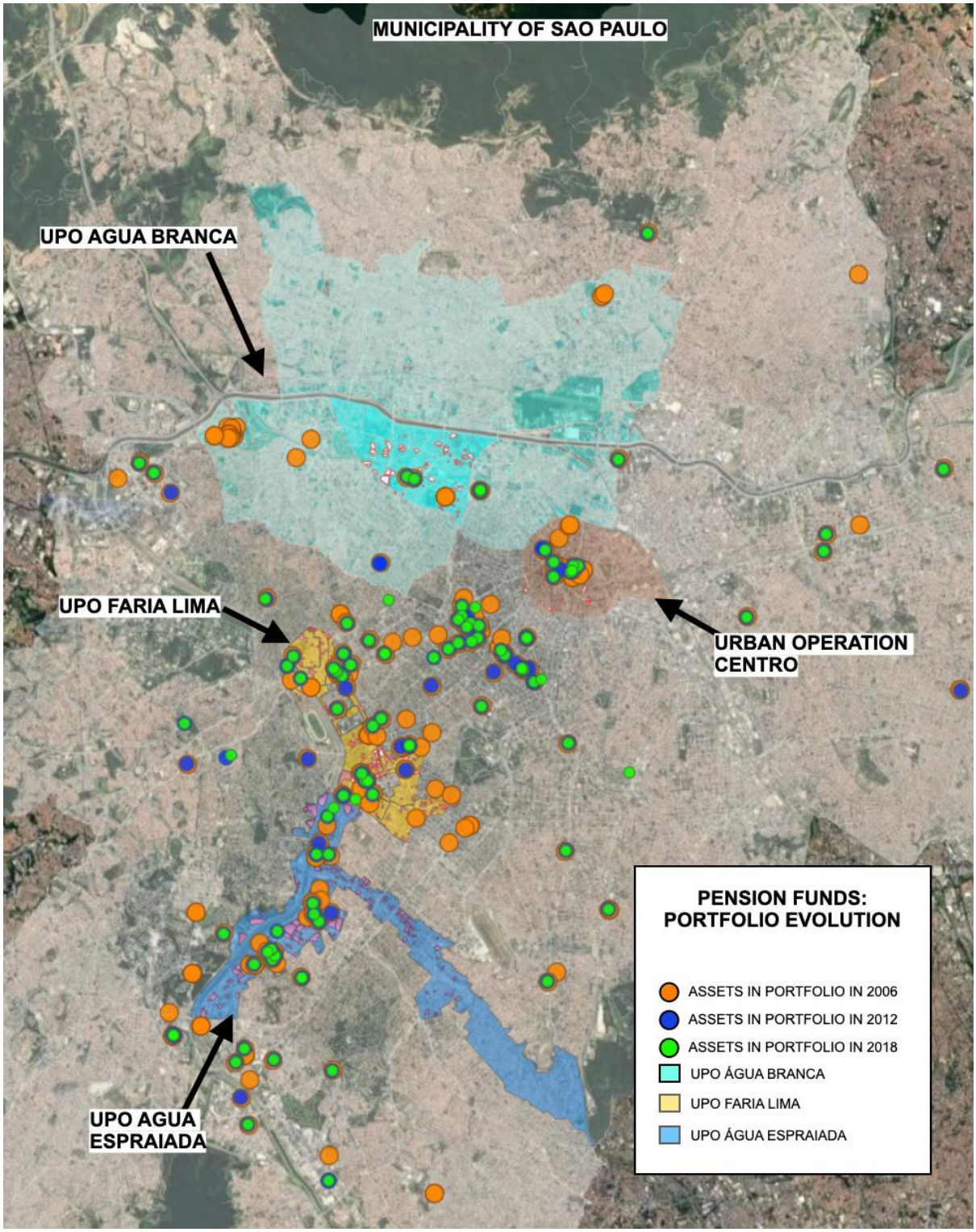


Figure 24- São Paulo: pension fund portfolio evolution (2006-2018), area of assets concentration (own authorship)

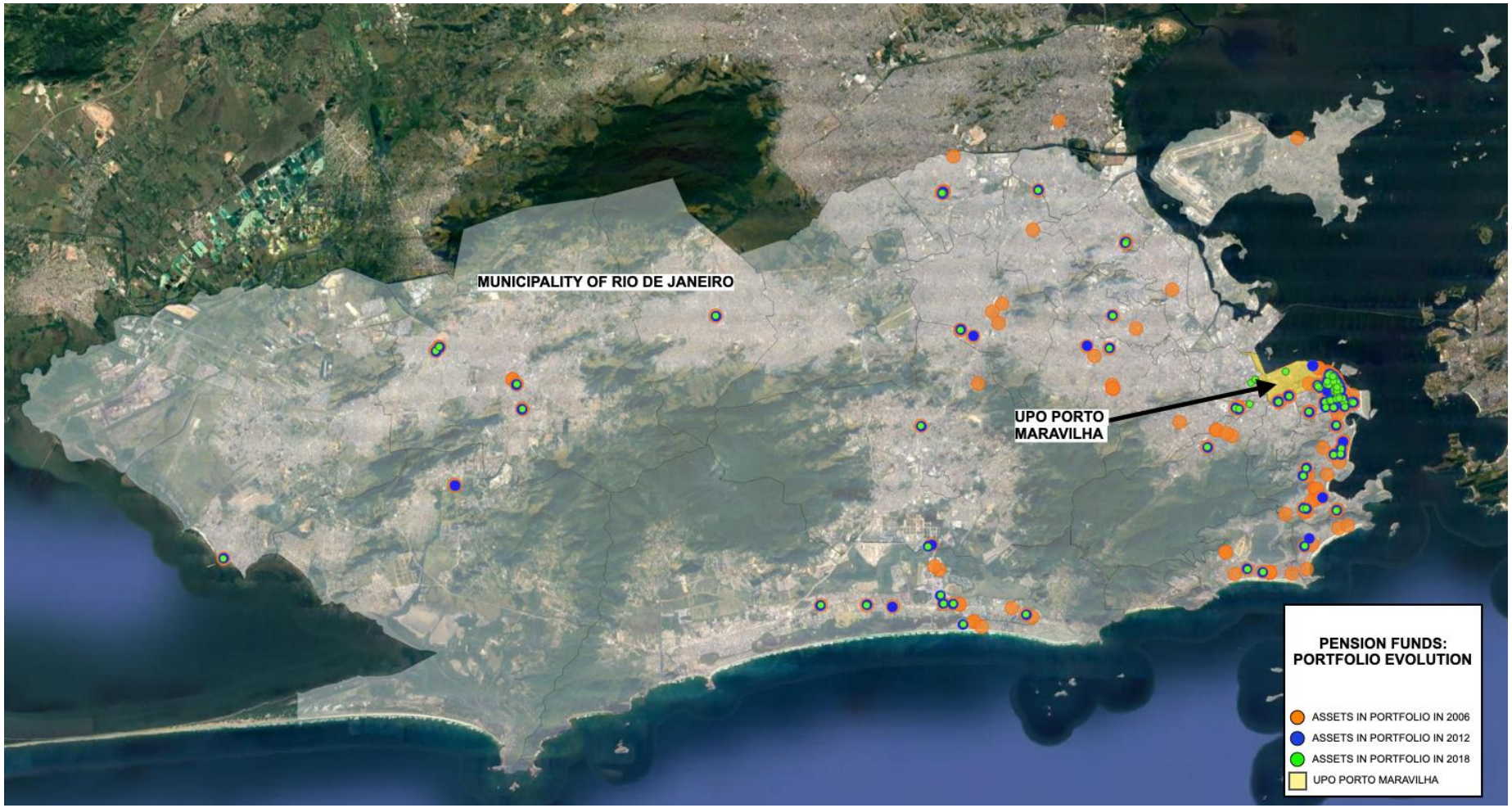


Figure 25- Rio de Janeiro: pension fund evolution (2006-2018) (own authorship)

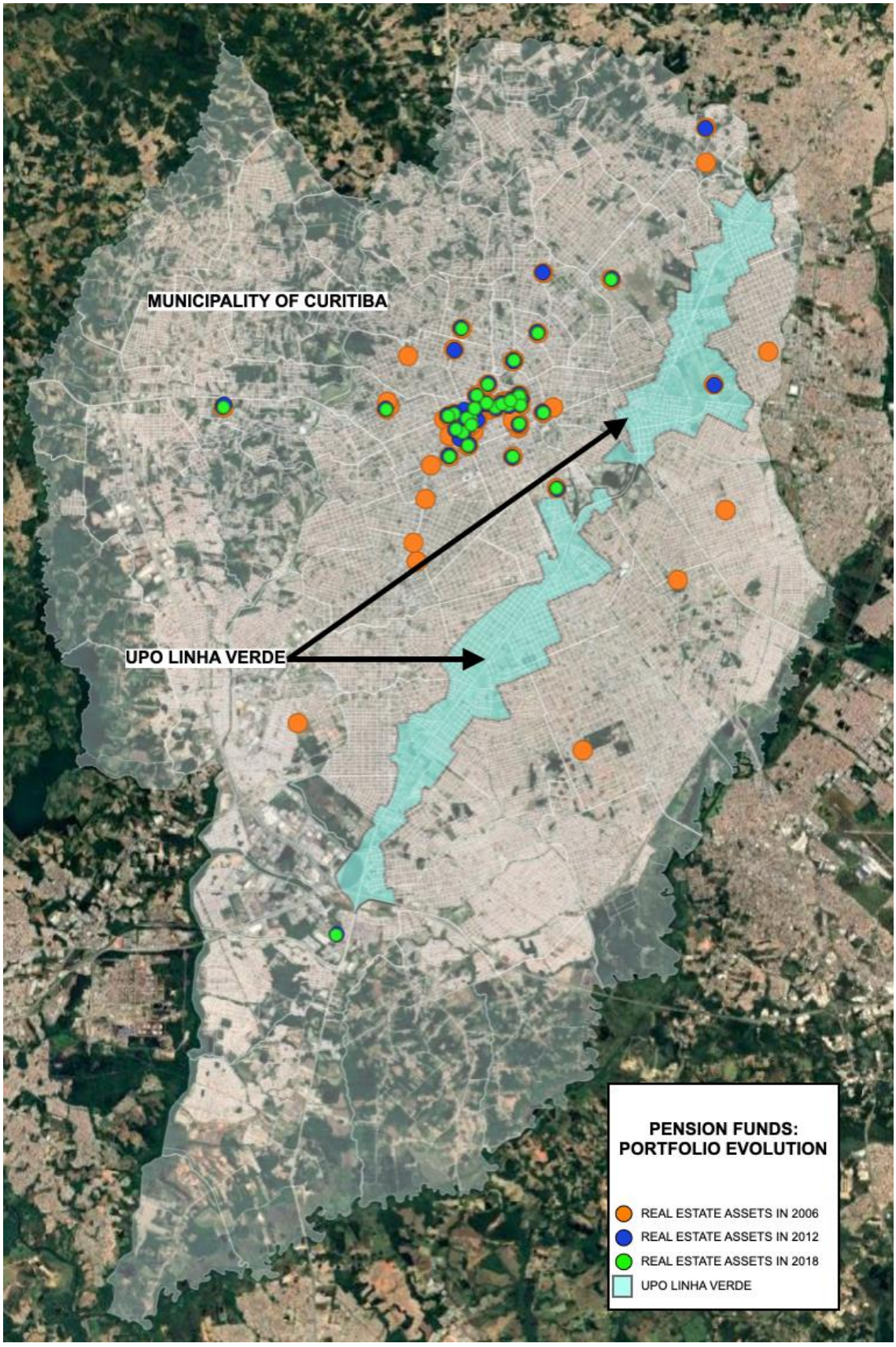


Figure 26- Curitiba: pension fund portfolio evolution (2006-2018) (own authorship)

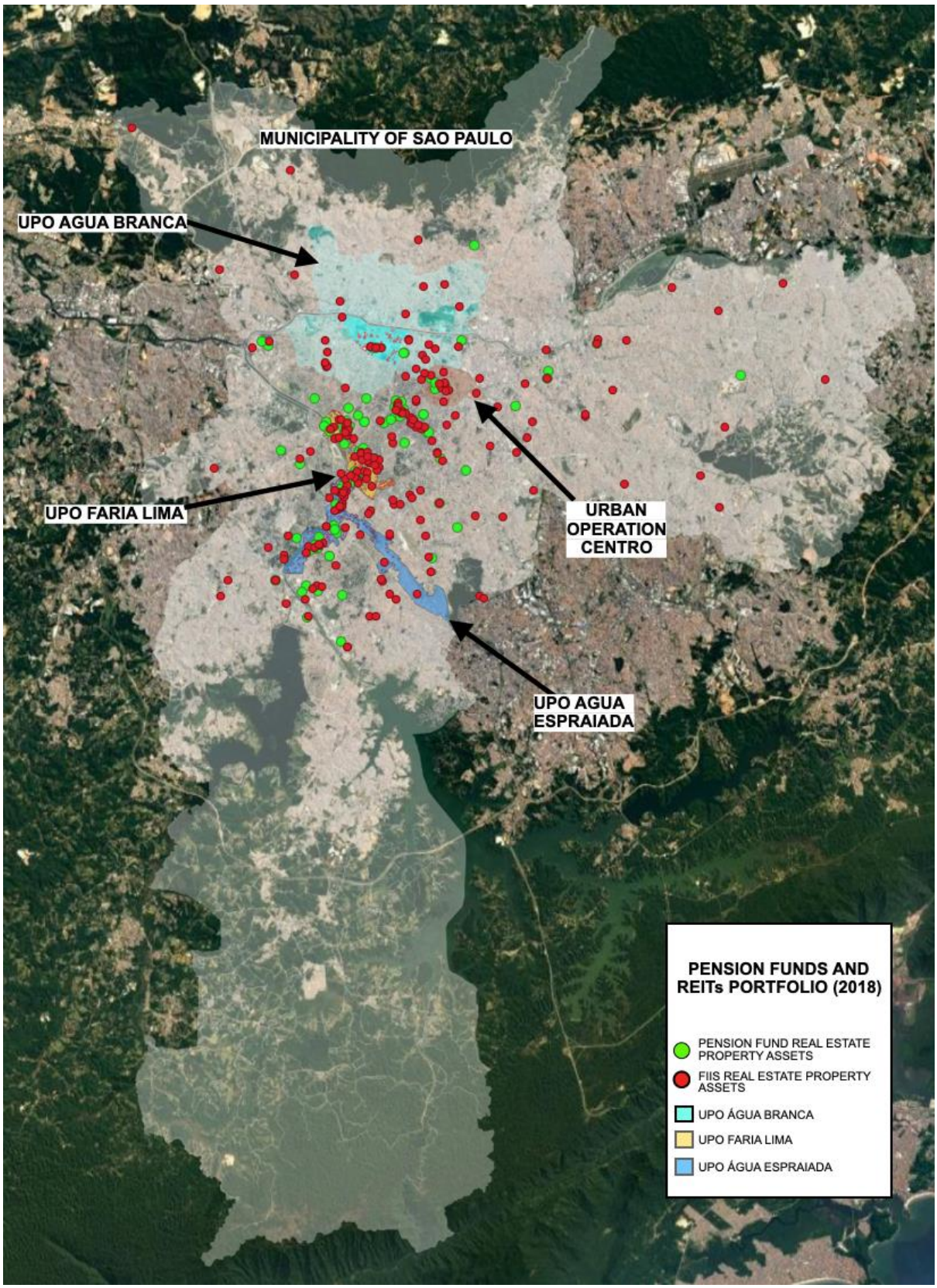


Figure 27- São Paulo: pension funds and REITs (FIIs) portfolio in 2018 (own authorship)

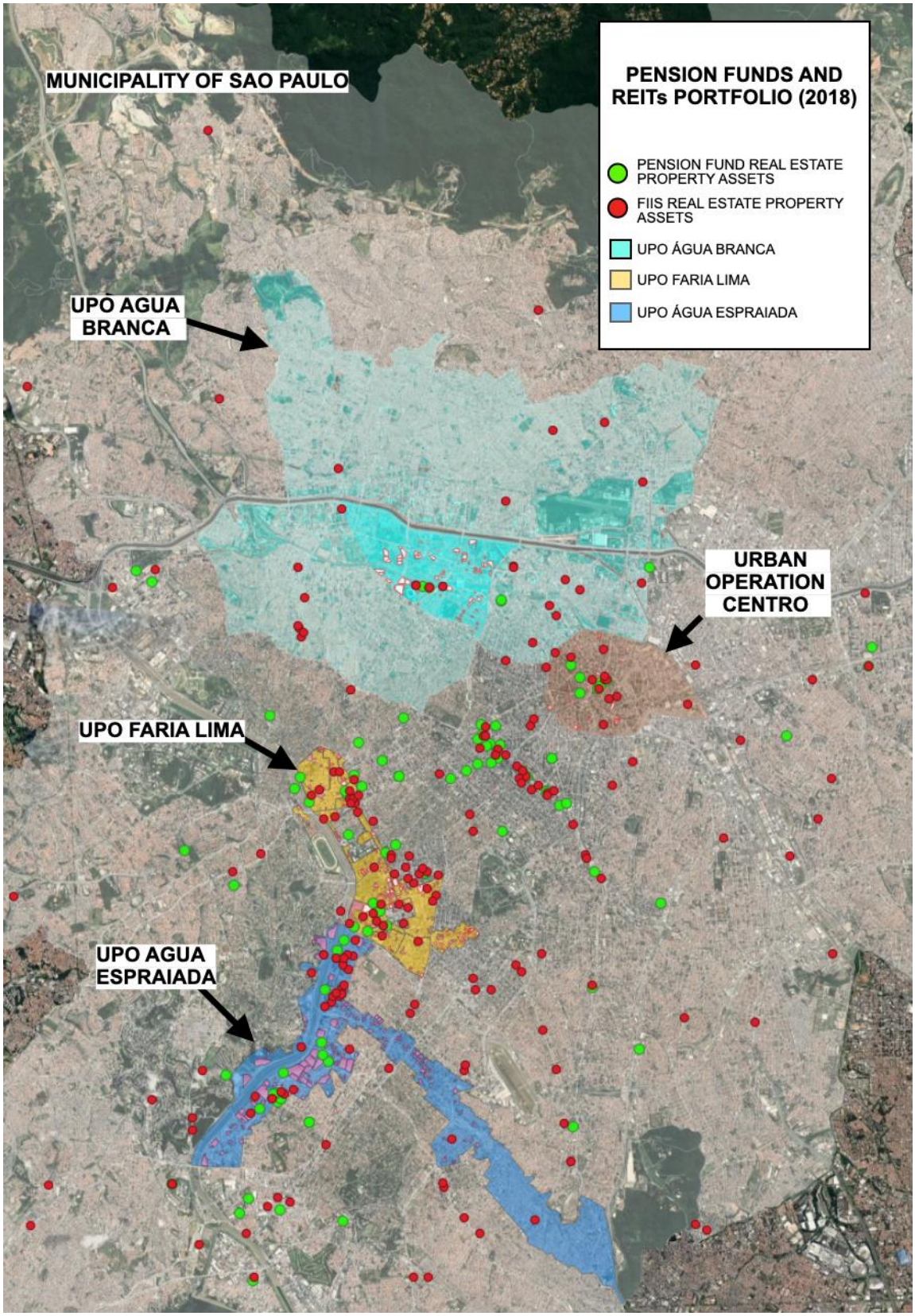


Figure 28- São Paulo: pension funds and REITs (FIIs) portfolio in 2018, area of assets concentration (own authorship)

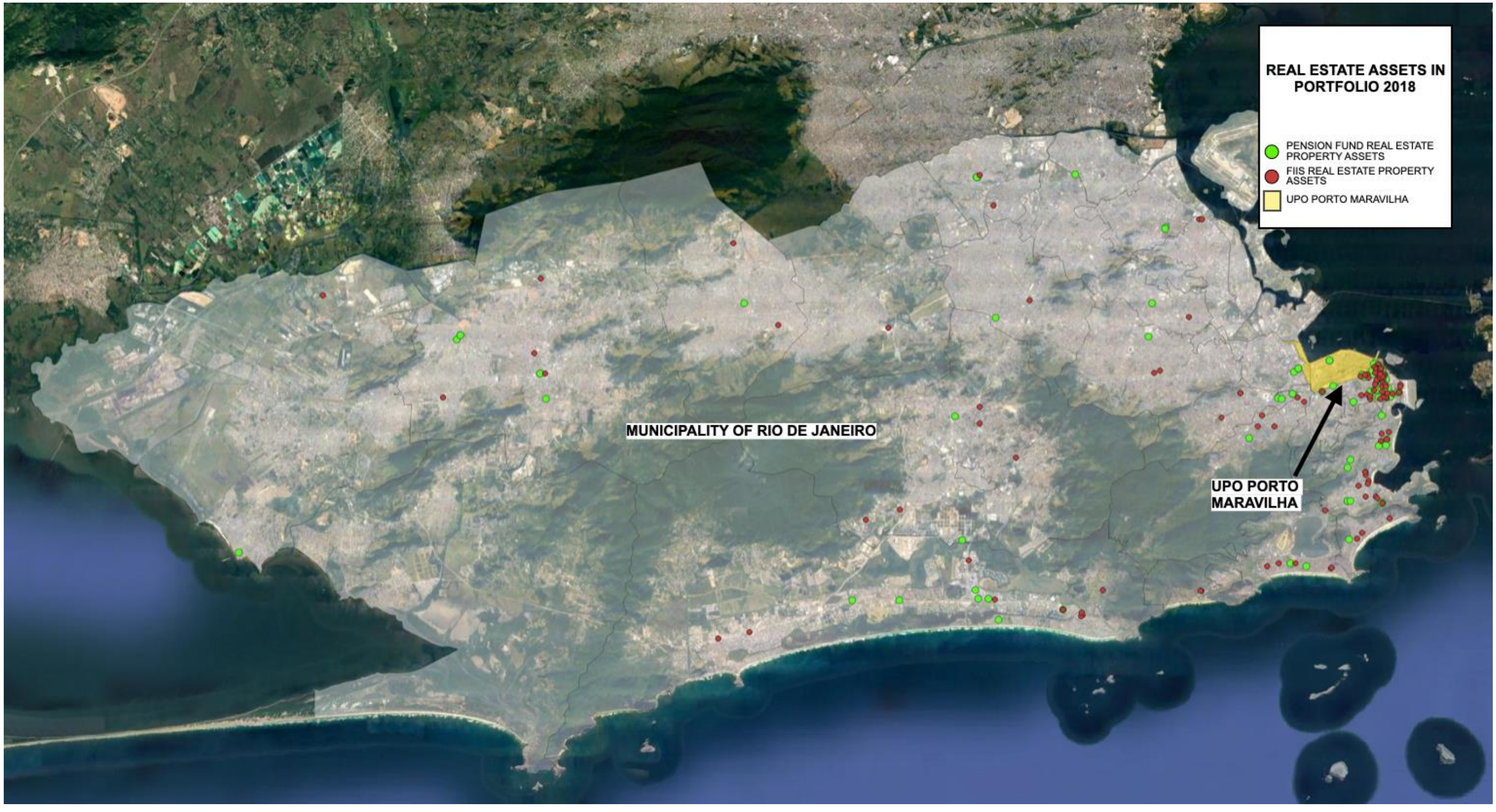


Figure 29- Rio de Janeiro: pension funds and REITs (FIIs) portfolio in 2018 (own authorship)

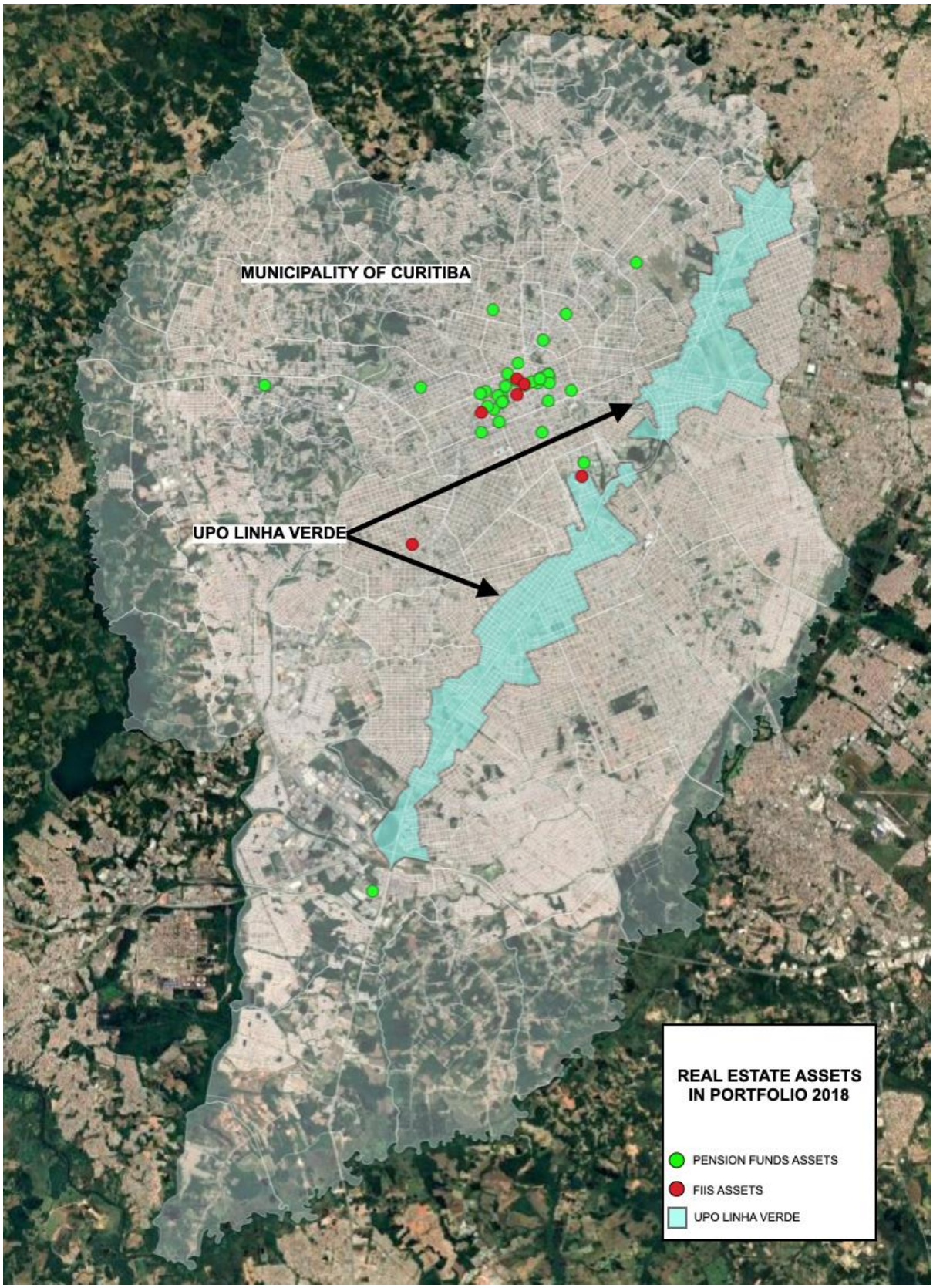


Figure 30- Curitiba: pension funds and REITs (FIIs) portfolio in 2018 (own authorship)

3.1.1.6 HIGHLIGHTS OF DATA ANALYSIS

The analysis of the financializing policy instruments contributes to important aspects to the scope of this work, both at national scale and municipal scale. These thematics are essential to the understanding and further exploration of hypothesis 1 to 3 of this thesis.

At national scale, the following aspects can be highlighted:

- The development of real estate property assets in portfolio of institutional investors is dispersed throughout the whole Brazilian territory but tends to concentrate its capital in major cities.
- Pension funds have historically invested small values, or none, into real estate property assets through REITs.
- The value sum of pension fund portfolios was similar to that of REIT portfolios in 2018.
- The change on regulation is likely to foster a significative increase on use of financialized channel of investment by pension funds.
- Both pension funds and REIT present rent revenue management as its major income type.
- Office and shopping are the types of use which represent the largest share of pension fund and REIT portfolios.
- Pension funds and REITs follow similar patterns of investment, in portfolio distribution, choice of geographical location, and use type.
- When compared to other Brazilian states, São Paulo has the largest share of REIT and pension fund portfolios, with 63% of this value concentrated in its capital city. The state of Rio de Janeiro ranks second compared to other states; nevertheless, 89% of the value is concentrated in the state capital.

At the municipal scale, the following aspects are evidenced:

- São Paulo and Rio de Janeiro: while it is possible to locate real estate assets in pension fund and REIT portfolios throughout the city, these are more noticeable concentrated in specific regions of the city, such as those close to the UPOs.
- Curitiba: real estate assets are concentrated in the downtown area, with only a few located in the outskirts of the Linha Verde UPO.
- In the three municipalities: in the case of pension fund assets, it was possible to observe that this location profile has changed little over time.

3.1.2 INSTRUMENTS PERTAINING TO THE CASE STUDIES

> *"The charge for building rights is not considered a tribute or a fee. The air rights above the basic FAR (floor area ratio) are also considered a public asset, which the city can concede (against payment or not) for urbanistic purposes, according to urban development guidelines." (Smolka and Maleronka, 2018, 125)*

The case studies chosen for analysis in this work comprise several UPOs whose funding scheme is based on the CEPAC ('Certificado de Potencial Adicional Construtivo', or 'Additional Building Right Certificate'), the most significant Brazilian land value capture instrument. Thus, the CEPAC is another determinant factor in the choice of case studies. CEPACs were used as funding instruments in five UPOs in three large cities: UPO Faria Lima, Água Espraiada and Água Branca in São Paulo, UPO Porto Maravilha in Rio de Janeiro and UPO Linha Verde in Curitiba. Currently, all five cases have CEPAC as its funding source, but this was not always the case, which means it is possible to find properties that used another land value capture instrument, known as OODC ('*Outorga Onerosa do Direito de Construir*', or 'onerous grant of the right to build'). Thus, CEPAC use varies from case to case due to temporal and local contexts, as well as the way it was embraced in each UPO funding structure. This is an important feature to consider when analysing the instruments pertaining to the case studies as well as their institutional arrangements. CEPAC is an instrument which was designed, implemented and has been constantly under refinement from one case to another while the UPOs are ongoing. This historical background matter when analysing these cases being important to clarify its financial, territorial, and real estate dynamics outcomes. The way it was adapted to the funding structure throughout time and the institutional coalitions around it are also another variation of the instrument's application.

These features were better clarified during the semi-structured interviews carried during 2016 and 2020 for this thesis research. These features were better clarified during the semi-structured interviews carried during 2016 and 2020 for this thesis research. This study used the convenience sample of more than 80 interviews, carried with distinct stakeholders. The choice of the interviewees took place through a snowball method. The sample inclueded property investors, consultants from international asset management companies, property developers, real estate brokers, real estate market research companies, property market assosiations, architects and planners, large-scale companies which are property owners and tenants inside UPO's perimeters, public power representatives (UPO management, municipality hall, urban planning instrument consultants, municipal councilors and secretaries), and bank representatives. These interviews took two hours average each, were recorded, listened and analysed during all process of writing this work. Some of the interviewees were consulted more

than once. This interaction, especially with market consultants and planning techinitians was essential for collection, interpretation, and data analysis. Moreover, it provided further compreension of challenges and limitations of information and data access within the brazilian planning context.

In addition, such analysis aided in filling knowledge gaps in how FPI are being embraced by urban governance, what is their role in processes of urban financialization is, and whether they are favouring processes that shape the urban built environment and turning it into another asset class.

Being an evolution from former planning instruments, known as Urban Operation and Interlinked Operations, the UPOs in São Paulo are perhaps the clearer examples of the instrument development, with Rio de Janeiro's project as the expression of transformations in urban governance towards financial logics. Basically, the UPOs Faria Lima and Água Branca have changed since their first implementation, and thus the way how CEPAC's use were strategically planned. These two UPOs were updated, adapting to fit in CEPAC while the Água Espraiada project was born as an UPO already, with its financial strategy tied to this instrument. In Curitiba, CEPAC was thought of by the municipality as a funding alternative to put in motion an existing urban planning project, known as UPO Linha Verde. Based on the experiences from São Paulo, Curitiba employed and adapted this knowledge to their case reality, yet this project could not foresee gaps between the offered building rights surplus and the existing real estate market demand. Rio de Janeiro made the most distinct use of CEPAC all five UPOs and, as underlined by scholars (Saruê 2015, 2016, 2018; Stroher and Dias 2019), it deserves some highlight due to its financial structure complexification.

The UPO Porto Maravilha has a unique contextual scenario hosting two international main events in a short period: The World Cup in 2014 and the Olympics in 2016. Thus, it was not only a municipal target but a national project involving Brazilian promotion in international spheres as well as a political target in distinct levels concerned to municipal, state and national governance. Its sophisticated funding structure was elaborated, merging the use of CEPACs and REITs, a creation of a management public private company, as well as a public-private partnership. All this engineering involved institutional and political arrangements at local and state level but, above all, it was mainly concerted by the national level of governance. This urban development project targeted the touristic promotion of Rio de Janeiro as a national Brazilian asset and the attraction of foreign investment.

Once, the UPOs in São Paulo and Curitiba were projects concerned with the municipal level. As Saruê (2020) suggests, Porto Maravilha is the only case which can be considered multilevel, under

national government leadership. Thus, it is important to consider all these contextual features and all its complexities when analysing an instrument like CEPAC, comparing its cases and outcomes to clarify processes of urban financialization, for a deeper understanding on its contextual features in multilevel scales of governance and real estate market dynamics.

3.1.3 Components for the characterization of Urban Partnership Operations: a presentation

Urban Partnership Operation (UPO)

Urban Partnership Operation (UPO) is a Brazilian urban policy instrument of regulatory nature and the object of analysis in this work. As presented in the Methodology chapter, all case studies are UPOs, implemented in medium and large-scale Brazilian cities. In Brazil, significant large-scale urban development projects rely on this instrument which are the specific cases analysed in this work, such as the UPOs Água espraiada (2001), Faria Lima (2004), and Água Branca (2013) in São Paulo, Porto Maravilha (2009) in Rio de Janeiro, and Linha Verde (2011) in Curitiba. The UPO model allows some cities to have their funding scheme based on the CEPAC (*Certificado de Potencial Adicional Construtivo*) instrument, which is another determinant factor in the choice of case studies. Urban Partnership Operations set a perimeter of regulatory exceptions and incentive systems, to promote structural urban transformations, social improvement, and environmental valorisation (Maleronka and Hobbs 2017). As a large-scale urban development project tool, the UPO can be only set in major Brazilian cities, per the regulation mentioned above. The supporters of UPOs pose that it is as an instrument that gives the opportunity to municipal governments to get around budgetary constrictions through a redistributive approach. However, this regulatory tool is often addressed as representing neoliberal managerial urban governance strategies (Fix 2003; Massonetto 2003; Mosciaro, Pereira and Aalbers 2018; Mosciaro and Pereira 2019; Rufino, Wehba, and Magalhães 2021).

The '*Operação Urbana Consorciada'* (directly translated as 'Urban Consortium Operation') is a Brazilian urban policy instrument to promote transformation, version of large-scale urban redevelopment projects (Maleronka and Hobbs 2017; Kim 2018; Mosciaro and Pereira 2019). In related literature, they are also included under the designation of 'Urban Partnership Operation' (Klink and Stroher 2017, Friendly 2020), or even the more general 'Urban Operation' (Friendly 2017; Mosciaro, Pereira and Aalbers 2018; Mosciaro and Pereira 2019). With the City Statute (Law 10257/2001) it was officially named as '*Operação Urbana Consorciada';* its predecessor instrument was called '*Operação Urbana'* (Urban Operation). Thus, it seemed more acurate to adopt the term 'Urban Partnership Operation', or simply UPO, for this thesis.

This section expands the brief description of UPOs previously presented in the Methodology chapter. In the context of this research work, it is crucial to understand what Urban Partnership Operations are and to historically contextualize them, starting with their 1980s and 1990s predecessor instruments: Interlinked Operation and Urban Operation.

Urban Partnership Operation is an urban planning and management instrument which, according to Maleronka and Hobbs (2017), if correctly used has the potential to guide the city growth. According to these authors, its relevance lies in financing the desired interventions and in gathering attributes able to make strategic urban transformations viable, in alignment with the municipal urban policy goals. Maleronka and Hobbs (2017) argue that its success depends on how it is planned as well as how it is managed. Urban Operations are not autonomous, and the dynamics resulted in its territory depend on general urban planning definitions. This is to say that the real estate activity guidance will depend on the regulatory options in a citywide scale. As Maleronka and Hobbs (2017) highlight, the results of existing UPOs to date cannot be seen as the instrument failures but as outcomes of how the instrument was implemented.

INSTRUMENT HISTORICAL BACKGROUND

UPOs were introduced by the City Statute (Law 10 /2001) based on the previous experiences of the São Paulo municipality with the Interlinked Operations and Urban Operations. As its evolution is important to understand some concepts inbuilt in this instrument, its historical background will be summarized here.

As pointed by Maleronka and Furtado (2013) and Friendly (2017), in 1975 there was a circulation of ideas and proposals targeting ways to promote balance between the burdens and bonuses of urbanization. As agreed by many authors (Maricato and Ferreira 2002; Maleronka 2010; Maleronka and Hobbs 2017; Stroher 2020), at this time these debates were influenced by the French experiences with an urban instrument known as *'Zone D'amenagement Concerté'*, or ZACs (mixed development zones). According to Maleronka and Hobbs (2017) ZACs were initially conceived in 1967 to flexibilize urban legislation in certain areas that were to be transformed by urban projects. But although the concepts of ZACs influenced the ideas circulating in the São Paulo City Hall at this time, Maricato and Ferreira (2002) point out that the Brazilian instrument has little to do with the French one. The authors highlight that these differences are intrinsic to the more inclusive characteristics of European market contexts and instrument models. According to Maleronka (2010) and Maleronka and Hobbs (2017), the first reference in the Brazilian literature about Urban Operation is found in a text signed by the urbanist Luiz Carlos Costa in 1976. In this text Costa refers to urban operation as an innovative instrument which would be key to the policy of urban development. The urbanist highlights the potential of using the increase in real estate

value achieved from urban interventions as source of funding, posing the following (COSTA, 1976, 73, apud Maleronka 2010, 74, free translation):

> *"Urban Operations were conceived as being, in essence, undertakings of a real estate nature through which the Public Authority takes the initiative in the process of producing urban space and participates in the real estate appreciation it helps to bring about, aiming at social objectives and increasing opportunities for private initiative to act."*

In 1980, Urban Operation is introduced as an instrument destinated to boost real estate activity through urban projects which are integrated with social purpose. These projects would be negotiated between the public power and real estate private sector. In 1985 was the first time when specific areas destinated to Urban Operations were presented as part of an, later non approved, urban masterplan of São Paulo. According to Maleronka and Hobbs (2017), inicially the urban operations were idealized as a management strategy of increase of real estate value, but this was changed when put in practice. These projects were viabilized through the sale of additional building rights, mechanism which will be further detailed in this chapter (item 3.2.2.1). This change took place with the Interlinked Operations, a precursor instrument of urban operations. As Maleronka and Hobbs (2017) highlights, the main change is related to its funding structure. The Interlinked Operations has its fundations on the concept of 'solo criado', literally, created land.

SOLO CRIADO: THE CONCEPT OF CREATED LAND

As Friendly (2017, 9) summarizes, the term '*solo criado*', or 'created land' emerged in mid 1970s as "(...) the right to additional floor space beyond the density restrictions established by the master plan (…)". According to Resende et al (2009) and Friendly (2017), the research group that developed this concept was inspired by the French 'Plafond Legal Densité' and North American experiences with 'transfer of development rights'. This research group was part of a center known as Centro de Estudos e Pesquisas da Administração Municipal (CEPAM), connected to São Paulo State's Secretariat. In one of their publications, '*solo criado'* was desscribed as follows: "the creation of additional usable floor area which is not directly leaning on land" (Moreira et al, 1975, 7 apud Maleronka and Furtado 2013). The following image (Figure 33) is a cover page of a Brazilian architectural magazine in 1977 which helps to illustrates the concept of 'solo criado'.

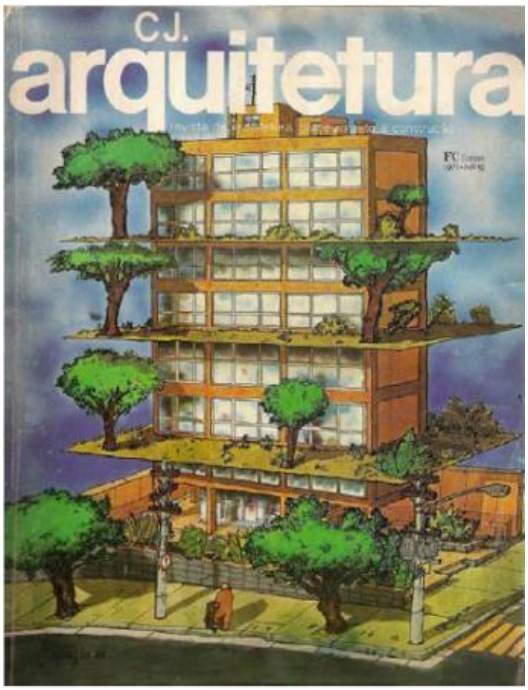


Figure 31-'Solo Criado' concept illustration on magazine cover - CJ Arquitetura, nº 16, 1977 apud Maleronka and Furtado (2013)

Three instruments have unfolded from the '*solo criado'* concept: single utilization coefficient, transfer development rights (TDR), and the proportionality between public land and private land. According to Maleronka and Furtado (2013), all these instruments aim to balance eventual land value outcomes imposed by distinct zoning criteria. It is assumed that distinct utilization coefficients in different zones lead to a variation on plot prices and, that these instruments aimed to correct this unbalance. Additionally, the concept brought to the spotlight ideas of land value capture, embedded in both OODC and CEPAC: it is fair to return to public coffers and, thus, to community the economic surpluses gained by its investments instead of letting it go to the landowners. As Maleronka and Furtado (2013) and Friendly (2017) explain, these instruments based on *solo criado* lead to the idea of stablishing the single land use coefficient, at first valid for all urban territory. But this idea aroused political and legal validity concerns and the subject was then debated by a group of jurists, resulting in a document known as 'Carta de Embu' (FPDL/ CEPAM, 1976). This document concludes the constitutionality of fixating a single built coefficient to all urban plots. The initial proposed idea was to adopt a basic and unitary land use coefficient; in other words, it would be allowed to build for free for a maximum one measure of the area of the plot.

However, this ambitious idea of turning it in a national rule has slowly faded away. Maleronka and Furtado (2013) points those previous drafts for Urban Development Law from 1977 shows the adoption of a '*solo criado*' instrument, also known as Outorga Onerosa do Direito de Construir (OODC), and the single land use coefficient. Later drafts from 1982 no longer include them. From the 1970s documents only the instrument of TDR was carried to the sanctions in the 1980s, yet

it was segregated from the idea of a single, or basic, land use coefficient. By this time, TDR was applied by some municipalities, as São Paulo and Porto Alegre, in an effort to preserve cultural and historical patrimonies. It is important to note that the OODC is also the base of the CEPAC - understanding these concepts aids the analysis of UPOs, especially the ones in São Paulo. These subjects will be developed further in this chapter.

The '*solo criado*', as instrument, returned to urban planners' focus on the Federal Constitution in 1988, who were concerned about finding ways to increase municipal fiscal autonomy. Initiatives emerged in distinct municipalities in the late 1980s, aiming to regulate the instrument. As Maleronka and Furtado (2013) underline, it is important to note that each municipality had a different interpretation of solo criado instrument, which was also perceived during this work's analysis of CEPAC across each of the three municipalities - São Paulo, Rio de Janeiro, and Curitiba. Although discreet, it was possible to identify some deviations on CEPAC interpretation and operationalization.

It was with the Federal Constitution in 1988 that the '*solo criado'* instrument returned to urban planners focus due to concerns about finding ways to increase municipal fiscal autonomy and responsibility. In the late 1980s, emerging initiatives in distinct municipalities aimed to regulate *solo criado*, although the instrument was appropriated within distinct versions. As Maleronka and Furtado (2013) explain, this variation happened due to distinct interpretations of *solo criado* concept and ideas from 1970s. Furtado et al (2007) and Maleronka and Furtado (2013) emphasize the lack of standard or models of elements and definitions to regulate and implement it as an outstanding characteristic of these municipalities' experiences. The first experiences were Florianópolis, 1989, Curitiba, 1990, Natal and Porto Alegre, 1994.

Interlinked Operations used a negotiated process (Maleronka 2010), but in 1998, it was declared unconstitutional as it represented changes to the zoning law. Another tool known as joint urban operations (Urban Partnership Operations, UPO) also uses the solo criado concept. UPO allows for urban interventions in predefined areas by exchanging development rights and releasing land use restrictions. Used in São Paulo since 1991, UPOs define exceptions for each area. Despite challenges, Interlinked Operation and UPO served as learning experiences for the use of new urban tools in São Paulo, helping to instil in developers the culture of payment in exchange for building potential, while public servants gained expertise in valuing land and negotiating the increment value with the private sector (Maleronka and Furtado 2013; Sandroni 2011). The pioneering spirit of both tools may explain why São Paulo introduced OODC relatively late.

The São Paulo master plan of 2002 established the basis for applying OODC, including methods for calculating the charge and allocating resources. At that moment, the validity of OODC went

unquestioned due to the precursor experiences such as Interlinked Operation and UPO (Maleronka and Furtado 2013). Yet in the discussions leading to the master plan's approval, developers challenged the idea of a basic FAR of 1 for the entire city (Bonduki 2007). In the 2002 master plan, FAR values from previous land use law (FAR 1 or 2) were maintained and maximum limits were adopted. This meant that a basic FAR of 1 or 2 was established for most of the city and of 4 for some areas with specific uses, such as in areas of UPO and priority public transport areas, so that there was considerable potential to construct at higher densities without paying for OODC.

These experiences show the variety of interpretations of Solo Criado and OODC had have assumed along the time by distinct Brazilian municipalities. This historical background provides some perspective to our analysis contributing to understand the complexities and diversities of contexts in each time and location. It also emphasises the challenges to be surpassed by this research and need for deep and extensive scrutiny to unveil with further clarity the outcomes of analysed case studies. Additionally, this historical background gives a great overview of São Paulo context, which is the city of three of our studied cases. Yet this section is dedicated to explaining the urban instruments, it is also worth to present some of the historical background of UPO Porto Maravilha, in Rio de Janeiro. As will be shown further in this document, this UPO has some distinctive features in its funding structure. This can be interpreted as an outsider case of UPO in comparisson to others. But it also can be seeing as turning point towards UPOs if considering: the whay how the instrument was put in use, who were the actors involved and their motivations in shaping such structure, and the absortion of a funding instrument such as FIIs in its funding structure. Thus, its contextual background is important to be highlighted.

Turning point towards UPOs: Porto Maravilha and its funding structure

- Historical background and some motivations for the shiftting

Rio de Janeiro's entry point into the world of mega-events began in the early 1990s as a strategy to attract global capital, marked by the adoption of strategic planning. This neoliberal managerial approach was considered key to confront the conditions imposed by globalization and to engage in competition for mobile global finance (Vainer 2009). This planning approach was justified based on a view that the well-being of a city's inhabitants would depend on the city's success as a global competitor. Key to this model was an approach based on institutional flexibility, allowing local authorities to reinvent planning regulations, by altering zoning and land use plans, permitting tax exemptions and legal exception to service private interests (Novais 2010). As Sanchez and Broudehoux (2013, 136) note, "according to such views, neo-liberal leaders have

learned to exploit a crisis discourse of fear, violence, and economic decline to generate a popular consensus about major urban interventions."

Within this model of strategic planning, the focus was on improving Rio de Janeiro's image, and marketing its competitive advantages to attract foreign investment, tax-paying residents, wealthy tourists, and professionals from the 'creative class.' This entrepreneurial mode of governance was modelled after the strategic planning approach pioneered in Barcelona, whose highly celebrated Olympic revitalization project was widely mimicked around the world, especially in Latin America. As Vainer (2015, 97) notes, in the early 1990s, "a new concept of the city set in." Following the 1992 Barcelona Olympics, consultants from Barcelona were hired to assist Rio prepare its first strategic plan. The Catalan consultants – also responsible for the Barcelona strategic plan – were key in the diffusion of the "Barcelona model" to Rio de Janeiro (Acioly 2001; Novais 2010).

A fundamental shift in the municipal leadership' strategy also occurred in the early 1990s. César Maia, of the conservative Brazilian Democratic Movement Party (*Partido do Movimento Democrático Brasileiro*, PMDB) and elected mayor of Rio de Janeiro in 1993, was drawn to the idea of strategic planning. The Barcelona model became a successful demonstration of a strategy to foster mega-events, demonstrated both by Rio de Janeiro's strategic plan and the recommendation of the city as a candidate for the Olympics. In 1995, the Strategic Plan of the City of Rio de Janeiro promised to bring tourism back to the city and to insert Rio de Janeiro in the circuit of sporting mega-events, and to attract investment and attention to the city. The goal was to establish a competitive city internationally, including a range of macro-economic, social, urban, cultural, and environmental infrastructure projects, defining the city for the future (Silvestre 2017). The document presented a scenario in which competition between cities and countries was of fundamental importance, defending the Olympics as a way to reach Rio de Janeiro's objectives, guarantee public investments, and project a new image of the city (PCRJ 1996). Rio de Janeiro's adoption of mega-events as a development strategy also resulted from a political alignment between the municipal, provincial, and federal governmental levels. Indeed, strong political alliances between President Lula's Worker's Party (Partido dos Trabalhadores, PT), Rio de Janeiro's state governor, Sergio Cabral, and Rio's Mayor, Eduardo Paes, both of PMDB, were also key to the strategy of mega-events. As Oliveira (2012) notes, the promotion of mega-events at this time was a priority for the Brazilian State, given the inclusion of practically all political parties, including those of the opposition. This unified political front was behind Rio de Janeiro's successful Olympic bid, after two failed Olympic attempts in 2004 and 2012, and the successful hosting of the 2007 Pan American Games. As Vainer (2015, 98) notes, what Rio residents are experiencing today is the result of a slow, complex, but continuous process of formation of a new

hegemonic coalition, able to propose and impose a new project and a new destiny onto the 'city in crisis'. In addition, the extreme growth of Brazil's economy, alongside the growth of the oil and gas industry, and the security policy implemented by the state of Rio, also likely boosted Rio de Janeiro's chances to host the games (Silvestre 2017).

Framed by Agamben's (2005) work on the state of exception, the story of Rio de Janeiro's Olympic city-making has been shown to operate as a city of exception, functioning outside the law. For Vainer (2009, 2015), the market-friendly state operates without firm rules to take advantage of opportunities to meet the demands of urban capital. In this reading, mega- events are embedded in a reconfiguration of power structures – both at the local and national levels – thus imposing a neoliberal order based on authoritarianism and exceptionalism. In this reading, such processes are not inevitable, but rather "intended outcomes of the new urban policies" (Richmond and Garmany 2016, 622).

- Funding structure

The Porto Maravilha UPO differs from all other case studies because not only does it employ CEPACs, it also relies on a Public-Private Partnership, which includes a management company (CDURP) and the private consortium Porto Novo, which focuses on services and infrastructures. All aspects of this UPO created in 2009 (the dedicated management entity, the fact that normally public services are undertaken by a private consortium) are unique in Brazil in the context of large urban operations. The public-private partnership was created after rights over several different public works and services were won by a trio of companies, through a public concession contest opened by the municipality. The consortium entity, Porto Novo, was responsible for building infrastructures, including the train line, and for undertaking maintenance – a service which would normally be public and undertaken by the prefecture itself.

The presence of this public-private partnership represents a delegation of responsibilities from the public administration to private companies. In this way, the prefecture was able to present a reduction of costs with public services, while at the same time working with the same companies which were previously directly contracted to ensure maintenance. Currently, Porto Novo has mostly disappeared as a service provided, largely defunded by the impossibility to trade CEPACs and mired in corruption scandals. Services previously ensured by it have been renegotiated and transferred. Due to these factors, the funding structure of Porto Maravilha is understandably more complex than other UPO's.

Access to CEPAC is also different. While elsewhere CEPACs are auctioned, plot after plot, after the respective prefecture completes the urban project and calculates the costs to be covered, in Porto Maravilha all CEPACs were sold all in the same auction, in 2014, and acquired by one single buyer

– a pension fund (FGTS) managed by the government with the primary function of capitalizing on workers' pensions, formed through the mandatory partial retention of workers' pay. There was a collision of local and national interests which led to this situation, including the approaching World Cup (2014) and Olympic Games (2016). First of all, it was urgent to sell the CEPACs, raise money, and build the projected infrastructures as quickly as possible, in order to meet the objectives of the existing agenda; secondly, buying all the CEPACs was considered a good investment for the FGTS, which had a low return rate for its investors and thus was able to turn the expected profit with ease; thirdly, the use of a public fund showed private investors that the government was invested in the project, implying that investment in that context carried a low risk, but also that the government was sharing the risks.

Another difference is the funding structure created for the Porto Maravilha UPO, as a consequence of its different approach to CEPACs. CDURP needed money to circulate, in order to fund the activities of Porto Novo. The state (and to a lesser degree the municipality and the state union) possessed several empty or derelict plots in the city and converted them into the first step of investment by transferring all of them to the municipality, which used them as a guarantee in return for FGTS's investment in Porto Maravilha. According to the law, there was not a clear path to ensure this transference of public land into private hands, which resulted in a somewhat convoluted and much criticized process. Furthermore, FGTS was also not supposed to invest in real estate trusts (like REITs) by law – FGTS was limited to certain types of investments, which did not include financializing instruments. As a consequence of this situation, the law was modified to allow FGTS to invest in this context, and two investment funds were created with the purpose of circulating money (one under the management of the municipality, and the other under the FGTS's management). The use of two different funds was necessary to ensure proper tax management.

3.1.3.1 CEPAC: A PRESENTATION

CERTIFICADO DE POTENCIAL ADICIONAL CONSTRUTIVO (CEPAC): DEFINITION AND PRESENTATION

As previously mentioned in this work, during the last decades urban development projects have been used by many cities to promote transformations in urban space and land configurations. In the Brazilian case of UPOs, this mechanism consists in a set of improvements financed and implemented in a certain perimeter of the city. These changes are regulated and financed through the sale of bonds that can be converted into additional building rights inside this perimeter, predefined by the municipal masterplan. Additional building rights are available for purchase through bonds issued by the municipality and are designated as CEPACs ('*Certificados de*

Potencial Adicional de Construção' or 'Certificates of Additional Building Rights'). The total amount of CEPACs to be used is defined by each UPO law and its issuance is determined by the municipality during the project's implementation. This issuance is usually made in distinct tranches, set by the municipality according to the UPOs development and, to a certain extent, market demand for additional building rights. As previously mentioned in this document, CEPACs are issued by the municipality and sold on electronic auctions on the Brazilian stock exchange market, regulated by the Securities and Exchange Commission (CVM) (Smolka and Maleronka 2018; Mosciaro et al 2018). An uncommon feature of CEPAC, which makes the instrument an interesting case of financialization of the urban built environment, is that it consists in a land value capture instrument whose credits are securitized and traded in public auctions. By incorporating the perspectives, valuation techniques and calculation methods of the financial market, CEPAC can be characterized as a financializing policy instrument (Klink and Stroher 2017; Mosciaro, Pereira and Aalbers 2018; Aalbers 2019).

The CEPAC initial value is based on an economic feasibility study which is part of the project's legislation, and functions as regulatory guidance and cash flow planning. This study is what defines the initial value when these bonds are traded in stock market auctions. Before being linked to a plot or real estate development project, CEPACs can also be traded in the secondary market. This fact raised concerns about the instrument's potential for speculation, emphasized by CEPAC's financialized characteristics, among some authors specialized on financialization (Fix 2003; 2009; Stroher 2017, 2018; Mosciaro et al 2018). However, the experiences so far point out that its trade volume through secondary market is low (Smolka 2013; Stroher 2017; Maleronka 2015; Maleronka and Hobbs 2017). CEPACs are usually bought and sold by real estate developers, who are the ones trading in the secondary market. The CEPACs available in this market are mainly the surpluses not absorbed by its buyers in their projects. In turn, titles available in this market are eventually bought by real estate developers, which are in need of more CEPACs than they initially expected for their projects (Stroher 2018). Although conscious of these facts, the concerns of financialization specialists about CEPAC's characteristics remain as a possible negative aspect forecast (Stroher 2017, 2018; Mosciaro et al 2018). Although this work does not focus on this debate, it acknowledges it as a relevant feature to be evaluated when analysing CEPAC's unfolding outcomes.

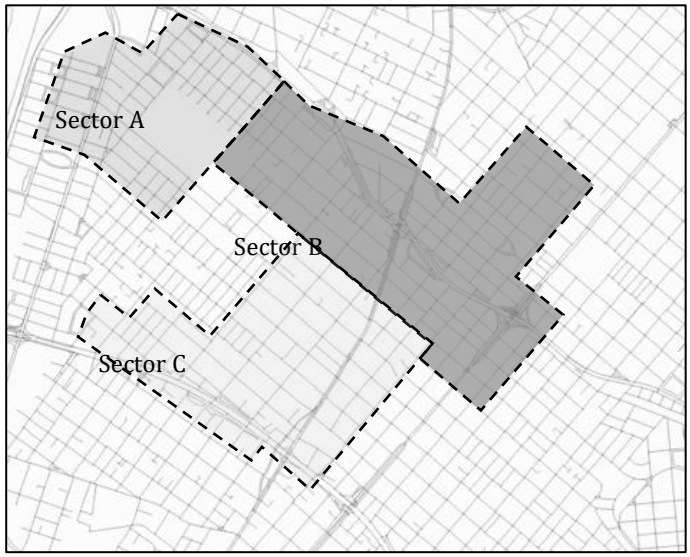
In practice and by law (City Statute, law 10257/2001), CEPACs can be used for dditional building rights, to convert land use, as well as a financial counterpart to pay municipal service providers. The limited amount of CEPACs for each UPO also highlights the idea of scarcity and long-term expectation of its full absorption through market demand. These characteristics are emphasized by the instrument narrative of value self-regulation and by the logic of value capturing, following

price increases according to an area's development (see Smolka 2013; Maleronka 2015; Maleronka and Hobbs 2017). As presented in the literature review chapter, this line of thought is common of land value capture instruments and in the concepts introduced by Henry George. Just like other land value capture instruments, CEPAC's concept is based on the idea that land value surpluses, due to communal investments, belong to the community and must return to citizens.

Another point to highlight is that CEPAC is based on the expectation of capturing the future surpluses of land value, due to infrastructural improvements and territorial transformations. This often led to comparisons with other land value capture instruments, such as Tax Increment Financing (TIF) which is also based on expectations of future value increases. However, there are some key characteristics of CEPAC and TIF which make them differerent. In short, TIF is based on the securitization of expectation of the future increment on property tax. The instrument aim is to anticipate this potential property tax increment, assuming it as a certain outcome derived from the area's urban development (Weber 2010; Maleronka and Hobbs 2017; Mosciaro et al 2018). Similarly, in the case of CEPAC there is an expectation of capturing value surpluses from area development – however, the trade currency is the right to build. Thus, the municipality is not giving up future property tax incomed, instead selling the right to build by granting a flexibilization of ratios inside a pre-set area of financial compensation (Sandroni 2013; Smolka 2013; Maleronka and Hobbs 2017). So, CEPAC per se does not translate into a scheme of debt/credit based on future expectations (Mosciaro et al 2018); instead, it means the sale of the so-called 'virtual additional land', in order to build above the city limits (Maleronka and Furtado 2013; Maleronka 2015; Friendly 2017).

CEPACs are bonds and, as Mosciaro et al (2018) underline, that bonds are tradable securities. This means that they can be bought and resold to anyone, independently of being attached to any project. When on sale, CEPAC's market value is always the same, independently of the sector to which it will be applied in the future. In addition, CEPAC will remain a tradable security until it is linked to a plot which must be inside the UPO perimeter. When CEPAC is linked to a plot and converted into additional building rights, or used to modify urban parameters, it is extinguished as certificate - in other words, it is no longer a tradable title. CEPAC is then attributed to a project and the number of additional built square meters is set according to the project location and use characteristics. This equivalence between one CEPAC and the right to a certain built area is calculated using a conversion table, imposed by the project's legislation. As a planning instrument with regulatory features, the UPO legislation defines distinct parameters for the conversion of CEPACs, placing its spatial distribution inside the project's perimeter. As Mosciaro (2018) and Smolka and Maleronka (2018) highlight, such distribution usually sets more permissive ratios for residential developments than non-residential ones. The CEPAC conversion table defines a

reference ratio to be considered by one CEPAC when developing a project inside the UPO's perimeter. Considering, for instance, the hypothetical case of 'UPOx' as presented in Figure 31, it can be assumed that sector B and C are areas planned to be potentially residential, while sector A is targeted as a non-residential area. In this case, in sector B, one CEPAC will be equivalent to 2.5 square meters of additional building right for a residential project, while in the case of a non-residential project such as office or other commercial buildings, it would be equivalent to 0,5 square meters. In sector A, one CEPAC can be converted into 1 square meter in residential projects, and 2 square meters when used for non-residential projects.



CEPAC conversion table		
UPOx	Weight value per CEPAC	
Sector	Residential use	Non-residential
A	1	2
B	2.5	0.5
C	1.75	0.75

Figure 32- Hypothetical UPOx and respective CEPAC conversion table (own authorship)

Another relevant characteristic of CEPAC is that the values captured by this instrument are directed to an exclusive fund of its respective UPO, as Figure 32 shows. It is to say that the values captured by the CEPAC sales are directed to the urban operation fund and must be reinvested in the same area where the addition building rights are granted. This can be different in other parts of the city even though additional building rights are granted by the municipality, as is the case of cities which apply OODC.

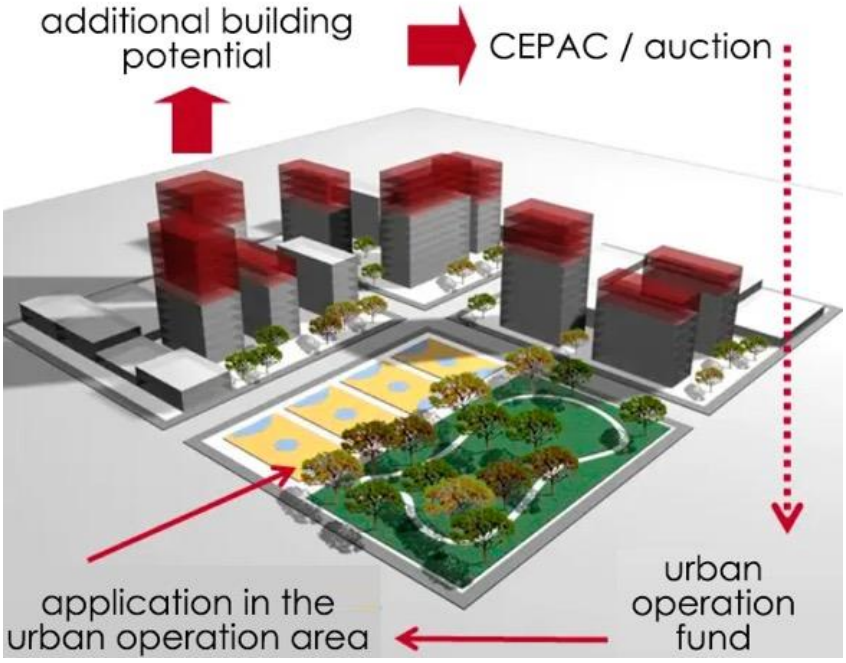


Figure 33-Operação Urbana Consorciada: exemplo de funcionamento. (adapted from Prefeitura de São Paulo, citation = https://www.prefeitura.sp.gov.br/cidade/secretarias/licenciamento/noticias/index.php?p=19287)

According to some specialists (Maleronka 2010, 2015; Maleronka and Furtado 2013; Smolka and Maleronka 2018), this feature is important to the analysis of CEPAC and its outcomes. The impact of granting additional building rights in a certain area can be more or less attractive according to the possibility of extra building outside the UPO perimeter. This stems from the fact that fees paid by the real estate developer to have this right granted are distinct, and so are the prices inside and outside the perimeter of an UPO. In cities like São Paulo, both OODC and CEPAC are at stake, and can be considered an option by the developers. This means that outside the UPO perimeter, it is possible to build above the city's floor area ratio (FAR) as defined in the municipal masterplan, in exchange of a financial compensation.

BRAZILIAN LAND VALUE CAPTURE INSTRUMENTS AND THEIR DISTINCT URBAN SCALES

Although with similar characteristics, OODC and CEPAC concern distinct territorial and value capture distribution scales. When a municipal planning applies the OODC, it is concerned with captureing value in plots of whole urban area. Municipal master plans might rely on both instruments, as is the case of São Paulo. However, a CEPAC must be attached to an UPO to exist; consequently, its use is tied to the area limited by the project. Even though the OODC is not a financialized policy instrument, neither the focus of this work, to acknowledge its role in Brazilian planning helps understand the possible contexts and distinct scales in which cities are capturing the value of additional building rights. Furthermore, if both are used in the same city, as in the case of São Paulo with three of the five UPOs analysed in this work, one instrument may interfere with the other, for example when deciding whether to build inside or outside an UPO. At the end

of the day, real estate developers make their calculations considering price of the plot and the characteristics of each instrument. What stands out for the investor in these calculations is that they can buy the additional right to build above the basic floor area ratio (FAR), and the current instrument where the plot is located, OODC or CEPAC, will stablish a limit for this, or a maximum FAR. As argued by Smolka (2013), to whom the real estate developer is paying to be able to build extra square meters seems to be rather irrelevant on the decision of where or what to build. Yet, a group of authors disagree with such perspective, arguing that CEPAC influences this path decision of real estate developers and investors, leading to the choice of real estate products and to financialization.

Together with the concept of *solo criado*, the idea of basic and maximum FAR is a key element to understand an UPO financial mechanism, as well as its main differences towards OODC and the intention to densify an area through an UPO project. This is due to the fact that an UPO project establishes relatively flexible zoning rules inside its perimeter. As Mosciaro et al (2018) explains, the zoning rules applicable to the Urban Operation define basic and maximum floor added ratios (FARs). A developer is allowed to create a project in which the total built area does not exceed the basic development rights, defined by multiplying the plot's size by the FAR. Then comes the innovation: projects that exceed basic development rights are admissible, as long as the builder purchases additional development rights. The total of additional development rights cannot exceed a certain limit, defined by a sort of 'FAR+'. In this case, the builder is supposed to purchase additional development rights to meet the difference between the FAR and the FAR+.

The real estate developer can choose to build on the skirts of an UPO, making use of OODC to build above the city's basic FAR, as happened in São Paulo. This may be an interesting decision when the plot is located close enough to an UPO area, thus, taking advantage of the project's urban transformation. Yet the OODC usually has a lower value and maximum FAR when compared with CEPAC, which can better fit the real estate developer calculations and product aims.

Basically, in the case of OODC (see Figure 34), the municipality charges to grant the right to build above basic floor area ratio (FAR) up to the maximum the area can support. Any landowner who desires to build above the basic FAR needs to pay a charge when applying a project at municipality. The sum collected by this instrument is deposited in an urban development fund. This fund is managed by staff from the public sector and society representatives, who approve the allocation of resources across the city. As argued by Furtado et al (2006) and Friendly (2017), once such fund is managed by a council, representing an improved transparency in the application of resources. In the case of CEPAC, although sharing the same root of *solo criado,* its calculation and operational criteria are different from those of OODC. With CEPAC, the purchased building rights pertain to a limited perimeter of the city, which is pre-defined by the UPO project.

The UPO project defines the maximum FAR inside its perimeter, which can also vary according to its use. This variation is usually regulated through a reference table, which attributes distinct CEPAC values to residential or non-residential uses. Such reference table is a tool to guide the development of real estate market in the direction the UPO is planned. This is to say that the project regulation encourages developers to invest in products with certain use, as desired for a specific area. For instance, should a plan aim for the development of more residential square meters near a cultural sector, the reference table would be set for this area. The values captured through CEPAC are deposited in a fund dedicated exclusively to its UPO and can only be reinvested inside the project's perimeter.

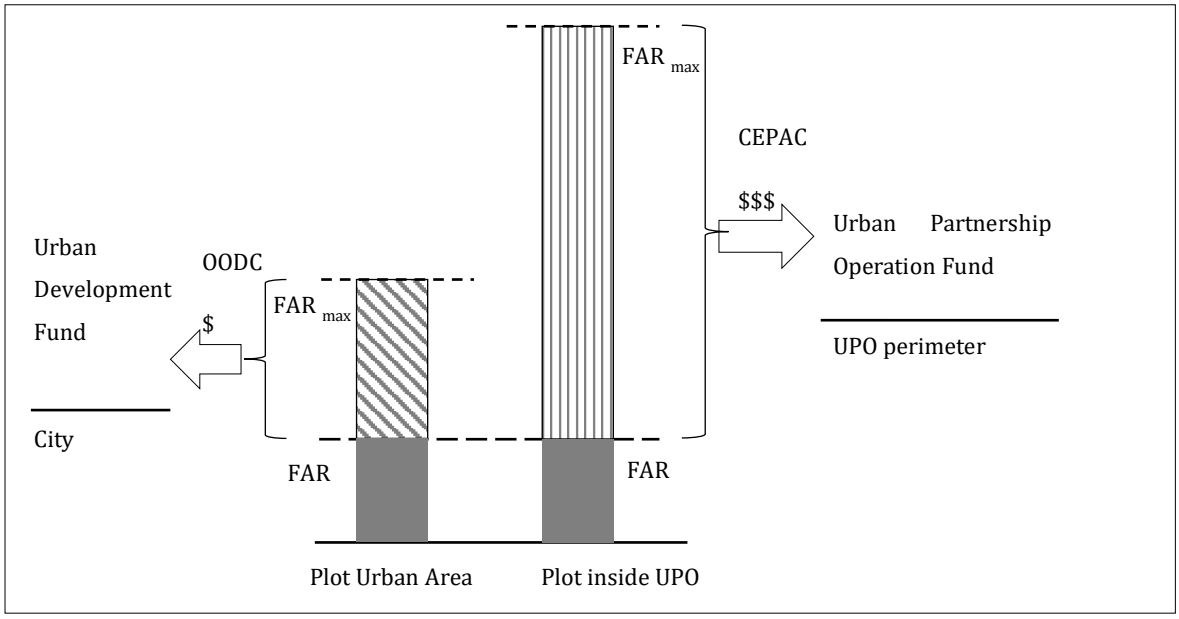


Figure 34- Differences between OODC e CEPAC (adapted from Maleronka 2015) Property assets classification and management

Economists have sought to understand the temporal regularities that exist in the production and consumption of urban space. The fluctuations present in this market are characterized by economists as 'cyclical' (Hoyt 1993/2000). This concept discusses that market and property valuation fluctuations have repeating characteristics that are reflected in new square footage and prices. Furthermore, as Hoyt (1933/2000) argued, these values repeated themselves not in isolation or randomly, but self-perpetuating. Weber (2016) comments that economists believe that the construction of cycles is an empirical way to describe one of the main features of the property market, characterized by the predictability of a movement between highs and lows that accompanies its business cycle. However, Weber (2016) warns that this view of market cycles also receives criticism, which in contrast sees cycles as metaphors for how economists imagine

the behavior of markets, or how it should behave. In this thesis, we will not delve into these issues of market cycles or their interpretations along the different lines mentioned by Weber (2016). We introduce the issue of cycles as a background of why and for what property market actors engage in assigning ratings to the built environment, also known as 'property rating'. Knowing this issue is essential to understand both the choice to collect and analyze the ratings assigned by real estate market actors, and to understand the data found. But first, it is also necessary to clarify why this theme is related to the processes of financialization.

The issue of property classification is of interest for discussing financialization processes, as they are one of the bridges used by investors in the decision-making process of where to allocate their funds. Moreover, as Weber (2016, 7) argues, "Cycle thinking is economically consequential in that it can affect prices and investment decisions." As explained throughout chapter 1, particularly in sections 1.1.1.3 and 1.2, it is not new to us that several works explain how the built environment has been reinterpreted through numbers and ratings by investors (Haila 1988, 1991; Coackley 1994). These ways of interpreting the built environment enable investors to compare real estate assets with any other type of financial asset (van Loon and Aalbers 2017). Another topic addressed in the literature review of this thesis, throughout section 1.2, is emergence and role of intermediary actors - e.g., real estate consultants, real estate asset management companies, real estate brokers, real estate developers, among others (Guironnet and Halbert 2014, 2015; Weber 2015; Theurillat et al 2016). These are the actors who design metrics and ratings that are assigned to the built environment as a 'quasi-financial' product (Coackley 1994). The non-residential use property is often exploited by these actors in assigning metrics and ratings that assist them in interpreting the cycles of the real estate market. The built environment is in this sense the connection point between the financial, the real estate market, but also to urban planning. As explained in section 1.2 of this thesis, it also explains that some urban policy instruments seek to guide and regulate the development of real estate as well as to stimulate investors to choose to build in certain areas. This is the case of large-scale urban development projects and land value capture instruments. These are instruments that relax laws and change building parameters with the focus on the transformation of a given urban area. One of the characteristic outcomes of these instruments, and which also concerns the discussions on financialization processes, is the alteration of property market dynamics and increases in real estate values practiced in the area delimited by the project (Guironnet and Halbert 2014, 2015; Weber 2015; Theurillat et al 2016). As seen in section 1.2.2.3, the increase in real estate value is precisely one of the bases of the concept of land value capture instruments. That is, once the increase in value derived from the investment in infrastructure made by the municipality, it is understood that it is fair that this increase is returned to the city's public coffers and consequently to its citizens. Thus, collecting and analyzing the ratings attributed by actors in the real estate

market seemed to us an interesting approach to shed light on how financialization processes have been occurring in Brazil.

The property market and its cycles are embedded in a complex network of actors and objects. In this context, market devices such as rating systems aim to help standardize and distribute information within this complex network. Śmietana et al (2014) explain that these analysis systems cover the following criteria: market, location, characteristics and quality of cash flows. Such criteria should demonstrate issues that are considered key to interpreting the quality of investment properties. With regard to the market, it is analyzed what the demand is for a particular type of property. The location criteria, point out if the property is located in an address that stimulates the increase of its value over time. Regarding the property's characteristics and the quality of the cash flows it can offer, the following points are considered: whether the type of urban and architectural concept of the development matches the type of product the market demands, whether this concept is also able to guarantee a high quality construction, whether the concept guarantees that the development follows sustainable environmental standards, whether it guarantees adequate space efficiency, whether it provides for professional management and maintenance consistent with what is considered high real estate standards, whether it follows financing, capital cost and real estate marketing models. Regarding the cash flow quality criterion, the aspects of financial management are evaluated and whether it is able to ensure the stabilization of cash flows. As Weber (2016) emphasizes, rating systems allow properties to be positioned next to each other so that they can then be compared and subsequently valued. Among these rating systems is the one that assigns properties Class A, B, and C typologies, which indicate the quality of the buildings and, at the same time, the concept of 'highest and best use', which prioritizes the most productive use of a lot.

As mentioned by Crosby and Hennebery (2016) these rating systems are part of calculative practices of property valuation. The way in which that valuation is performed can affect its outcome, thus interfering with the operation of the property market. For the analysis made in this section, we could not delve deeper into how that valuation was performed, this being one of the weaknesses of the methodology adopted for data collection. We considered only the data available in databases of market consultants, accessed via search engines that they make available on the internet, websites of builders and developers, websites specialized in real estate and real estate launchings, as well as news in specialized magazines and newspapers. However, we understand that analyzing the ratings attributed by the market available to any interested party represents a first step in this direction. After all, this is also a way to understand how the actors responsible for these ratings have affected the market and made possible the comparison between real estate assets. Referring to market valuation processes Crosby and Hennebery

(2016, 1424) emphasize that "its grounding in comparison - a centring and standardising process - offers an explanation for some of the changes in the urban built environment that are ascribed to financialisation." Thus, we argue that looking at the classifications assigned to buildings located within the perimeter of UPOs, which have had additional area granted by land value capture instruments is to take another step in the direction of unveiling how financialization processes occur in these projects.

3.1.3.2 DESCRIPTION OF DATABASE COMPILATION AND ANALYSIS

This research aims to critically compare the outcomes of the five considered cases (three in Sao Paulo, one in Rio de Janeiro and one in Curitiba) taking into consideration their specific governance features. An analytical framework that includes legal, land use, financial, socioeconomic, and temporal dimensions was considered.

The cases in question are large-scale urban development projects, known as Urban Partnership Operations. These projects have a land value capture instrument, the CEPAC. The conceptual and theoretical background of UPOs and CEPACs was explained in the previous section. However, it was still necessary to understand, even if briefly, how these instruments were integrated into the structure of each of the UPOs. Therefore, the first step was to analyze the legal documents of each of the UPOs to understand the main information of these projects, such as a general characterization of the project, the institutions involved and the use of CEPAC. This done, it was necessary to find ways to understand their results in the territory - how the additional area granted was converted into built-up area and what the profile of these buildings is, such as their use, their location, their morphology, etc. To provide answers to hypotheses 2, 3, and 4 of this thesis, it was necessary to know how CEPACs were used, clarifying questions such as: what were the characteristics of the projects that linked CEPACs to obtain additional area, when did this occur, which of these projects were built and what were their characteristics. Another point to be explored was to understand the relationships between these projects and the real estate market.

Thus, our starting point was to seek data from municipalities about CEPACs and their implementation. Once we had these databases in hand, we realized that they differed from one another, especially in terms of organization and quality of the data contained therein. The first step, therefore, was to compare the data contained in them and equalize the level of information between them. To do this, we checked the total of 579 listed cases one by one. During this process, we could count on the support of experienced urban planning technicians from the city halls, who were always ready to answer questions about any divergences we found in relation to the original spreadsheets provided by the city halls. However, the data should be standardized following the

same organizational logic so that the UPOs could be compared. The databases of the UPOs in the municipality of São Paulo followed the same organization logic, besides having the largest amount of data.

Thus, we elected these databases as a guide to recompose the Porto Maravilha and Linha Verde UPOs databases. We then organized our own base that could display all the information collected that was equivalent to each other so that it could be compared. Once this first organization was done, in order to identify the existence of each of the cases and to start an analysis of information related to the real estate market, the first step was to check the location of all the buildings. We identified and completed the address data of all of them using Google tools (maps and street view). With this it was also possible to identify which buildings were already constructed and which were not. At this stage, in some cases it was also possible to identify the builder and developer of these buildings. This was used as a starting point for the next step, which consisted in gathering market data for each of the developments. To this end, we used as a data source the information available about the launching of the developments. This information was accessed online on the websites of construction companies, real estate agents and consultants, and in promotional material for the launching. This data was then cross-referenced with the information that could be found about property ratings, building classifications, GLA, vacancy rates, lease agreements, news about company address changes, real estate brokers' blogs, real estate consultants' reports, etc.

This data gathering gave us a sense of how the real estate market was absorbing the additional floor area built in buildings that had area added via OODC or CEPAC. Table 12 shows an example of the structured base for the purpose of our analysis. We organized the information into units and categories of analysis. Through the result of the analysis of this data we were able to produce graphs and tables which we will demonstrate below. The results of this analysis revealed the characteristics of both the use of land value capture instruments within UPOs and the way in which the market has absorbed this built environment as a real estate product.

For the analysis of the built environment using CEPACs, we have maintained the uses category similar to that proposed for the analysis of REITs and Pension Funds assets. However, these data were identified through information contained in the databases of the municipalities and in an extensive search of data available on the internet (real estate consulting sites, enterprise launchings, real estate development companies, news in newspapers and magazines, etc.), and search via Google Maps and street view. The types and sub-types that make up this category are described in Table 13, they are: commercial, office, mixed use, logistics, tourism, health, educational, residential and plot. In the commercial category we have 4 sub-types: unspecified, retail - general and supermarket - and shopping/mall.

The information about the real estate market was also collected during the research of data found on the internet in several sites such as: official pages of construction companies, pages of real estate launchings that we found based on the business name of the enterprises, reports in specialized magazines (webEscritórios, Buildings, Zap Imóveis, etc), information search engines and repots from market consulting companies (accessCRE Toll, JLL, CBRE, RealtyCorp, Siila, Expert XP, and others). The market evaluation is based on a matrix of attrubutes built with the opinion of market players. They analyze the quality of the office and corporate office buildings, which can include not only the office type, but also use type health and educational. Basically, this classification expresses the opinion of some actors, such as real estate agents, brokers and consultants. In this way, the classifications may vary, even if subtly, from one actor to the other, with each one adopting its own evaluation matrix. This fragility of information is also reflected in our research, as it was not possible to find a completely standardized opinion. Thus, we opted for the information presented by the players that appear as being the most relevant in terms of the dissemination of this 'market' opinion. Another weakness of this methodology that is worth pointing out is that the data collected was based on the year 2020, which is an atypical year for the market, not only for real estate, but for the global market. Since 2019 the world has been facing a pandemic situation which has globally affected all sectors of the economy.

In Table 14 we describe the meaning of each of the building classifications attributed by these actors, considering the definitions that we found most frequently during this research. It is relevant to mention here that when a development is evaluated, the assigned classification has a 3-year validity period. The rating system takes the following evaluation criteria as a basis: market, location, characteristics, and quality of cash flow. Class AAA is that to which the market players attribute a standard of 'excellence', this being the top of the system's hierarchy. Buildings classified as AA are those that score 'very high' on the evaluation criteria, and those classified as A are scored 'high'. Class triple B are considered the middle in the hierarchy and are rated to a 'good' standard. The BB class comes next with the 'regular' standard rating, and the B class a 'vulnerable' standard. The last of the categories in the hierarchy is class C, which has a standard rated as 'inadequate'.[40]

[40] Based on the information collected during the research phase that seemed consistent with the information described by the NúcleodeRealEstate of Poli-USP. Find more about the categories of rating system at https://www.realestate.br/site/conteudo/pagina/1,45+O-SISTEMA-DE-CLASSIFICATION-QUALITY.html

Table 12- Sample of structured database listing the projects inside UPOs according to information in municipality databases and collected property market data (own authorship)

Database organization																
ID	Units of analysis									Categories of analysis						
Project protocol number	Date of protocol [applied as 'year']	Total CEPACs used	CEPAC Add. Building Area [applied as 'm²']	OODC Add. Building Area [applied as 'm²']	Date of building delivery [applied as 'year']	Highest Number of floors [applied as 'units']	Gross Leaseble Area [applied as 'm²']	Vacant Area [applied as 'm²']	Vacancy Ratio	UPO	Project Land Use	Property Use	Property Classification	Location		
														Address	City	State
AE-0172	2013	6448	6,820.80	_	2017	19	7622.23	5594.72	73%	Água Espraiada	Non-Residential	OFFICE	B	Rua Bacaetava, 191, Brooklin	São Paulo	SP
AE-0164	2013	9122	8886.05	_	2019	24	14434.26	14434.26	0%	Água Espraiada	Non-Residential	OFFICE	A	Rua Pôrto União, 295, Itaim Bibi	São Paulo	SP
FL-0142	2000	_	_	9444.72	2003	15	19976.83	0	0	Faria Lima	Non-Residential	OFFICE	AA	Av. Brigadeiro Faria Lima, 3900, Itaim Bibi	São Paulo	SP
PM-03	2013	206788	103393.64	_	2017	19	138849.56	80491.09	58%	Porto Maravilha	Non-Residential	OFFICE	AAA	Av. Oscar Niemeyer, 2000, Santo Cristo	Rio de Janeiro	RJ
42009010000	2014	1273	1240.38	_	2018	6	_	_	_	Linha Verde	Residential	RESIDENTIAL	_	Rua Doutor Reynaldo Machado, 1340, Prado Velho	Curitiba	PR

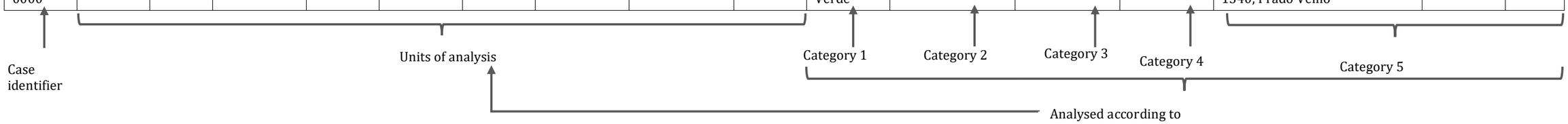


Table 13- Category 'Property Use': list and description of types (own authorship)

Category: Property Use		
Type	Subtype	Description
economic activities: tertiary sector		
3S: Commercial	Unspecified	Municipality original classification (as non-residential) which could not be further specified into other types or subtypes. That is to say, it may include any of the uses in this table, but the available information was not consistent enough to attribute other typification.
	Retail: General	From small local or individual shops or commerce to store chains or department stores.
	Retail: Supermarket	Supermarket chains, the assets can be mini, super or hypermarket.
	Shopping/ Mall	Shopping center or mall.
3S: Office	_	From buildings of individual rooms (small offices such as dental clinic) or coworking spaces to corporate spaces (such as triple A corporate buildings). They can be integrated to convention centres or other activities, such as cases of a mixed-use development where offices are dominant.
3S: Mixed Use	_	It may include residential, office, commercial, and tourism types all in the same real estate development.
3S: Logistics	_	From sheds to logistics centre and logistics facilities (ex: back offices).
3S: Tourism	_	Apart hotels or flats, and hotels.
3S: Health	_	Hospital or health institutions.
3S: Educational	_	Educational institutions, from nurseries, schools to universities.
non-economic activities		
NE: Residential	_	From individual houses to residential buildings and condominiums.
unspecified activities		
U: Plot	_	From individual plot waiting for start to develop a project already registered with CEPACs.

Table 14 - Category 'Property classification': building classes and its descriptions (own authorship)

Category: Property classification	
Building class	**Description**
AAA (triple A)	It is the highest of the ratings given in the real estate market rating system. It considers the development to be of 'excellent' standard in all evaluation criteria.
AA	Market players consider the development to be of 'very good' quality standard.
A	Market players consider the development to be of 'good' quality standard.
BBB	Market players consider the development to be of 'intermediate' quality standard.
BB	Market players consider the development to be of 'regular' quality standard.
B	Market players consider the development to be of 'vulnerable' quality standard.
C	Market players consider the development to be of 'inadequate' quality standard.

3.1.4 RESULTS

GLOBAL OVERVIEW

The five cases analyzed in this section share similar characteristics such as the fact that they are all Urban Partnership Operations, all use CEPACs in their financing structure. Some of these UPOs are even located in the same municipality, as in the example of the three cases in São Paulo. However, they all differ from each other. In order to assist in the comparison of these cases, Table 16 summarizes basic information from each of them through a comparative table that is divided into three sets of information collected from the UPOs' Registration Prospectuses. The first one contains data regarding the general characterization of each of the UPOs containing: the legislations and decrees that regulate the project, the estimated period for the total implementation of the project and the estimated cost to do so, the total area of each of the UPOs, and the urban policy financial instruments used in each of them since their inception. The second set of information refers to the institutions involved in the management of the UPOs, such as: the issuer of the CEPACs, the bank coordinating this issue, the bond supervising agent, and the UPO coordinating institution. The third set brings some data regarding CEPAC and its distribution such as: the total number of titles issued by each UPO, the total stock of additional construction area that can be obtained through the sale of full titles, the number of sectors and subsectors to which the conversion factors used to calculate how much the title is equivalent in additional area are assigned.

Table 15- Comparative table of UPOs: General characterization, institutions involved and information regarding CEPAC (own authorship)

UPO comparative table [41]													
General characterization						**Institutions involved in management**					**CEPAC**		
UPO	Law/Date	Implementation period	Estimated cost	UPO perimeter	Financial instrument of urban policy since the beginning of the UPO	Issuing agency	Issuing coordinator bank	Distribution of CEPAC	Supervisory Agent	UPO Coordinator	Total CEPACs to be issued (in units)	Additional Building Area Stock	No. of sectors/subsectors
São Paulo													
Faria Lima	Laws 11.732/1995, 13.789/2004, 15.519/2011, 16.242/2015 Decr. 53.094/2012	21 years	R$715,000,000 R$2,561,000,000	650ha	OODC, CEPAC	Prefeitura do Município de São Paulo	Banco do Brasil S.A.	Multiple auctions	Caixa Economica Federal	SP Urbanismo[42]	650,000 (Law 13.769/2004) 1,000,000 (Law 15.519/2011)	1,310,000m² (Law 13.769/2004, continued by Law 15.519/2011)	4/18
Água Espraiada	Law 13.269/2001 Decr. 44.845/2004	15 years	R$1,125,000,000	1,300ha	CEPAC						3,350,000	1,310,000m²	6
Água Branca	Law 11.774/1995, 15.893/2013 Decr. 55.392/2014, 54.911/2014	12 years	R$4,954,000,000	505ha	OODC, CEPAC						2,190,000	1,850,000m²*	4
Rio de Janeiro													
Porto Maravilha	101/2009	30 years	R$8,147,000,000	489ha	CEPAC	Município do Rio de Janeiro, *under CDURP coordination*	Banco do Brasil S.A.	Single auction	Caixa Economica Federal	CDURP	6,440,000	4,089,502m²	9/16
Curitiba													
Linha Verde	13.909/2011	25-30 years	R$1,655,000,000	2,000ha	CEPAC	Prefeitura Municipal de Curitiba	Banco do Brasil S.A.	Multiplos leilões	Multiple auctions	IPPUC[43]	4,830,000	4,475,000m²	3/9
Grand total			R$ 18,442,000,000	4,944ha	–	–	–	–	–	–	17,810,000	13,034,502 m²	–

[41] Self-authored table constructed based on the reading of the various documents called 'Registration Prospectuses' of each of the UPOs. Such documents are publicly available on the official websites of each of the municipalities.

[42] The public company São Paulo Urbanismo (SP Urbanismo) is responsible for elaborating and coordinating urban projects linked to the main demands of the municipality's Secretary of Urban Infrastructure and Works.

[43] Among the activities under the responsibility of Curitiba's Urban Planning and Research Institute (IPPUC) is the coordination of actions of the municipal government plan, and the elaboration and monitoring of the work implementation plan (source: https://ippuc.org.br/mostrarpagina.php?pagina=248&idioma=1&titulo=&teste=).

Some of the information shown in this table are worth highlighting. The legislation presents not only the date of creation of each of the UPOs, but also gives an idea of their evolution over time. In the case of the experiences in São Paulo we can see that the UPOs have undergone changes since their creation. Of these, the changes in the Faria Lima UPO are also reflected in the estimated cost of the project and the total number of CEPACs issued. Besides the fact that the first laws of the Faria Lima and Água Branca UPOs are from 1995, they also share the fact that they have used two types of land value capture instruments throughout their history: the OODC and the CEPAC. As explained in the previous section, although both instruments have the function of granting additional constructed area, the form of payment and the destination of the financial counterpart are different. However, we understand that both instruments play a role in the transformation of the territory in the project perimeter. Therefore, recognizing the existence of OODC in this transformation process can be beneficial for the analysis of these projects and the market dynamics within their perimeter.

The Porto Maravilha UPO also draws attention for its peculiarity. Among all of them, this is the UPO with the highest estimated investment value, which is almost double the estimated value for the Água Branca UPO, which has the second highest. Porto Maravilha is also the project with the largest number of CEPACs issued, which, unlike the other UPOs, were sold in a single auction. Another point to note about this case is the presence of Urban Development Company of the Port of Rio de Janeiro Region (CDURP) as the coordinating company of the UPO and its role in coordinating the issue of the bonds. CDURP was created by Municipal Complementary Law 102/2009 and is responsible for the articulation between the other public and private agencies with the Consecionaria Porto Novo. This consortium, in turn, was initially contracted to execute the works and services within the operation. UPO functions as a kind of condominium and the urban services were planned to be provided by the consortium. Although the UPO Linha Verde in Curitiba has a lower estimated cost than the UPOs Água Branca and Porto Maravilha, this project also deserves attention. Its perimeter expands almost linearly across the territory of Curitiba and has the largest area of all the UPOs, 2,000ha. The number of CEPAC units is quite similar to the number of additional area stock, which highlights the information given in the Registration Prospectus that the sales value of the bonds will not be sufficient to collect the total value of the interventions planned for this project. One last point to be highlighted and that concerns all UPOs is the number of sectors and subsectors. Each of them has different rules regarding the equivalence coefficients used to calculate the conversion of CEPACs according to the project.

A second step involved looking at the database thus organized (see Table 15) and identifying the relevant information regarding projects that used CEPAC, the total additional constructed area granted by CEPAC. This was cross-referenced with the information collected during the

documental review of the value captured via CEPAC. As a complement, the values captured via OODC in UPOs Faria Lima and Água Branca are also included here. When looking into the number of CEPACs used and comparing it with the additional area generated in each of the municipalities, it can be seen that São Paulo is the municipality that has generated the most additional area proportional to the use of CEPAC units. In Rio de Janeiro and Curitiba, this proportion is inverted, with more CEPAC units used generating less additional area.

Table 16-CEPAC's use: additional building rights and value captured per UPO until 2019 (own authorship)

UPOs: General characteristics[44]						
City	**UPO**	**Projects registered w/ CEPAC**	**Used CEPACs (linked to a project) ***[45]	**CEPAC Additional Building Rights (m²)**	**CEPAC - Value Captured until 2019**	**OODC- Value Captured– before CEPAC**
São Paulo	Faria Lima	315	3,866,060.86	4,146,726.97	R$ 2,460,935,106	R$ 465,321,920
	Água Espraiada				R$ 2,891,275,029	N/A
	Água Branca[46]				R$ 9,288,000	R$ 544,904,426
Rio de Janeiro	Porto Maravilha	11	574,542.00	341,862.99	R$ 3,5bilhões[47]	N/A
Curitiba	Linha Verde	79	158,478.00	99,645.97	R$ 45,026,738	N/A
Total		405	4,599,080.86	4,588,235.93		R$ 1,010,226,347

UPOs AND GENERAL CHARACTERISTICS OF CEPAC-USING PROJECTS

As explained previously, each UPO has an equivalence table that relates the CEPAC unit to the number of square meters it will be converted into, depending on the use category of the project. In other words, the conversion of CEPAC into area will depend on whether the project is

[44] Source of analysis: organized from official data base provided to the author by each municipality regarding the starting year of the UPO until 2019.

[45] Although in most cases CEPAC is used to grant the right to additional constructed area, in the municipalities of São Paulo and Curitiba, these bonds can also be used for urban parameter conversion.

[46] OUC Água Branca has not linked CEPACs to any projects by the cut-off date of the survey, 2019. Thus, none of the figures presented for São Paulo include CEPACs linked to projects through 2019.

[47] Although this is the amount collected from the single auction of CEPAC, in which the FGTS bought all the bonds, land owned by the municipality, state and union was given to the buyer as a counterpart under the argument of mitigating the risks of the investing institution.

registered as residential, non-residential, or mixed use (residential and non-residential). In our database we refer to this category as 'property land use'. In this section we analyze this category considering the analysis units 'Total CEPACs used', 'CEPAC Additional Building Area' and 'OODC Additional Building Area'.

The main focus of this section is to analyze financializing policy instruments, such as the CEPAC, and their outcomes in the built environment. However, at the beginning of the first Urban Operations, before CEPAC existed by decree, the additional built-up area was granted within the project perimeter through another instrument: the Outorga Onerosa do Direito de Construir (OODC). Like CEPAC, OODC is a land value capture instrument; however, the structure and operation of the instruments differ. The OODC is a fee paid by the owner who wishes to purchase the additional construction right directly at the municipal office, upon registration of the project. The CEPAC, on the other hand, is a financial security issued by the municipality, traded on the stock exchange, and only converted into additional area when linked to a project. Although law determines that only CEPACs can be used within the perimeter of Urban Partnership Operations, we cannot forget that UPOs Faria Lima and Água Branca were not always consortiated. Previously, they were only Urban Operations, and OODC was the instrument that captured value surpluses within their perimeter. In other words, some of the existing property developments within the perimeter of these current UPOs bought additional construction area through the OODC. 173 property developments within the perimeter of these operations have used OODC to acquire additional construction rights; of these, 104 are in the Faria Lima UPO, an important number when compared with the 138 developments that used CEPAC when UPO Faria Lima became consortiated. Since these developments make up the urban built environment within Faria Lima and Água Branca, we understand that their analysis is also pertinent to the understanding of the dynamics between market and territory in these operations. Additionally, the UPO Água Branca has so far had very low sales of CEPACs; and, of these, there has been no link to future development projects.

Table 18 provides some information about the projects licensed in the municipality of São Paulo within the perimeter of the Faria Lima and Água Branca UPOs before they became consortiums. As Table 17 shows that the additional building rights may be applied to land uses in distinct patterns according to each UPO. In São Paulo, our analysis shows that, in Água Espraiada 25.4% of the total UPO's CEPAC was registered on mixed-use projects while in Faria Lima only 8.2% was registered under this land use type. Yet both are dominated by non-residential land uses, UPO Faria Lima with 54.8% and UPO Água Espraiada with 39.2% of the total CEPAC of each project destined to this use, their results as urban built environment is considerable. In Faria Lima the non-residential use is equivalent to 371,447.37 m2 of additional area above the city standard

maximum FAR. In Água Espraiada this number is substantially higher, 1,338,360.37m2 of additional area above the city standard maximum FAR. In the Porto Maravilha UPO, 81.8% of the CEPACs were registered in non-residential projects, which represents 243,053.47m2, considerably less additional area than in Água Espraiada for example.

Table 17- Characteristics of projects using OODC and CEPAC by land use, in UPOs Água Branca and Faria Lima (own authorship)

UPOs: Projects using OODC x CEPAC[48]						
UPO and Category of Use	OODC [49]			CEPAC		
	Project with OODC	Add. Area (m²) *	%	Project with CEPAC	Add. Area (m²)	%
Água Branca[50]	69	777,252.68	100%	_	_	_
Mixed-Use	6	141,369.64	18.19%	_	_	_
Non-residential	39	363,762.43	46.80%	_	_	_
Residential	24	272,129.61	35.01%	_	_	_
Faria Lima[51]	104	470,908.48	100%	138	948,240.64	100%
Mixed-Use	_	_	_	14	99,784.37	10.5%
Non-residential	46	282,207.41	59.93%	46	371,447.37	39.2%
Residential	44	180,018.88	38.23%	76	472,208.90	49.8%
Unspecified	14	8,682.19	1.84%	2	4,800.00	0.5%
Grand Total	173	1,248,161.16	_	138	948,240.64	_

[48] Source of analysis: organized from official data base provided to the author by each municipality regarding the starting year of the UPO until 2019.

[49] It was not possible to identify the additional constructed area of all the projects that registered the use of OODC in the São Paulo City Hall database we had access to. That is, there is the possibility that this instrument has granted more additional area than can be identified in this thesis.

[50] The Água Branca Urban Operation was created in 1995 by law 11774 and until 2013 the additional area granted in its perimeter was done via OODC. This year, the operation was revised by law 15893/2013, at which time the CEPAC was introduced in its financing structure. However, until the cut-off date of the survey, 2019, no CEPAC has been linked to projects on its perimeter.

[51] Like Água Branca, the Faria Lima Urban Operation was created in 1995 (law 11732). Until 2004, the additional area within its perimeter was granted via OODC. During this year, the operation was revised by law 13769/2004, when CEPACs were introduced in its financing structure. The table shows the CEPACs linked to projects within the OUC perimeter until 2019.

Table 18- Characteristics of projects using CEPAC by land use on each UPO until 2019 (own authorship)

UPOs: Projects using CEPACs[52]					
UPO and Category of Use	Projects	Quantity of CEPACs registered on projects		Additional Building Rights - CEPAC	
		CEPAC (unit)	%	Add. Area (m²)	%
Faria Lima	138	663,238.00	100%	948,240.64	100%
Mixed Use	14	54,151.00	8.2%	99,784.37	10.5%
Non-residential	46	363,337.00	54.8%	371,447.37	39.2%
Residential	76	244,058.00	36.8%	472,208.90	49.8%
Unspecified	2	1,692.99	0.3%	4,800.00	0.5%
Água Espraiada	177	3,298,553.00	100%	3,304,934.06	100%
Mixed Use	13	839,370.00	25.4%	899,817.19	27.2%
Non-residential	62	1,291,948.00	39.2%	1,338,360.37	40.5%
Residential	102	1,167,235.00	35.4%	1,066,756.50	32.3%
Porto Maravilha	11	574,542.00	100%	341,862.99	100%
Mixed Use	1	35,848.00	6.2%	26,912.00	7.9%
Non-residential	9	470,063.00	81.8%	243,053.47	71.1%
Residential	1	68,631.00	11.9%	71,897.52	21.0%
Linha Verde	79	170,147.00	100%	107,542.63	100%
Mixed Use	2	1,718.00	1.0%	807.49	0.8%
Non-residential	20	120,113.00	70.6%	60,569.58	56.3%
Residential	57	48,316.00	28.4%	46,165.56	42.9%
Grand Total	405	4,706,480.00	_	4,702,580.32	_

The following set of figures shows the distribution of additional area by type of use in each of the UPOs. Figure 35 shows that of the projects that used CEPAC in the UPOs, most of the additional footage granted is for residential use, equivalent to 58% in Água Espraiada, 55% in Faria Lima and 78% in Linha Verde. However, at the UPO Porto Maravilha, most of the area granted is for non-residential use (82%). In Figure 36, it is interesting to note that in the case of the additional area granted via OODC, the UPO Água Branca had 56% of the area granted to non-residential projects, 35% to residential and 9% to mixed use. In the Faria Lima UPO, on the other hand, a different characteristic from the other operations can be observed, with a slightly more balanced distribution between non-residential (44%) and residential (42%) projects. Complementing this

[52] Source of analysis: compiled from official data base provided to the author author by each municipality, from the starting year of the UPO until 2019.

information, Figure 37 shows the evolution of the additional area used in the projects that have been filed in the municipalities over the years.

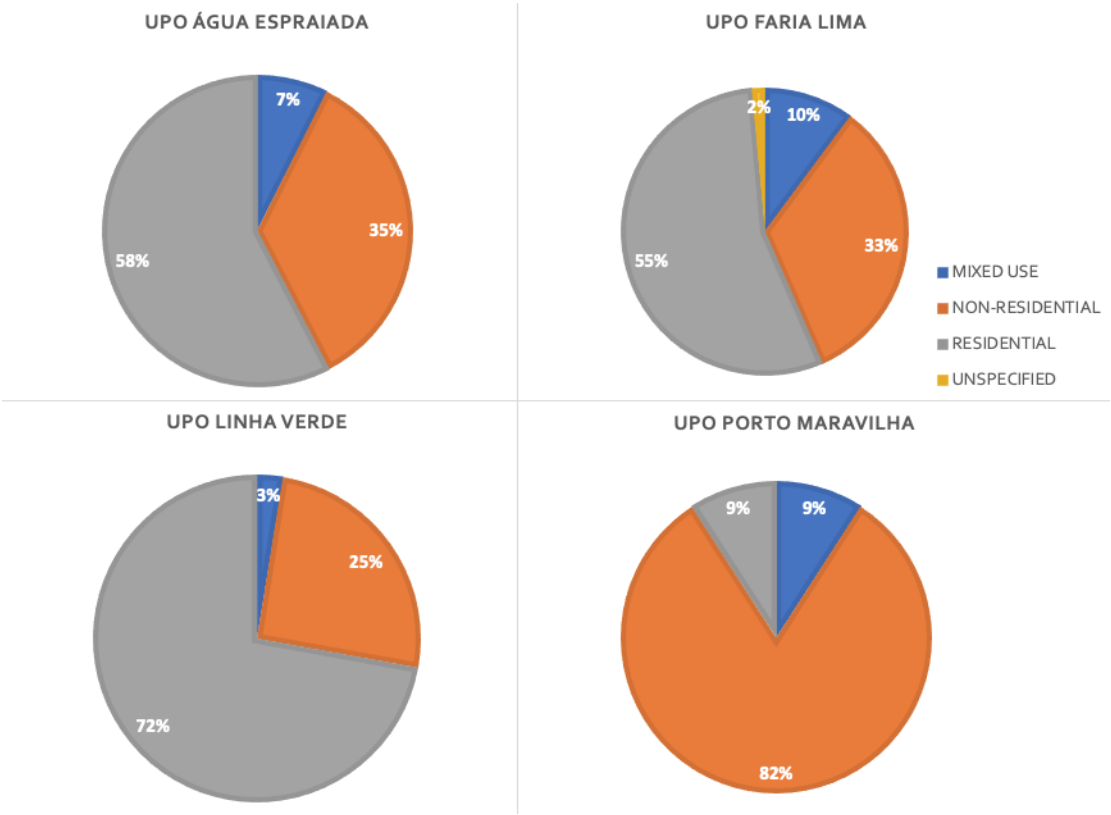


Figure 35- Projects registered with CEPAC: per type of use (own authorship)

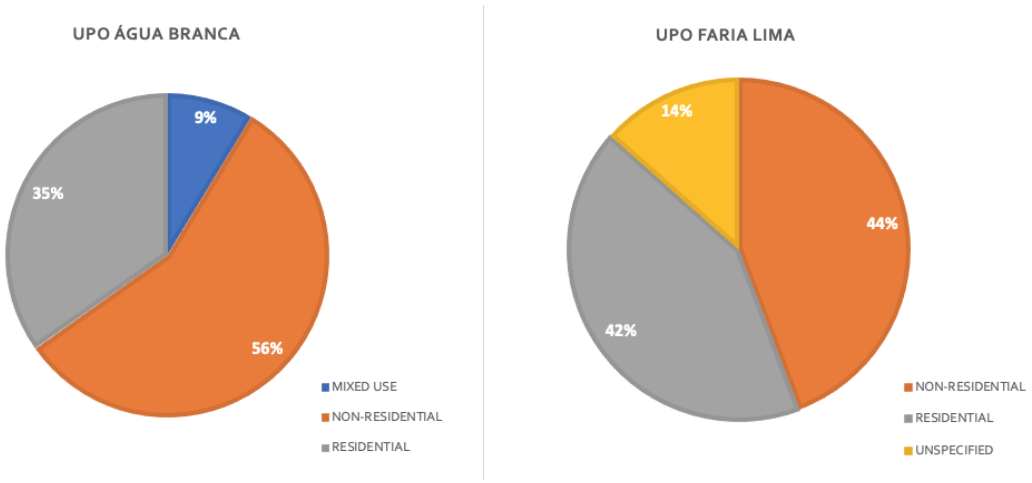


Figure 36- Projects registered with OODC: per type of use (own authorship)

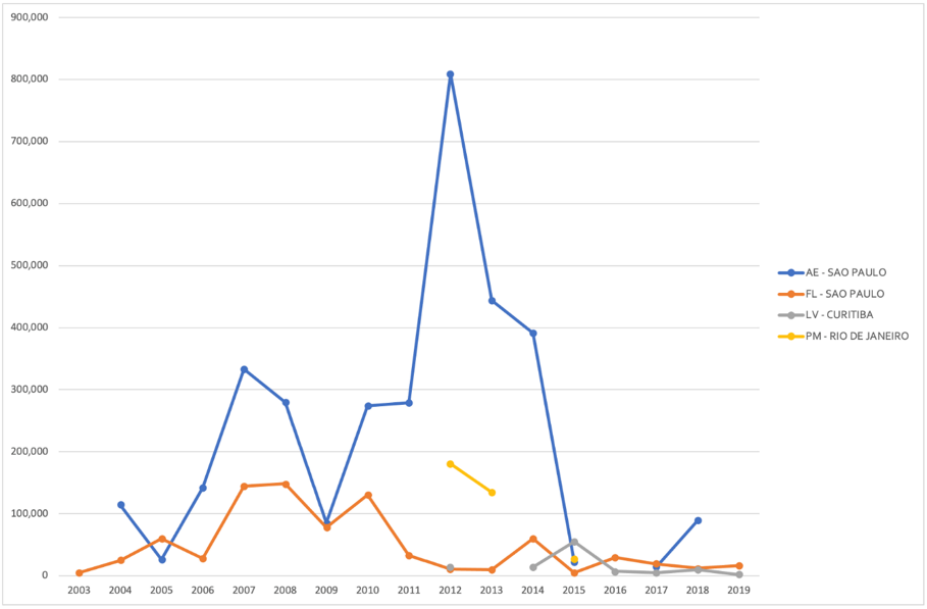


Figure 37- Additional construction area granted by CEPAC, in projects per year (own authorship)

- Comparison between original plot area and additional built area granted by CEPAC, for the cities of São Paulo, Rio de Janeiro and Curitiba

In order to understand how much the use of CEPAC and OODC impacted the supply of additional area in relation to the existing land within UPOs, the relationship between the lot area and the additional area granted by these instruments was analysed. Essentially, the greater the area granted by these instruments relative to the original lot area, the greater the verticalization of the buildings constructed. Besides showing the role of these instruments in the transformation of the territory, this information also evidencest the success or failure of each of the UPOs in densifying the territory within its perimeter. The results of this analysis are grouped by cities below.

- São Paulo: comparison between plot area and additional area granted by CEPAC

Figures 38 and 39 show the relationship between the area granted via CEPAC and the original area of the lot to which the project is assigned. And the figures show this same relationship when the instrument used is OODC. Figure 38 it can be seen that in most cases the additional area considerably exceeded the original lot area. The period between the years 2006 to 2008 and 2012 to 2014 the projects filed in the city hall presented more than double the original area of the lot. A similar effect can be observed in the case of the use of OODC as a land value capture tool (Figure 39). Except for the projects filed in the municipality between 2001 and 2004, the instrument promoted an increase in area in relation to the original area of the lots, and in 2012 the additional area granted was almost three times more than the original area of the lot.

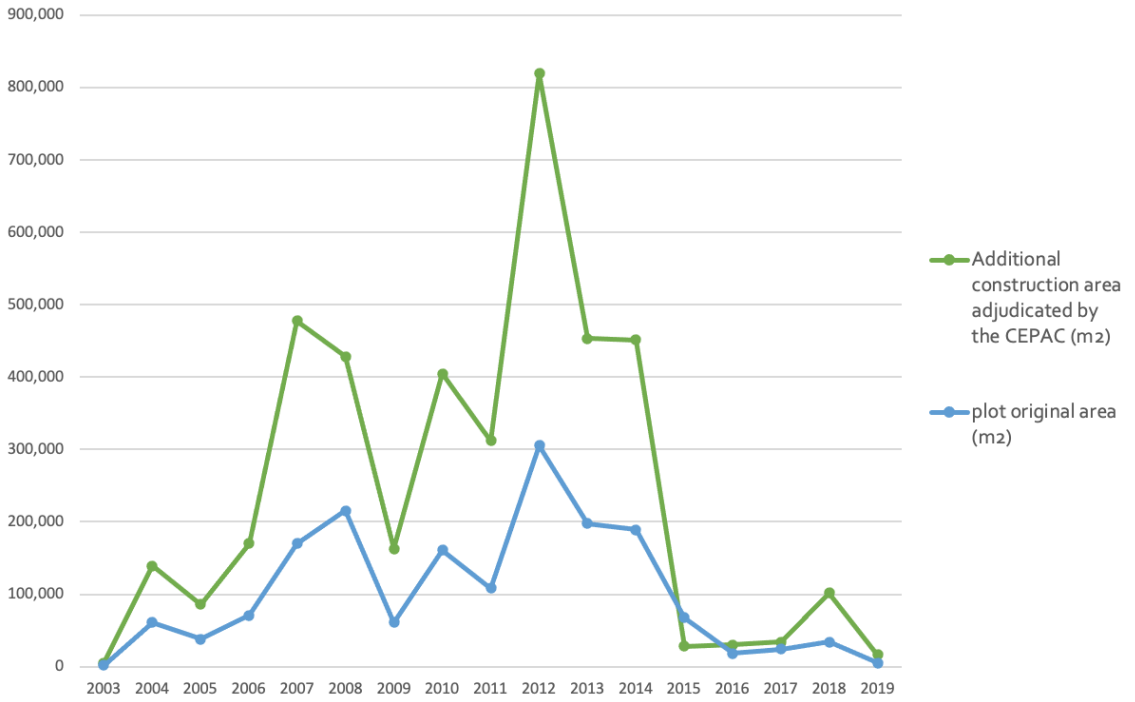


Figure 38- Comparison between evolution of plot area and additional construction area granted by CEPAC (own authorship)

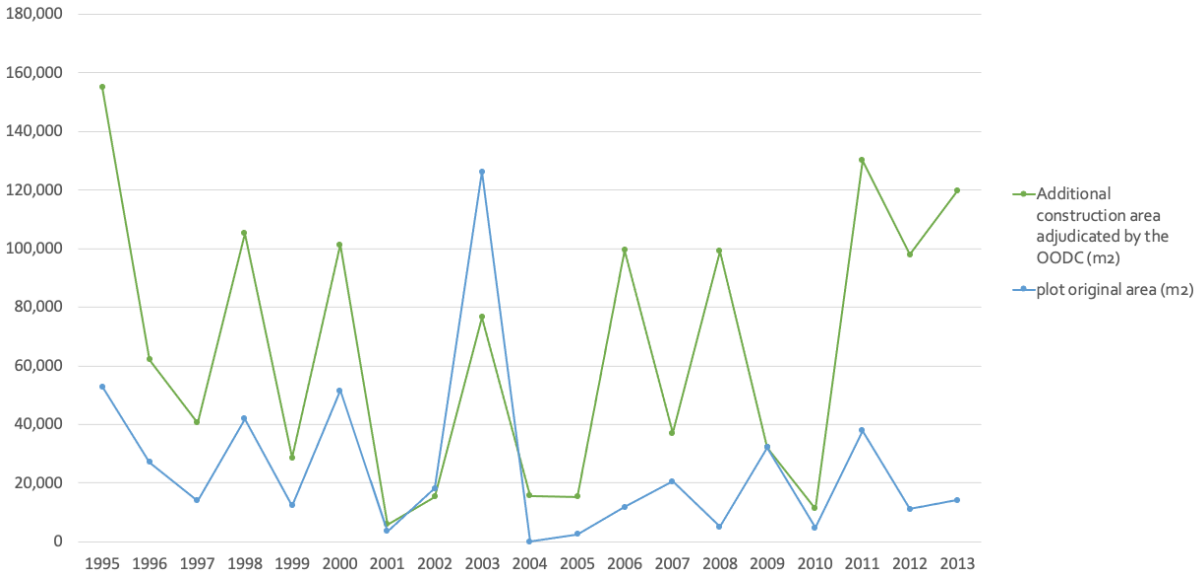


Figure 39- Comparison between evolution of plot area and additional construction area granted by OODC (own authorship)

By looking at the UPOs individually we could see the following. As we know, in the case of the Faria Lima UPO, from 1995 to 2004, the land value capture instrument used was the OODC. In the figure we can observe that until 2001 that the additional area granted for its use was on average double the original lot area. Note that its use drops off in 2001, just when the OODC and CEPAC are considered instruments of national urban policy by the City Statute (10.257/2001). In 2003 the Collegiate Body of the CVM came to understand CEPAC as a security and issued CVM Instruction 401 to regulate the registration of trading and distribution of CEPACs. The data presented between Figures 40 and 41 clearly show this transition period, with CEPACs from 2003 onwards having the role of granting additional area to projects filed within the UPO Faria Lima. We can also observe that the ratio between the additional area granted, and the initial lot area continued to follow the same profile as when the OODC was used. In terms of total area added to the project, the difference between the use of OODC and CEPAC is slight.

When we analyze the case of UPO Água Branca, it is possible to see a similar behavior to the one observed in the case of Faria Lima regarding the use of OODC. Our database does not present any case of projects that have used CEPAC at UPO Água Branca, so only OODC cases appear in our analysis. Figure 42 shows that, as in the case of Faria Lima, the additional area granted to projects filed in the municipality using OODC is greater than the original lot area, even tripling this value in the period between 2011 and 2012. Of the São Paulo operations that use CEPACs, the UPO Água Espraiada was the only one that was born in a consortium, so OODC was not used in this case. The ratio between the additional area granted and the lot area follows the same profile as the other UPOs in this municipality and shows a considerable increase in area in relation to the lot area (see Figure 43). The year that reached the peak of additional area granted by CEPAC in projects filed in the municipality was 2012. This also coincides with the peak of additional area granted by OODC in UPO Água Branca in the years 2011 and 2012. The absence of this peak in the case of Faria Lima can be justified by the 5-year gap between CEPAC auctions in this UPO (see Annex I - Auction History - UPO Faria Lima, position on 09/25/2020). Auctions were only resumed in 2015 and the following period coincides with a context of national political-economic crisis, also reflected in the real estate market.

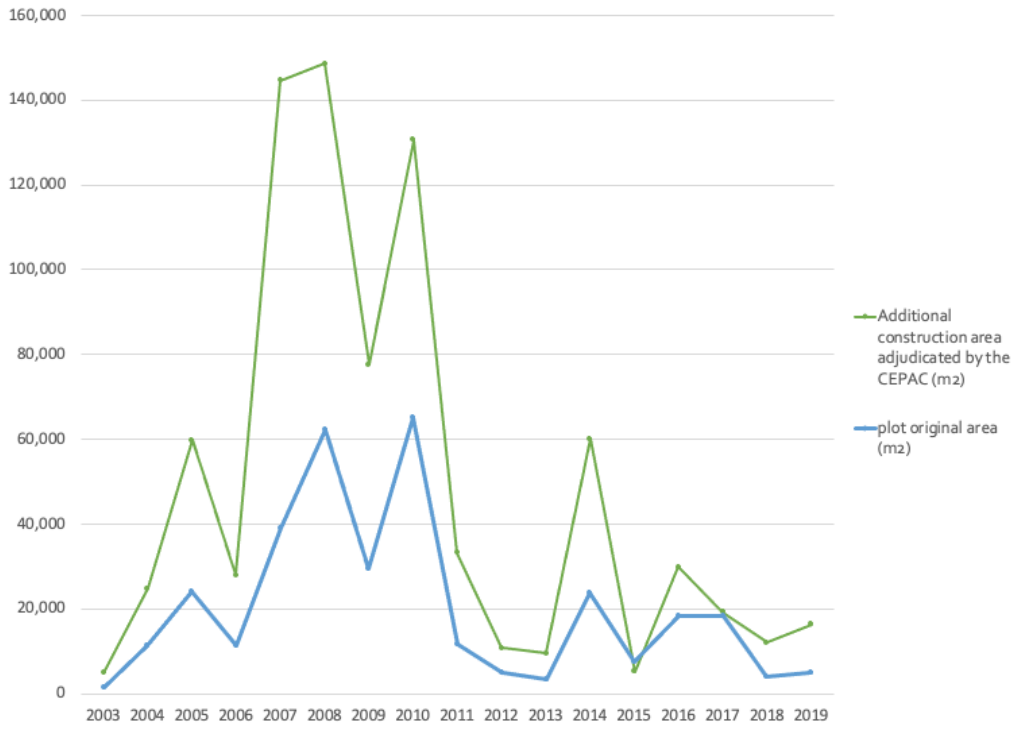


Figure 40- São Paulo, Faria Lima: comparison between plot area and additional construction area granted by CEPAC (own authorship)



Figure 41- São Paulo, Faria Lima: comparison between plot area and additional construction area granted by OODC (own authorship)

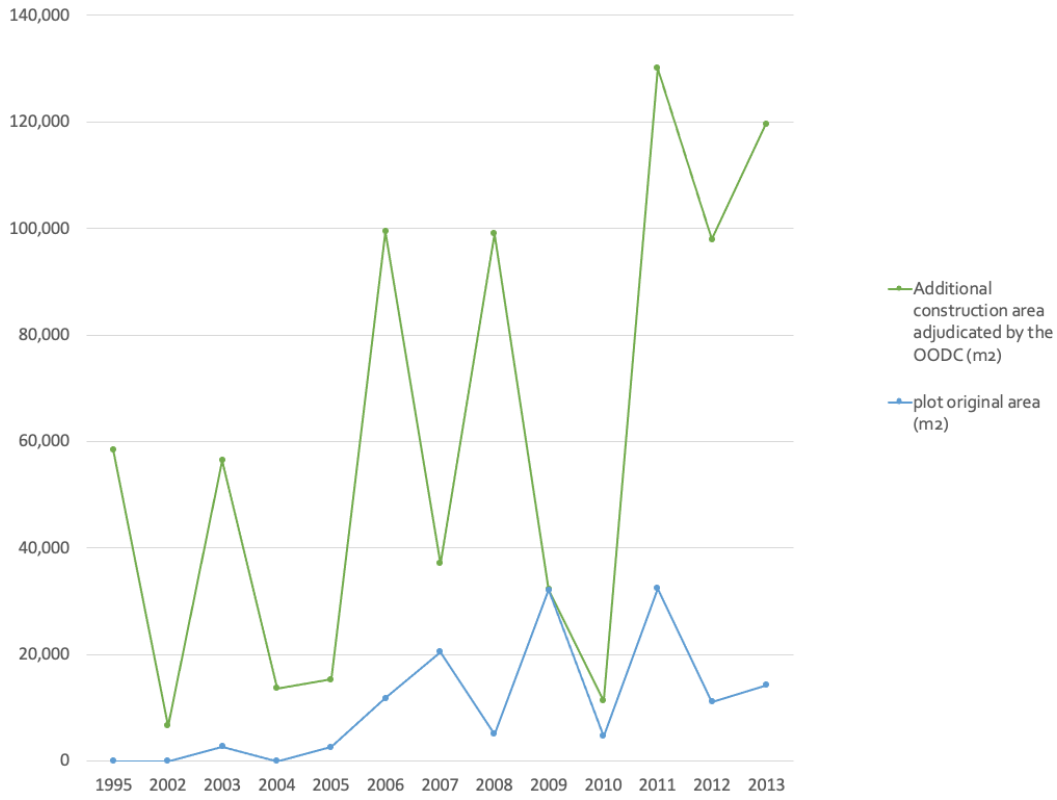


Figure 42- São Paulo, Água Branca: comparison between plot area and additional construction area granted by OODC (own authorship)

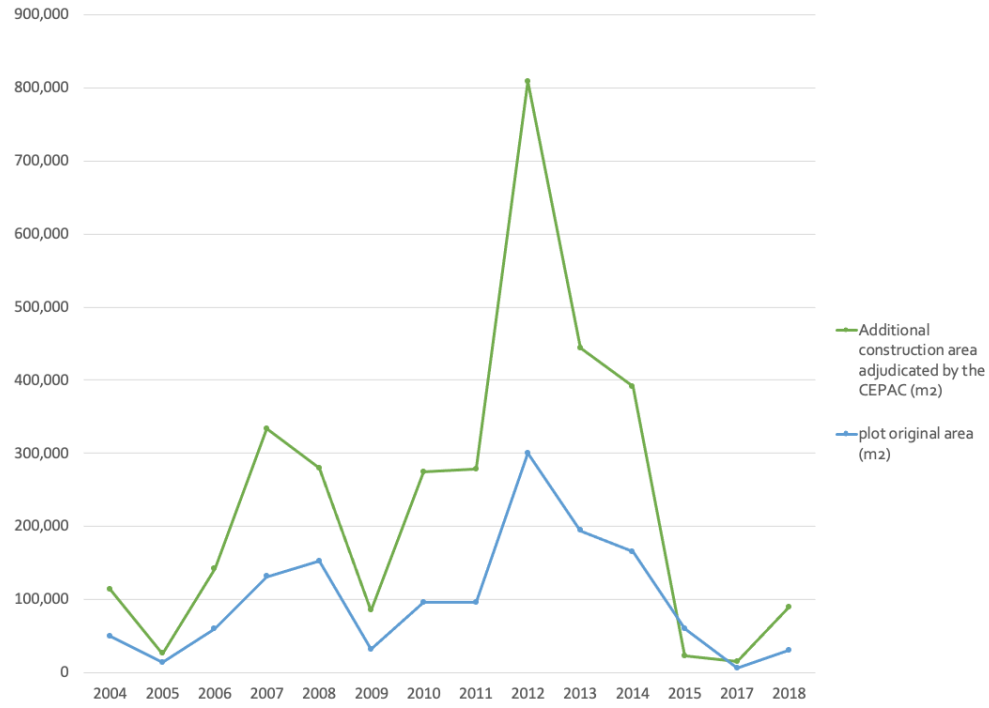


Figure 43- São Paulo, Água Espraiada: comparison between plot area and additional construction area granted by CEPAC (own authorship)

- Rio de Janeiro: comparison between plot area and additional area granted by CEPAC

The analysis of the relationship between the additional area granted by CEPAC and the original land area in the case of the UPO Porto Maravilha presented similar results to the cases in São Paulo. Although this urban operation presents few cases of projects, as we can see in Figure 44, as in the UPOs Água Espraiada and Água Branca the peak of additional area is noted in 2012. In this year, the area granted by CEPAC reached more than three times the original size of the land. The operation is still active, but since 2015 no other project has been filed in the municipality using CEPAC.

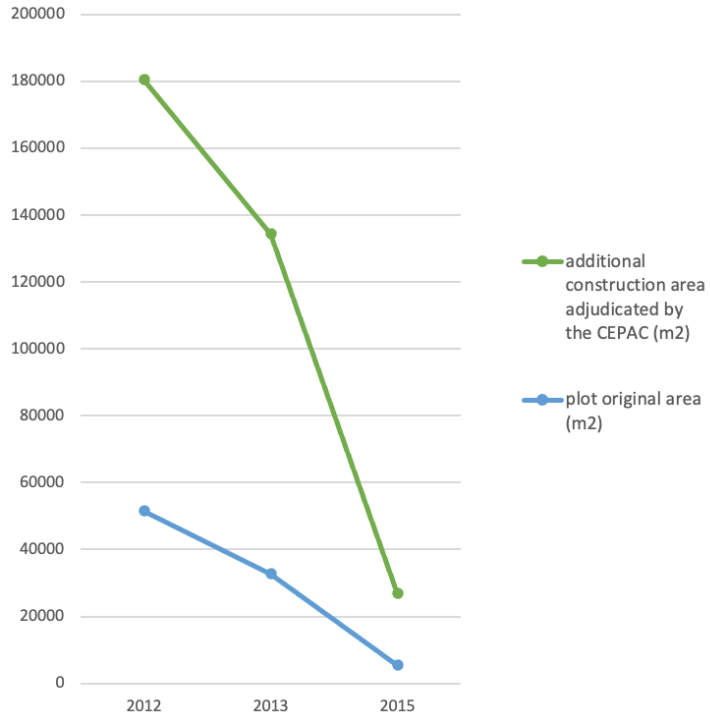


Figure 44- Rio de Janeiro, Porto Maravilha: comparison between plot area and additional construction area granted by CEPAC (own authorship)

- Curitiba: comparison between plot area and additional area granted by CEPAC

Of all the cases analyzed, the municipality of Curitiba is the only one to present an opposite result. Of the projects registered in the municipality using CEPACs, the additional area granted is considerably less than the original lot area (see Figure 45). Even in the year 2015, when there was the largest sum of area in additional granted in projects filed, the lot area is approximately double the land area. In 2019 this discrepancy was even greater and there was practically no additional area granted to projects filed in Curitiba. This result evidence the low verticalization

of projects in the UPO Green Line. Furthermore, it informs us that the project has not been able over the years to densify the area with regard to the space to be built.

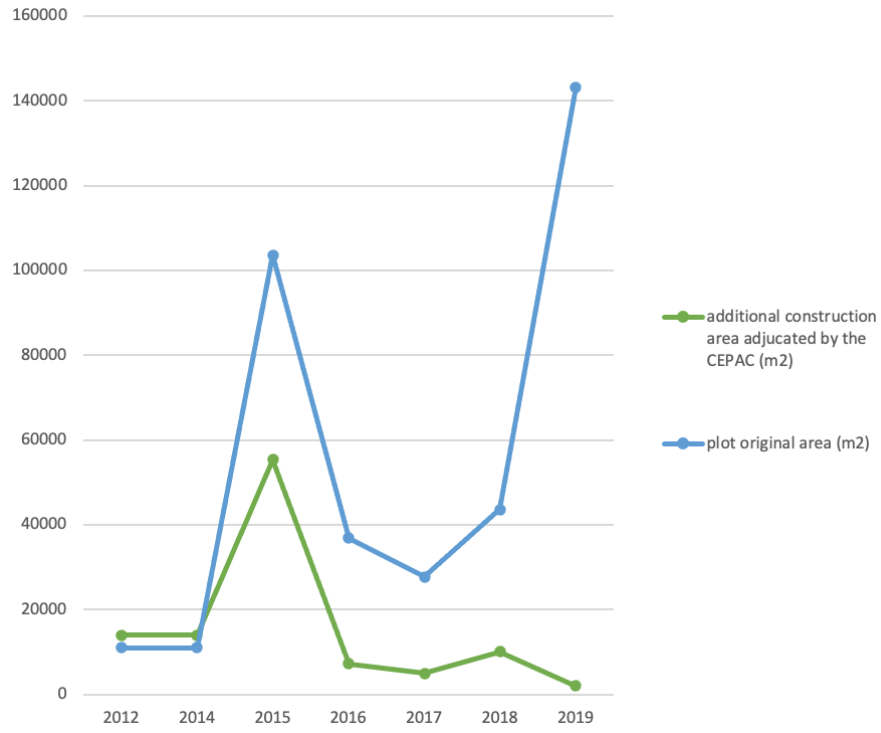


Figure 45- Curitiba, Linha Verde: comparison between plot area and additional construction area granted by CEPAC (own authorship)

CHARACTERISTICS OF BUILD ENVIRONMENTS WITH CEPAC IN UPOS

- General characterization

In transition between this section and the previous one, Figure 46 shows the evolution of the additional constructed area granted by CEPAC in each development according to its launching year. When we compare this figure with Figure 37, presented previously, it is possible to see that the time span between the moment the projects were registered in the municipality and the launching date of the buildings is around 3 years. This gives us some idea about the production cycle of the built environment in relation to when the real estate developer files the project and delivers the real estate product.

In Figure 47 we can see the clear discrepancy between the average floors built in Curitiba and in Rio de Janeiro and São Paulo. The graph shows the average floors of the developments built using CEPAC over the years and highlights the challenge that Curitiba has faced since its inception to foster densification in its perimeter. Remember that one of the key proposals for transforming the territory in an UPO is to densify the territory, justifying the investment in infrastructure in a certain perimeter of the city.

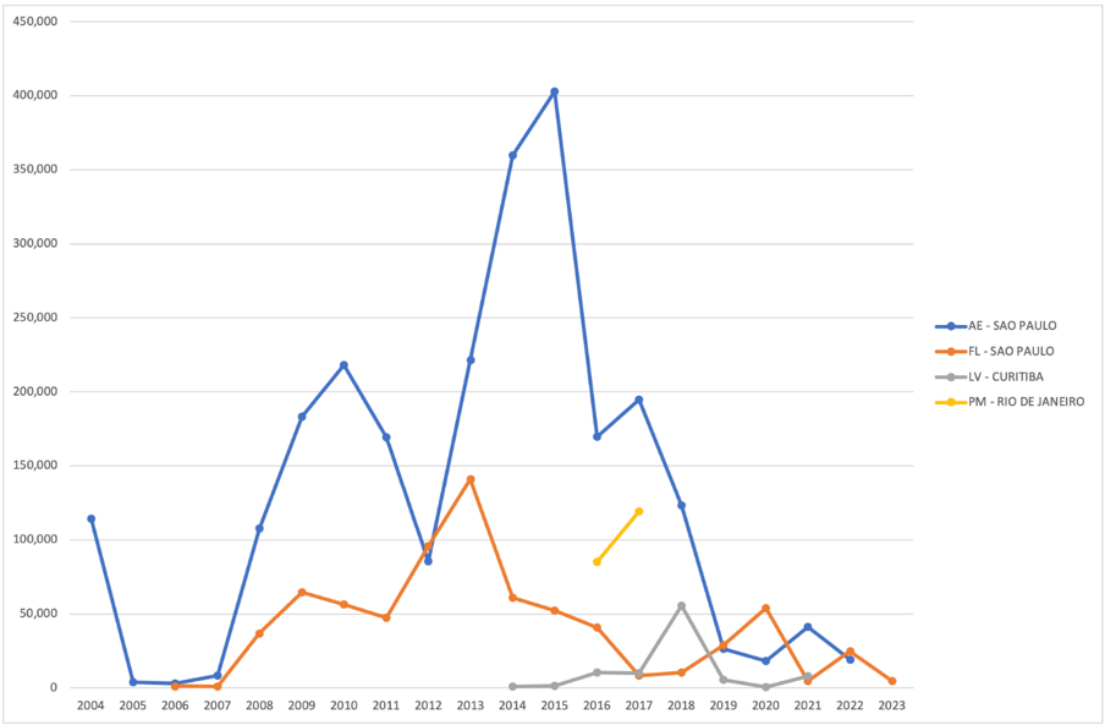


Figure 46- Additional Built Area of the development x year of delivery of the developed property (own authorship)

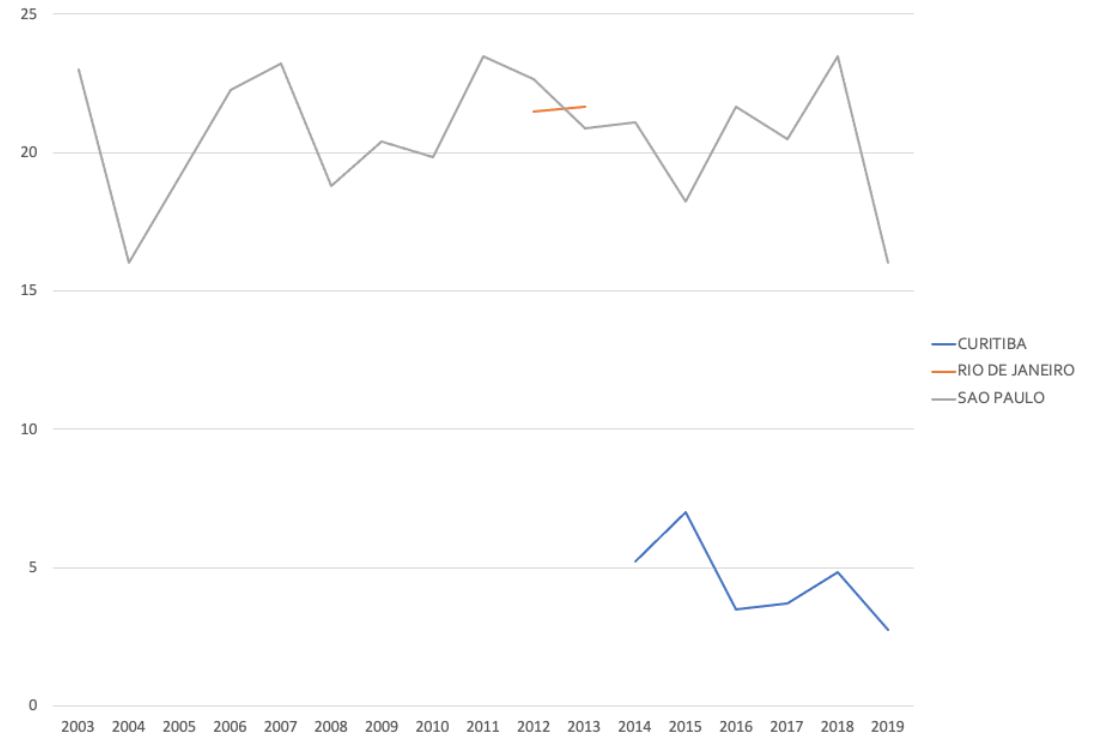


Figure 47- Average number of floors of buildings constructed with additional area granted by CEPAC (own authorship)

To better understand the results of the application of land value capture instruments such as CEPAC and OODC, this thesis was also dedicated to identifying the end use of the built developments. Through the data collected, crossing the information about the projects registered in the municipalities, a visual survey, and the market information, it was possible to identify the category of property use and its types and subtypes. This gives us an overview of the built environment resulting from the use of land value capture instruments in all five UPOs. As indicated in Table 19 of the 315 cases in the city of São Paulo of the types belonging to the tertiary sector, the one with the highest number is the office type, with 84 cases. We also found 162 cases of the residential type, which belongs to the non-economic activities, and 38 of the cases found are of the plot type and therefore do not yet have an economic activity assigned. Among the 11 cases in Rio de Janeiro, 5 are type office and 2 are tourism. Of the projects that registered CEPAC only 1 is for residential type and 3 do not have a defined activity and remain as land. In Curitiba, 10 cases are of the commercial type, and of these 2 are suptype Shopping/Mall. Only 2 cases within the UPO Linha Verde are of the office type and 53 cases are residential type. Similarly, Table 20 shows the property use distribution of buildings that had additional building area awarded by OODC.

Table 19- Category: Property Use - number of cases that used CEPAC (own authorship)

Caregory: Number of cases with CEPAC				
Type	**Subtype**	**S. Paulo (nº of cases)**	**R. Janeiro (nº of cases)**	**Curitiba (nº of cases)**
economic activities: tertiary sector				
3S: Commercial		5	_	10
Unspecified		_	_	1
Retail: General		4	_	7
Shopping/ Mall		1	_	2
3S: Office	_	84	5	2
3S: Mixed Use	_	13	_	_
3S: Logistics	_	_	_	1
3S: Tourism	_	4	2	_
3S: Health	_	4	_	_
3S: Educational	_	5	_	1
non-economic activities				
NE: Residential	_	162	1	53
unspecified activities				
U: Plot	_	38	3	12
Grand total		315	11	79

Table 20- Category: Property Use - number of cases that used OODC (own authorship)

Caregory: Number of cases with OODC		
Type/ Subtype	**Água Branca (nº of cases)**	**Faria Lima (nº of cases)**
3S: Commercial	24	20
Unspecified	22	18
Retail: General	_	2
Retail: Supermarket	1	_
Shopping/ Mall	1	_
3S: Office	11	26
3S: Mixed Use	5	1
3S: Tourism	2	1
3S: Health	_	2
3S: Educational	2	_
NE: Residential	24	52
U: Plot	1	_
U: Unidentified	_	4
Grand total	104	173

- Characteristics of distribution by property use in municipalities

Following this survey and taking into account the types identified in the property use category, we have made an analysis of the evolution of the delivery of developments. We looked at the data from the 3 municipalities from two perspectives: the number of cases and their distribution by type, and the amount of built area granted by CEPAC by type. This analysis allowed us to deepen our understanding of the production of the built environment within the perimeters of the UPOs. This reveals not only the profile of the built environment through additional area granted by CEPAC, but also the profile of products placed on the market through the use of this instrument. This data tells us how real estate developers understand the demand for each type of real estate product.

The following set of figures show the proportion of the types of uses in relation to the number of developments that have used CEPAC and the proportion of the type of use in relation to the area granted CEPAC. In general, these proportions differ, and each city shows a different distribution profile. In the case of São Paulo, we can observe the evolution of this information during the period 2004 to 2020. Figure 48 shows the relationship between the number of developments that used CEPAC, and the types identified in the property use category. Of the 315 cases in São Paulo, it was not possible to identify the delivery year for more than 40 developments that had CEPAC linked to the project. Of these some are just pre-launches and undelivered buildings; others have not started construction and in other cases we simply could not identify them. Over the years, the

launchings within the UPO perimeter have been mostly residential, followed by the type office category. However, in Figure 49 we notice that this proportion is inverted and the type office developments have the largest additional area granted by CEPAC. This indicates that this type of development tends to be more vertical than the residential type.

São Paulo

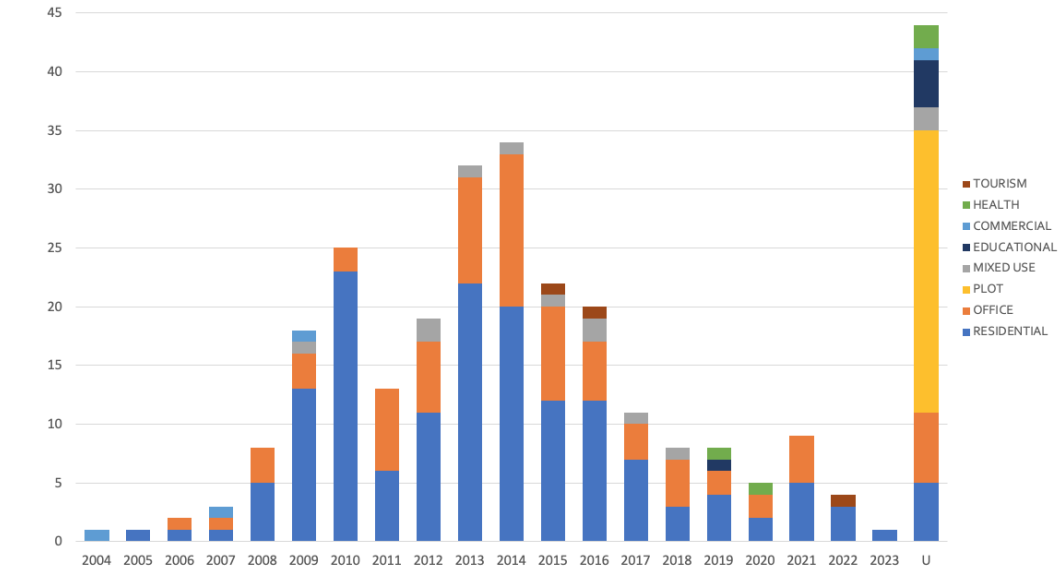


Figure 48- São Paulo, property use distribution: number of developments with CEPAC by category, delivered per year in São Paulo (own authorship)

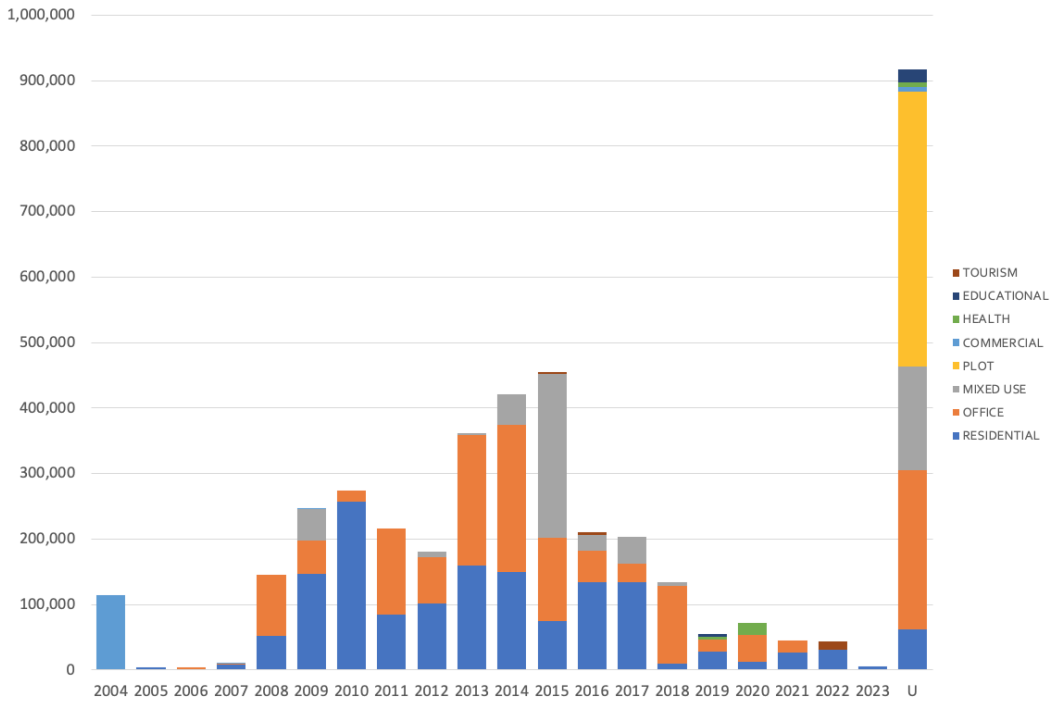
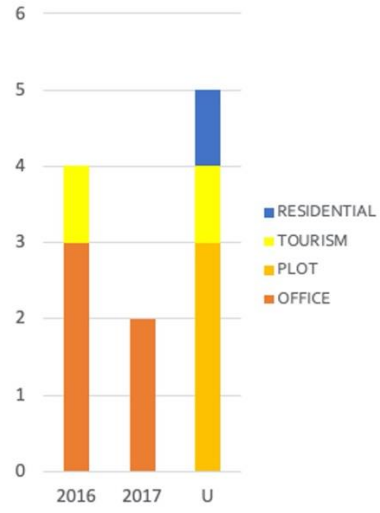


Figure 49- São Paulo, use type distribution: additional built area granted by CEPAC by type/ category delivered per year in São Paulo (own authorship)

- Rio de Janeiro

In the case of Rio de Janeiro (Figures 50 and 51), we could not identify the date of 5 of the 11 developments that registered projects with CEPAC, as none of them had construction initiated or completed. It is noteworthy that among these unfinished developments are residential developments. This is the case of Porto Vida Residencial, a high-standard residential development planned by Odebrecht, a large construction and development company. When we look at the developments in Rio de Janeiro, we can see that most of the developments are of the office type.



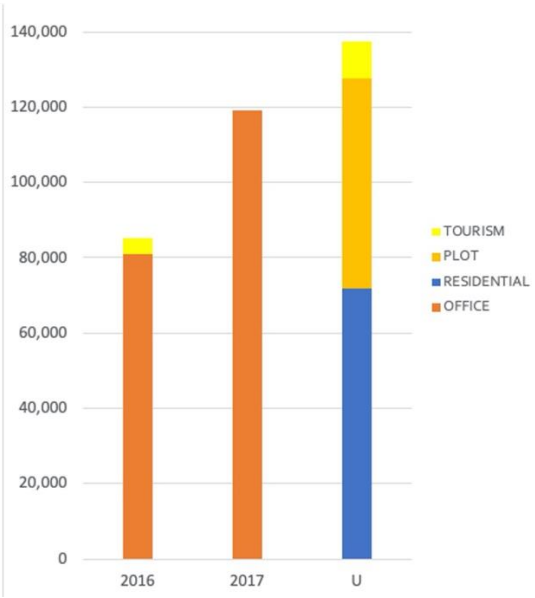


Figure 50 (left)- Rio de Janeiro, property use distribution: number of developments delivered per year (own authorship)

Figure 51 (right)- Rio de Janeiro, property use distribution: additional built area granted by CEPAC by developments delivered per year (own authorship)

- Curitiba

In relation to Curitiba, Figure 52 shows that most of the buildings with additional area granted are residential. In Figure 53 we can see that although this typology is the most used within the perimeter of the UPO Linha Verde, we note that the use of additional area granted by CEPAC in the residential typology is low. This occurs because residential developments in Curitiba are mostly townhouses or buildings with up to 6 floors. This is a different profile from the residential developments in São Paulo, which are mostly buildings with an average of 15 to 20 floors. It is also possible to note that in 2018 there was a peak in additional area granted by CEPAC for the commercial typology. This is due to the launch of the Jockey Plaza shopping center, a 3-story above ground development, which reaffirms the low verticalization profile in the Linha Verde UPO.

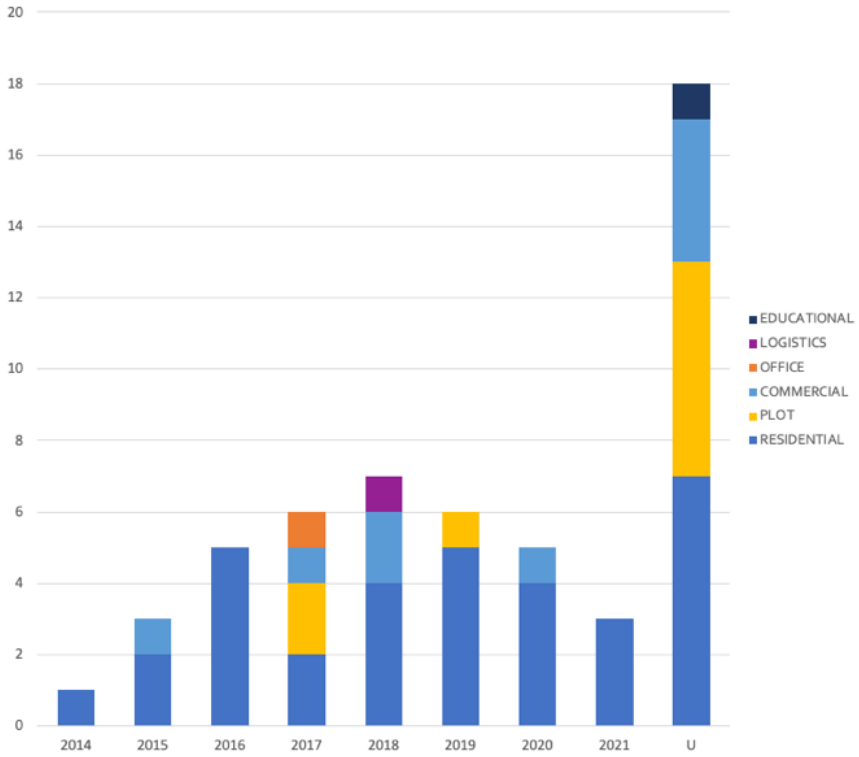


Figure 52- Curitiba, property use distribution: number of developments, delivered per year (own authorship)

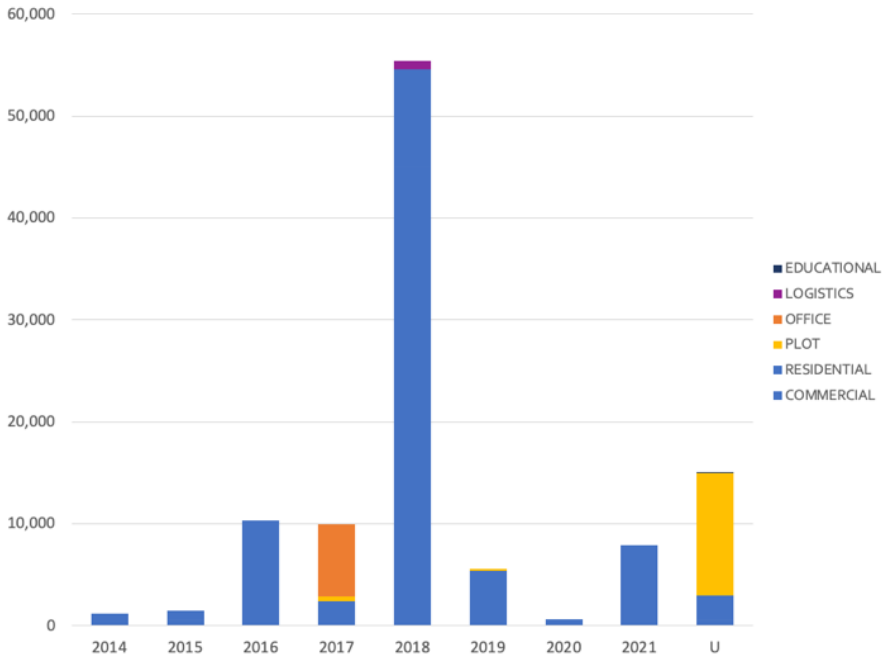


Figure 53- Curitiba, property use distribution: additional built area granted by CEPAC by developments delivered per year (own authorship)

REAL ESTATE MARKET CLASSIFICATION INSIDE UPOS

This section also cross-references information about the built space resulting from projects that used CEPACs and some of the information collected about the real estate market. Table 21 shows us a comparison between all UPOs and their results regarding verticalization of the built environment.

Table 21- Characteristics of projects using OODC and CEPAC by land use (own authorship)

UPOs: Urban built environment with CEPAC[53]				
City	Nº of projects using CEPAC	Max Number of Floors average[54]	Real estate market classification	
			Nº of buildings	vacancy average (%)
São Paulo	315	21	88	32.5%
Rio de Janeiro	11	22	5	45.4%
Curitiba	79	4	2	65.0%
Total	405	18	95	33.8%

In our database, out of a total of 405 buildings that use CEPAC, we were able to identify information about the market classification of 95 of them, which belong to the office type property use category. That is, the cases that we could identify this category are equivalent to 23.46% of the total universe of cases. We can observe that from the total identified most of them are in the UPOs in São Paulo (88 buildings). Among the data identified in our database we also have information about the vacancy rate in each of the properties. We can see that the vacancy rate in developments located in UPOs in São Paulo is the lowest, with an average of 32.5%, in contrast to the Green Line which showed an average vacancy rate of 65%. The average vacancy rate found for developments within the UPO perimeter in Rio de Janeiro was 45.4%. Since our information was in an atypical pandemic year, 2020, we also include here some information found about the vacancy rate in other years in the cities of São Paulo (Figure 54) and Rio de Janeiro (Figure 55). It was not possible to find the same level of information regarding the Curitiba market. However, the information we present here gives us some basis for understanding whether the rates we find in our database are high or low and gives us an overview of the evolution of vacancy rates in these cities. It is important to note that these rates refer to

[53] Sources of data for this analysis: google maps, real estate search engines, and official data base provided to the author by each municipality.

[54] The number of floors per building was identified using data provided by municipalities, information made available on the internet by developers and real estate agents. It was possible to identify the number of floors of approximately 79% of the 405 buildings using CEPAC in Brazil.

buildings in these cities in general and not only to buildings that have had additional area granted by CEPAC or OODC as is the case investigated in this thesis.

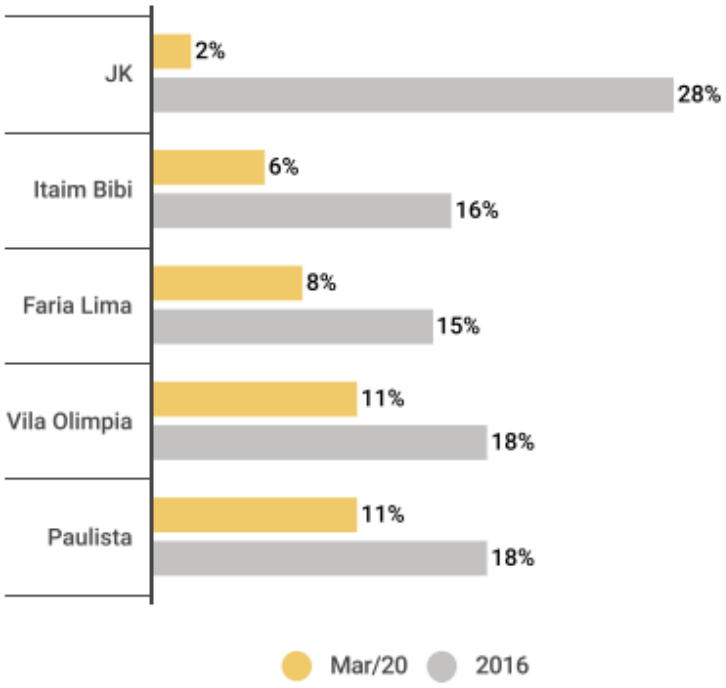


Figure 54 - Vacancy rate of São Paulo regions (data source: XP Investimentos, Cushman & Weakefield, in Manda 2020)

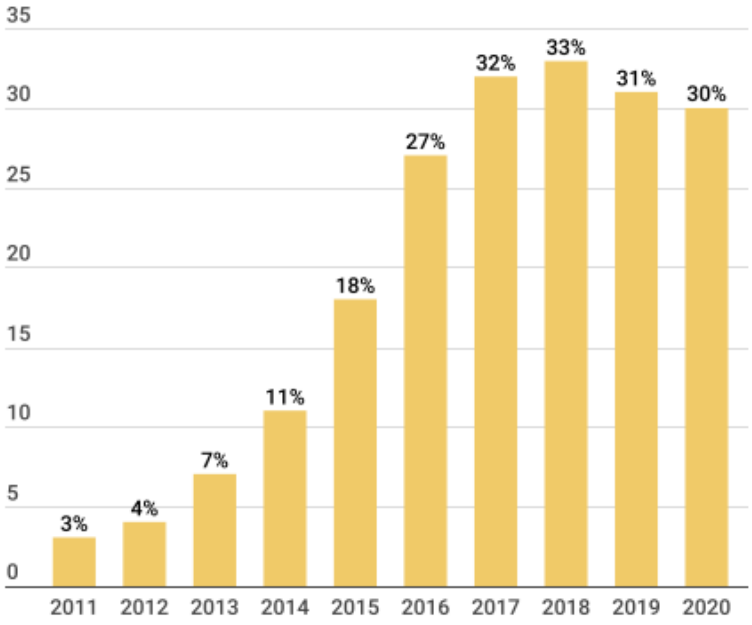


Figure 55 - Vacancy rate in Rio de Janeiro (data source: XP Investimentos, Cushman & Weakefield, in Manda 2020)

- Real estate market classifications

From the studies and reports analyzed, it was identified that the Rio de Janeiro and São Paulo markets have been going through a prolonged crisis (Alvarenga and Silveira 2017; Manda 2020). These documents report that as of 2015 the market presents a difficulty in disposing of the stock of office-type buildings. The difficulty of absorption by the market is justified by deliveries of new buildings and also by the recission of contracts by large tenant companies. In the case of Rio de Janeiro, these terminations are often attributed to the crisis in the oil and gas sector, which in 2017 led large companies in the sector to vacate entire buildings, mainly in the city's port region. According to Manda (2020), São Paulo has been gradually recovering, while the situation in Rio de Janeiro remains discouraging for the real estate market segment and, according to the author, there is no forecast for deliveries for the coming years. From Figure 49 presented earlier, we can see that this situation is reflected in our data with a sharp drop from 2016 onwards in buildings delivered in these municipalities.

The real estate market evaluation system assigns these buildings two distinct categories: corporate and office. The buildings in the 'corporate' category are those with large spaces designed to accommodate large corporations. Office buildings, on the other hand, are smaller spaces that can accommodate small businesses, consulting firms, and individual activities. We emphasize here that in our database we refer to both office and corporate buildings as belonging to the same category and type: office type property use category. In other words, although the name coincides, our approach is different from that of the market, and in Tables 22 and 23, when we refer to office or corporate, in fact they both belong to our property use of type office category. That said, when we evaluated the 'property classification' category we could identify both classified developments that had additional area granted by CEPAC, 95 units, and OODC, 39 units. Of all these, 52 are concentrated on the perimeter of the UPO Água Espraiada, of which 25 received an A classification, 9 are triple A and 8 are class AA. In the UPO Faria Lima we identified 61 buildings classified by the market, 36 of which had additional area granted by CEPAC and 27 by OODC. Of the latter, even though they are older buildings, 18 still receive high classifications (AAA, AA, and A). Of the newer buildings built using CEPAC, 30 receive this rating in the 'A' group. In UPO Água Branca we identified 12 buildings and 7 of them are in the 'A's, remembering that in this operation CEPACs have not been linked to any project yet. In UPO Porto Maravilha all 5 buildings constructed so far belong to the 'A's group. In Curitiba only 2 cases were found, one of them classified as A and the other as B.

Table 22- Category: property classification (CEPAC); number of cases and their market types (own authorship)

Property Market Rating: Number of cases with CEPAC							
UPO and Type	AAA	AA	A	BB	B	C	Grand Total
Faria Lima	7	4	19	1	5	_	36
Corporate	7	4	15	1	1	_	28
Office	_	_	4	_	4	_	8
Água Espraiada	9	8	25	2	7	1	52
Corporate	8	6	19	2	4	1	40
Corporate and Office	1	_	1	_	_	_	2
Office	_	2	5	_	3	_	10
Porto Maravilha	3	1	1	_	_	_	5
Corporate	3	1	1	_	_	_	5
Linha Verde	_	_	1	_	1	_	2
Corporate	_	_	_	_	1	_	1
Office	_	_	1	_	_	_	1
Grand Total	19	13	46	3	13	1	95

Table 23- Category: property classification (OODC); number of cases and their market types (own authorship)

Property Market Rating: Number of cases with OODC						
UPO and Type	AAA	AA	A	B	C	Grand Total
Água Branca	1	1	6	3	1	12
Corporate	1	1	2	_	1	5
Office	_	_	4	3	_	7
Faria Lima	2	5	11	8	1	27
Corporate	2	5	11	4	_	22
Office	_	_	_	4	1	5
Grand Total	3	6	17	11	2	39

When we broaden our spectrum considering the total Gross Leasable Area (GLA), vacant GLA and Vacancy Ratio analysis units we observe that not all the area available in the market focuses on the same type of client (Tables 24 and 25). In São Paulo, UPO Faria Lima has most of its GLA focused on supplying the needs of large corporations and we can notice that the same occurs at UPO Água Espraiada. At the Água Branca UPO the offer is less polarized and the real estate products are aimed at supplying the needs of both office and corporate profile customers. In fact, if we compare the spaces produced using OODC and CEPAC, we note that production at Faria Lima and Água Branca with OODC was more balanced between office and corporate buildings. In the case of Porto Maravilha, all the buildings focus on meeting the needs of large corporations. And in Curitiba the office type is the one with the highest GLA supply, but it is also the one with the highest vacancy rate.

Of all the UPOs Faria Lima has the lowest vacancy rate, 19% in buildings constructed using CEPAC and 22% in buildings constructed using OODC. All other UPOs have a higher vacancy rate, ranging from 42% in Água Espraiada to 65% in Linha Verde. However, these high rates are not justified for the same reasons. The numbers found in Água Espraiada can be justified by the recent delivery of several projects in a local market that already had absorption difficulties. In Porto Maravilha, the crisis in the real estate market and the difficulty of absorption is also evident and pointed out as being worse than in São Paulo. However, we can elaborate further justifications based on the context of the urban development project itself. During the consultation of reports and market documents we noticed that the insecurity of the market in relation to the continuity of the project is a factor mentioned with some frequency. Another point is the lack of services and of resident population in the region, besides topics related to lack of security. In the case of Curitiba, the vacancy can be justified by an apparent lack of market demand for these specific products. The situation is also aggravated by the location of the project in an area that has not yet consolidated itself as a valued area and seems to be expanding following the same pattern of constructions destined to the low- and middle-income residential public.

Table 24- Category: property classification, acording to total GLA and Vacancy Ratio, in buildings that used CEPAC (own authorship)

Property Market Rating: Total GLA and Vacancy per UPO – Additional area from CEPAC																				
UPO and property category	Property Market Rating Class																	Grand Total		
	AAA			AA			A			BB			B			C					
	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)
Faria Lima	359,274.27	230,929.43	35%	90,592.64	21,409.20	18%	206,655.39	46,657.84	18%	5,279.99	765.07	14%	22,777.06	1,044.35	5%	_	_	_	684,579.35	300,805.90	19%
Corporate	359,274.27	230,929.43	35%	90,592.64	21,409.20	18%	147,947.15	14,067.70	12%	5,279.99	765.07	14%	4,113.80	171.55	4%	_	_	_	607,207.85	267,342.95	18%
Office	_	_	_	_	_	_	58,708.24	32,590.15	42%	_	_	_	18,663.26	872.81	6%	_	_	_	77,371.50	33,462.95	24%
Água Espraiada	829,486.47	260,256.91	26%	414,175.54	196,385.66	47%	356,939.30	141.125.18	44%	29,215.54	20,113.05	69%	48,579.95	26,277.19	42%	3,600.00	1,400.04	39%	1,681,996.80	645,508.03	42%
Corporate	597,073.64	98,362.67	21%	361,287.10	185,590.03	55%	267,485.19	92,997.64	42%	29,215.54	20,113.05	69%	22,929.76	11,236.20	30%	3,600.00	1,400.04	39%	1,281,591.23	409,699.64	40%
Corporate and Office	232,412.83	161,894.24	70%	_	_	_	30,009.71	14,393.16	48%	_	_	_	__	_	_	_	_	_	262,422.54	176,287.40	59%
Office	_	_	_	52,888.44	10,795.63	26%	59,444.40	33,734.38	51%	_	_	_	25,650.19	14,990.99	58%	_	_	_	137,983.03	59,512.00	48%
Porto Maravilha	273,503.55	189,143.36	57%	13,299.00	7,254.60	55%	18,313.00	0.00	0	_	_	_	_	_	_	_	_	_	305,115.55	196.397.96	45%
Corporate	273,503.55	189,143.36	57%	13,299.00	7,254.60	55%	18,313.00	0.00	0	_	_	_	_	_	_	_	_	_	305,115.55	196.397.96	45%
Linha Verde	_	_	_	_	_	_	8,920.68	7,312.28	82%	_	_	_	4,235.44	2,034.28	48%	_	_	_	13,156.12	9,346.56	65%
Corporate	_	_	_	_	_	_	_	_		_	_	_	4,235.44	2,034.28	48%	_	_	_	4,235.44	2,034.28	48%
Office	_	_	_	_	_	_	8,920.68	7,312.28	82%	_	_	_	_			_	_	_	8,920.68	7,312.28	82%
Grand Total	1,462,264.29	680,329.70	34%	518,067.18	225,049.47	39%	590,828.37	195,095.30	33%	34,495.53	20,878.12	51%	75,592.45	29,305.83	29%	3,600.00	1,400.04	39%	2,684,847.82	1,152,058.45	34%

* The information compiled into this table uses 2021 as base year. It is worth noting that this is an atypical year for global economy due to the COVID 19 pandemic. According to several sources, the real estate market for office buildings felt the effects of this crisis, which led to the cancellation and/or non-renewal of leases in the corporate market).

Table 25- Category: property classification, acording to total GLA and Vacancy Ratio, in buildings that used OODC (own authorship)

Property Market Rating: Total GLA and Vacancy per UPO – Additional area from OODC																		
UPO and property category	Property Market Rating Class															Grand Total		
	AAA			AA			A			B			C					
	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)	Total GLA	Vacant GLA	VR (%)
Água Branca	32,124.00	0.00	0%	23,012.00	20,077.97	87%	70,843.46	48,437.69	62%	12,339.97	6,351.21	59%	2,091.00	0.00	0%	140,410.43	74,866.87	53%
Corporate	32,124.00	0.00	0%	23,012.00	20,077.97	87%	18,246.00	13,286.25	71%	_	_	_	2,091.00	0.00	0%	75,473.00	33,364.22	46%
Office	_	_	_	_	_	_	52,597.46	35,151.44	58%	12,339.97	6,351.21	59%	_	_	_	64,937.43	41,502.65	58%
Faria Lima	105,950.55	3,706.48	7%	107,661.81	5,216.79	4%	130,827.65	7,733.94	43%	40,428.02	4,216.42	10%	2,880.00	29.95	1%	387,748.03	20,903.58	22%
Corporate	105,950.55	3,706.48	7%	107,661.81	5,216.79	4%	130,827.65	7,733.94	43%	23,346.02	3,098.92	13%	_	_	_	367,786.03	19,756.13	26%
Office	_	_	_	_	_	_	_	_	_	17,082.00	1,117.50	6%	2,880.00	29.95	1%	19,962.00	1,147.45	5%
Grand Total	138,074.55	3,706.48	5%	130,673.81	25,294.76	18%	201,671.11	56,171.63	50%	10,567.63	10,567.63	23%	4,971.00	29.95	1%	528,158.46	95,770.45	31%

3.1.4.1 HIGHLIGHTS OF DATA ANALYSIS

To summarize, the analysis of Brazilian large-scale urban development projects that have used financializing policy instruments such as UPO and CEPAC contributes important aspects to the scope of this work:

- In general, the profile of results in built environments with additional area granted by CEPAC does not differ dramatically from those that used OODCs in São Paulo.
- In the UPOs Água Branca, Água Espraiada, Faria Lima and Porto Maravilha the buildings resulting from the use of OODC and CEPAC are higher than in Curitiba, and the latter UPO has presented difficulties in fostering densification in area within its perimeter.
- Not all buildings constructed with CEPAC, and not even with OODC, are for office type.
- The UPOs in the city of São Paulo have managed to capture values via CEPAC and OODC and the additional area granted was in fact built, promoting the transformation of the territory.
- Although Porto Maravilha initially raised 3.5 billion, the CEPAC bonds have not been converted into the built environment in recent years.

3.2 THE TERRITORIAL DATA OF FUNDS APPLIED TO THE URBAN OPERATION PERIMETER: A CROSS ANALYSIS

3.2.1 DESCRIPTION OF DATA ANALYSIS

This section is dedicated cross-referencing data collected on REITs and pension funds with data on UPOs. The main objective was to understand how the financialization of the built environment has occurred within the perimeter of the UPOs. There were two options: cross-reference the databases in excel and try to identify which addresses of properties in the REIT and pension fund portfolios coincided with properties that made use of CEPACs or OODCs, or georeference the data from the REIT and pension fund spreadsheets to understand which of them would fall within the UPOs' area. The second option seemed more appropriate since the spreadsheets do not always show the same address for the same property. Also, although this work addresses economic issues, this is a thesis in spatial planning. Therefore, it made more sense to map said properties and understand how they relate to the territory.

To do this, Qgis software was chosen. As a first step, the official websites of the city halls were searched for the shape files of the municipalities and the UPOs. In the case of São Paulo, the shapes with the location of the properties that made use of CEPAC and OODC were also used. In the other

municipalities, that information was not available in a shape file. Information on the assets in portfolio of the two funds, REITs, and pension funds, was imported. The resulting maps are primarily presented in this section, although a few were included in the first section of this chapter since they seemed to be a good complement to the analysis presented there.

Although georeferencing is an important tool to identify the properties and verify which of them coincide with the use of CEPAC and OODC, there are limitations. It is not always possible to obtain the necessary precision to show the overlapping of this information in an indisputable and evident way. In addition, funds do not always provide the full address of the properties, which also impairs the quality of the data. However, the results achieved in this research through this analysis methodology proved satisfactory, as a first step in identifying the relationships between urban development policy instruments and financial instruments and institutions.

3.2.2 RESULTS PER CASE STUDY

3.2.2.1 SÃO PAULO

The municipality of São Paulo has three Urban Partnership Operations (UPOs): Faria Lima, Água Branca and Água Espraiada. There is also the Urban Center Operation, which is not an UPO and does not use CEPACs, only OODCs. Since it is an urban operation located in the same area as the UPOs, it was included in the map. This information helps to clarify the positioning of properties in fund portfolios in the region; furthermore, it shows how the market has functioned within areas which municipal urban planners classify as special. In Figures 56 and 57, two avenues are also highlighted, Faria Lima and Paulista Avenue. Faria Lima was seen as the 'new Paulista'. Paulista Avenue was considered, and still is, one of the main business centers of the city and the most coveted address for large companies. One can see, therefore, that there is indeed an agglomeration of real estate for pension funds and REITs along these two streets. In the first figure we can see the evolution of the pension funds' portfolio in this region of the city. Most of the properties are in the portfolio for long periods, and several of these properties are located within the perimeter of urban operations. However, many of them are also outside of the perimeter, usually clustered along important road and transportation axes, as is the case of Avenida Paulista. Figure 57 shows that the real estate in the REIT portfolio is found in the same areas as the pension funds, inside and outside the UPOs.

In what concerns the Água Branca UPO (Figures 58 and 59), from 2006 to 2018 pension funds have been reducing the number of properties in portfolio within its perimeter and until 2018 kept 2 properties there. However, when looking at the properties in the REIT portfolio, 25 cases can

be identified within the perimeter of this UPO. Of these, only 2 properties had additional area granted by OODC.

In the case of the Água Espraiada UPO (Figures 60 and 61), the presence of real estate in pension fund portfolios is greater than in Água Branca. Of the 21 properties in portfolio in the year 2006, 13 remained in portfolio in 2018. Also, 13 were buildings that had additional area granted by CEPAC. In 2018, only 8 properties in the portfolio used CEPAC in their projects. Regarding REITs, in 2018, 26 properties were in portfolio and of these 5 used CEPAC in their projects.

As Figures 62 and 63 show of the 22 properties in pension fund portfolios in 2006 in the Faria Lima UPO perimeter, 4 were built using OODC and 2 with CEPAC. By 2018, the number of properties in pension fund portfolios had decreased to 13. In 2018, 27 were part of the REITs portfolio of which 10 had been built with additional area allocated by CEPAC and 8 by OODC.

3.2.2.2 RIO DE JANEIRO

As seen in Figures 64 and 65, on the perimeter of the Porto Maravilha UPO in 2006, pension funds had 14 properties in their portfolio, which dwindled to 11 in 2018. In the same year, 7 properties located within this operation belonged to the REITs portfolio. It is worth noting that in this UPO there is a clear agglomeration of properties in the portfolio of both pension funds and REITs.

3.2.2.3 CURITIBA

As shown in Figures 66 and 67, on the perimeter of the Green Line UPO only 1 property in pension funds portfolio and 1 in REITs portfolio have been identified. The agglomeration of the properties in portfolio of these funds is nirregularly located in the central part of the city, out of the development axis proposed by the UPO.

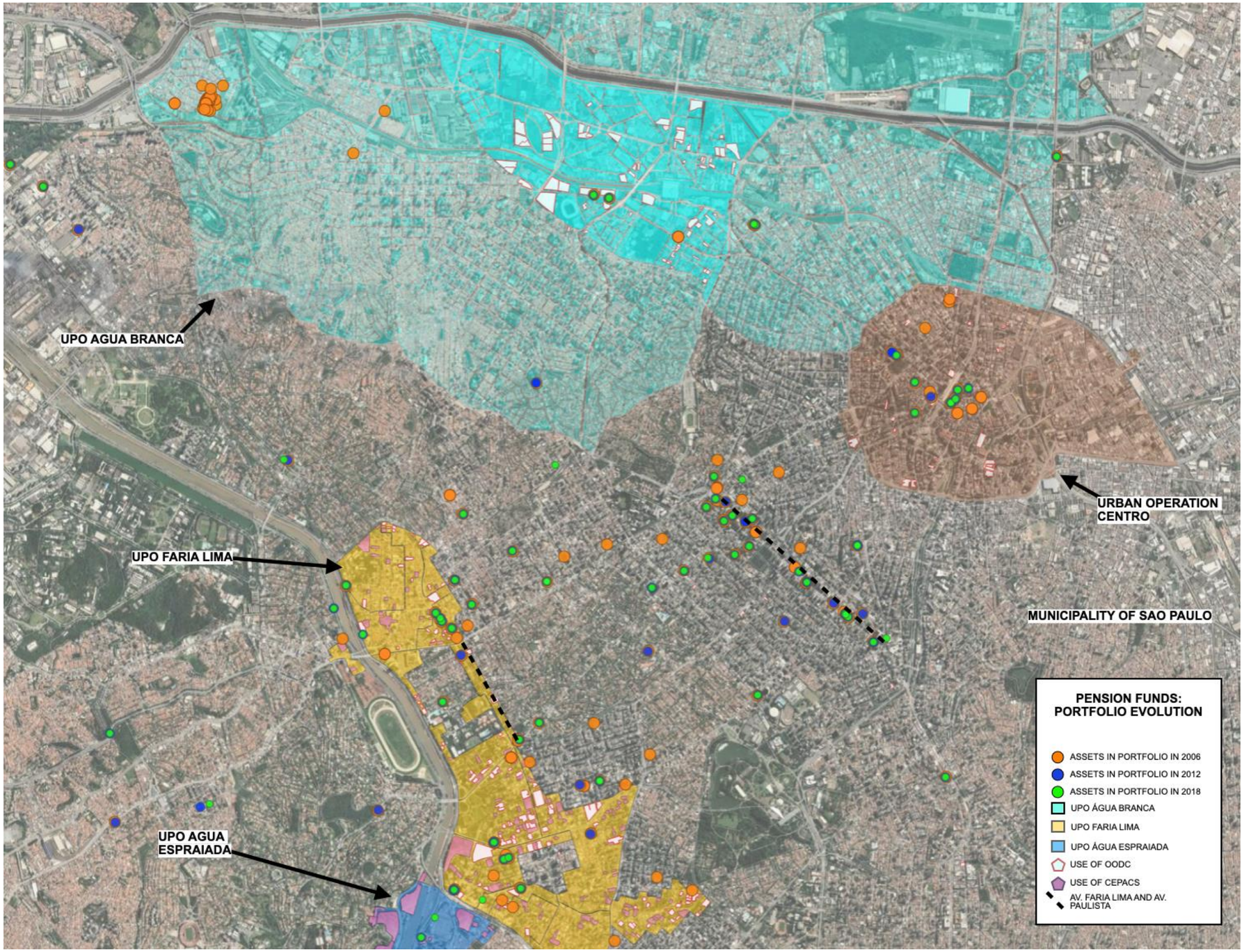


Figure 56 - São Paulo, areas between UPOs Faria Lima and Agua Branca: pension fund portfolio evolution (2006-2018), and some relations with the use of OODC and CEPAC (own authorship)

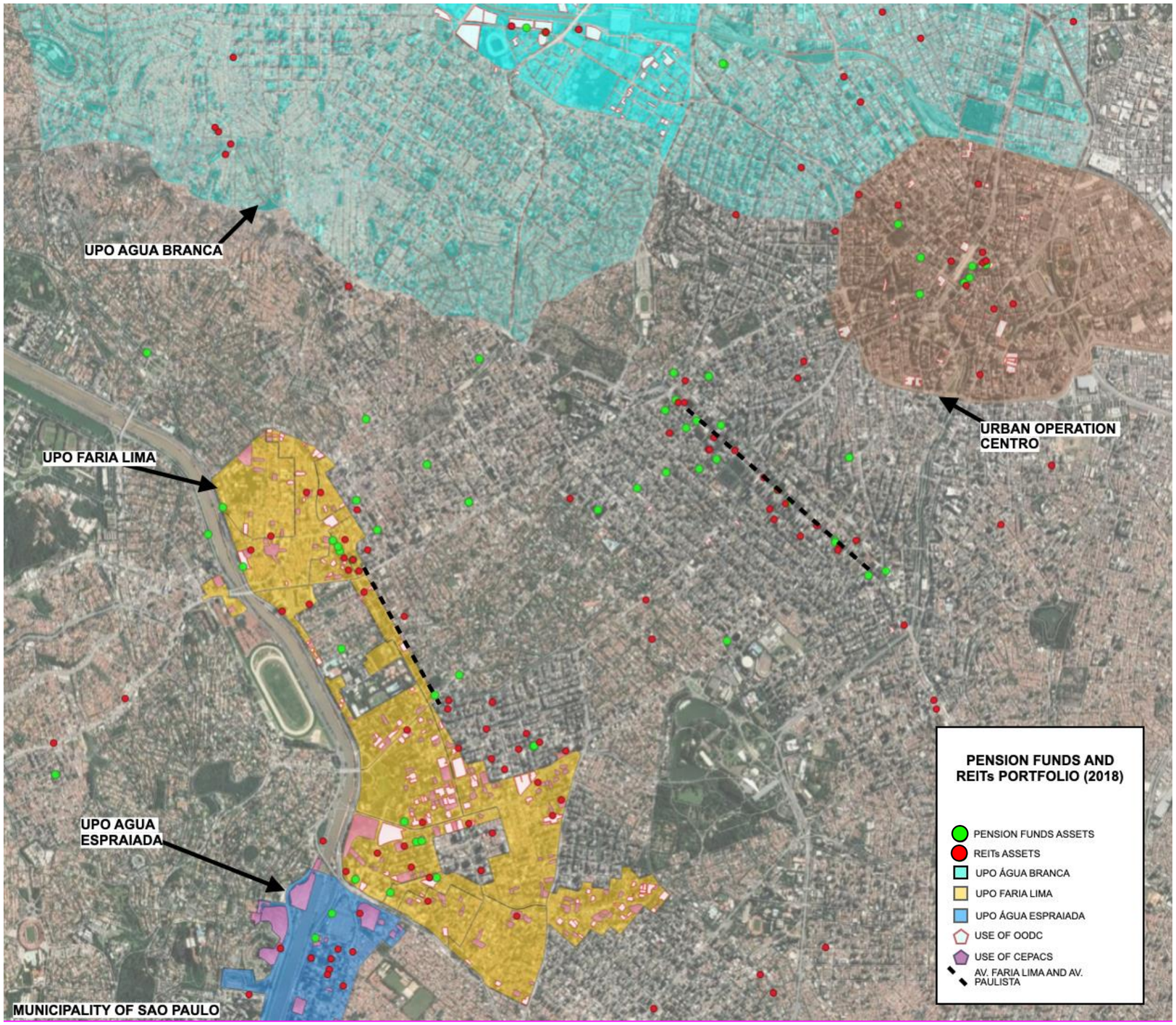


Figure 57 - São Paulo, areas between UPOs Faria Lima and Água Branca: Funds (2018) vs Land Value Capture (own authorship).

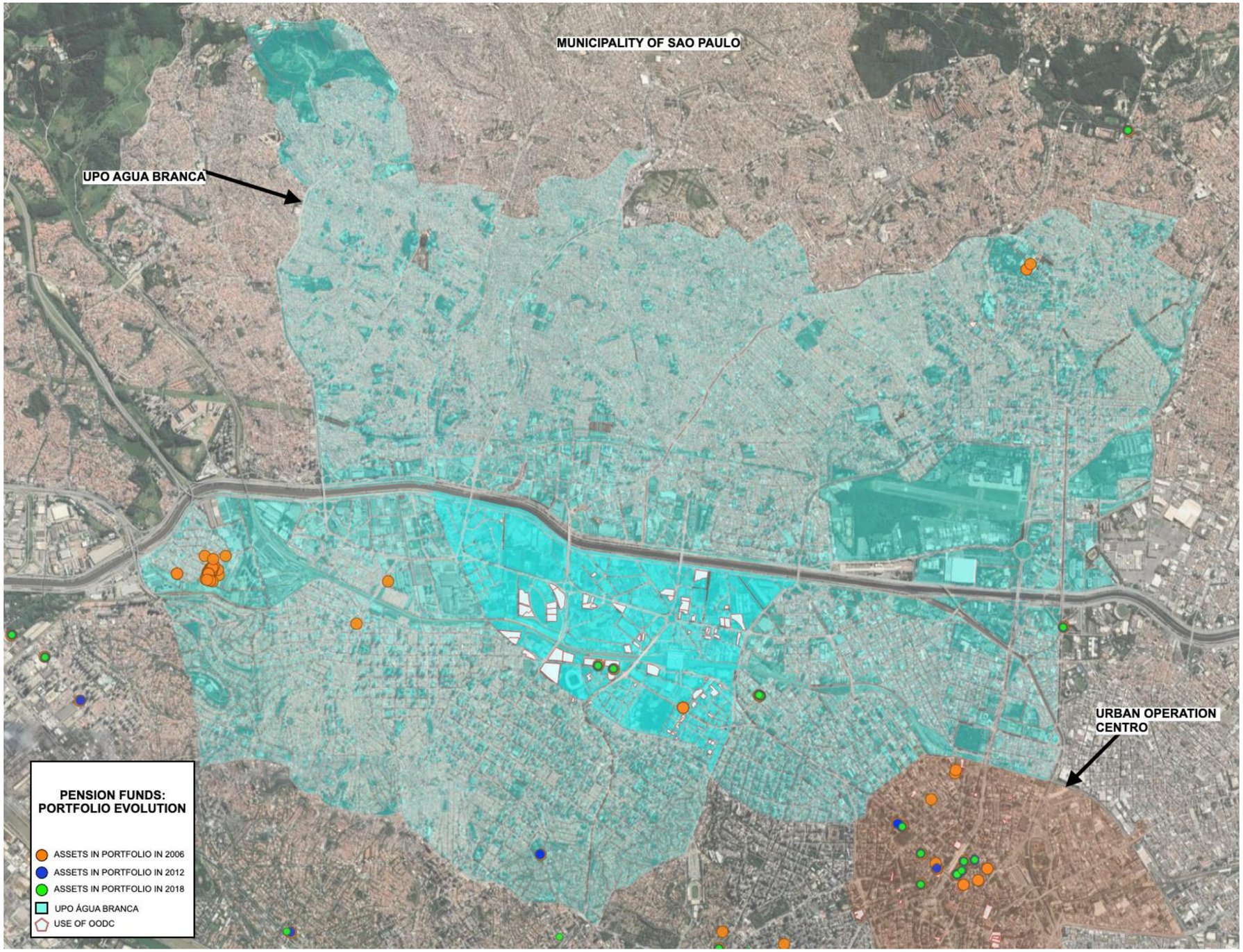


Figure 58- São Paulo, UPO Água Branca: pension fund portfolio evolution (2006-2018) and some relations with the use of OODC (own authorship)

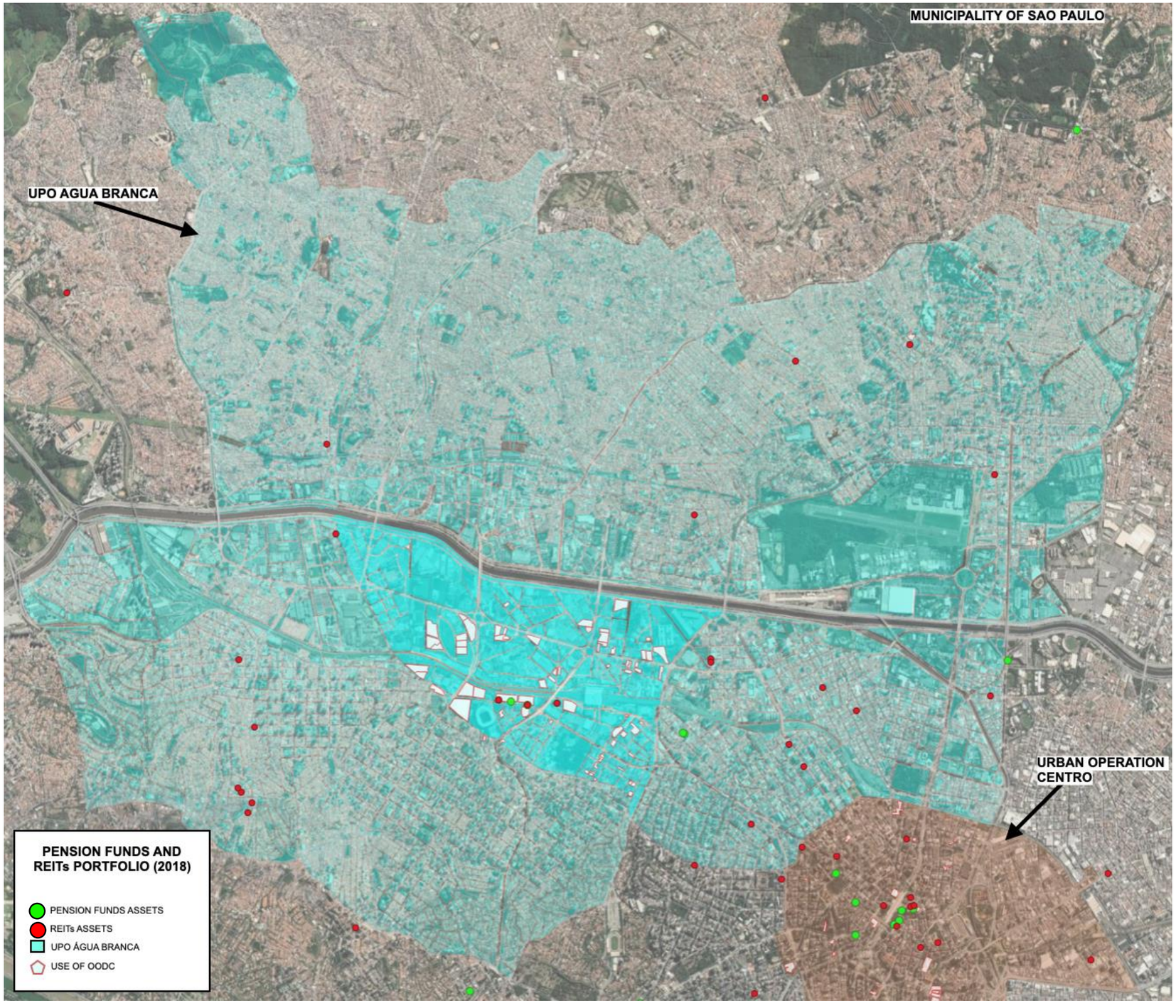


Figure 59 - UPO Água Branca: pension funds and REITs (2018) vs Land Value Capture (own authorship)

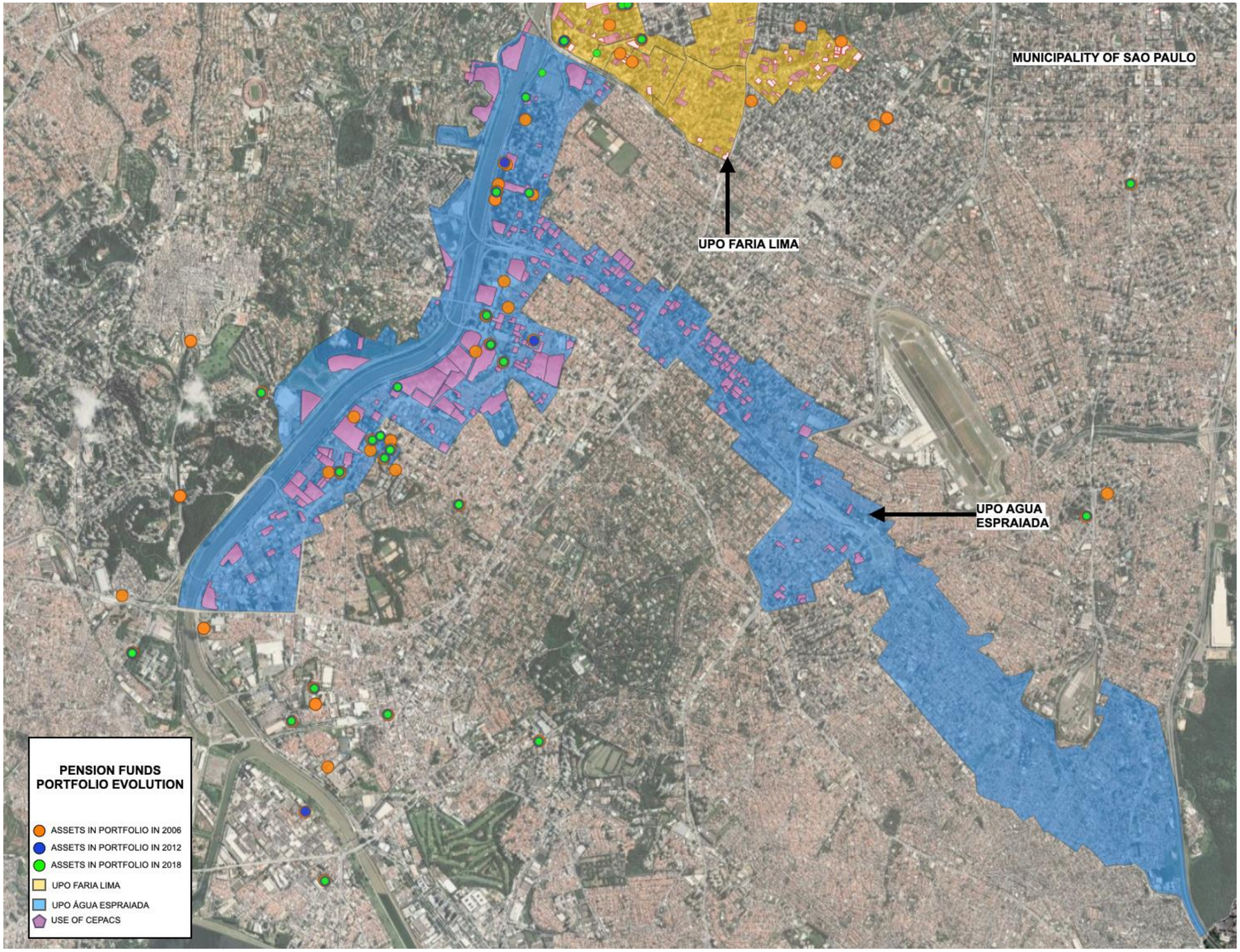


Figure 60 - São Paulo, UPO Água Espraiada: pension fund portfolio evolution (2006-2018), and some relations with the use of CEPAC (own authorship)

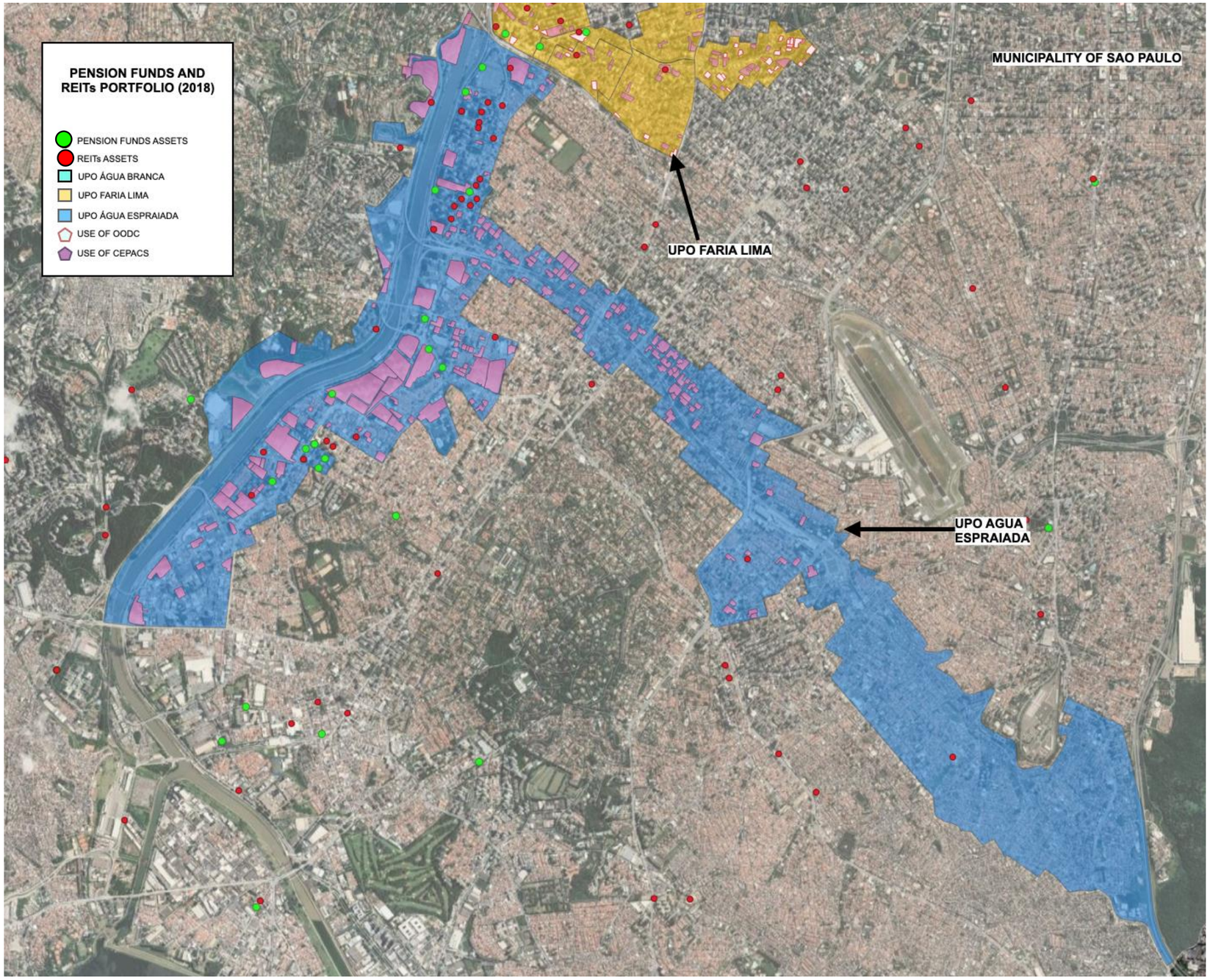


Figure 61 - UPO Água Espraiada: pension funds and REITs (2018) vs Land Value Capture (own authorship)

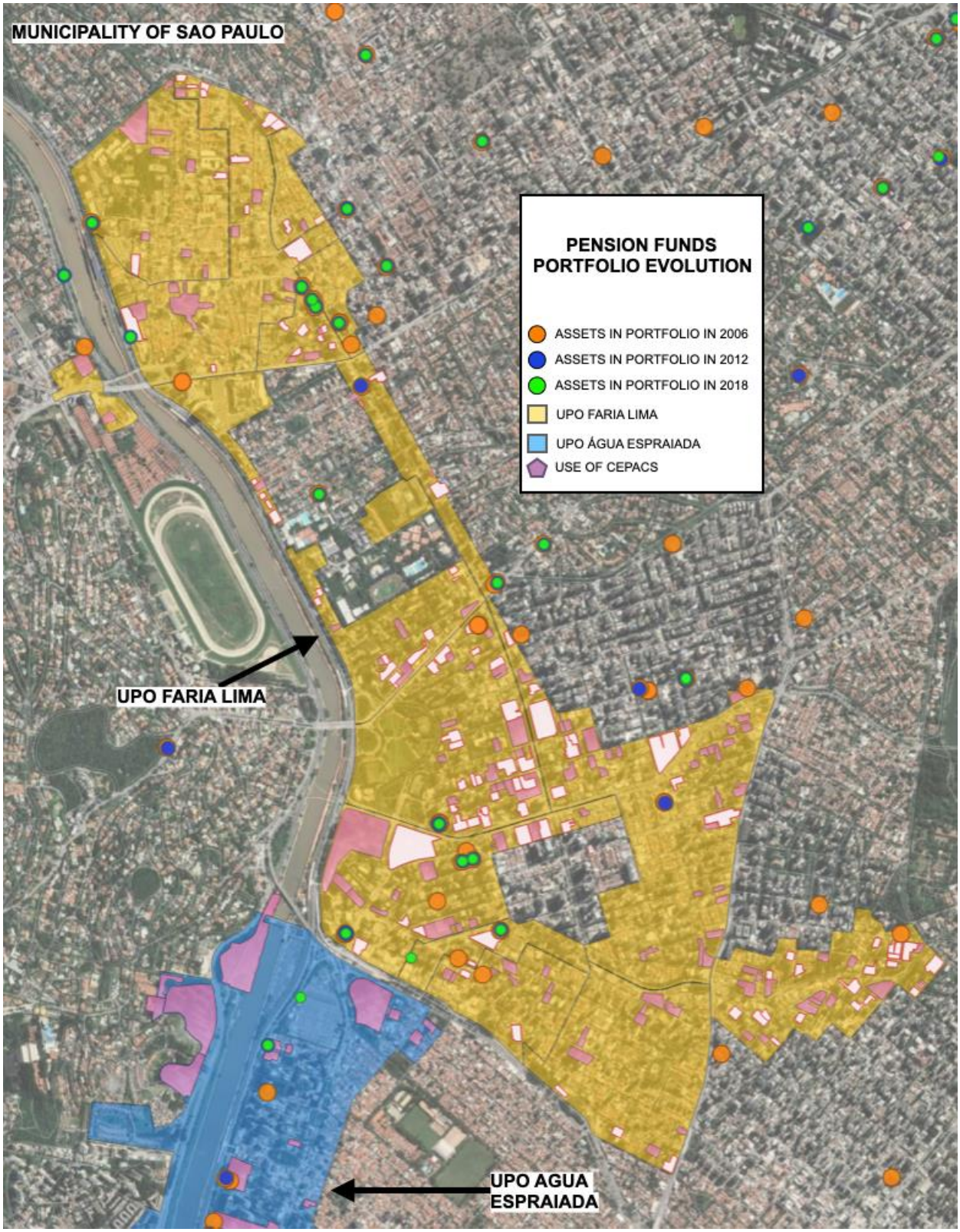


Figure 62 - São Paulo, UPO Faria Lima: pension fund portfolio evolution (2006-2018) and some relations with use of OODC and CEPAC (own authorship)

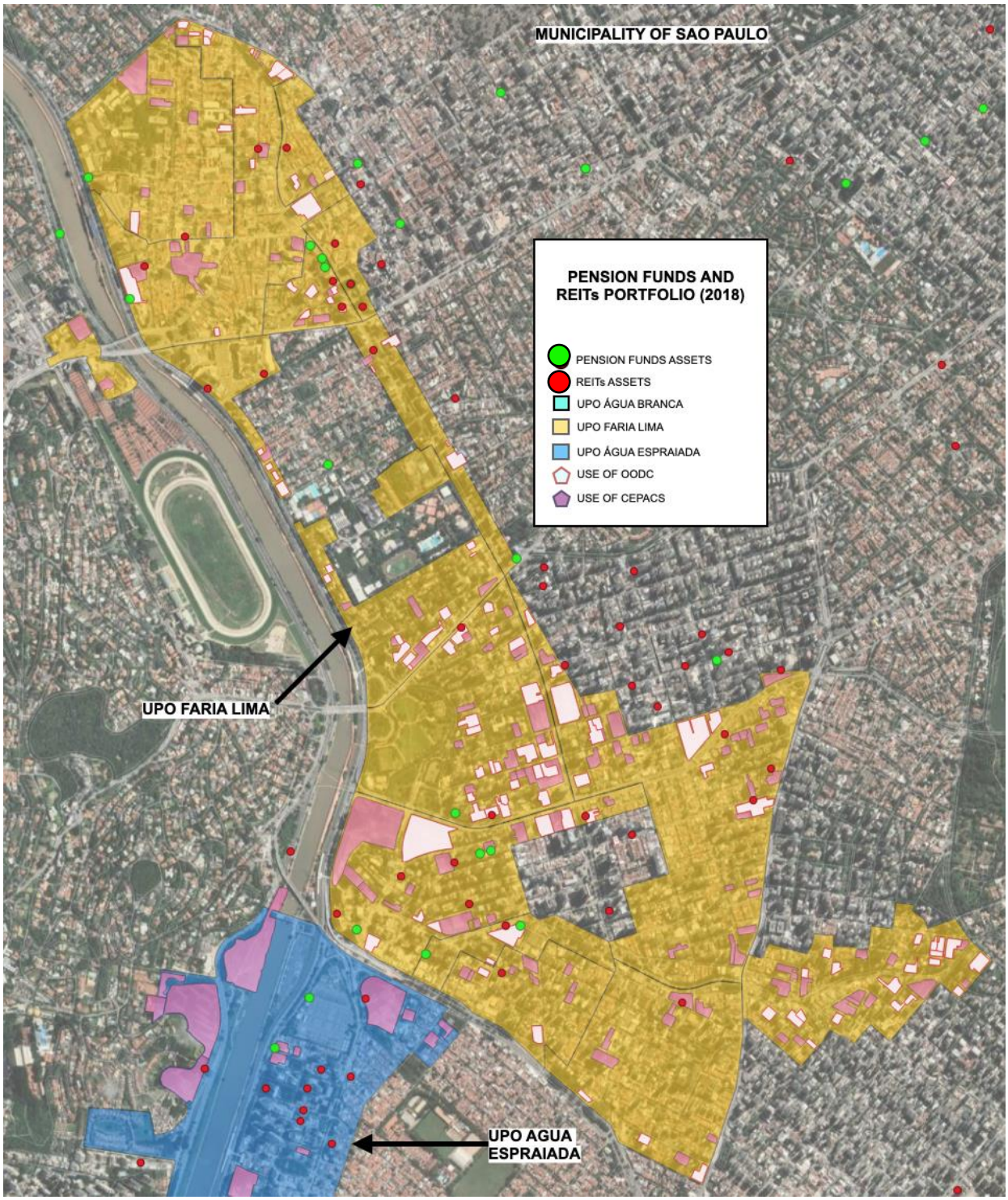


Figure 63 - UPO Faria Lima: pension funds and REITs (2018) vs Land Value Capture (own authorship)



Figure 64 - Rio de Janeiro, UPO Porto Maravilha: pension fund portfolio evolution (2006-2018) (own authorship)



Figure 65 - Rio de Janeiro, UPO Porto Maravilha: pension funds and REITs (2018) vs Land Value Capture (own authorship)

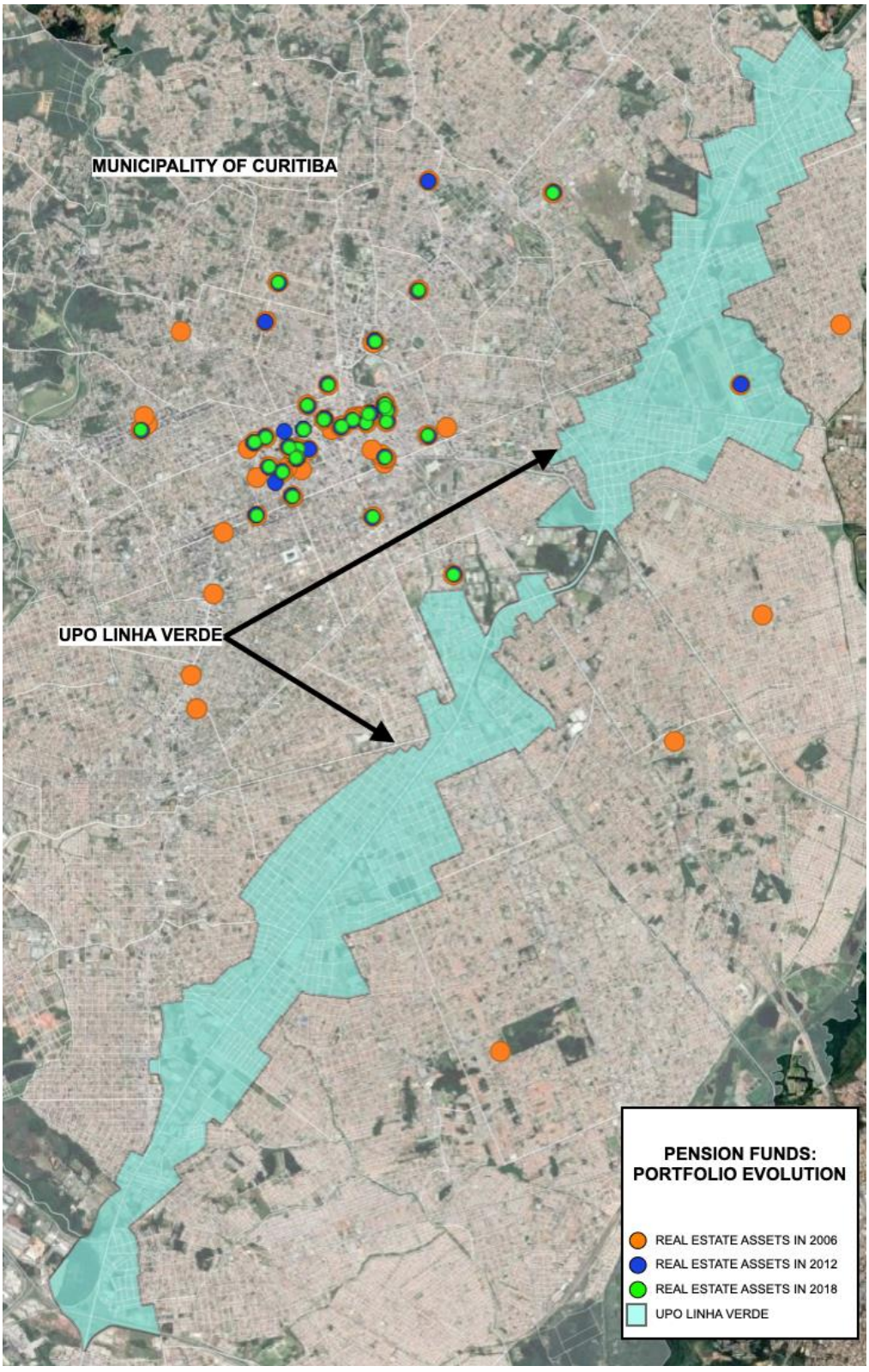


Figure 66 - Curitiba, UPO Linha Verde: pension fund portfolio evolution (2006-2018) (own authorship)

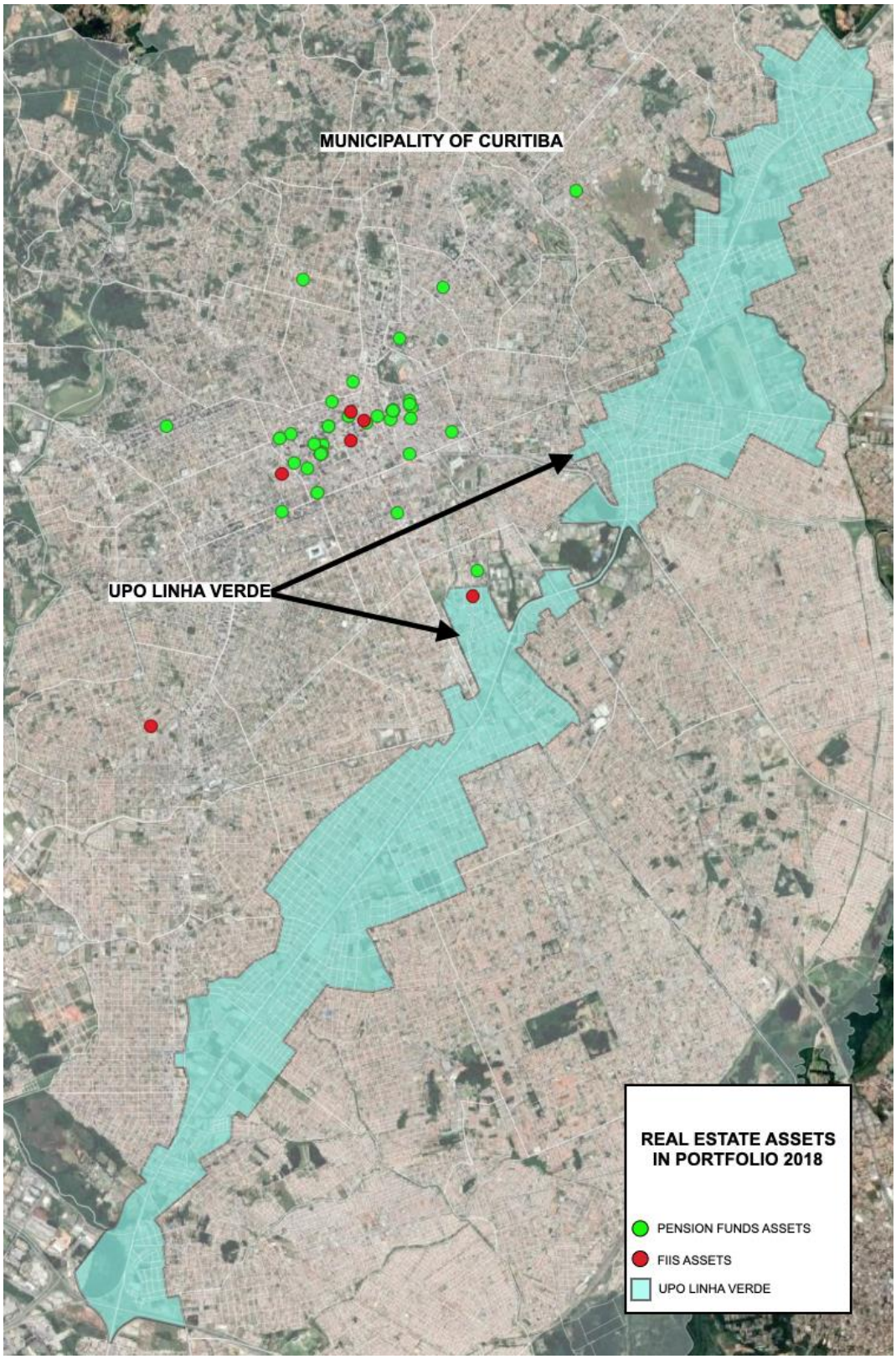


Figure 67 - Curitiba, UPO Linha Verde: pension funds and REITs (2018) vs Land Value Capture (own authorship)

3.2.2.4 HIGHLIGHTS OF DATA ANALYSIS

To summarize, the analysis of real estate held by institutional investors and funds in large-scale urban development project areas in Brazil contributes important aspects to the scope of this work:

- Real estate in the portfolio of pension funds and REITs can be located throughout the city and tend to cluster near important road and transportation axes. They also tend to be located near established business centers in the city.
- The São Paulo cases demonstrate that properties in REITs or pension funds portfolios are not necessarily built with additional area granted by land value capture instruments.
- The Curitiba case demonstrates that CEPACs have not had the strength to promote real estate market dynamics, especially the one related to finance capital, within its perimeter. The figures presented also show that the territory immediately surrounding the UPO does not have the vocation to attract investors from pension funds and REITs.
- The case of Porto Maravilha shows that CEPACs, until 2018, have not had the strength to promote real estate market dynamics, even the one related to finance capital, within its perimeter. However, the territory around it shows an agglomeration of properties in portfolio of pension funds and REITs, which represents that the region in which the UPO is located has the potential to attract capital market investments.

It is noted that real estate in the portfolio of REITs, considered financialized, can be located to a greater or lesser extent within the perimeter of UPOs.

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4 DISCUSSION OF RESULTS

4.1 FINANCIALIZATION CASE STUDIES: AN INFORMED NARRATIVE

This section focuses on debate dilemmas regarding the distinct scales and perspectives of analysis and the rise of peripheral economies in financialization literature, providing an overview of several important themes. While the previous section presented data on land use development inside the UPOs' perimeter, in order to build a panaroma of land use types and real estate development, this chapter now turns to the construction of an informed narrative on the financialization cases under analysis, by confronting established literature and recently collected data. This confrontation also contributes to the triangulation of results.

The research undertaken in the context of this thesis scrutinized outcomes for the urban built environment, UPOs included. The research question - "is the interaction between urban development instruments, financial instruments and institutions leading to a scenario of increasing financialization in the context of urban partnership operations in Brazil?" - included the local and national scales, in order to discuss contextual status of financialization, clarify how such processes are taking place in Brazil, and provide a better understanding of the multiscalar, and multidimensional complexity of financialization processes. Additionally, this section focuses on the lack of clarity regarding the rise of peripheral economies and the specificities of their financialization processes, as a first step towards a comprehensive exploration of the trajectories of financialization from the global context to the Brazilian one.

Fiscal austerity and budgetary restrictions, combined with the pressure to provide urban infrastructure and services, have challenged many municipalities around the globe. Finding themselves cornered to find funding sources, municipalities developed the ability to negotiate with local and global markets, in order to attract investments and face budgetary shortages (Savini and Aalbers 2015). Various contributions have reported on large-scale urban development projects, as spaces where trading between local built environment and global

capital often takes place (Olds 1995; Fainstein 2001; Swyngedouw et al 2002; Wolf-Powers 2005; Salet 2008; Weber 2010, 2015; Gotham 2016; Rouanet 2016; Guironnet and Halbert 2014, 2015; Theurillat et al 2016).

Similarly, to financialization, and as mentioned in the first chapter of this work, large-scale urban development projects have also received criticism for adopting neoliberalizing measures. These projects were accused of enhancing inequity and urban segregation, prioritizing the needs of elite stakeholders, and de-contextualizing planning and the urban built environment to attend to non-local needs (Swyngedouw et al 2002; Savini 2013; Peck et al 2013; Savini and Aalbers 2015; Shin and Kim 2016). In addition, such projects often adopt FPIs at their funding structure, which boosts the critical tone of existing literature. However, as Fainstein (2016) stresses, neoliberalism does not mean the cancellation of the state, but a specific involvement of the state: the state's commitment to a project's goals, such as infrastructure and service provision, is more important than any adopted strategy. In these cases, the financialization and use of FPIs can be helpful, allowing the state to provide different types of subsidies. When analysing the case of Chicago, Weber (2010) arguments that the local government can use financial markets as an additional feature to promote their own agenda. Yet, Savini and Aalbers (2015) express their concern that many municipalities are not in a position to do so.

This dilemma, embedded in the use of large-scale urban development projects and FPIs, still divides the opinions of scholars regarding the financialization debate. Does the use of FPIs place municipalities in a vulnerable position in order to attend to investor needs, or can such instruments offer municipalities the opportunity to circumvent budget constrictions? This issue seems to have no direct answer as of yet. The present thesis discussion does not aim to deepen discussions on the background of the Brazilian developmentist state, its sociospatial inequity, the qualities and problems of UPOs or FPIs instruments, political and partisian issues, nor whether financialization is positive or negative. Instead, it focuses on the aforementioned exploration, towards better supported answers and a more complete picture of the subject at hand.

As presented in section 1.1, financialization has a multi-layered and bluried concept. It is important to highlight that, to answer research question and hypothesis posed by this thesis was considered that the financialized urban built are the ones turned into REITs. This is a clear limitation of this research once it was impossible to cover all levels of finanancialization in this thesis. For example, as shown along the first chapter of this document as well as Aalbers' (2015) conceptual definition, financialization processes are taking place inside companies, institutions, and daily life. This work would not be able to cover all these nuances of financialization. Thus, when limiting the interpretation of financialized urban built environment as the ones belonging to REITs all these other aspects are being put aside, for the good and the bad. Furthermore, REITs

are not the only investment vehicle used by financial investors. Sovereign wealth funds, for example, pool their investments to a closed group of investors and they do read real estate investment as any other financial asset, just as the REITs investors. However, it was not possible to track their investments once these institutions keep their data closed to public. Another level of financialization beeing put aside by this thesis is the companies which their corporative management are changed when they go for an IPO. When such companies put their shares in market they focus on risk, return and efficiency strategies dealling with their portfolio under financial market logics to report results to their shareholders. This thesis put all these nuances aside making the analysis and interpretation of collected data limited to the REITs perspective. Yet, the quantity and quality of data collected by this work provide a significative contribution to enhance the compreension of financialization processes in Brazil, national and locally.

The application of FPI instruments can indeed have varied results, even when applied to the same country or municipality. As presented in Chapter 3, the collected data that compares Brazilian UPOs and the use of CEPAC as a funding and regulating instrument revealed distinct outcomes, both in values captured and regarding the urban built environment. Table 15 shows that there are considerable variations of captured values for each UPO which used CEPAC; for example, UPO Linha verde captured R$45 million, while UPO Porto Maravilha captured R$3500 million. Differences between UPOs of the same municipality can also be noted. For instance, in São Paulo, the UPO Água Branca captured R$ 9 million, while UPO Água Espraiada captured R$2460 million. The background and age of each of these projects cannot be dismissed when comparing them. However, these numbers show the different orders of magnitude in captured values through CEPAC.

Thus, the additional area awarded by the CEPACs registered by the projects in each city is quite varied, something which is also reflected by its urban built environment. For instance, Linha Verde registered an additional 107,542.63m^2 of area, but most of it was non-residential and ended up being used for a shopping center project: Jockey Plaza Shopping used 44,857.91m^2 of 60,569.58m^2, or 74.06% of the total additional area destinated to non-residential use. The number of CEPACs used for residential projects on this UPO is close to this value - 46,165.56m2, - and mostly comprises row houses or single-family houses, plus a few residential buildings. This is also shown by Figure 47, which presents an average of 5 floors for previously built constructions at UPO Linha Verde, from 2014 to 2019, a reality which is even more emphasised when looking at the UPOs in São Paulo and Rio de Janeiro, with averages of 21 and of 22 floors respectively.

These results also highlighted that the use of an FPI like CEPAC does not necessarily lead to the achievement of the expected outcomes, such as fostering private investment in the urban built

environment inside the project's perimeter. This is visible in the cases of Linha Verde in Curitiba, Porto Maravilha in Rio de Janeiro, or Água Branca in São Paulo (see Table 15). Likewise, the CEPAC instrument itself seems to lack the definite power to give shape to the built environment, as pointed by the UPO strategy plan, something which is especially visible in the case of Curitiba. As demonstrated by Tables 15 and 17, Figures 66 and 67 of this work, it is clear that UPO Linha Verde has not been able to foster greater density within its perimeter. As available plots are occupied by low height and low-density buildings, the possibility of building higher and densifying the area is reduced. Consequently, sale opportunities for more CEPACs and the capturing of further values to fund the project are also decreased. This can be noted at UPO Porto Maravilha, as existing buildings were built solely between 2016 and 2017. Another point to highlight is that the additional construction area adjudicated by the CEPAC in Porto Maravilha until 2015 is superior to the original plot area. This situation is inverted in the case of Linha Verde, where CEPAC was used to add an inferior amount of area compared to the plots in which it was registered.

Furthermore, available plots in the project of Curitiba were considerably smaller than the ones available in Rio de Janeiro. This also confirms the low capacity of CEPAC to give shape to the built environment, as aimed by the city strategy plan. This issue is equally true in the case of Rio de Janeiro, that CEPAC could not foster urban built environment changes at the pace predicted by the project's promotion narrative. In fact, the use of CEPACs in Porto Maravilha did not achieve neither the speed of real estate property production, which is not even close to what was initially predicted by its investors' calculations, nor the cash flow considered by the worst-case scenario predicted on its feasibility study, due to the illiquidity of the REITs declared by Caixa Economica Federal on behalf of FGTS.

The points mentioned above, as they shows the difficulties faced on UPOs Água Branca, Porto Maravilha and Linha Verde on turning CEPACs into actually built additional area, serve to support the validity of the second hypothesis of this research: "The Brazilian Urban Partnership Operations (UPOs) implemented to date with the use of CEPACs do not always possess the strength to promote real estate market dynamics , especially the one related to finance capital, within their boundaries." – as valid.

CEPACs can either give municipalities the opportunity to capture high values from real estate development, as in UPO Faria Lima and Água Espraiada, or result in low value capture, as in Linha Verde or Água Branca. In the case of UPO Linha Verde, the municipality had to relocate funds initially destinated to other municipal investments in order to proceed with the project, trusting that once the infrastructure is completed the market will aim its investments towards the project area. Interestingly, and contraditorily, the case of Porto Maravilha presents both CEPAC use

outcomes: it initially managed to sell all available titles, while simultaneously leveraging funds to start the project and placing the municipality in a situation of vulnerability regarding market financial logics; intriguinly, the project investor is represented by a parastatal fund and not by a private or global capital investor. This question is to be further developed in other sections of this chapter.

It can thus be inferred that the use of such instruments is not a simple subject for analysis, neither does it have straightforward outcomes. Collected data confirm the dillemmas pointed by several scholars, inbuilt in large-scale urban development projects and the use of FPIs as their funding source. For instance, results support Aalbers's (2019a; 2019b) emphasis on the nonlinear, multiscalar and multidimensional complexity of financialization processes and of contemporary societies and economies.

In short, this research aimed to illuminate some of the shadowy corners of such multiscalarity and multidimentionality, by investigating not only the outcomes of CEPAC use but also its interaction with other policy instruments at other scales, as seen in the analysis of another FPI (REITs) and of institutional investors as pension funds at national level. That is, it investigates, as posed on our research question, the interaction between urban development instruments, financial instruments, and financial institutions in a national context that we identified as being of increasing financialization. The next section is also part of the effort to provide answers to the research question. To discuss our data results and explore its multtiscalarities and multidimentionalities we will present and locate it by building bridges between them and contributes from financialization specialist from international and Brazilian perspectives.

4.2 FROM INTERNATIONAL FINANCIALIZATION TO BRAZILIAN FINANCIALIZATION

With the aim of clarifying the context of financialization in Brazil, as introduced in the previous sub-chapter, this section gathers some aspects discussed in international arenas of debate, side by side with this work's findings on Brazilian experiences. As Aalbers (2019, 5) underlines, the study of financialization processes is not about showing if a place is more financialized than other; "it is about understanding the process by which financial actors, markets, practices, measurements, and narratives are increasingly becoming dominant." This is the approach followed on our reseach. About these processes in peripheral countries Mosciaro et al (2018, 3) argue that they are "considered to be less financialized or not financialized at all, whether it is for reasons of political instability, poverty, the underdevelopment of financial markets, or because real estate investment is considered too risky or insecure to function as a financial asset."

Starting with the literature review of Chapter 1, this thesis has presented a broad overview of conceptual definitions and knowledge regarding the financialization of the built environment, the real estate market, urban governance, and its policy instruments. To bridge these aspects and collected data, this work follows the framework laid out in Aalbers' (2019) work, which is complemented by other existing contributions regarding financialization in Brazil.

The results of the research conducted in this thesis have brought further insights into the development of the financial market in the country, its dynamics and expansion trends. Our data show that despite the political instability, inequality conditions, market size and risk conditions mentioned by Mosciaro et al (2018), the Brazilian financial market is growing and presents a trend of eminent expansion in the next decade. As presented by the financial sector regulator on its real estate market bulletins (see CVM 2019, 2020, 2021), the annual evolution of total traded volume through FII increased significantly. In 2012, the total traded by FIIs in Brazil was R$3.6 billions; in 2018 this value increased to R$11.2 billions; and in 2020 it reached R$53.9 billions. However, when looking at the investor type distribution, institutional investors until 2018 represented 0.31% of the total traded volume, while in 2020 they represented 0.6% (CVM, 2020). Most investors were private individuals - 65.92% in 2018 and 74% in 2020. Although an increase on institutional investor participation can be perceived, it did not follow the rapid growth of FIIs in annually traded values. Thus, the changes in institutional investors' channel of investment, from ownnership to FIIs, tends to represent a considerable impact on its market. Collected data show that, in 2018, real estate assets on pension funds portfolio were more than R$30 billions, thus a supposed migration of the asset value of such pension funds into FII in the same year would result in a considerable increase of its portfolio. Although this kind of event can be confirmed only in 2030, deadlines imposed on pension funds ensure such a migration of real estate property assets to FIIs. Moreover, this trend is not related to large-scale urban development projects, but rather to regulatory changes and government strategies to foster the expansion of this market at the national level.

As the data results show, most of real estate assets in portfolio of pension funds and FIIs belong to commercial real estate category (see Figures 14, 15 and 16). This is the topic to be discussed next presenting parallels between our data and the existing literature.

4.2.1 COMMERCIAL REAL ESTATE

Large-scale urban development projects and real estate development, as seen in section 1.2, are interdisciplinary and extensively studied by the field of urban studies. As Aalbers (2019) emphasizes, beyond mainstream urban economics, approaches from the perspective of urban

political economy have been recurrent and often based on the works of Henri Lefebvre, Christian Topalov, Susan Fainstein, David Harvey, among others. For Aalbers (2019), these studies are to some extent based on the inherent financial characteristic of real estate itself as a product and object of finance-intensive use beyond its function as physical infrastructure through which capital flows. This line of research is grouped into two main themes of debate. One deals with the development of real estate and large-scale urban development projects, and the other with the financialization of commercial property itself. However, in the body of work on financialization in Brazil, these themes appear somewhat merged, not only among themselves, but also with the themes of the financialization of housing, governance, and real estate as a state strategy. However, in this section we seek to identify convergences between the trends of financialization processes presented by the international literature and what has been identified so far in Brazil.

As Aalbers (2019) highlights, and as previously seen in the literature review chapter, properties considered commercial real estate are increasingly developed to meet the needs of investors rather than their users. The literature on financialization reports that there has been a shift in ownership patterns. Aalbers (2919) states that commercial real estate is no longer directly owned by end users or property management companies, but increasingly by (international) real estate funds. These funds typically own assets concentrated in certain macro-regions, although these portfolios are expanding with globally located properties. The results of this thesis confirm this trend, although in Brazil these properties have not necessarily become part of the portfolio of international real estate funds, but national ones.

The works by Lizieri (2009), Savini and Aalbers (2016) and Wijburg and Aalbers (2017) address some nuances of this strategic portfolio expansion toward real estate markets around the globe. Aalbers (2019) also emphasizes that, in general, these funds focus their portfolio on office buildings, although some of them also focus on shopping and retail as well as leisure and hospitality. Moreover, financial logics have made it easier to read local properties (e.g., offices, logistics warehouses, hotels) as an asset to be traded by global investors. The analysis of the Brazilian case made in this thesis confirms this trend, although the leisure and hotel typologies are not as representative in the portfolios of funds, such as FIIs, or institutional investors, such as pension funds. The results presented in chapter 3 show that Brazilian funds, in the specific case of FIIs in the year 2018, also concentrated their investments in office buildings.

Surveyed data show that portfolio investments in this typology exceded R$11 billion in 2018. In the same year, investment in shopping centers was close to this value, around R$10 billion. It was followed by investments on financial, industrial, logistics properties, which were less than R$2billion each, and by other sectors (see Figure 15). It is also shown that both pension funds and REITs tipically explore their assets through rent revenue management (Figure 13 and 14). In

2018, the average of real estate assets destinated to rent revenue management represented 93.1% of total pension fund portfolios and 53.3% of total REITs portfolios.

As Aalbers (2019) emphasizes, funds are not new around the world. They exist in increasing numbers and manage larger and larger portfolios of large investors, including institutions such as pension funds which are among the largest investors in the world (Clark 2000). It is worth mentioning that pension funds and other institutional investors have owned real estate for decades (in some cases nationally and in others internationally). However, whereas before they used to own (and often manage) the real estate directly, they now typically invest in large funds specialized in real estate assets, such as REITs for example, which own and manage a diversified portfolio of globally located real estate assets (Lizieri 2009; Theurillat et al. 2010; Van Loon and Aalbers 2017). This characteristic could also be confirmed by this research. Through the data collected by this research, it was possible to analyze the portfolio of Brazilian pension funds in the period from 2006 to 2018. We could see that historically; these institutional investors manage their own real estate. In 2018, rental management represented an average total of 93.1% of the pension funds' source of extraction income. Considering the research undertaken in this work, the chart on Figure 13 shows that Brazilian pension funds presented very low or no real estate investment through REITs from 2006 to 2018. Figure 16 demonstrates that the largest investment through real estate funds during this period was made in 2016, representing less than R$120 millions in a total portfolio of more than R$30 billions. Basically, pension funds invested in REITs in 2008 and 2016, and in small amounts, when considering the size of its total portfolio.

Further evidence that Brazilian pension funds are on the verge of following international trends is also emphasized by the RCMN law, 4661/2018. This law prohibits pension funds from owning real estate directly and enacts that all investment in the portfolio real estate segment be made through investment vehicles such as real estate investment funds (FIIs, CRIs and LCIs). In other words, by 2030, the properties in pension funds' portfolios must migrate from a non-financialized to a financialized investment channel. This move, therefore, results in a greater distance between the pension fund and its portfolio assets. The built environment thus becomes to be seen as an asset class, like any other. They become mere numbers in quarterly reports delivered to pension fund managers, just as in other parts of the world. The points discussed here validate hypothesis 1 of this thesis – Recent regulatory changes which limit institutions, such as pension funds, when investing in real estate assets through REITs are a sign of increasing state-fostered financialization.

The literature in Brazil presents several points of agreement with those pointed out by works on international cases of financialization processes. However, not all aspects are similar, which puzzles some authors (Klink and Stroher 2017; Santoro and Rolnik 2017; Stroher 2018; Sanfelici 2020) and highlights the need for further analysis of financialization processes in the country.

Overall, the working group identified changes in real estate development in Brazil. As we will describe below, these changes were marked by the absorption of practices and mechanisms typical of the financial market in the process of producing the built environment. However, as we mentioned at the beginning of this chapter, these authors did not identify a strong direct participation of global finance capital in the Brazilian real estate development market.

4.2.1.1 CONTRACTORS & REAL ESTATE DEVELOPERS, AND THE ADOPTION OF PRACTICES TYPICAL OF THE FINANCIAL MARKET

From the standpoint of real estate development, there is still little to no research identifying the marketing of buildings directly by large international companies or global institutions in Brazil, contrary to the trends of international literature. However, there are several works identifying the adoption of practices, calculations, and mechanisms typical of the financial market by contractors and developers (Fix 2009, 2011; Rufino 2017; Santoro and Rolnik 2017; Pereira 2017; Rufino, Wehba and Magalhaes 2021; Shimbo and Sanfelici 2021); nevertheless, few address the absorption of market logics into the commercial real estate segment.

As mentioned earlier in this section, real estate development in Brazil has been driven by changes in the national financing mechanisms. In the mid-2000s, some large companies in the real estate development and development sector began to be listed on the stock exchange. As Fix (2011) and Pereira (2017) emphasize, until the mid-2000s, the segment was dominated by private equity, privately held companies with mostly family management. In 2005 some of these companies made their 'initial public offerings', or IPOs. As emphasized by several authors (Shimbo 2010; Rufino 2012, 2017; Pereira 2017; Shimbo and Sanfelici 2021), this was considered an emblematic period for the expansion of the real estate sector in the country, marked by rapid changes and the alteration in the organizational culture of these companies.

As Sanfelici (2020) explains, the IPO of these companies allowed them to finance their activities by issuing private stocks and bonds. Moreover, with the IPO, participation in the stock exchange required these companies to adopt accounting and governance practices more in line with international standards. The adoption of these practices focuses on making it easier for investors to monitor the companies' performance. According to the author, these new sources of capital also explain the increase in real estate production and launchings as of 2006. This market growth was further evidenced by the access to credit from the *Minha Casa Minha Vida* program in 2009, when the state made available budgetary resources to subsidize credit for middle- and low-income segments. This volume of credit further reinforced the growth trajectory of the real estate market in this period, especially the residential market. This fact boosted the growth of

companies specialized in the low-income segment, some of which had shares traded on the stock exchange (Fix 2011; Pereira 2017; Sanfelici 2020).

Rufino et al (2021) associate such growth of the real estate sector and the changes in the organizational culture of property development companies with their apetite to invest in large-scale urban development projects. These authors identify these companies' influence on real estate, infrastructures, and capital finance, arguing that these large real estate development companies are totally integrated into finance capital practices, and presenting the cases of UPO Faria Lima and Água Espraiada to discuss such integration. They pose that the additional building rights awarned through CEPACs attract large property development companies and enable the construction of large and luxurious buildings, claiming that this demand is driven by the typical characteristics of large-scale urban development projects such as concentrated investments on infrastructure. To these authors, the combination of infrastructure with additional area provided to property development companies generates higher incomes and, consequently, justifies their performance in the eyes of their shareholders.

This thesis argues that integration between real estate and capital practices can be also interpreted through rates and classifications, which are usually attributed by real estate market consultants. As Weber (2016) explains, to evaluate market behaviour, or 'property cycles' (Hoyt 1933/ 2000), and risk of investment, consultants use tools such as building classifications (ex. triple A, AA, BB, B, C), occupancy, or vacancy rates. These classifications are a way to communicate the physical and financial characteristics of a building to its potential investors in standard language, enabling comparisons with other assets. Overall, the context of the real estate-finance complex in Brazil is yet to be explored. The results of the data analysis conducted in this thesis present some of the characteristics of this context, especially about the commercial real estate segment. This work's data analysis managed to identify classification and vacancy rates attributed to 23.45% of cases that possessed additional building rights awarded by the CEPAC, which represents 95 buildings in total (Table 21). From this universe that received both a classification and vacancy rates, buildings were distributed in each UPO as follows: 54.7% at Água Espraiada, 37.9% at Faria Lima, 5.3% at Porto Maravilha, and 2.1% at Linha Verde. The highest classification a building can receive by consultants is known as 'triple A', or AAA, with data showing that 20% of buildings are triple As. Água Espraiada was the only one of all analysed UPOs that received all the three class ranges, A, B and C. Faria Lima received the first two class ranges, A and B. The buildings identified in Porto Maravilha, of which there are only three units, are classified from triple A to A. In Linha Verde, of the two identified buildings, one is A and the other B.

Another feature that provides information regarding asset performance and the cycles of real estate markets is the building vacancy rate. Although collected data only covers performance in 2020, an atypical year for national and global economy due to the pandemic caused by COVID-19, it still yielded interesting results (see Tables 22, 23, 24, and 25). Together with previous reports from real estate property assets consultancies, it could be verified that the property sector in the cities of São Paulo and Rio de Janeiro is still struggling to release their stock of additional square meters created. In other words, either the market is not absorbing this additional area, or there is no demand for the product marketed by real estate developers, foiling their expectations at the beginning of the project's construction. In contrast, the buildings within the São Paulo UPOs that both used CEPAC and possess classifications (88 units from a total universe of 95) provided the real estate market with a Gross Leasable Area (GLA) sum of 2,366,576.15m² until 2021. Of all considered buildings, 40% are vacant, especially at Água Espraiada where vacancy ratio is 42%, as opposed to Faria Lima's 19%.

It should be noted that buildings that used OODC in São Paulo UPOs, such as as Água Espraiada and Faria Lima, also received real estate market classifications. From these, the GLA of 140,410,43m² at Água Branca has a vacancy ratio of 53%, while the GLA of 387,748.03m² at Faria Lima has a vacancy ratio of 22%. These results indicate that the Faria Lima market absorption has been steady throughout the years, while Água Espraiada expresses the high expectation of real estate developers in relation to the market absorption of products inside this UPO. The high vacancy ratio in Água Branca can also be interpreted as a historical struggle of real estate market to absorb new products in the area, one of the reasons why there are no projects using CEPAC in this area. Porto Maravilha, in Rio de Janeiro, also shows the difficulty of the real estate market in absorbing these new products. Of a GLA of 305,115.55m², the vacancy ratio is 45%. GLA and vacancy ratio in Curitiba also emphasize the difficulties of the Linha Verde project – out of 13156,12m², the vacancy ratio is 65%.

4.2.1.2 THE REITS IN BRAZIL AND REAL ESTATE DEVELOPMENT

Another aspect that influenced real estate development in the country, and in this case impacted the commercial real estate market, was the creation of real estate investment funds (*Fundos de Investimentos Imobiliários* or FIIs). As detailed in the previous chapter, FIIs are the Brazilian version of REITs. As Sanfelici and Halbert (2018) and Sanfelici (2020) explain, this investment vehicle pools resources from dispersed investors to invest them in real estate intended for income or for the development of new projects. The instrument was introduced by Law 8,668 (Brazil, 1993) as a tool to support residential, commercial, and infrastructure real estate financing in the country. According to Sanfelici and Halbert (2018), the promotion of this instrument

involved a series of regulations, promulgated by the Securities and Exchange Commission (CVM), which controlled aspects such as the attributions of agents, conflicts of interest, and income distribution requirements. The formation of these regulations involved debates with civil society through public hearings that included the participation of key financial market players, interested in the growth of the real estate funds market. Sanfelici (2020) points out that another important aspect introduced by these funds was the tax exemption for individual investors. This aspect contributed to boost the fund market as of 2009. The expansion of this market also promoted changes in the commercial real estate segment. Among them, Sanfelici (2020) highlights the increased participation of financial intermediaries, such as asset management companies, and institutional investors, such as pension funds. This represented changes in a market that historically was dominated by individual investors, that is, by individuals who acquired a fraction of a property with the aim of extracting from this property a recurring income. Sanfelici (2020) further emphasizes that FIIs introduced a set of governance techniques and models, influenced by recurring practices in the financial world. These practices have impacted the way a portfolio is managed. The 2018 regulatory changes, which alter the way in which pension funds own real estate assets in their portfolios, highlight this assertion by Sanfelici (2020).

On this aspect, the present thesis argues that the instrument not only carries real estate portfolio management practices typical of the financial market, but the FII itself has become the only investment channel available to pension funds. By 2030, pension funds in Brazil will only own real estate assets through FIIs, that is, their relationship with the built environment will be exclusively through a financially driven investment channel. This fact in itself already emphasizes the Brazilian context of growing financialization, which in this case has been institutionalized by the state.

The analysis of the pension funds' portfolio in the period between 2006 and 2018 presented in the previous chapter allows us to confirm some of these statements by Sanfelici (2020). Looking at Figure 13, it is indeed noticeable that there was an expansion of the pension funds' portfolio from 2009 onwards and that the real estate assets in the portfolio were mostly managed with a focus on income extraction. However, pension funds until 2018 invested in these properties via a direct investment and ownership channel (see Figure 16). Investment in real estate assets via FIIs during this period proved to be insignificant and, in some years, non-existent (Figure 13 and 16). This fact also emphasizes the impact of the 2018 legislation on the expansion of the financialization of the built environment in the Brazilian territory. This trend is illustrated in Figure 17 and 18, which show the location of assets in pension funds' portfolios, which, by 2030 tend to be sold or transferred to the FIIs portfolio.

Of the works consulted in this literature review that address the issue of real estate funds in Brazil (Rufino 2017; Santoro and Rolnik 2017; Pereira 2017; Sanfelici 2017, 2020), the one by Sanfelici and Halbert (2018) is the only one that makes a direct and exclusive analysis of REITs, an instrument that the authors define as a financializing policy instrument. In this work, Sanfelici and Halbert (2018) emphasize the participation of financial market actors as urban policymakers. Another interesting point identified by the authors is the segment distribution of the FIIs portfolio and its geographical distribution in the country. Through Sanfelici and Halbert's (2018) analysis, it can be noted that the real estate in FIIs' portfolios is concentrated in the cities of São Paulo and Rio de Janeiro. The results of the data analysis demonstrated in Chapter 3 confirm this territorial distribution and concentration of real estate assets in FIIs' portfolios (see Figure 17). Regarding the representativeness of the real estate fund market in the country as a source of financing for urban development, Pereira (2017) highlights an important point. As the author shows, in 2014, the net worth of FIIs was still quite small compared to other funding sources. The author argues that the creation of the Real Estate and Financial System in Brazil had little impact on the dynamics of (housing) sector financing in the country. However, the author warns about the continuous growth of this segment as a source of financing for real estate development in Brazil. The results of this thesis confirm this context of continuous growth highlighted by Pereira (2017).

Still on the topic of the real estate fund market in Brazil, by studying the city of São Paulo Santoro and Rolnik (2017) and Rufino (2017) also make relevant findings on the development of FIIs and their impacts on the city's real estate market. To a certain extent, these contributions also relate to large-scale urban development projects, and therefore we will explain a bit about these works below. But although Royer (2016), Pereira (2017), Sanfelici (2017, 2020), and Sanfelici and Halbert (2018) have presented important findings on the evolution of investment vehicles in Brazil, Sanfelici (2020) argues that there is still much to be explored in this regard. The results of this thesis collaborate with the effort to fill this knowledge gap and open space for new perspectives of analysis and reflections on financialization in peripheral economies.

4.2.1.3 THE ROLE OF INSTITUTIONAL INVESTORS AND INVESTMENT VEHICLES IN LARGE-SCALE URBAN DEVELOPMENT PROJECTS

Another point of agreement between the works on the Brazilian context and the trends identified by international literature is the role of institutional investors, and investment vehicles as owners of buildings constructed within the perimeter of large-scale urban development projects (Fix 2009, 2011; Stroher 2017, 2018, Rufino 2017; Santoro and Rolnik 2017). This body of work suggests that the actions of this profile of intermediaries may represent opening avenues for global investor participation in large-scale urban development projects. However, based on the

data presented in the previous chapter, this work argues that, in the Brazilian case, the performance of these actors in these projects does not seem to imply a direct participation of global capital in these projects. At least, so far, it has not been possible to identify such a direct connection. However, as our FII real estate property location survey shows, this does not mean that there is a lack of built environment financialization, both inside and outside the perimeter of urban development projects in Brazil. The mapping of the properties of FII portfolios in 2018, in the cities of São Paulo and Rio de Janeiro, illustrates this situation (Figures 59, 61, 63 and 65).

In order to investigate these connections between global investment and possible effects on Brazilian municipalities, Santoro and Rolnik (2017) sought to unveil a possible role of the global financial market in the Brazilian territory, through the commercial real estate market, by means of real estate investment funds (FIIs). Rufino (2017), on the other hand, discusses the history of the creation of financial instruments, such as real estate investment funds. She also addresses the issue of the expansion of parastatal financing to the construction sector, which, as previously mentioned, drove the IPO of some large contractors and developers in the country. Since these companies are listed on the stock exchange and reflect the organizational culture typical of the capital market, Rufino (2017) classifies them as financialized. Considering the case of São Paulo, the works by Santoro to Rolnik (2017) and Rufino (2017) draw attention to two issues: the presence of real estate owned by FIIs in the growth axes of the real estate market, delimited by the Consortiated Urban Operations Faria Lima and Água Espraiada, and the role of financial instruments as a possible gateway for international financial capital investors. Although Rufino (2017) and Santoro and Rolnik (2017) highlight the participation of capital market actors, they could not prove the existence of international capital. They attribute this fact to the difficulty of access to the companies' equity information, especially in the case of those that are opened in the Special Purpose Company model. Used with some frequency by developers and real estate developers, this model is intended for companies with specific and restricted activities, sometimes with a fixed term of existence. Santoro and Rolnik (2017) argue that this type of corporate structure makes it difficult to research and survey the properties in real estate funds' portfolios. According to the authors, these funds often invest in this type of company instead of investing directly in the physical enterprise.

This work agrees that the opening of Special Purpose Company for the management of new enterprises is a recurrent practice of development and incorporation of companies. However, this fact is not necessarily the impeding factor in the identification process of properties in the portfolio of real estate funds such as FIIs - not least because, as observed during the data collection phase and extensive individual report analysis of all FIIs listed by the stock exchange in 2018, only a few investments via Special Purpose Companies were found. This work argues

that the lack of clarity and low quality of the information available regarding the assets in the portfolio of these funds are actually an expression of the lack of experience of a still immature national market. During the survey of FII data conducted from 2016 to 2020, a variation in the quality of the reports issued by the companies and published on the official website of the stock exchange[55] was also noticed.

It was observed that, in older reports, the information and content used to be more incomplete. However, the market itself is seeking ways to systematize, organize, and make available the information provided by FIIs to increase confidence and attract more investors to the sector. During this research, it was also noted that, from 2018 onwards, there has been a clear proliferation of search engines, which offer information about the assets in FIIs portfolios. These tools offer, in a systematized way, the information present in the reports made available at B3. These engines also redirect the user to the reports at the stock exchange's official website[56]. Some of these sites charge a subscription fee, while others allow free consultation. This fact reinforces the argument that information is available, but disorganized and dispersed among reports, evidencing a lack of more efficient data systematization in this sector.

The work of Rufino et al (2021), although not centered on the financialization debate, continues this line of research on the recent transformations of the real estate and infrastructure industry in Brazil. The study is based on the case of the Água Espraiada UPO, in São Paulo. The authors identify the profile of developments made within this large-scale urban development project by publicly traded contractors and developers, also mentioned by Rufino (2017) and Santoro and Rolnik (2017). Rufino et al (2021) argue that the intensification of these investments in a concentrated manner, within the area of this type of project, enhances the capture of real estate income and guarantees financial flows. The authors highlight that such flows can be captured by these companies in several dimensions of space production (infrastructure and building construction and development), while ensuring gains to the financial investors of these

[55] Also known as B3 - a reference to the words *Brasil, Bolsa, Balcão* - Brazil's official stock exchange is headquartered in the city of São Paulo. The information and annual and quarterly reports of each FII registered in the Brazilian stock exchange can be consulted by any citizen at http://www.b3.com.br/pt_br/. Fund managers register, in these reports, the list of current assets in their portfolio. However, this information is not always complete or standardized. In the consultations made during this research, it was possible to notice that the re-issuing of reports is a common practice on the part of the FIIs. These documents frequently correct and/or complete the information contained in previous reports.

[56] During the research, beyond the content available on the B3 website and the websites of the funds themselves, several online search engines were consulted, among them Clube do FII (https://www.clubefii.com.br), Fiis.com.br (https://fiis.com.br), and FundsExplorer (https://www.fundsexplorer.com.br).

developments. In this paper, Rufino et al (2021, 174, free translation) makes the following comment:

> *"The imbrication between infrastructure and real estate production gives greater prominence to real estate rents, which become a central part of the process of financialization of the real estate sector. In our analyses, we highlight that the expansion of the flow of these rents, through real estate production by contractors, can explain the enormous interest of these companies in participating in urban interventions and large projects."*

In this statement, the authors imply that the bundling of real estate production into urban development projects results in greater rent extraction, which would lead to a process of financialization of the built environment. Our research agrees with some aspects of this statement. Based on the analysis conducted, it can be observed that there is indeed a relationship between the financialized built environment and the supply of infrastructure, especially with regard to roads and transportation axes. However, in cities, spaces with these characteristics are not exclusive to areas inserted in large-scale urban development projects, nor is the interest of real estate development companies restricted to these areas. Differently from what Rufino et al (2021) suggest, it is believed that the search of real estate developers for profit maximization, risk mitigation, and performance justification to their investors is a characteristic of the organizational and strategic culture of these companies, or rather, it is a typical characteristic of large corporations in contemporary capitalist economies. Thus, the position of the latter authors seems a rather simplistic way of justifying the dynamics of real estate and the processes of financialization of the built environment.

Nevertheless, the works by Rufino (2017), Santoro and Rolnik (2017), and Rufino et al (2021) evidence that the institutions responsible to produce space have increasingly internalized logics, calculation practices, and mechanisms typical of the global financial market. The works by Fix (2003, 2009), Klink and Stroher (2017), Stroher (2017a, b, 2018), Mosciaro et al (2018), Mosciaro and Pereira (2019), and Stroher and Dias (2019), on the other hand, are more directed towards the analysis of large-scale urban development projects themselves. This group of papers highlight the use of CEPAC in the financing structure of these projects and as a key element in the discussion of the financialization of urban governance, as presented below.

4.2.2 THE FINANCIALIZATION OF URBAN GOVERNANCE

FINANCIALIZATION AND NEOLIBERALIZATION

According to Aalbers (2019) one of the key points discussed by this line of analysis is the contestation of the use of financial instruments in entrepreneurial urbanism, urban entrepreneurship, neoliberal urbanism, or urban neoliberalism. In chapter1, the concepts globalization, neoliberalization, and financialization were presented. We emphasized that the literature presents a difficulty in both defining these concepts precisely and establishing the relationships between them. Aalbers (2019) argues that this difficulty in conceptualizing the relationships between financialization and neoliberalization is also reflected in the urban debate in which the topic of financialization of governance is embedded. For example, Fainstein (2016) suggests that financialization is intrinsic to neoliberalization and Novy and Fainstein (2020) add that the institutional form of the speculative development of these processes can be represented by public-private partnerships. Peck and Whiteside (2016) suggest that entrepreneurial strategies are increasingly put in place through a combination of financial means and actors in this market and its intermediaries. Van Loon et al (2018), on the other hand, argues that the financialization of urban planning is not about a new era of entrepreneurial urbanism, but rather the means through which entrepreneurial urbanism has been enabled.

Moreover, in this line of research, the position of authors is divided when discussing the relationship between urban governance and the financial market. On the one hand, one group of authors argues that local governments are being captured by the forces imposed by the financial sector (Hendrikse and Sidaway 2014; Engelen et al. 2014; Peck and Whiteside 2016; Savini and Aalbers 2016). Another group, in the meanwhile, argues that municipalities have the potential to invite and use the financial sector as an ally to provide answers to the challenges of budget constraint and be able to fulfill the municipal agenda (Weber 2010; Theurillat and Crevoisier 2013, 2014; Gonzalez and Oosterlynck 2014; Ashton et al. 2016; Van Loon et al. 2018). Aalbers (2019), meanwhile, ponders that it is possible that both processes occur synchronously, resulting in differentiated opportunities and threats for local governments. However, the author suggests that because of these characteristics, municipalities are unable to channel funding to meet their objectives.

Based on the existing literature on UPOs and the data collection and analysis conducted throughout this research, it is argued that the use of CEPAC in Brazil possesses both characteristics. On the one hand, São Paulo UPOs, especially Faria Lima and Água Espraiada projects, demonstrate an effort by the municipality to implement a financially driven instrument

as a means to get around budget constraints and fulfill its agenda. Although the sale of CEPACs in these two projects continues until today, the municipality had raised R$29 billion with the sale of the bonds from the beginning of the projects until 2019. To some extent, the amount captured through CEPACs was significant and allowed the Faria Lima and Água Espraiada UPOs to continue. On the other hand, it is argued that the case of Porto Maravilha and its sophisticated financing structure, which in addition to CEPACs included the use of FIIs, placed the project and the municipality in a position of vulnerability. Since 2016, Caixa Economica Federal, the managing bank of the Porto Maravilha FII, has declared the illiquidity of the fund due to low sales of CEPACs. The structure of buying and selling CEPACs in the case of Rio was designed to mitigate investor risk. The successive declarations of illiquidity of the fund have allowed the FGTS to stop the flow of payment for the CEPACs, thus compromising the continuity of the project. This makes it *de facto* impossible for the municipality to channel funding to meet its objectives, as Aalbers (2019) emphasizes.

Amidst existing literature on Brazil, the works that better fit the profile of a critical approach that intersects the issues of neoliberalism and financialization are those by Fix (2009), Mosciaro et al (2018) and Mosciaro and Pereira (2019). Taking the Brazilian cases of UPOs and CEPACs as the objects of analysis, these works direct criticism towards large-scale urban development projects and their financing instruments.

In a broader approach, Fix (2009) analyzes real estate production in Brazil, and especially in the city of São Paulo. The author discusses the role of the historical course of the Brazilian market economy and the changes in the operational culture of the state in the development of the real estate sector. Fix (2009) relates this market segment to the reflection of economic reforms and privatization, the developmentalist state stance, and financial liberalization. The author suggests that in this context of real estate development in the country, UPOs are an attempt to transform the city into a reflection, or mirage, of a 'global city' and enable speculation and rent extraction through the built environment. Fix (2009) warns that there is, however, a certain failure in the creation of this image. A fact that the author attributes to the peripheral position of the Brazilian economy in relation to the economies at the center of the financial system command. Mirroring the image of the ‘global city’ or not, this work’s data analysis could identify 88 buildings inside the UPO Água Espraiada and Faria Lima in 2021 classified under financial market logics. It was also determined that 52 buildings in REIT portfolios are located inside these two UPOs. In other words, these results express that, although not present in every building inside these UPOs, rent extraction is indeed happening throughout the built environment, following financial market logics. Yet, it is not an exclusive feature of UPO territories nor of CEPAC use. The maps locating

the real estate assets in REIT portfolios (see Figure 14 and 15) show that they are spread throughout all the three municipalities analysed.

Mosciaro et al (2018) and Mosciaro and Pereira (2019), on the other hand, understand UPOs as the creation of spaces of exception, of reinforcement to the development of socio-spatial inequality, and as an object of speculative dynamics. The authors emphasize the facet of the CEPAC as a financial product traded on the stock exchange. They argue that both UPOs and CEPACs are facilitating and sponsoring instruments of financialized speculation of the urban built environment. This thesis argues that, indeed, CEPACs can facilitate the financialization of the urban built environment. However, this is not due to CEPACs' financialized feature, but due to the additional building space it awards to new real estate commercial buildings. This argument is based on the information found on OODC inside the Água Branca and Faria Lima UPOs. Collected data indicate that some real estate commercial buildings with additional area awarded by the OODC also present financial market driven features. For instance, as mentioned earlier in this section, some of these buildings received market classifications, and 30 buildings inside these two UPOs belong to REIT portfolios. This invalidates hypothesis 3 of this thesis – "Large-scale urban development projects lead to the financialization of the urban environment."– since CEPAC, as an instrument, is not the element that induces the financialization of the built environment, but rather creates the possibility of additional built area in areas that are predicted to have enough demand to absorb it.

Grounded in the theoretical approach of entrepreneurial urbanism, Mosciaro and Pereira (2019) question the social benefits generated by this type of project. The authors stress that the justifications of these projects, while guided by promoting positive socio-economic impacts, are merely discursive. They argue that, in fact, urban development projects put social demands aside to favor market-related interests. In analyzing the case of the Porto Maravilha UPO, Mosciaro and Pereira (2019) draw attention to two topics: the role assumed by the state, national level, in financing the project through the full sale of CEPACs by the FGTS, and to the role of the state in allowing the use of public lands as a kind of collateral for this investor. Another highlight refers to the use of FIIs in the composition of the financial structure of the Porto Maravilha UPO, allowing the circulation of capital between the municipal and national spheres. Mosciaro and Pereira (2019) argue that, in this way, the state has become an active agent of the valuation and speculation of territory and real estate assets. The authors attribute this to the penetration of neoliberal policies in Brazil. They claim that by establishing a specific space for intervention, these projects are tools for the infiltration of financialized business dynamics into the built environment, serving as a support for elite groups while reiterating and exacerbating pre-existing social inequalities. This participation of the state in the process of financialization leads us to a

next point discussed by this line of debates at an intersection between political science and geography: the financialization of the local State.

Before moving to the next section, it is worth highlighting a few points. This thesis argues that all UPOs represent the interaction between financial instrument (CEPAC) and planning instrument (CEPAC and UPO). As mentioned above, the results concerning São Paulo UPOs demonstrate that the use of CEPACs can facilitate the financialization of the built environment, because the instrument makes it feasible to build additional area in certain regions of the city, especially in those where there is a market appetite to absorb more built-up area. As the cases of Curitiba and Água Branca UPOs demonstrate, the use of CEPAC or of the UPO itself are not, in themselves, the driving force behind the financialization of the built environment, nor do they have the capacity to create market demand. The vacancy rate of commercial real estate developments found in these two projects corroborates the low demand for this typology so far - at the beginning of 2021 vacancy rates in buildings that used CEPAC were 65% at Linha Verde and 42% at Água Branca; in the latter, older buildings that used OODC had a 53% vacancy rate. All UPOs except Porto Maravilha, only had CEPAC in their financing structure. And although the issue of financing was very important during their composition, CEPAC was still thought of as a regulatory instrument for land use. This does not occur with the same force in the Porto Maravilha UPO. Some more observations are necessary to understand and interpret the data found, not least because these issues concern hypothesis 4 of this thesis: "Large-scale urban development projects place municipalities in a position of subservience to financial power of capital markets."

The Porto Maravilha project integrated yet another financial instrument into its financing structure, more specifically the FII Região do Porto and the FII Porto Maravilha. On the part of the municipality, the FII Região do Porto was integrated with the goal of achieving greater tax efficiency. Even though this is a fund, it has its roots linked to the municipality and institutions connected to it, such as CDURP - the mixed economy company responsible for the urban project management and service providers. On the FGTS side, the FII Porto Maravilha was created to manage the assets and the financial flows involved in the negotiation processes of CEPACs. This FII is managed by Caixa Economica Federal, which gives the fund an exclusively financial approach, and has no ties to the city of Rio de Janeiro. Besides the tax exemptions that involve any FII, the assets are interpreted as financial - such as the acquired CEPACs, - or quasi-financial, - as in the case of the land received as collateral during the negotiation with the municipality. It is precisely based on this aspect that this thesis argues that CEPACs in Porto Maravilha have indeed assumed their role as a financial security. This means that even if they are not converted into a built environment, they can wait in paper form for a more appropriate economic moment to maximize, or recover, their value. In this way, the management of these securities by the fund, as

far as their sale is concerned, is conducted from the point of view of maximizing profits and reducing risks, with a focus on justifying returns to the FII shareholders.

Regarding the development of the Porto Maravilha project, the bets made by its creators, as public and private actors, and by the institutional investor predicted the valuation of a territory with apparently promising characteristics: an area with large vacant lots, on the sea front, and bordering the central area of the city where large financial companies are concentrated. These bets were made in a context of national economic euphoria. Another contextual characteristic, motivated by the coming international events, was the alignment of interests of the various governmental strata, at national, subnational, and municipal level, and the institutional arrangements between a few large private companies historically linked to the government in development projects. The new development that these actors envisioned for the Porto Maravilha area, from 2009 to 2013, was not out of context with the reality of the local real estate market. As shown in maps on Figures 64 and 65, the region around the project has historically possessed several assets pertaining to pension fund portfolios with revenues through rent, which denotes a certain attractiveness for real estate developments in that area.

However, the Rio de Janeiro market is going through a prolonged crisis, emphasized by the oil and gas crisis in 2016 that caused the return of properties and was reflected in the increase of the vacancy rate in high-end commercial real estate buildings. According to Manda (2020), the percentage of new properties not occupied in Rio de Janeiro went from 2.03% in 2009 to 18.8% in 2016. In the case of high-end or Class A corporate spaces, the vacancy rate in 2016 closed at 38.33% in Rio. Table 24, in chapter 3, points out that by the end of 2020, the buildings of Porto Maravilha (all of them class A) had a vacancy rate of 45%. It should be kept in mind that 2020 is an atypical year in which the economic crises were aggravated by the COVID-19 pandemic and resulted in rental contract terminations. As such, an increase in the vacancy rate is not surprising. Nevertheless, the fact remains that, at this point in time and given all the factors mentioned above, the development of more commercial real estate products within or outside the Porto Maravilha perimeter seems unlikely. The same can be expected regarding the commercialization of CEPACs by the FGTS. This points to a tendency for the FII Porto Maravilha to continue to declare illiquidity, implying that payments of the remaining purchase price of CEPACs will continue to be interrupted. This is in line with a comment made by Aalbers about the contradictory role of the state in the financialization of urban policies, arguing that the state's abilities to deal with financialization may be increasingly limited (Aalbers 2019, 13):

> *"In many of these cases, we also see how urban policy does not only become financialized through the use of financial instrument and rationales but is also moved away from urban planning and housing*

departments and into either finance departments or into separate units outside of 'normal' democratic control (…)."

The case of Porto Maravilha illustrates exactly this fragility, where the focus on the financial structure instead of the urban policy in question placed the municipality itself in a situation of subservience of capital markets representatives, as mentioned in hypothesis 4. However, not all urban development projects, such as the UPOs in São Paulo and Curitiba, hold municipalities hostage to financial power of capital markets. The conclusion of this work is that what leads the municipality to this situation of subservience is the distancing of the project from its purpose as an instrument of urban policy. This purpose could be a part of the financial instrument itself, either through the principle of land value capture, finding ways to return it to the community, or in its ability to represent an alternative for the municipality to deal with budget constraints; but in the case of Porto Maravilha, the financial structure was conceived following financial logic, instead of urban logic, and focused instead on providing guarantees to the investor, risk mitigation opportunities, and emphasizing the attractiveness of the investment. The fact that investor in question is linked to state management at the national level complicates matter, something which highlights the contradictory role of the state in the financialization of urban policies, as mentioned by Aalbers (2019).

FINANCIALIZATION OF THE LOCAL ESTATE

According to Aalbers (2019), while issuing debt and obtaining bank loans has always been a reality for municipalities, pressure to turn to these financing mechanisms has been increasing. Municipalities are herded in this direction by a variety of sources, financial market actors, local professionals, government associations, state bureaucracies, and consultancies. As Hendrikse (2015) and Möller (2016) show, the intersection between the financial market and municipalities takes the form of policy experimentation to respond to a reduction in funding allocation or the deployment of certain public services. There are several works that explore these changes in the organizational culture of municipalities as a reflection of financialization (Weber 2010; Lagna 2015; Peck and Whiteside 2016; Pacewitz 2016).

While financialization is reflected in these changes, it also entails a move towards more sophisticated techniques, such as derivative instruments for fee and risk management (Hendrikse and Sidaway, 2013), or the reconfiguration of municipal governance into public-private partnerships with a focus on capitalizing future revenue streams from public services and utilities (Ashton et al 2016; Whitfield 2016). Aalbers (2019) suggests that urban policy has become a financial instrument, or at least some of them are transformed into financial instruments. In addition to REITs, mentioned in the previous section, the author highlights that there is a wide

range of new financial instruments implemented, which he presents a long list of instruments used in various places around the world and their respective academic studies. These are instruments such as Tax Increment Financing (in the United States, Weber 2010; Pacewicz 2013; Fisher 2015; Kirkpatrick 2016; in the UK, Baker et al 2016), Social Impact Bonds (in the United States, Lake 2015; in the UK, Dowling 2016), Opportunity Bonds (in the United States, Gotham 2016), Transferable Development Right (in Taiwan, Yang and Chang 2018), Certificates of Additional Construction Potential (in Brazil, Fix 2011; Mosciaro et al 2019; Klink and Stroher 2017; Stroher 2017, 2018), among others.

As Aalbers (2019) emphasizes, these various financial instruments are often used to enable investments over a short term. To do so, they rely on advancing capital flows to municipalities that would come from future fee payments or other possible revenue sources. These instruments provoke different reactions from scholars. According to Aalbers (2019), while on the one hand economists and public policy academics defend this type of instrument, on the other, urban planners and geographers are more critical of the impacts that these financial instruments have on cities. This critical line argues that in many cases, because of the nature of these financial instruments they benefit the actors providing financial outcomes rather than local communities.

As noted above, in Brazil, CEPACs are instruments that adhere to this line of inquiry. CEPACs and UPOs appear in the analyses mentioned in the previous section focusing on debates from the perspective of neoliberalism and entrepreneurial urbanism (Fix 2011; Mosciaro et al 2019). This perspective is also present to some extent in works more dedicated to analyzing the instrument (CEPAC) and the policy itself (UPO) (Klink and Stroher 2017; Stroher 2018; Stroher and Dias 2019). However, these works delve into operational issues of these policy instruments, and the changes in organizational culture and institutional arrangements surrounding them.

As mentioned earlier in this thesis, international literature highlights a trend towards the financialization of governance and municipalities and an instrumental approach to urban planning. Attentive to this trend, Klink and Stroher (2017) and Stroher (2018) seek to identify, through the analysis of the case of UPOs using CEPACs in Brazil, the possible points of convergence with this literature. Klink and Stroher (2017) and Stroher (2018) analyze the Brazilian case with a focus on the trends identified by Savini and Aalbers (2015). The latter, in turn, emphasize that finance is increasingly penetrating not only the real estate segment, but also land planning and land development. Furthermore, Savini and Aalbers (2015) stress that contemporary urban development is undergoing changes that are characterized by investment reallocation strategies, the concentration of investments in a single area, and an instrumental approach to planning. According to Savini and Aalbers (2015, 13), "the financialization of land, in which land is treated as a financial asset, results in the de-contextualization of urban planning

from local conditions and needs." Savini and Aalbers (2015) argue that under land financialization, capital flows not only by and through land as Harvey (1982) claims, but also that land is increasingly used as financial collateral. That is, land is no longer just seen as a possibility of future income flows but is also mobilized to leverage credit to produce profitable investments elsewhere.

CEPACs are securities, traded on the stock exchange, that carry within them the right to additional construction, i.e., additional land. Klink and Stroher (2017) and Stroher (2018) emphasize the instrument's characteristic as a means by which land is traded as a financial asset and an object of credit leverage. Thus, the authors seek to identify the possible decontextualization effects of planning as Savini and Aalbers (2015) suggest. Moreover, Klink and Stroher (2017) and Stroher (2018) seek to identify the intertwining effects of financial and non-financial actors caused by financialization suggested by several works in the international literature (Pacewicz 2013; Guironnet and Halbert 2014, 2015; Kaika and Rugierro 2016). However, the results of the analyses by Klink and Stroher (2017) and Stroher (2018) reveal a context distinct from that which is predicted by international trends. Klink and Stroher (2017) argue that there is an absence of a consolidated and deep financial capital market in Brazil. In contrast, even assuming that this market is incipient, in the authors' view large-scale urban development projects represent a potential space for urban financialization to take place.

The works by Klink and Stroher (2017) and Stroher (2018) highlight that, contrary to international literature that holds municipalities hostage to pressures from financial market actors, urban planners in Brazil have been active in the effort to build the market for bonds such as the CEPAC. However, capital investors have not embraced the purchase of CEPAC as an investment, and so far, the purchase of the bonds is restricted to the contractors and developers who will use the additional construction potential. In other words, the bond itself has not become the focus of speculation by investors other than the end consumer of the additional construction right, much less the capital market. Nor is the instrument fostered by the relationship between municipalities and capital investors. However, CEPAC has brought a number of new actors (banks, pension funds, financial intermediaries, specialized consultancies) and new procedures to financially driven urban planning (auctions, approvals with the CVM, specific market studies). According to Stroher (2018), the role of these new actors and their impacts on urban planning and its outcomes deserve more attention. Another point highlighted by the author is the role of REITs as an effective means of connecting the production of the urban built environment within UPOs and capital market investors. In analyzing the Faria Lima and Água Espraiada UPOs, Stroher (2018) stresses that the presence of these actors has brought imposing implications on the profile of the buildings that have been built within the perimeter of the UPOs. However, unlike the profile

of international investors typical of the international market of REITs, in the Brazilian case, most investors are individuals residing in São Paulo. Another point emphasized by Stroher (2017) is the role of pension and welfare funds (public and private) as an important agent in the financial support of mega-developments within the perimeter of UPOs.

It is interesting to note that, although pension funds led to territory changes just as these authors claim, this work's data analysis shows, in Figures 17 and 18, that these institutional investors were acting all over the Brazilian territory, including in the cities where UPOs are located - especially in São Paulo and Rio de Janeiro, whose occurrences are located throughout the municipal extension as well as inside UPO perimeter or its vicinities. However, not every building with additional area awarded by CEPAC belongs to pension fund or REIT portfolios. In the case of Curitiba, of all the buildings that used CEPAC, none was identified as part of these portfolios. This disproves the hypothesis 3 of this thesis – "Large-scale urban development projects lead to the financialization of the urban environment." as the use of CEPAC does not necessarily result in the financialization of the urban built environment.

Another feature highlighted by Klink and Stroher (2017) and Stroher (2018) is the CEPAC design and pricing process. According to the authors, this process occurs within an interwoven network between both public actors, such as municipal and sometimes national government representatives, and private actors, such as market consultants, contractors, and developers. Klink and Stroher (2017) and Stroher (2018) consider that this pricing process happens in a contradictory way. It is a process in which expectations are set regarding the financial and physical design of operations in terms of local government revenues, the quantity and profile of public goods, and private sector rates of return. According to Klink and Stroher (2017) and Stroher (2018) there is an effort at the national level to promote the real estate backed financial market. As can be seen throughout this section, the role of the state in promoting the financial market backed by the real estate sector is a feature quite evident by several authors (Fix 2003, 2009; Royer 2016; Rufino 2017; Sanfelici and Halbert 2018; Mosciaro and Pereira 2019) who discuss financialization in Brazil. Moreover, in this thesis it was possible to gauge the latter claim both in the interpretation of these other authors and through the data analysis presented in chapter 3. In fact, there is an effort at the national level to promote the financial market backed by the real estate sector. Through the analysis of the cases of FGTS and FIIs in Brazil, the works of Royer (2016) and Sanfelici and Halbert (2018) also emphasize the national state's efforts in this regard.

Researched data complements these contributions, by showing the expansion trends of the real estate-finance complex in Brazil. This expansion is emphasized by the transfer of real estate asset ownership from pension funds to FIIs. As shows in maps in Figures 17 and 18, pension funds, as

well as FIIs, hold in their portfolio real estate assets with various land use types all over the Brazilian territory. As mentioned earlier, the regulatory changes of 2018 determined that real estate assets must migrate to FIIs until 2030. This is a significant change – had it happened right away in 2018, it would represent an increase of more than R$30 billions on FIIs portfolio, almost duplicating the FIIs portfolio in value.

In general, Klink and Stroher (2017) conclude that the capital market in Brazil has not embraced CEPACs as an investment product. According to Klink and Stroher (2017) and Stroher (2018), CEPACs have basically been acquired by local real estate developers. However, the authors do not rule this out when there is an eventual development of this market in the country. Klink and Stroher (2017) highlight a number of operational issues of CEPACs as possible limiters to the development of a financialization process, such as: the poor interfaces between real estate, land and finance, the illiquidity of secondary markets, the uncertainties in the frequency of issuing CEPACs, and their high transaction costs. Klink and Stroher (2017) and Stroher (2018) suggest that urban financialization in Brazil is a process truncated by its contextual characteristics.

This thesis argues that Brazil is in a process of increasing financialization and that its characteristics are a reflection of the country's economic model, with the promotion of financialization processes in Brazil as a state strategy shaped mainly by the characteristics of this economic model. But before addressing this question, it is necessary to delve into what international literature says about the financialization of property as a state strategy, namely how it relates the process of financialization to urban policy instruments, investment vehicles and the role of the state.

4.2.2.1 FINANCIALIZATION OF REAL ESTATE PROPERTY AS A STATE STRATEGY

When discussing the financialization of real estate, Aalbers (2019) highlights that the roles assumed by the state are often contradictory. According to the author, if on the one hand the governmental capabilities to deal with financialization seem to be limited, on the other hand the state is far from absent in the processes of creating new patterns of urban financialization. Regarding the limitations of the state, Aalbers (2019) emphasizes that several authors (Erie et al 2011; Lake 2015; Mosciaro et al 2019) note the following: both urban policies have become financialized through the increasing use of financial instruments and their logics, and these policies have been removed from the tutelage of urban planning departments to financial departments or even to other management units linked to the private sector and separated from democratic control.

Also, in relation to the role of the state in promoting new patterns of urban financialization, Aalbers (2017 and 2019) highlights that, in some circumstances, government agents take an active position in this regard. Contradictorily, other state actors may be seeking to limit the pressures caused by financialization processes. For Aalbers (2019) and other authors (Hendrikse 2015; Ashton et al 2016) the government has been transformed through the financial sector, but at the same time makes use of this sector to extend state power (Gotham 2016). As Aalbers (2019, 13) mentions, "states are bringing the architecture of financial markets inside the state (Bryant and Spies-Butcher, 2018) to a degree that Waldron (2018) argues that the state and financial sector are interdependent." It should be noted that by mentioning the state, these authors are referring to its various stages of governance, whether national or municipal. Although these are multiscalar phenomena, these issues can be subdivided into national and municipal scales.

The following subsections aim at complementing the previous sections of this chapter (discussion of results), however the data previously presented won't be included here to avoid repetition. Our intention is to discuss some parallels that can be made between the existent literature and the findings of this research.

NATIONAL SCALE

Waldron (2018) and Aalbers (2019) further comment on the role assumed by the state in crisis resolution. Waldron (2018, 216) argues this role of the state passes: "(...) not just through the socialization of private banking losses, but also in the development of financial instruments and policies that connect the financial and real estate markets in a more direct way." In this sense, Aalbers (2019) emphasizes the central role of real estate in a regime of financialized capital accumulation. Both the state and households treat real estate as a key piece in their capital reproduction strategies. These governments that base their strategies on real estate as key are also referred to as 'property states' (Haila 2000; 2015). On the discussion of the role of real estate in the circulation of geopolitics, Aalbers (2019) mentions three dimensions highlighted by Büdenbender and Golubchikov (2017, 1): '(i) external influences over domestic real estate markets; (ii) the implications of outward real estate investment; (iii) state-led mega-projects conveying externally the power of the state.'

These debates are also related to the first hypothesis postulated in this thesis: "Recent regulatory changes which limit institutions, such as pension funds, when investing in real estate assets through REITs are a sign of increasing state-fostered financialization."

Firstly, the Brazilian case of the migration of the real estate portfolio from pension funds to REITs, as already mentioned in this section, makes clear some of the points of the debate presented, such

as: the interdependent relationship between the state and the financial sector, where the valorization of capital is backed by the land and the urban built environment, the active posture of the state in promoting the growth of the financial market, and the role of the state in promoting new patterns of urban financialization.

It is worth mentioning that the State also gains feedback through this relationship with the financial market, since the main pension funds in the country are sponsored by public autarchies of the federal or state spheres – e.g., the top three pension funds in Brazil are Previ (Banco do Brasil, joint enterprise with 50% participation of the Federal Government), Funcef (Caixa Economica Federal), Petros (Petrobrás, state-owned enterprise). By expanding the market of REITs, the State also opens the domestic real estate market to the influences of the external market, as Büdenbender and Golubchikov (2017) mention. Before, pensioners' savings were invested and managed by pension funds; now, these properties are managed by REITs. Since pension funds do not participate in the decision-making process of which location or type of property to invest in, the managers of these funds look at these properties as mere numbers that demonstrate the performance of an asset class like any other (van Loon and Aalbers 2017). Moreover, this case of the migration of real estate assets from pension funds to REITs also demonstrates that Brazil presents a context of increasing financialization (of real estate), fostered by the state.

This argument is also reinforced, even if inadvertently, by other works already mentioned in this section (Royer 2016; Sanfelici and Halbert 2017; Sanfelici 2020). To resume, Royer (2016) who discusses the changing strategies of financing instruments such as the FGTS, which began to allocate part of these investments to real estate funds. Sanfelici and Halbert (2017) talks about the growth of REITs in Brazil and discusses both the role of financial actors in the design and implementation of this policy instrument and their role as urban policymakers. That is, in line with the contribution achieved by this thesis, these works also demonstrate that the Brazilian context is one of increasing financialization, and this is often fostered by the state.

MUNICIPAL SCALE

Aalbers (2019) highlights that the increasing use of financial instruments and their logics have made urban policies financialized. Moreover, these policies have increasingly been removed from the responsibility of urban planning departments to financial departments, or even to other management units linked to the private sector and separated from democratic control. One of the works mentioned by Aalbers (2019) is that of Mosciaro et al (2019); this particular work discusses the case of Porto Maravilha, which is analyzed in this thesis. Mosciaro et al (2019) contribution refers to the financial structure of this project, which includes CEPACs, REITs,

public-private partnerships - known as Porto Novo -, and a management company - CDURP. While not all of these topics are subject to scrutiny in our data analysis, it is relevant to understand them for a better interpretation of our data.

First, and picking up on the first points made in this section, this work agrees with Aalbers (2019) on the point that the roles assumed by the state are often contradictory and bifurcated. On the one hand, there is the state's own limitation in dealing with financialization; on the other, there is a transformation of the active role of the state in turning urban policy into financialized, making use of financial instruments and logics, and often distancing the decision-making sphere from the state itself and from citizens. The integration of FIIs combined with CEPAC in the financial structure of Porto Maravilha, the inclusion of CDURP and the creation of Porto Novo illustrates this argument. This is also emphasized by the national regulatory changes that, as shows maps in Figures 64 and 65, at municipal level tend to increase the financialization of real estate around UPO Porto Maravilha.

As previously mentioned, among the existing literature on UPOs there are several works that report the active role of the state in the financialization of urban policy (Fix 2003,2009; Klink and Stroher 2017; Stroher 2018; Mosciaro and Pereira 2018; Mosciaro et al 2019). As Klink and Stroher (2017) emphasize, the enactment of the CEPAC as a financial instrument that is available to municipalities in national law is first evidence of the absorption of financial logics in urban governance. It is worth remembering that, as several authors explain (Maleronka and Furtado 2013; Klink and Stroher 2017; Maleronka and Hobbs 2017), the instrument was born out of the efforts of urban planners in the municipality of São Paulo to turn around budget constraints. In relation to this, Klink and Stroher (2017, 527) highlight the following feature: "Brazilian planners have proven active, albeit non-professional players in efforts to constitute markets for securitized building rights in UPO." In a way, this further highlights the efforts of the municipal government to attract new dynamics of the real estate market through the financialization of the right to build. To provide some dimension, if we consider a sum of CEPACs of all five UPOs in Brazil we are refering to almost 18 million titles to be issued to provide more than 13 million additional m^2 aiming to leverage more than R$18 billions (see Table 16). At the same time, this feature also tells us that this initiative did not come from financial market actors. Even though the CEPAC is a security that sells additional construction rights, we can interpret this as an instrument that financializes real estate, which is part of a government strategy.

Klink and Stroher (2017) comment that UPOs funded by CEPACs have focused inordinately on financial infrastructure and project returns. This has led to disproportionate growth, when compared to international experiences, in both the size and scale of these projects when. Furthermore, Klink and Stroher (2017) argue that the reports of these UPOs are highly technical

and geared towards dialoguing with developers and real estate developers, demonstrating the risks and returns related to the use of the instrument. We have been able to gauge these facts during this thesis by analyzing the reports and economic feasibility studies of these UPOs. These documents are written in a highly technical language, which, as Klink and Stroher (2017) mention, makes it difficult for most citizens to understand. These authors also highlight that among the characteristics of these UPOs is the expectation of the rapid appreciation of the project area, which would also have a reflection on the values captured via CEPAC throughout the project. These points highlight the absorption of financial logics because of the insertion of financial instruments, as Aalbers (2019) points out.

The use of financial instruments and logics is also exemplified by the CEPAC itself and its characteristics as a financial security. However, of all the UPOs reported in these works, the one with the most evident absorption of financial market logics is undoubtedly Porto Maravilha, in Rio de Janeiro. Even when approaching it outside the financialization debate, works such as Saruê's (2016, 2018) make evident the various urban capitals (also discussed by Marques 2013) exploited in the implementation of the Porto Maravilha case policy. Saruê (2016) discusses the institutional arrangements of the policy and its relationship to urban land valuation and emphasizes the conditions of investment and profitability promoted by this arrangement. By underlining the complexity of this project, its financial and institutional structure the author demonstrates that the negotiation of urban capital in the Porto Maravilha UPO does not take place only through the commercialization of CEPAC. Through the analysis of the institutional arrangements that enabled the policy in this UPO, Saruê (2016) highlights the creation of an institution, insulated from the municipality, to coordinate services and works within the UPO. These services and the completion of the major works within the project, in turn, were granted to the private sector through the creation of the Porto Novo public-private partnership, which resulted in the appreciation of the land and built environment. This real estate appreciation was then to be captured by REITs and incorporated into the CEPAC buying and selling structure. This appreciation would make the operation viable from the initial contribution from the sale of all CEPACs to the FGTS, a fund managed by Caixa Economica Federal, which is a semi-public bank.

According to Saruê (2016), this model impacts the state's regulatory capacity over the private sector. In addition, it produces an important dependence on economic conditions and market fluctuations. The points discussed by Saruê (2016) meet, in several aspects, the topics presented by Aalbers (2019). They demonstrate the promotion and interaction of financial instruments with urban policies and instruments, making them increasingly financialized. The creation of an insulated company to coordinate the services provided by a public-private partnership also highlight the aspect that urban policies have been removed from the auspices of urban planners.

Moreover, these policies are increasingly under the tutelage of financial departments and/or integrated with the private sector and removed from democratic control as Aalbers (2019) mentions. Another point highlighted by Saruê (2016) about this project, and common to other UPOs, is the expectation of generating appreciation of the territory and, consequently, attracting new investments and dynamics of the real estate market.

However, the data analyzed in this thesis demonstrate that the use of these policy instruments, such as UPOs and CEPAC, do not necessarily result in changes on market dynamics (see in the Table 22 the cases of Rio de Janeiro and Curitiba as well as in Figures 65 and 67). In the case of Porto Maravilha, with all the concentrated elements of the processes of financialization of urban policy, it has failed, at least so far, to attract new real estate investors to the area as planned in the project's feasibility studies. This highlights the weaknesses of the model proposed by Saruê (2016), such as the low regulatory capacity of the state under private power and the dependence on economic conditions and market fluctuations. As we can verify in the maps of Rio de Janeiro presented in Chapter 3, the territory in the direct surroundings of the project presents a relevant agglomeration of real estate assets in portfolio of REITs and pension funds. This would be a sign consistent with the vocation of the territory identified in the project. However, the Porto Maravilha model, and the weaknesses related to it, was not able to guarantee that this vocation would materialize in the planned time. Unlike the other UPOs, the Rio de Janeiro UPO sold all the CEPACs to a single buyer. What seemed to be the 'magic formula' (Fix2003) for advancing funds and implementing the project became one of the villains, highlighting the municipality's vulnerability to the pressures of financialization.

Mosciaro and Pereira (2019) argue that the policy instrument model of UPOs is a mechanism in which the state acts as an active agent in the valorization and speculation of land and the built environment. This statement is somewhat extreme, since there is an intention to transform, densify and valorize the territory, but the state is not always in a position to promote this valorization. The aforementioned limitations of the state to regulate the market and the dependence on economic conditions support this assertion. Considering the current context of UPOs in Brazil, as shown in chapter 3, although the local government plays a relevant role in creating means for the real estate market to exploit the territory, the local dynamics of this market are not always guided by municipal guidelines. Perhaps too much power, or too high an expectation, is attributed to an urban policy instrument such as the case of UPO.

This argument does not exempt the state from its agency as a fomenter of real estate valorization, nor does it deny that the state can assume a speculator posture. The very case of the FGTS, a parafiscal fund managed by the state (Mosciaro and Aalbers 2017), is the very expression of this speculative posture. Whether in relation to the marketing strategy of CEPACs, in which the fund

proposes to buyers a situation of bargaining and partnership in real estate developments within the UPO. Whether in relation to the suspicious declarations of illiquidity of the FII Porto Maravilha, in which the entity clearly awaits the appreciation of the bonds and land aiming for a greater return. My intention, however, is to draw attention to the complexity of market dynamics and some of the limitations of the local state's role as a financializing agent. I argue that these dynamics of the real estate market are often out of sync with the desires of an urban development project, especially in a country with a history of frequent economic oscillations like Brazil. On the other hand, I see the key role assumed by the national state, and institutions that are its arms, as the great promoter of financialization in the country. The case of Porto Maravilha and the FGTS, inclusive, shows us that there is a contradiction between the forces of the state itself, national and municipal levels, when it seeks to act as an agent in this valorization and speculation of land and the built environment.

One additional note concerns the maps of Rio de Janeiro presented in chapter 3; it is clear that the financial market tends to concentrate its investments in the region next to the port area, which is also known as the financial center of the city - home to large national corporations, especially those linked to the oil industry, and international corporations. The extensive data analysis done during this research included consulting reports from market consultants, fund reports, news, and information on search engines specializing in the real estate market. Although the current area of investment agglomeration shown on the maps of Rio de Janeiro lies outside the perimeter of Porto Maravilha, it is evident that looking at its surroundings is a fundamental task. Not only to understand the behavior of the market, but also to understand the challenges of real estate valuation assumed by the project. During the data analysis we could observe that this is a region where the market concentrates buildings categorized as corporate and office, with triple A to C classifications. The sources consulted also point out that these buildings have been suffering from high vacancy rates, as concluded by the market itself. This means that there is greater supply than demand and difficulties in selling the existing stock of this type of real estate product. The consulted authors justify this high vacancy rate as a reflection of a crisis in the sector since 2016, emphasized by the country's economic crisis and the crisis in the oil and gas sector, and more recently by the COVID-19 pandemic.

In order to deepen the analysis of the role of the state and the context of financialization in Brazil, the following section makes some observations about the particularities of the country.

4.2.3 THE PARTICULARITIES OF FINANCIALIZATION IN BRAZIL

Nölke and Claar (2013) and Nölke et al. (2015) propose that Brazil follows the state-led market economy model. As previously presented, one of the characteristics of this model is the role of national financial institutions and domestic banks in providing credit. According to Kaltenbrunner and Painceira (2018), in Brazil, financialization processes are a reflection of the changes in financial practices and relations between economic actors that occurred from 1980 onwards. These changes were shaped to integrate the country into the global economic system and express its subordinate and peripheral positioning in this system. Both Büdenbender and Aalbers (2019) and Fernandez and Aalbers (2020) emphasize that considering historical legacies, local dynamics, and interaction with global capital hierarchies' matter in explaining financialization processes. That is, the particularities of one country may be key to a broader understanding of the specific dynamics shaping financialization (of the built environment) in distinct countries.

Like Fix (2009), the works by Klink and Denaldi (2014), Royer (2016), Rufino (2017), and Sanfelici and Halbert (2018) continue the narrative about the development of the real estate sector and fostering the growth of the financial sector in Brazil. Inadvertently, these works also emphasize the typical characteristics of a state-led market economy model. These contributions address the issues mentioned by Büdenbender and Aalbers (2019) and Fernandez and Aalbers (2020) by pointing to historical legacies, local dynamics and, to some extent, their relations with the global hierarchies of the contemporary capitalist system. They also highlight the role of the state, its organizational and regulatory changes throughout history, in the development of these economic sectors. Royer (2016) asserts the role of the state in the strategy changes of financing instruments, analyzing the case of the FGTS and highlighting the perceived efforts in government measures to expand the financial segment in Brazil. The author points to one of the characteristics of the economic model of Nölke et al. (2015), where national financial institutions and domestic banks have a central role in providing credit for the development of sectors such as real estate. Rufino (2017) addresses this issue and talks of the impacts that these changes have had on large real estate development and development companies and the IPO of these companies.

From the point of view of the present research, the author makes evident some characteristics of local dynamics and the changes in the organizational culture of companies that, in turn, started to follow international practices, reflecting an effort to integrate into the global capital production system as mentioned by Büdenbender and Aalbers (2019) and Fernandez and Aalbers (2020). Sanfelici and Halbert (2018) demonstrate the role of the state in forming channels to foster capital inflows through the built environment, as is the case with REITs. Based on the work of Sanfelici

and Halbert (2018) and the data collected in this thesis on pension funds and FIIs**,** this feature is interpreted as further evidence of the state's effort of integration into the global monetary system by adopting its practices. Additionally, the case of pension funds and the transfer of their real estate assets to REITs further highlights this state stance in fostering the financialization process (of real estate) in Brazil. It is worth remembering that pension funds gather the savings of individuals made during their working lives; the fund is formed by the money of Brazilian workers, that is, domestic capital. Moreover, a large part of these funds is sponsored by institutions linked to the state. As Oliveira et al (2017) explain, in 2014, among the ten largest pension funds in Brazil, eight were sponsored by current or former federal or state public autarchies. Nolke et al (2015) explain that economies like Brazil's, besides having a strong state participation, are characterized by the dominance of national capital and not foreign multinational capital.

With this, the prominent role of the state in the changes in the real estate segment experienced in the country over the last four decades is evident in addition to its clear strategy of promoting the financial market through the real estate sector. The shift from a direct property investment in pension fund portfolios to the financialized channel of investment funds is a clear example of this. Although Klink and Denaldi (2014) argue that financialization processes in Brazil are truncated, this thesis proposes that the country is actually in a context of increasing financialization. The processes of financialization are not necessarily truncated, but they are articulated differently from those witnessed in other countries.

FUNDS AND THEIR DYNAMICS WITHIN THE URBAN BUILT ENVIRONMENT

Although incipient, and sometimes dispersed, studies on financial institutions and instruments in Brazil and their dynamics with the built environment are an important avenue of debate, yet to be explored in order to understand the processes of financialization in the country. Thus, in this section, the the main findings about Brazilian financial institutions by this line of research are highlighted. In general, geography and urban studies works propose that, in Brazil, there is an increasing trend of adopting financial market logics (Fix 2003, 2009, 2011; Santoro and Rolnik 2017; Stroher 2017, 2018; Sanfelici 2017, 2020; Mosciaro et al 2018; Stroher and Dias 2019; Shimbo and Sanfelici 2021).

As Royer (2016) and Sanfelici (2020) describe, the adoption of these logics can be noticed through changes occurring in the “financial infrastructure supporting real estate production in Brazil” (Sanfelici 2020, 140). Such changes have taken place in the country since the 1990s, when, using the words of Sanfelici (2020, 132, free translation):

> *"(...) one observes the convergence among a heterogeneous set of players - banks, capital market entities, international consulting firms, real estate developers, private fund managers, pension funds, etc. - aiming at the proposition of a regulatory framework that would allow the capital market to become a financing vehicle for real estate activity".*

The author also emphasizes that, "(...) although such coalition is not characterized as typically urban/local, the public policy instruments they promote have immediate reverberations on the production of cities." Regarding the evolution of this scenario of regulatory changes and coalitions, Royer (2016) and Sanfelici (2020) emphasize two aspects: the first, linked to changes in investment strategies of the Guarantee Fund of Time of Service (FGTS). Historically, this fund has been an important resource for investments in urban infrastructure and for housing credit in the country. As Royer (2016) and Sanfelici (2020) emphasize, starting in 2008, the fund also began to invest in real estate-based securities such as Real Estate Receivables Certificates (CRI) and Real Estate Investment Funds (FII). According to both authors, the FGTS played an important role in leveraging these instruments in the Brazilian real estate market.

Another important point is the investment of 3.5 billion *reais* by the Porto Maravilha Real Estate Fund, which acquired the total stock of CEPACs of the Porto Maravilha Consortiated Urban Operation, as detailed in one of the case studies analyzed in this thesis. An aspect emphasized by Royer (2016) and Sanfelici (2020), also highlighted in Sanfelici (2017) and Sanfelici and Halbert (2018), is precisely the growth of the market of real estate-based securities, such as the Certificate of Real Estate Receivables (CRI) and the Real Estate Investment Fund (FII). In this sense, Sanfelici (2020) who stresses the role those financial actors have given to new dynamics in both real estate development and real estate asset portfolio management in Brazil. However, according to the author, "(...) even if the actions of these new actors have been partially analyzed in recent research, there is still much to be done in order to unravel the repercussions of these changes in the financial infrastructure for the morphology and dynamics of cities." (Sanfelici 2020, 139-140).

In addition, mentions of the role of Brazilian pension funds in the design and implementation of large-scale urban development projects, such as UPOs, can be found, albeit scattered, in this body of work on financialization (Fix 2003, 2009, 2011; Santoro and Rolnik 2017; Stroher 2017, 2018; Sanfelici 2017, 2020; Mosciaro et al 2018; Stroher and Dias 2019; Shimbo and Sanfelici 2021). These papers also identify that pension funds and FIIs own real estate within the perimeter of some of these projects. The authors highlight the role of these funds as relevant players in the real estate market in areas considered to be development hubs, such as along the Rodoanel road axis and the Faria Lima and Água Espraiada UPOs in São Paulo, and in the financing structure of the Porto Maravilha UPO in Rio de Janeiro (Fix 2009, 2011; Royer 2016; Stroher 2017, 2018,

2019; Mosciaro et al 2018; Mosciaro and Pereira 2019; Sanfelici 2017; 2020). This thisis manage to identify, locate and analyse them and can be seen in the section 3.2.

4.3 SOME CONSIDERATIONS

In light of the discussion conducted in this section, a brief wrap up is necessary, highlighting a few key considerations that have been explored throughout the chapter.

The analysis of REITs and pension funds in Brazil has clarified some aspects of funds market in relation to their profile of investment in real estate assets. It shows how they distribute and manage their real estate assets and what were the channel of investment used until 2018. It also showcases how both REITs and pension funds has been evolving and growing during the last decade. Our data also implies that, with the requirements imposed by regulation changes at national level, the pension funds are impeled to use REITs as their main channel of investment in real estate, thus, financializing it. This proves our hypothesis 1 - "Recent regulatory changes which limit institutions, such as pension funds, when investing in real estate assets through REITs are a sign of increasing state-fostered financialization." – as valid.

It is noted that, in the case studies under analysis in São Paulo, some buildings that used CEPAC obeyed the logics of the financial market following global classifications; however, it was not possible to identify whether all these buildings attracted financial market investors. The same is vaid for all set of buildings inside all five UPOs that we managed to identify inside its perimeter. Yet some buildings with market classification were found in Rio de Janeiro and Curitiba this number was small. UPOs Porto Maravilha and Linha Verde did not attracted, at least until 2018, a considerable volume of private investments to be implemented inside its perimeter. This validates our hypothesis 2 – "The Brazilian Urban Partnership Operations (UPOs) implemented to date with the use of CEPACs do not always possess the strength to promote real estate market dynamics, , especially the one related to finance capital, within their boundaries."

Furthermore, in the São Paulo UPOs, it was possible to determine that not all buildings within FII portfolios in 2018 used CEPACs. Of the 75 buildings that were part of FII portfolios at this date, 11 of them were built with additional area granted by CEPACs, and 9 with area granted by OODCs. However, it remains to be seen whether other buildings constructed using these instruments are owned by other funds, such as private equity.

Based on the undertaken research, the case of Curitiba shows that buildings, which have used CEPACs, are mostly properties for home ownership, owned by individuals or small contractors who develop housing for the final consumer. When looking at the pension funds and REITs

portfolio distribution in this city and in Linha Verde it gets clear that this large-scale urban development project did not lead to the financialization of urban environment. In São Paulo, even though there are many properties in REITs portfolio that are located inside the UPO perimeter, these assets are distributed all over the city mening that this is not an exclusive set of large-scale urban development projects. What could be noticed is that pension funds and REITs tend to cluster their portfolio assets in areas marked by important viary and transport axes in the city. This proves our hypothesis 3 – "Large-scale urban development projects lead to the financialization of the urban environment." – as invalid. The financialization is not a direct result from large-scale urban development projects per se, but once they emphasize infrastructural changes this may be a possible outcome.

The analysis of the cases of pension funds and REITs showed us that the growth of the financial sector backed by real estate has been fostered by the state. In other words, as discussed in section 4.2.2.1, the growing use of property as financial assets is part of a state strategy to promote the circulation of capital. At the local scale, although the use of CEPACs follows the logic of financialising the right to further construction, it was in the case of the Porto Maravilha UPO that its use together with REITs where the expression of this State strategy to financialize real estate became most evident. It is worth noting that, although Porto Maravilha is a project aimed at urban transformation in a specific area of Rio de Janeiro, its implementation brought together interests from various spheres of governance - national, state and municipal - and was backed by the hosting of international events. Although this project raised R$3.5 billion through the sale of CEPACs to fund the initial phase of the project with an estimated cost of over R$8 billion, the municipality placed itself in a situation of subservience to the powers of the financial sector. In the case of Porto Maravilha, this subservience is related to the contractual concessions made in the CEPAC purchase and sale agreement, which favoured reducing the risk of the investor, which in this case is a parastatal fund. In São Paulo, this has not occurred, and municipalities have acted quite independently of the forces of financial power of capital markets. It is important to highlight here that when refering to financial power this thesis mean the forces of capital makets and its representatives. Real estate developers are not intrincially financial capital market representatives. It is noticeable the effort of the municipality to foster the development of the real estate market within the projects, regardless of whether the source of investment comes from financial capital or not. Moreover, the process of design and implementation of UPOs in the municipality shows interference from representatives of the financial market or other spheres of governance, as in the case of Rio de Janeiro. Curitiba, on the other hand, has been held hostage by the local real estate market with regard to the lack of densification and the purchase and use of CEPACs in the project. This shows that the position of subservience mentioned in our hypothesis is something that can occur, as in Rio, but large-scale urban development projects do not

necessarily place municipalities in this position. This proves our hypothesis 4 – "Large-scale urban development projects place municipalities in a position of subservience to financial power of capital markets" - as invalid.

CONCLUSIONS

This thesis discusses financialization in countries situated in the periphery of the capitalist system, which are multidisciplinary and multifaceted. There is not one single defined form of financialization, but rather financializations, which vary according to each country depending on a set of historical, economic, social and political issues.

This work sought to unveil the ways in which financialization relates to the real estate sector in peripheral and emerging economy countries, and how these processes have taken place in urban governance and the urban built environment. The Brazilian cases of Urban Partnership Operations which use CEPACs were analyzed. Both UPOs and CEPACs are simultaneously urban development and financial instruments, whose understanding must be complemented by that of REITs – a financial instrument, – and pension funds, which are financial institutions. Through them, it was possible to analyse the interaction between urban development instruments, financial instruments and institutions that leads to a scenario of increasing financialization.

It was found that the interaction between urban development instruments, financial instruments and institutions does not necessarily lead to a scenario of increasing financialization. In fact, the opposite occurs: scenarios of increasing financialization lead to greater interactions between urban development instruments, financial instruments, and institutions. Furthermore, it is argued that, in the case of Brazil, this process of financialization is state-sponsored, in an attempt to create forms of capital circulation through land or the built environment, and to insert the country's economy into the capitalist system in a subordinate way.

Findings and arguments provided in the discussion of results relied on a theoretical foundation centered on comparative capitalism and hierarchies of the capitalist system (see section 1.1.1.4). This school of thought considers Brazil one of the emerging economies, which together with India and China follows the State-led Market Economies model. These economies have some characteristics in common that are reflected in their institutional model and in their organizations. Usually, in these countries, major companies fall under the tutelage of the state or

belong to a few restricted families of high socio-economic level. Often, the relationship between public actors and these select private actors is based on informal personal relationships, sometimes even blood ties, based on common values and the same social class. These large companies are backed by national capital, which allows them to be insulated and protected from the short-term movements of global market fluctuations and profit expectations of international investors. The fact that these companies are controlled by national capital, or even that they are often public companies, usually guarantees them access to public financial support, such as subsidized credit from state-owned banks. Such cooperation between the state and large companies also ends up supporting industry, as in order to guarantee competitiveness between companies, the state implements some regulatory measures which maintain low labor costs. When taking into account the large informal sector that exists in these countries, the possibility of these companies paying very low wages to produce cheap goods and services is even more evident. The combination of all these characteristics perpetuates the large socioeconomic differences, typical of these countries. During the analysis of the results of this work, several of these characteristics were apparent, which partly explains the profile of the financialization processes in these countries.

Through the documentary analysis on pension funds (see section 3.1.1.3), it was identified that, in 2018, their portfolio represented 13.2% of Brazil's GDP. Of this total, 4.1% of the assets were real estate, which according to collected data represented more than R$30 billion. That same year, the state instituted a regulatory change in the investment strategy of these funds, which requires that pension funds change the way they invest in real estate assets by migrating from direct ownership to investment via REITs by 2030. In other words, the state requires that pension funds stop using a non-financialized investment channel and start making use of a financialized channel.

This leads to two points: the promotion of the financialization of real estate ownership as a state strategy, and the promotion of the circulation of national capital, in the case of retirement pension funds, through the built environment. Results show that the portfolio size of pension funds in 2018 was roughly equivalent to the portfolio of REITs. Thus, a shift in this direction implies having Brazilian pensioners as one of the main investors of REITs in Brazil. Another aspect of note is that the main pension funds in the country are linked to governmental, national or federal autarchies. In other words, pension funds actually operate as large companies, with the main ones under the tutelage of the state, and they are backed by national capital. Moreover, the regulatory change that restricts the investment channel of these funds ends up supporting the financial industry. In short, these are characteristics of state-led market economies.

It can also be argued that the state seeks, through these regulatory measures and capital market promotion, to make use of financialization processes of real estate – centered on land and the urban built environment – to increase its power and that of institutions linked to it. This constitutes domestic financialization, which uses domestic capital to transform the local real estate into a financial asset. The characteristics previously highlighted justify the difficulty in locating global market investors in the Brazilian financialization process. This work argues that, because this form of financialization is a process with characteristics typical of large-scale emerging economies, the search for a mirror image of Anglo-Saxon financialization is futile. Although there is much to be explored about financialization processes in emerging and peripheral economies, broadening and adapting the perspective of analysis to local realities is essential, something which was one of the aims of this work - the analysis of the local scale did indeed open new perspectives on the characteristics of the financialization processes in Brazil.

CEPAC, because of its financial aspect, is an undeniable case of the financialization of an urban policy instrument. Its formulation and implementation, which has its origin in the city of São Paulo, relied on the proactivity of its urban planners, in addition to the participation of politicians and private sector representatives. Of the three cases located in this municipality, the UPO Faria Lima and Água Espraiada - from its implementation until 2019 - managed to leverage around R$2.4 billion and R$2.9 billion[57] respectively (see Table 16). These R$5.3 billion were raised entirely through the sale of CEPACs, an additional amount incorporated into the municipal budget and exclusively intended to fund the works and services of the projects' intervention plan. It is legitimate to say, therefore, that in the case of these two UPOs the municipality was able to find ways around budget constraints to meet its agenda through the use of CEPAC. In other words, regardless of the quality of the urban project and its objectives, the financialized instrument fulfilled its role of capturing land value surpluses.

Furthermore, it was detected that, within these projects, there is indeed an incidence and concentration of properties in REITs' portfolios, thus they are considered financialized. However, this concentration is not unique to UPOs in the municipality. The agglomeration of financialized real estate also occurs in other areas of São Paulo marked by important road axes and transportation infrastructure, such as the region between Avenida Paulista and Av. Faria Lima (see Figure 57). UPOs are identified in the PDM as projects located in structuring axes of the city, which privilege road and urban infrastructure. Thus, it makes sense to say that it is not the UPOs that attract investors like REITs, but the characteristics of the infrastructure present in their

[57] As value reference, the total revenues of fiscal budget in 2019 for São Paulo Municipality was around R$60 billions. (source: https://www.saopaulo.sp.leg.br/orcamento2019/).

territory. It can also be argued that instruments such as CEPAC and OODC, which grant additional built area beyond the $FAR_{max.}$ allowed by the municipality, collaborate with the development of real estate products that tend to attract capital market investors, although it was not possible to prove or disprove it it – results only demonstrate that properties in REIT portfolios may or may not be built with additional area granted by these instruments.

The Curitiba case also reinforces the idea that UPOs are not responsible for attracting investors like REITs (see Figure 67), but also that the use of CEPAC does not necessarily result in a financialized built environment (see Tables 22 and 24). In other words, if we consider that in an UPO the CEPAC accumulates the two functions of urban planning and financial instrument, it is not possible to affirm that this interaction leads to a scenario of increasing financialization; CEPAC, albeit a financial security, is above all an urban planning instrument. However, the situation changes when these urban policy instruments are combined with purely financial instruments and financial institutions, resulting in the scenario that constitutes the financial structure and the respective institutional arrangements leading to financialization.

Of the five UPO cases analyzed, Porto Maravilha was the only project that incorporated a purely financial instrument such as REITs into its financing structure. In addition, it is the only UPO to have created an exclusive management company for the project, CDURP, and to have formed a public-private partnership through the Porto Novo consortium responsible for the construction of infrastructure works and provision of urban services. This consortium comprises large companies from the civil construction sector, originally family-owned and long-time partners of the state in its development projects.

Here, there are aspects that can be attributed to the state-led market economies model. The first aspect is precisely the incorporation of REITs (FIIs) in the financial structure of the urban development project, with the role of interconnecting the different spheres of government - national, federal, and municipal - and the FGTS investor. It cannot be forgotten that the FGTS is a parafiscal fund represented by the Caixa Economica Federal, a financial institution in the form of a public company. This marks the strong presence of the various facets of the state in this structure and reinforces the argument that it is the main financial agent in this project. Through these various facets, the state used urban policy instruments, UPO and CEPAC, as another piece to compose a structure that could circulate land and capital among its different scales, represented by the municipality and the FGTS. Second aspect, it is the institutions linked to the state - Caixa Economica Federal representing the FGTS, - that assume the role of speculating CEPAC as a currency of exchange by proposing partnership business models to potential developers and builders who wish to build their future developments there. When looking at Tables 21 and 22, it was observed that by 2020 there were only five properties built using CEPAC

within the perimeter of the OUC Porto Maravilha. Of these, three were classified as class A standard by representatives of the real estate market, with a focus on attracting investors and treating the built environment like any other asset class.

The analysis of the UPOs cases highlights that, contrary to what was postulated in this thesis' research question, it is the context of increasing financialization that promotes the interaction between urban development policy instruments, financial instruments and institutions. The case of Porto Maravilha also reinforces the argument that financialization in countries like Brazil is shaped by the characteristics of state-led market economies. As explained in chapters 1 and 4, when considering the perspective of Anglo-Saxon experiences, financialization in Brazil has been hailed as the result of a truncated process. This work argues, however, that financialization in Brazil is not a truncated process, but a rapidly developing and growing process shaped by the characteristics of its own model of economy - that is, a domestic and state-led financialization.

- Closing remarks

As a major contribution, this research work elaborates a comprehensive survey, categorization and analysis of the portfolio of pension funds and REITs in Brazil, in a structured, detailed and georeferenced way that was not previously available in the existing literature. Through this survey, it was possible to test the validity of the different hypotheses, and thus contribute to knowledge about the areas of financial geography, comparative capitalism and public policies linked to instruments that are based on urban development, especially with regard to the financialization of land use and governance in the Brazilian case. Furthermore, this research work elaborates a comprehensive case study analysis of Urban Partnership Operations in Brazil that used CEPACs. This level of comparison among all UPOs was not previously available in the existing literature. Through this survey, it was possible to test the validity of different hypotheses and compare instruments, nationally and globally, aimed at urban development.

Property and urban development data concerned to planning and real estate market in countries from Global North are often publicly availabe online. In Brazil, this is a distinct reality. Population and market have not an easy, or none, acess to such information and these restrictions are even true between internal affairs of municipality halls or distinct municipalities. This fact represents a huge gap when researching a subject related to urban development and market regulation such financialization. It also represents the main fragility of this research. The analysis gathered in this document has put financialization processes limited only to the urban built environment on REITs' portfolio. However, it is understood that financialization has not such limitation, but it happens in many layers of processes and its complexities. This gap is fully encoraged to be filled by future research, invited to revisit this work, evolve it, and carry its interpretations futher and

binding it to other layers of new information. Beyond beeing a theoretical contribution, it can also add to practice of urban planning and help with the challenges faced by Brazilian municipalities.

Furthermore, future avenues of research include better understanding certain aspects of financialization that fall outside the scope of this thesis. Since the existing literature on the topic is scarce, it is urgent to better understand how 'subordinate financialization' - a form of financialization typical of peripheral market economies, - happens in Brazil and other countries with similar configurations, and how it impacts on the territory. It is also necessary to understand how these processes of financialization affect governance, to the extent that governance adopts financial market logics and is molded to the reality of these countries; and to explore the possibility that 'domestic financialization' is taking place, defined by this work as the one where the state acts as a financializer and acts on the domestic capital market and its dynamics, and what the outcomes of these processes are. It is also of interest to explore whether these processes are similar to those in other countries with a state-dominated market economy.

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